I was born at a time when people were still farming and everybody had large gardens and we ate directly from the gardens, and life in general was fairly happy. If you were looking from the outside into our communities, you would maybe see that our communities were impoverished - meaning that we didn’t have a lot of material things. But we had a lot of other things. And one of the things that we did have was good healthy food, good healthy water, and so forth, which is very different from what we see today.

- Clayton Brascoupe, Traditional Native American Farmers Association
ACKNOWLEDGMENTS

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Given the evolving nature of online information, please note that the links provided to websites were accurate as of March, 2018, but cannot be guaranteed accurate in the future.

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The Business of Indian Agriculture

MODULE 1: Business

Table of Contents

11 LESSON 1: Native Agribusiness
   12   TOPIC 1: Native American Agribusiness History and Culture.
   14   TOPIC 2: Tribal Values in Agribusiness.

17 LESSON 2: Basics of Agribusiness
   19   TOPIC 1: What is an Agribusiness?
   20   TOPIC 2: Basic Functions of an Agribusiness.
   24   TOPIC 3: Managing an Agribusiness.

36 LESSON 3: Preparing a Business Plan
   37   TOPIC 1: What Is a Business Plan and Why Is It Important?
   39   TOPIC 2: The Basic Parts of a Business Plan.
   43   TOPIC 3: Writing a Business Plan.
   45   TOPIC 4: Where to Find Assistance in Developing a Business Plan.

55 LESSON 4: Risk Management
   56   TOPIC 1: What is Risk and Why is it an Important Agribusiness Management Issue?
   59   TOPIC 2: Risk Management Strategies.
The Business of Indian Agriculture

MODULE 2: Accounting

Table of Contents

71 LESSON 1: Basics of Agribusiness Accounting & Bookkeeping
  73  TOPIC 1: What is Agribusiness Accounting and Bookkeeping?
  76  TOPIC 2: Basic Accounting Concepts.
  80  TOPIC 3: The Importance of Recordkeeping.

87 LESSON 2: Journals and Ledgers
  89  TOPIC 1: What are Journals and Ledgers?
  92  TOPIC 2: How to Use Journals.
  94  TOPIC 3: How to Use Ledgers.

103 LESSON 3: Preparing Financial Statements
  105  TOPIC 1: The Importance and Uses of Financial Statements.
  106  TOPIC 2: Preparing an Income Statement.
  112  TOPIC 5: Preparing a Statement of Owner's Equity.

123 LESSON 4: Analyzing Financial Statements
  125  TOPIC 1: Using Financial Statements to Provide a Financial Picture of a Business.
  127  TOPIC 2: Using Ratio Analysis.

143 LESSON 5: Preparing for Credit and Assistance Applications
  145  TOPIC 1: General Guidelines Capitalize Preparing for Credit and Assistance Applications.
  147  TOPIC 2: Preparing for USDA Farm Service Agency Program Applications.
  150  TOPIC 3: Where to Find Resources for More Assistance.
# The Business of Indian Agriculture

## MODULE 3: Financial Management

### Table of Contents

<table>
<thead>
<tr>
<th>154</th>
<th>LESSON 1: Spending, Saving and Budgeting</th>
</tr>
</thead>
<tbody>
<tr>
<td>155</td>
<td>TOPIC 1: Introduction to Personal and Business Financial Management.</td>
</tr>
<tr>
<td>159</td>
<td>TOPIC 2: Developing a Spending Plan.</td>
</tr>
<tr>
<td>164</td>
<td>TOPIC 3: Developing a Savings Plan.</td>
</tr>
<tr>
<td>171</td>
<td>TOPIC 4: Payments and Invoicing.</td>
</tr>
<tr>
<td>178</td>
<td>TOPIC 5: Developing a Budget.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>194</th>
<th>LESSON 2: Understanding Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>195</td>
<td>TOPIC 1: Introduction to Credit.</td>
</tr>
<tr>
<td>204</td>
<td>TOPIC 2: Short-Term Operating Credit or Loans.</td>
</tr>
<tr>
<td>208</td>
<td>TOPIC 3: Intermediate Operating Credit or Loans.</td>
</tr>
<tr>
<td>212</td>
<td>TOPIC 4: Long-Term Mortgages and Contracts.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>221</th>
<th>LESSON 3: Understanding Insurance</th>
</tr>
</thead>
<tbody>
<tr>
<td>222</td>
<td>TOPIC 1: Introduction to Insurance.</td>
</tr>
<tr>
<td>225</td>
<td>TOPIC 2: Making Decisions About Insurance.</td>
</tr>
<tr>
<td>230</td>
<td>TOPIC 3: Life Insurance and Estate Planning.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>236</th>
<th>LESSON 4: Financial and Strategic Planning</th>
</tr>
</thead>
<tbody>
<tr>
<td>238</td>
<td>TOPIC 1: Family Financial Planning.</td>
</tr>
<tr>
<td>244</td>
<td>TOPIC 2: Long-range and Strategic Planning.</td>
</tr>
<tr>
<td>248</td>
<td>TOPIC 3: Whole Farm Planning.</td>
</tr>
</tbody>
</table>

| 252 | LESSON 5: Farm, Ranch and Agribusiness Planning |
The Business of Indian Agriculture

MODULE 4: Agribusiness Economics and Marketing

Table of Contents

264  LESSON 1: Agribusiness Inputs (Supplies and Services)
     265  TOPIC 1: The Importance of Inputs (Supplies and Services) to Agribusiness.
     268  TOPIC 2: Supply Inputs.
     273  TOPIC 3: Service Inputs.

277  LESSON 2: Agribusiness Marketing
     278  TOPIC 1: Introduction to Marketing and Marketing Channels.
     282  TOPIC 2: Marketing Strategies.
     286  TOPIC 3: Marketing Functions.

291  LESSON 3: Value-Added Products
     292  TOPIC 1: Introduction to Value-Added Products and Services.
The Business of Indian Agriculture

MODULE 5: Land Use and Management

Table of Contents

300 LESSON 1: Introduction to Native American Land Use and Management
   301 TOPIC 1: Historical and Traditional Examples of Native American Land Use and Management.
   302 TOPIC 2: Basic Considerations of Native American Land Use and Management.
   306 TOPIC 3: Respecting Cultural and Sacred Sites.

311 LESSON 2: Knowing Your Land
   313 TOPIC 1: Natural Properties and Appropriate Agricultural Uses of Land.
   317 TOPIC 2: Land Demarcation, Mapping and Surveying.
   322 TOPIC 3: Sustainable Agricultural Management Practices.

329 LESSON 3: Understanding Land Transactions and Rights
   330 TOPIC 1: General Considerations of Land Transactions.
Module 1: Business
Participant Guide
The Business of Indian Agriculture

MODULE 1: Business

Lessons

This module covers the following lessons:

- Native American Examples of Agribusiness.
- Basics of Agribusiness.
- Preparing a Business Plan.
- Risk Management.
The Business of Indian Agriculture

MODULE 1: Business

LESSON 1: Native Agribusiness

Lesson Topics

This lesson covers the following topics:

• Native American Agribusiness History and Culture.
• Tribal Values in Agribusiness.

Learning Objectives

Upon completion of this lesson, participants will:

• Understand the history and culture of Native American agribusiness.
• Understand the history and culture of agribusiness in the participant’s tribal community.
• Understand the tribal values associated with Native American agriculture and business.
• Identify and use the appropriate tribal values in decisions regarding agribusiness.

Definitions

Agribusiness: Any business operation that produces, processes, stores, manufactures or delivers farm and ranch products and/or services. These operations can include farmers, ranchers, farm equipment suppliers, trucking services, food processors, meat packers and agricultural service providers. Agribusiness can encompass all business activities from “the farm (or ranch) to the fork.”

Native American: In this curriculum, Native American and American Indian are used interchangeably and both refer to indigenous people of the continental U.S. When appropriate, the use of specific tribal names should be preferred when using the curriculum in community settings.
TOPIC 1: Native American Agribusiness History and Culture.

**Learning Outcome:** Students will understand the history and culture of Native American agribusiness generally, and their own tribal community specifically.

- Indians were the first farmers in North America, and agriculture has been a central feature of the American Indian culture and economy for thousands of years.
  - In fact, the Indians of Central America and Mexico were engaged in agriculture 7,000 years before Europeans settled in the present-day United States.
  - Archaeological evidence shows that American Indians began farming in the continental U.S. by 5,000 B.C., using indigenous agricultural practices as well as practices learned from Mexican and Central American cultures.
  - By 1,000 A.D., American Indian farmers had developed productive and complex agricultural systems. For example, one system was based on intercropping corn, beans and squash, and is commonly known as the “three sisters” method.

- There was great variety in American Indian agricultural practices and economies, reflecting the diversity of eco-systems and climate across the continent.
  - In the Northern Plains, American Indians cultivated the river valleys and flood plains with bone, wooden hoes and digging sticks. Although the Plains Indians relied mainly on hunting and gathering, by 1,000 A.D., they practiced well-developed agriculture with crops that included corn, beans, squash, sunflowers and tobacco.
  - Indian farmers in the Southwestern U.S. cultivated squash and bottle gourds, and traded agricultural products in regional market centers.
  - In the Pacific Northwest region, tribes maintained diversified food systems that included fisheries, agricultural crops, wild game and native plants.
  - Similarly impressive agricultural economies were present elsewhere throughout the U.S and Alaska, wherever American Indian and Alaskan Natives were present.

- American Indians used highly developed agricultural methods and practices, developed over generations of careful observation, trial and error. For example:
  - The Southwest Indian farmers developed a new kind of corn, which provided the subsistence basis for their civilization. They cultivated varieties of squash and beans, and grew cotton.
    - They also developed water-conservation practices and used sophisticated irrigation systems. The Hohokam Indians of the Southwest, called “canal builders,” constructed major systems of irrigation canals that were 150 miles long or more.
In the Great Lakes region, the Ojibwa and Assiniboine sowed, harvested, dried, threshed and stored wild rice. Some Northern tribes also tapped maple trees and made sugar.

In addition to food, American Indian agriculture produced other products, such as fiber for clothing or shelter, gourds as water containers and food utensils, tobacco for ceremonial purposes, and so forth.

Agricultural products were preserved and stored, and served as a source of savings and wealth.

Agricultural products and surpluses were traded for other economically valuable resources.

In other words, the “Business of Indian Agriculture” historically represented vibrant and diversified agricultural economies, and food and fiber systems.

The American Indian tribe(s) in your local area also has a rich history associated with agriculture and agribusiness.
TOPIC 2: Tribal Values in Agribusiness.

Learning Outcome: Students will understand the tribal values associated with Native American agriculture and business, and identify and use the appropriate tribal values in decisions regarding agribusiness.

➢ Cultural ceremonies and activities were closely intertwined with agriculture and tribal societies throughout the U.S. For example:

  o Prayers and songs were offered for good weather and successful plantings.
  o Songs and ceremonies celebrated successful harvests and gatherings of wild plants.
  o Clans and other social structures in some tribes supported agriculture through specialized roles and responsibilities.
  o Cultural practices may have determined how agricultural surpluses were stored and distributed among the tribe.

➢ These cultural activities represented certain tribal values that helped ensure the survival and prosperity of tribal society.

  o For example, harvest celebrations encouraged tribal values such as generosity and an appreciation of hard work.

➢ Tribal values continue to have importance in today’s American Indian agriculture and business. For example:

  o Working in harmony with the natural world means that American Indian agribusinesses manage natural resources in a sustainable way that protects the environment for future generations.

  o Accumulating and saving wealth means that American Indian agribusinesses manage profits and debt in a responsible manner, ensuring successful operations through high and low business cycles.

  o An appreciation for hard work means that American Indian agribusinesses reward employees with fair and prompt pay, and treat them with respect.
References


Module 1: Business
LESSON 2: Basics of Agribusiness
The Business of Indian Agriculture

MODULE 1: Business

LESSON 2: Basics of Agribusiness

Lesson Topics

This lesson covers the following topics:

- What is an Agribusiness?
- The Basic Functions of an Agribusiness.
- Managing an Agribusiness.

Learning Objectives

Upon completion of this lesson, participants will:

- Understand the definition of agribusiness and the range of operations it includes in both general and local terms.
- Understand and apply the basic functions of an agribusiness, including planning, production and operations, human resources, finances, recordkeeping and marketing.
- Understand the basic steps in starting an agribusiness.
- Understand the five major areas of agribusiness management: planning, organizing, directing, staffing and controlling.

Definitions

Agribusiness: Any business operation that produces, processes, stores, manufactures or delivers farm and ranch products and/or services. These operations can include farmers, ranchers, farm equipment suppliers, trucking services, food processors, meat packers and agricultural service providers. Agribusiness can encompass all business activities from the “farm (or ranch) to the fork.”

Agribusiness management: The roles and responsibilities of the person or people who make the major decisions about the agribusiness.

Controlling: A management responsibility that watches all business activities to make sure they are performing in line with business goals.
Directing: A management responsibility that ensures instructions and guidance are given to every employee, and that there is a good working relationship between management and employees.

Finance: The business function that includes a wide range of financial issues such as maintaining a good credit rating, accessing credit, managing income and debt, establishing savings plans, and managing land mortgages and leases.

Human resources: The business function that involves the processes and procedures needed to find the right people for the operation, train them properly, motivate them to do a good job, reward them, and assess their performance.

Marketing: The business function that involves the processes of selling a product or service, and includes targeting the market and customers, advertising, pricing, identifying sales channels, inspecting and packaging.

Organizing: The management responsibility concerned with coordinating processes, activities and resources to effectively carry out the business plans.

Planning: The business function that involves the serious consideration of every function of the business operation. It is a basic business function and a management responsibility. It answers the questions about what the business does and where, how and when things will be done. It includes research, analysis, forecasting and careful decision-making.

Production (or operation): The business processes and materials that are central to the creation of an agricultural product or service. It involves the inputs, facilities and equipment and contracted services necessary for the operation.

Recordkeeping (and accounting): The business function that involves budgets, cash flows, accounts payable and receivable, bookkeeping, financial statements, filing taxes, and securely maintaining business documents and data.

Staffing: The management responsibility that includes hiring, training and retaining the right employees for the right job.
TOPIC 1: What is an Agribusiness?

**Learning Outcome:** Students will understand the definition of agribusiness and the range of operations included, both generally and specifically, for their own tribal community.

- Agribusiness is any business operation that produces, processes, stores, manufactures or delivers farm and ranch products and/or services.
  - These operations can include farmers, ranchers, farm equipment suppliers, trucking services, food processors, meat packers and agricultural service providers.
  - Agribusiness can encompass any and all business activities from the “farm (or ranch) to the fork.”

- Agribusinesses can be small operations that employ a few people and sell a single product, or they can be large multinational corporations that employ thousands and sell products around the globe.

- Each tribal community will have a unique mix of agribusiness opportunities based on its agricultural environment, which includes soil conditions, climate, geography, markets, culture and so forth. What agribusinesses are present in your tribal community?

- Tribal communities may also have barriers or limitations that hamper businesspeople from taking advantage of all the potential agribusiness opportunities that are available.
  - Common barriers or limitations can include lack of access to credit, usable land, technical assistance, markets and so forth.
  - There are strategies that can address these barriers and provide new opportunities for agribusinesses in your tribal community. Many of these strategies will be discussed in later lessons.
TOPIC 2: Basic Functions of an Agribusiness.

Learning Outcome: Students will gain and apply knowledge of the basic functions of an agribusiness, including planning, production or operations, human resources, finances, recordkeeping and marketing.

- Every business operation, including agribusinesses, can be broken down into several basic functions that need to be in place for a business to be successful. It does not matter how simple or complex the business, the same basic functions apply.
  - For example, let’s say that you are advising your child on how to make and sell lemonade.
    - First, you might ask her about plans for getting lemons and other ingredients; how will she make the lemonade; and who will buy her lemonade. That’s the planning function.
    - Next, you might ask her how the lemonade will be processed, including details about the workplace, recipe, preparation, mixing of ingredients, storage and transportation to the customer. That’s the production or operation function.
    - You might also ask your child if she will have any help, what the helpers will do and how they will be paid. That’s the human resources function.
    - You might ask your child how she will handle money. How will she buy the ingredients, how much will she pay, how much money will she need to make change, and what will she do with the profits? You might ask her how she will know if she is making money instead of losing money. That’s the finance function.
    - Next, you might ask her how she will keep track of her business so that she knows when to buy more ingredients, how her sales are going, and if her helpers are really adding value to the business. That’s the recordkeeping function.
    - Finally, your child will need to know the best place to sell lemonade, who her best customers will be, and what will be the best price to charge. She will also want to think about how to package and advertise her product. That’s the marketing function.
  - This is a simple example, but it illustrates that the business model applies to all businesses, large and small, agricultural or not.
Planning is the serious consideration of every function of the business operation. It answers the questions about what the business does and where, how, and when things will be done. It includes research, analysis, forecasting and careful decision-making.

- The planning function is a critical step in developing and running a successful agribusiness. After all, how will you reach your business goals if you do not know where you are going and how you will get there?
- The most common form of planning is the preparation and use of a business plan.
- Planning is a continuous activity — it is not something that is done only when you first create your business. Continuous business planning helps you to be prepared for, and react to, changes in the business environment and marketplace.
- Planning helps you stay ahead of the competition, take advantage of new opportunities, and minimize your risks.

The production or operation function involves the processes and materials that are central to the creation of the agricultural product or service.

- It involves the inputs, resources and raw materials needed for the operation. These inputs can include land, water, fertilizers, seed, animal genetic resources, feed and forage, and veterinary drugs.
- It involves the facilities and equipment that are needed, including barns and stables, tractors and trucks, fencing and irrigation systems.
- It may also include contracted services such as storage, packaging, transportation or veterinary service providers.
- The planning or operation function may be highly specific to your type of agricultural product or service.

The human resource function involves the processes and procedures needed to find the right people for the operation, train them properly, motivate them to do a good job, reward them, and evaluate their job performance.

- In most businesses, people are considered the most valued asset.
- Human resources are important even if you only employ yourself and family members. It’s important that you and your family workers are trained, motivated, rewarded and evaluated too.
- Finding and retaining qualified people can be a challenge in rural and tribal communities with a limited pool of workers. That makes good human resource practices even more important.
Laws and regulations concerning the rights and protection of employees in the workplace are important to know and follow. They are there to protect both your business and your employees.

- The finance function includes a wide range of issues such as maintaining a good credit rating, using credit, managing income and debt, establishing savings plans, managing land mortgages and leases, and more.

  - In most small agribusinesses, the personal and household finances of the operator are closely tied to the financial health of the business. Good personal financial practices will benefit the business’s financial position. Likewise, poor personal financial practices will often hurt the business’s financial position.

  - However, even though personal and business finances can (and usually do) affect each other, there must be a “firewall” that separates personal finances from business finances.

  - Many times, financial experts can assist you in developing sound financial practices. You should seek out and work only with trusted people who have good references in your community and the business field.

- The recordkeeping (and accounting) function involves budgets, cash flows, accounts payable and receivable, bookkeeping, financial statements, filing taxes, and securely maintaining business documents and data.

  - The recordkeeping function can be the least appreciated, yet one of the most valuable functions, in a small agribusiness. Good recordkeeping can put your business in a strong position to take advantage of a range of government and financial services and assistance.

    - On the other hand, the lack of good business records is one of the most common (and preventable) reasons services and assistance are denied.

  - There are many different recordkeeping systems sold in the market, and you should research the system that fits your needs best.

  - While computers have made the job of recordkeeping much easier than in the past, it still requires someone with careful attention to details and a good filing system.

  - As with finances, you may choose to work with accounting experts who can assist you in the more complex tasks of recordkeeping and accounting.
The marketing function is the processes of selling a product or service, and includes targeting the market and customers, advertising, pricing, identifying sales channels, inspecting, packaging and so forth. It is about delivering a product or service to the consumer.

- Marketing is much more than selling. It is a complete strategy that makes sure that the final sale will maximize your revenue and profits, satisfy the customer, and increase the value of your business.

- Conducting a market analysis is an important step in developing a market plan. It will help tell you if a product or service will sell and make a profit. A survey is often used to collect market information.

- Creating a market plan will help you study the complete situation surrounding your agribusiness opportunity, identify your marketing objectives, and then develop strategies to achieve your business goals.
TOPIC 3: Managing an Agribusiness.

Learning Outcome:

• Students will understand the basic steps in starting an agribusiness.
• Students will understand the major areas of agribusiness management: planning, organizing, directing, staffing and controlling.

ロー Starting an agribusiness that one hopes will become successful requires extensive planning and preparations.
  
  ○ First, much like choosing a career, you must consider if the agribusiness fits with your personal interests, skills and life goals.
  
  ○ Next, careful consideration should be given to the risks and rewards of starting your own business. According to the Small Business Administration (SBA), about half of new businesses fail within five years.
  
  ○ Once you have decided that starting an agribusiness is the right move for you, then there are specific steps that need to be taken before you open your doors to customers. The SBA recommends this 10-step checklist to starting your own business.
## 10 Steps to Starting a Business

1. **Conduct Market Research.**
   What’s the opportunity to turn your idea into a successful business? Gather information about potential customers and businesses already operating in your area. What’s the competitive advantage for your business?

2. **Write the Business Plan.**
   What are your specific plans? Your business plan is the foundation of your business — It’s your roadmap for how to structure, run and grow your new business. It also “sells” the business idea to potential investors and partners.

3. **Fund your Business.**
   How will you find the money and capital to start and operate your business? If you don’t have that on hand, you’ll need to either raise or borrow the capital.

4. **Pick your Business Location.**
   Where will you operate your business? Whether you’re setting up a brick-and-mortar business or launching an online store, your decision could affect taxes, legal requirements and revenue.

5. **Choose a Business Structure.**
   How will you be legally structured? The legal structure you choose will impact your license requirements, how much you pay in taxes, and your personal liability.

6. **Choose your Business Name.**
   What will your business be called? You’ll want a name that builds your brand and captures your spirit. You’ll also want to make sure your name isn’t already being used by someone else.

7. **Register your Business.**
   How will you protect your name and brand? Once you’ve picked the perfect business name, it’s time to make it legal and protect it.

8. **Get your Tax IDs.**
   You’ll need an employer identification number (EIN) for important steps to start and grow your business, like opening a bank account and paying taxes. Some, but not all, states require you to get a tax ID as well.

9. **Get any Licenses and Permits.**
   What other legal steps are needed? Keep your business running by staying legally compliant. The licenses and permits you need for your business will vary by industry, state, location and other factors.

10. **Open a Bank Account.**
    A small business checking account can help you handle legal, tax and day-to-day issues. It’s easy to set one up if you have the right registrations and paperwork ready.

Once you’ve accomplished the basic start-up tasks, it’s time to manage the business. Agribusiness management is about the roles and responsibilities of the person or people who make the major and daily decisions about the agribusiness.
It involves decision-making, managing resources, implementing work processes, and evaluating the business outcomes.

It is closely related to the basic agribusiness functions discussed earlier in Topic 2, but focuses more specifically on the manager’s role.

There are five major areas of agribusiness management: planning, organizing, directing, staffing and controlling.

Planning is about making the decisions on how the business will operate, including details about what tasks need to be accomplished; when, where and how those tasks will be implemented; and who will make them happen.

When planning, the manager thinks carefully about each business function in terms of its objectives, resources required, activities needed and outcomes desired.

The manager considers the possible business scenarios and prepares appropriate backup plans.

The manager plan for the short-term (day-to-day), medium-term (year-to-year) and long-term (two years and more).

In practice, planning includes these typical management tasks:

- Developing strategic plans with vision and/or mission statements, and goals and objectives.
- Developing project work plans that include tasks, deadlines, the resources needed and responsible parties.
- Developing financial projections and budget forecasts.

Organizing is about coordinating processes, activities and resources to effectively carry out your business plan. It is making sure that the parts of your business work together smoothly and efficiently.

The manager who does organizing breaks down the business plan into specific tasks, with specified timelines, resource needs, staffing and outcomes.

The manager then looks for ways to increase efficiency, streamline processes, lower costs, reduce operation times and increase production.

In practice, organizing includes these typical management tasks:

- Developing Policies and Procedures that describe the “rules” of the business (see outline in this section).
- Scheduling regular meetings and checkpoints related to a project.
• Using calendaring and workflow tools to manage various tasks and personnel.

• Creating and/or locating work and office spaces that are efficient in getting the work done.

Directing is about making sure that instructions and guidance are given to each employee, and that there is a good working relationship between management and employees.

  o When directing, the manager provides training, instructions, motivation and rewards to the people who work for the business.

  o The manager who directs makes sure that there is strong communication throughout the agribusiness so that everyone in the operation knows their specific roles and duties, as well as the overall business objectives.

  o Good directing also involves the courage to confront problems and to find solutions that benefit both the employee and the business.

  o In practice, directing includes these typical management tasks:
    ▪ Providing adequate (e.g., daily, weekly) supervision and direction for employees to do their job.
    ▪ Responding with timely emails and phone calls to employee questions and concerns.
    ▪ Meeting with employees to discuss their performance, recognizing and rewarding high performance and providing direction and guidance for low performance.

Staffing includes hiring, training and keeping the right employees for the right job.

  o The manager whose staff knows what kind of people are needed for each job, and is able to select and keep employees with the right mix of experience, skills and attitude.

  o Training and professional development are important areas of good staffing management.

  o Staffing also includes adjusting your workforce as your business needs change, which might include hiring new help or letting employees go.

  o In practice, staffing includes these typical management tasks:
    ▪ Developing job positions, and hiring and retaining employees.
    ▪ Developing training and professional development plans specific to each employee and job position.
Managing employee benefits such as vacation and sick leave, health coverage and pension plans.

Controlling is like the dashboard function of a business — it monitors all business activities to make sure that they are performing in line with business goals.

- When controlling, a manager sets work and quality standards and outcomes, and then measures progress against those targets.
- Controlling also includes watching employees and their performance.
- A good controller knows exactly how the business is doing and can provide advice on how to improve or correct business functions.
- In practice, controlling includes these typical management tasks:
  - Conducting regular leadership or executive meetings on the overall status of the business and various projects.
  - Checking business performance against strategic plans and financial and budget forecasts.
  - Keeping up-to-date on current and emerging market trends and regulatory policies.
  - Managing investor and/or board of directors’ expectations and strategic guidance.

References

The Business of Indian Agriculture

MODULE 1: Business

LESSON 2: Basics of Agribusiness

Basic Functions of Agribusiness Worksheet

Instructions: Read the story below, and then write in the basic business function that best matches the agribusiness task or resource. As a group, discuss why you chose each answer and be ready to share your answers with the class.

For example, if you were discussing a business that makes and sells lemonade, you might fill in your table as follows:

<table>
<thead>
<tr>
<th>Tasks and Resources</th>
<th>Basic Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decide if running a lemonade business is enjoyable to me.</td>
<td>Planning</td>
</tr>
<tr>
<td>Squeeze lemons into lemon juice.</td>
<td>Production/Operations</td>
</tr>
<tr>
<td>Hire your brother to squeeze the lemons.</td>
<td>Human Resources</td>
</tr>
<tr>
<td>Count how much money was made in a day and put it in the bank.</td>
<td>Finances</td>
</tr>
<tr>
<td>Write down how much money was spent and made in a day.</td>
<td>Recordkeeping</td>
</tr>
<tr>
<td>Create a sign for your lemonade stand.</td>
<td>Marketing</td>
</tr>
</tbody>
</table>

Story: Your agribusiness is Cottonwood Falls Ranch. It is a family-owned and operated cattle ranch that manages a 250-cow-calf operation on 1,200 acres of land. Half the land is in pasture and the other half is in hay production.

Your name is Jack Collier, 63 years old, and you are the principal operator and head of the family. Your son, Andy, 38 years old, is the ranch manager and handles the daily operations. Your wife, Debbie, does the bookkeeping for the business, along with working part-time at the high school and managing the house. Two local ranch hands are hired seasonally each year to help out. You've been in business for over 40 years and have all the facilities, equipment and services to operate a profitable operation.

You are thinking about retiring in a few years and would like Andy to take over the business. To help Andy know the business better and to plan for the transition, you and Andy have decided to fill out this worksheet. You both took an agribusiness workshop and learned about the basic functions of agribusiness. You tried to be as detailed as possible in identifying the specific tasks and resources in the business.
Just as a reminder, these are the six basic functions of agribusinesses that you and Andy learned at the workshop:

| Planning: | involves the serious consideration of every function of the business operation. It includes research, analysis and careful decision-making. |
| Production/Operation: | involves the processes and materials that are central to the creation of an agricultural product or service. |
| Human Resources: | involves the processes and procedures needed to find the right people for the operation, train them properly, motivate them to do a good job, reward them and evaluate their performance. |
| Finances: | includes a wide range of issues such as maintaining a good credit rating, accessing credit, managing income and debt, establishing savings plans, and managing land mortgages and leases, etc. |
| Recordkeeping: | involves budgets, cash flows, accounts payable and receivable, bookkeeping, financial statements, filing taxes, and securely maintaining business documents and data. |
| Marketing: | involves the processes of selling a product or service, and includes targeting the market and customers, advertising, pricing, identifying sales channels, inspecting and packaging, etc. |

In the worksheet below, write in the basic business function that best matches the task/resource.

<table>
<thead>
<tr>
<th>Tasks and Resources</th>
<th>Basic Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andy hires ranch hands for this year’s season. Debbie gets their paperwork ready.</td>
<td>Planning:</td>
</tr>
<tr>
<td>Andy buys additional hay.</td>
<td></td>
</tr>
<tr>
<td>Debbie researches forecasts for beef prices and the cost of hay.</td>
<td></td>
</tr>
<tr>
<td>Andy fills out a loan application for a new work pickup.</td>
<td></td>
</tr>
<tr>
<td>Debbie writes down the expenses and revenue from last month.</td>
<td></td>
</tr>
<tr>
<td>Jack talks to a butcher about selling some meat locally.</td>
<td></td>
</tr>
</tbody>
</table>

The Business of Indian Agriculture • Participant Guide • Module 1
Andy figures out how much building and fence repair will cost this year.

Debbie puts some money each month into a retirement account.

The veterinarian visits a sick animal.

Debbie checks on the business’s credit report to make sure everything is correct.

Andy gives a ranch hand an extra day off to visit a sick family member.

The whole extended family gets together for branding.

Jack researches the price of a new tractor and tries to decide if the business can afford a loan.

Debbie pays the utility bill.

Andy gets a new door sign for his pickup with the ranch’s logo, name and phone number.

Some nearby land has become available and Jack researches the feasibility of buying it to expand the operation.

Debbie works with the accountant on filing taxes.

Jack visits with a USDA official about land conservation practices.

A ranch hand goes missing for a week and Andy decides to fire him.

Jack, Andy and Debbie work on updating their business plan for the next five years.

Jack donates a cow for the tribe’s annual powwow and rodeo.

Debbie looks at hay production over the last three years and notices a decline.

A cow gets out and Andy has to go find her.

Propane prices double and Debbie recalculates expenses for the winter.

Don’t forget to discuss your answers with your group and be ready to share them with the class.
The Business of Indian Agriculture

MODULE 1: Business

LESSON 2: Basics of Agribusiness

Policies and Procedures Outline

Instructions: Review the Policies and Procedures outline below, and then, as a group, discuss what you would skip or add for your business.

Employee Templates

- Employee handbook
- Employment basics
- Workplace policies
- Employee code of conduct
- Employee compensation and development
- Employee benefits and perks
- Working hours, PTO and vacation
- Employee resignation and termination

Company Templates

- Accessibility
- Anti-discrimination
- Bereavement leave
- Breastfeeding policy in the workplace
- Company car sample
- Company cyber security
- Company data protection
- Company holiday
- Company overtime policy sample
- Corporate email usage
- Corporate social responsibility
- Disciplinary action
- Drug testing
- Employee assistance program
- Employee attendance policy
• Employee background check policy sample
• Employee bonus
• Employee breaks
• Employee cell phone policy
• Employee classification
• Employee confidentiality
• Employee conflict of interest
• Employee exit interview policy
• Employee fraternization
• Employee internet usage policy
• Employee parking policy
• Employee performance review
• Employee probationary period policy
• Employee progressive discipline
• Employee promotion
• Employee PTO sample
• Employee recruitment and selection policy sample
• Employee referral program policy
• Employee remote work
• Employee resignation
• Employee social media sample
• Employee temporary layoff
• Employee training and development policy
• Employee wellness program policy
• Employer mental health
• Employer paternity leave policy
• Employment of relatives
• Equal opportunity employer policy
• Flexible working hours
• Former employee rehire policy
• Grievance procedure
• Hot desking policy
• HR policy revision
• Internal job posting
• Jury duty
• Moonlighting
• New hire
• Occupational/workplace health and safety
• Open door
• Parental leave
• Payroll advance
• Pets in the workplace
• Record retention
• Retaliation in the workplace policy
• Sabbatical leave
• Sample accident reporting policy
• Sample business dress code policy
• Sample sick leave
• Sample employee business expense policy
• Sample employee code of conduct policy
• Sample maternity leave
• Separation/termination of employment policy sample
• Sexual harassment
• Short-term disability
• Smoke free workplace policy
• Solicitation
• Substance abuse
• Unlimited vacation
• Violence in the workplace template
• Work from home policy sample
• Workplace harassment sample
• Workplace visitor policy
Module 1: Business

LESSON 3: Preparing a Business Plan
Lesson Topics

This lesson covers the following topics:

- What is a Business Plan and Why is it Important?
- The Basic Parts of a Business Plan.
- Writing a Business Plan.
- Where to Find Assistance in Developing a Business Plan.

Learning Objectives

Upon completion of this lesson, participants will:

- Understand the definition, importance and uses of a business plan.
- Understand and develop the basic parts of a business plan.
- Gain the basic knowledge and skills to develop and present the first draft of a business plan.
- Understand the resources available to assist in developing a business plan.

Definitions

**Branding:** A marketing strategy that creates value in the company through improving the public opinion and reputation of the business and linking it with the business’s name, logo and other images.

**Discount Structures:** A marketing strategy that gives discount pricing to certain customers based on criteria such as volume purchasing, long-term purchase commitments and customer loyalty.

**Gross Margin:** A business’s total sales revenue minus its cost of goods sold, divided by the total sales revenue, and shown as a percentage. The gross margin represents the percent of total sales revenue that the business keeps after paying the direct costs associated with providing its products and services. The higher the percentage, the more the business keeps as profit.
TOPIC 1: What Is a Business Plan and Why Is It Important?

**Learning Outcome:** Students will understand the definition, importance and uses of a business plan.

- A business plan is the written, detailed description of your business idea that answers all of the major questions regarding the start-up and operations of your agribusiness.
  - It represents the thinking, research and planning that you have done on your business idea. It starts first with an idea that you think will make a good agribusiness.
  - The business plan's major purpose is to persuade and convince (to sell) people that your agribusiness is realistic and will be profitable. Your plan must convince you first, and then your family and business partners, and then your potential lenders, suppliers, customers and other important players.
  - Most often, the business plan is used to secure funding from a lender.
  - Although business plans are usually associated with start-ups, a second major purpose for your business plan is to serve as a roadmap of how to operate your agribusiness and keep it on track.
    - That means a business plan should be reviewed and updated regularly, and then followed.
  - There are many variations of business plans, but all of them answer the same basic set of questions concerning the business.

- There are many important questions that a good business plan will answer. Your partners, investors and lenders will want to know the answers to these questions, and so you will need to know the answers to them first.
  - For example, here are some of the major questions a business plan will consider:
    - Why am I doing this business? What is my motivation to start a business?
    - What are my relevant skills and experiences?
    - What will the business do? What will be the agricultural product or service?
    - How will I accomplish my goals? What are my operational plans?
    - What resources will I need, and what are available to me now?
- Where will the business be located?
- What legal issues need to be considered?
- Who will run the business? What is the management plan?
- What job positions and employees will be needed?
- What are my financial needs, and what is my financial health?
- How will the business market the product or service?

- A business plan is perhaps the most important step toward creating (and maintaining) a successful agribusiness.
  - The process of developing the plan will help improve your ideas, set your goals, and increase your chances of success.
  - A good business plan is like the gift that keeps on giving. By regularly reviewing and updating it, it will continue to help your agribusiness stay successful.
  - It is the best investment in time and thinking that you can make in your agribusiness.

- Note that for nonprofit or tribal organizations, a project proposal is analogous to a business plan, in that it must “sell” the project idea to a funding organization, tribal leadership and/or management team. It also serves as a roadmap to implementing the project.
TOPIC 2: The Basic Parts of a Business Plan.

Learning Outcome: Students will understand and analyze the basic parts of a business plan.

➢ Every business plan has similar components that are important to planning for a successful agribusiness. Depending on your specific agribusiness idea, your plan may have more parts or less. The basic parts of a business plan may include the following:

o The Cover Sheet usually starts the business plan with a professional and eye-catching presentation.
  ▪ It includes your name and contact information, information on the agribusiness’s owners and officers, the date the plan was developed, and the person who prepared the plan.

o The Table of Contents lists the sections of the business plan and their page numbers. It may also contain a list of graphs and tables.

o The Introduction summarizes everything about the agribusiness: the who, what, where, when and how of your business. It also provides a preview of the rest of the business plan. This section is also called the Executive Summary.
  ▪ This section should start with a comprehensive (but general) description of your agribusiness, including the product or service.
  ▪ It begins to “sell” the reader by describing the strong points of your business idea, along with your experience, skills, partnerships and market opportunity.
  ▪ It also outlines your resource priorities and needs, such as financing or land acquisition.

o The Market Analysis section describes the market opportunity for your agribusiness, including the research you used to conduct the market analysis, your target customers, the marketplace trends, and the competition.
  ▪ The target market should be described in as much detail as possible, including demographic (population) data, market size, customer purchasing histories and patterns, needs and preferences, geographic location, and the thoughts of opinion leaders and trendsetters.
  ▪ Your competition should be described in terms of their strengths and weaknesses.
- Trends in the marketplace should be reviewed, for both consumers and the industry.

- A good market analysis will include any seasonal cycles that may affect the agricultural products and services.

  - The Organization and Management section of the business plan describes how your agribusiness will be structured and run. It gives information on the owners and partners, management team, and legal structure of the agribusiness.

    - This section lists people who will own and/or run the business, and includes their roles, responsibilities, qualifications and estimated salaries.

    - One effective way to describe the organization and management structure is with an organization chart that shows all the people involved in the agribusiness and how they relate to each other.

    - The legal ownership structure should also be described, including how ownership is defined and what percentages of ownership are held by each owner. Common forms of ownership include sole proprietorships, partnerships, corporations and limited liability companies.

    - If there is a Board of Directors or Advisors for the agribusiness, the role of the board should be explained, and its members should be listed, along with their roles and qualifications.

  - The Marketing Plan section describes how you will create, reach and keep customers for your agribusiness product or service. It should describe a broad, complete strategy. Remember that marketing is much more than just selling.

    - The Marketing Plan should talk about how exactly you will sell and deliver your product or service.

    - The plan should also include your pricing strategy, including the cost of goods sold, gross margin objectives and any discount structures.

    - The marketing plan may also include advertising and promotional tactics, as well as any packaging and branding strategies.

    - The plan should also include any public relations and networking activities such as press releases, participation in local business groups, and community relations.
o The Product and/or Service section describes the specific agribusiness products and/or services you will produce and deliver for sale.

- The Product/Service section should say why the customer will benefit from your product/service, what needs it satisfies and why it is better than other products/services.

- This section should also address the product/service lifecycle. It should describe what is involved from the very beginning of the product/service to the final goal of customer satisfaction.

- It should also describe the current stage of your product/service development, and what future versions of the product/service might look like.

O The Financial Plan section describes your financial needs and plans so that a prospective lender will feel confident in lending to you. It also provides proof of your good financial standing and practices.

- This section starts with a detailed explanation of why you need financing, how much is needed, how you will spend it, and how you intend to pay it back. It should include your current needs, and also your projected needs over at least the next five years.

- The next part of this section should include your financial documentation that provides evidence of your good financial standing and supports the projections discussed in the first part of the Financial Plan.

- The list of financial documents or statements may vary according to your specific agribusiness and financing needs, but they will probably include two basic sets: 1) historical financial information and 2) prospective financial information.

- Usually lenders want three to five years of historical financial information (if the agribusiness has been in existence). This documentation may include the following financial information:

  • Income statements, balance sheets and cash flow statements for each year.
  • Any collateral that may be used to secure a loan.
  • Credit reports, both personal and business.
  • Contracts, either completed or ongoing.
  • Letters of reference that talk about your financial standing.
Prospective financial information shows your financial expectations over the next five years or so. This documentation may include the following information:

- Forecasted income statements, balance sheets, cash flow statements and capital expenditure budgets for each of the projected years.
- A break-even analysis that shows when in time your company’s expenses will match your product/service sales revenue. This is based on your projected revenue and expenses from your forecasted income statement.
- The financial statements mentioned above will be explained in more detail in Module 2: Accounting, Lesson 3: Preparing Financial Statements.

- The Miscellaneous section (or Appendix) is where you place any other supporting documents that may be important to your agribusiness or to your prospective lender.
  - It may include legal documents such as patents or copyrights, detailed data that was used in your market analysis or financial plan, company documents like articles of incorporation, mortgages, leasing documents and any other important information.

- Finally, the business plan should be carefully edited and proofread. It should look professional, but have a personal touch so that your reader knows that you wrote it specifically for your audience (e.g., the lender).
  - Have your plan professionally bound and printed, and make sure you keep track of all the copies. You don’t want to lose copies or have your competitors get a copy.
  - Don’t forget to update the plan as things change. An out-of-date business plan is easy to see and gives a bad impression.
TOPIC 3: Writing a Business Plan.

**Learning Outcome:** Students will gain the basic knowledge and skills to develop and present the first draft of a business plan.

- Now that you are familiar with the basic parts of a business plan, it is time to put that knowledge into practice. As a reminder, the basic parts of a business plan are:
  - **Cover Sheet:** usually starts the business plan with a professional and eye-catching presentation.
  - **Table of Contents:** lists the sections of the business plan and their page numbers.
  - **Introduction:** summarizes everything about the agribusiness: the who, what, where, when and how of your business. It also provides a preview of the rest of the business plan. This section is also called the Executive Summary.
  - **Market Analysis:** describes the market opportunity for your agribusiness, including the research you used to conduct the market analysis, your target customers, the marketplace trends and the competition.
  - **Organization and Management:** describes how your agribusiness will be structured and run. It gives information on the owners and partners, the management team and the legal structure of the agribusiness.
  - **Marketing Plan:** describes how you will create, reach, and keep customers for your agribusiness product or service. It should describe a broad, complete strategy. Remember that marketing is much more than just selling.
  - **Product and/or Service:** describes the specific agribusiness products and/or services that you will produce and deliver for sale.
  - **Financial Plan:** describes your financial needs and plans so that a prospective lender will feel confident in lending to you. It also provides proof of your good financial standing and practices.
  - **Miscellaneous (or Appendix):** contains any other supporting documents that may be important to your agribusiness or to your prospective lender.
Let’s start by reviewing several sample business plan templates to show you that, while business plans must contain the essential sections described above, they can (and should) also convey a personal touch that makes the business plan unique to you and your business.

Now that you have seen several examples, it is time to begin to draft your own business plan. Working as a team, you will identify a business idea and then begin to develop the essential sections of your business plan.
TOPIC 4: Where to Find Assistance in Developing a Business Plan.

Learning Outcome: Students will understand the resources at the local, tribal, state and federal level that are available to assist in developing a business plan.

➢ There is a great deal of help available for developing a good business plan. At the national (federal) level, some useful resources are as follows:

  o The U.S. Small Business Administration (SBA) has an extensive website dedicated to small business development and business plans.

  o The U.S. Department of Agriculture (USDA) has a New Farmer website.

  o The USDA National Agricultural Library Rural Information Center maintains a resource database for small businesses.


  o Each of these resources provides contact information as well as links to other resources throughout the internet.

➢ At the regional, state or local level, there are many resources and you should check with your regional, state or local technical assistance contacts.

  o Many land-grant universities have extensive materials for small agribusiness planning. For example, Cornell University maintains a Small Farms Program website. Check with your state or local extension specialists for details.

References

Minnesota Institute for Sustainable Agriculture. (2003)

The Business of Indian Agriculture

MODULE 1: Business

LESSON 3: Preparing a Business Plan

Business Plan Sample Templates

Instructions: In small groups of 2-3, review the Business Plan Samples (about 15 min.) Share what you liked about the plans, and what you would change to fit your business.
SAMPLE BUSINESS PLAN
FITNESS PLUS, INC

Disclaimer: This is a sample business plan, so the company and business information are fictitious. This plan reflects our standard business plan model. Changes in outline and structure can be made as per client specifications. Source: BizPlanCorner.com.

Contents

EXECUTIVE SUMMARY
GENERAL COMPANY DESCRIPTION
  1.1 COMPANY OVERVIEW
  1.2 MISSION AND VISION
  1.3 STRENGTHS AND CORE COMPETENCIES
  1.4 CHALLENGES
INDUSTRY ANALYSIS
SERVICES OVERVIEW
  3.1 SERVICES
  3.2 BENEFITS AND FEATURES
  3.3 WHY PEOPLE NEED THIS SERVICE
MARKETING PLAN
MARKET ANALYSIS
  4.1 Market Description
  4.2 Market Facts
  4.3 Market Size
  4.4 Market Growth
  4.5 Market Demand
  4.6 Market Trends
  4.7 Market Growth Potential
  4.8 Market Opportunities
  4.9 Barriers to Entry
  4.10 Regulations
  4.11 Service Potential
  4.12 Targeted Audience
  4.13 Competition
  4.14 Market Niche
MARKETING STRATEGY
  5.1 Value Proposition
  5.2 Branding
  5.3 Marketing Objectives
  5.4 Strategy
  5.5 Marketing Budget
SWOT ANALYSIS
MARKETING MIX

OPERATIONAL PLAN
  8.1 Service Execution Timeline
  8.2 Location
  8.3 Legal Environment
  8.4 Personnel

MANAGEMENT AND ORGANIZATION
  9.1 Management Strength
  9.2 Bankers
  9.5 Advisor

FINANCIAL PLAN
  10.1 Start-up Expenses
  10.2 Revenue Forecast (3-Year)
  10.3 Profit and Loss Projection (3-Year)
  10.4 Pro Forma Cash Flows (3-Year)
  10.5 Projected Balance Sheet
  10.6 Breakeven Analysis

APPENDIX
Beginning Farm Business Plan

Example

Prepared June 2008

This is a sample farm business plan, provided by NYFarmNet/NYFarmLink. It is based on a real farm plan written by a real farm family in Upstate NY. The identity of the farm and proprietary information have been deleted. Each section will give you a good sense of what should be in the plan. This particular plan was written to communicate management intentions to a financial partner like a bank or investing family member.

Executive Summary

An overview of the farm, the purpose of the business plan and its conclusions (about 200 words). Write the executive summary last, but it will be positioned first in the document for a quick overview and refresher.

Farm Description

John Doe owns 71 acres in the town of South Bend of Sheffield County. There are 55 acres of tillable land currently all in grass for hay and pasture. The family currently raises approximately 200 goats for meat production and the sale of breeding stock. John's farm has been in operation since 1984, starting out as a sheep farm dealing in Polypay sheep for freezer lamb and wool. Recognizing an emerging market for meat goats and the acquisition of leased 38 acres of brushy land, the farm sold off the sheep and acquired Boer bucks and does to begin the current herd in 1992.

Long-Range Strategy and Implementation:

Short-Term Goals: (Within the calendar year)

1. Determine best alternative to establish a goat diary
2. Establish financing for selected alternative intermediate-term goals:
3. Sign contract and build barn/milking facility or locate suitable farm for purchase and establishment of dairy in existing facility.

Long-Term Goals:

1. Goat dairy is a final phase for complete utilization of time and energy in the enterprise.

Options:

• The owners are considering two options:
• One possibility is to build a milking facility on their current property.
  • Debt load may be larger
  • Allows for alternative use of existing barn
  • Avoids cost of moving entire enterprise
• Second possibility is the purchase of an existing facility near Watertown and moving the enterprise to that location.
  • Facility could be modified, not built from scratch
  • More land may be available
  • Debt load is minimal with sale of current facility and house
  • Cost and stress of moving entire enterprise is high

Product Description
The dairy prides itself on producing high-quality milk for the production of cheese and growing high-quality breeding stock for market trade.

Organization and Management
Description of business format: sole proprietor, partnership, LLC, or corporation. Any other characteristics that help explain the business structure to the reader.

Management Team
John Doe, Owner and Operator:
Responsible for:
  Feeding and care
  Hay harvesting
  Long-term planning decisions

Farm Helper:
Responsible for:
  Youngstock care and development
  Long-term planning decisions

Additional part-time labor will be utilized in the dairy operation once under way.

Product Marketing
Milk from the dairy will be marketed in two ways. The primary market will be to freeze the milk in shipping bags and transported it periodically to the Old Chatom Cheese Company in Albany, NY. The second market is developing a branded product in conjunction with Kutter’s Cheese. The current market price for milk is $.94 per pound.
The Financial Plan

The current plan is to begin milking 150 of the current 200 goats and then bring the operation up to 400 animals within three years. The attached income projections show a positive cash flow both years due to the current sale of goats that will continue. The transition period of 100 animals develops over $18,000 in useable income after expenses (not including any debt service). Projected debt service on a $160,000 loan at 7% for 15 years would be $17,258. Debt service for vehicles totals $8,340 for a total debt service of $25,598. Net Income after debt service is projected to be short by $7,515 while herd is at 150 animals and rises to $54,300 once 400 animal goal is reached and projected income and expenses fall within the expected parameters.

(Financial projections are often attached to a business plan like this. Use a spreadsheet to show a list of anticipated expenses, and anticipated income, and how the reserves will be spent).

Assumptions:

All economic data are based upon current values provided by John Doe and an economic spreadsheet of dairying from the University of Wisconsin at Spooner.

Strengths:

• The John Doe family has a long history of successful production of animals for the meat and breeding markets. Knowledge of the industry and research regarding marketing of the milk is current and realistic.

• The potential exists for developing a processing agreement with a local cheese manufacturer. This would increase potential for profitability as the product would be a local, high-quality product, and transportation costs would drop dramatically.

• Debt load is very small with a net worth of $578,120 and a debt-to-asset ratio of .08. This does include the residence as well.

Risks:

• The primary issue at the current location is the land base and available land to provide necessary forage given the tight land market and hay market in the past few years.

• Ensuring access to adequate forage is a necessity prior to working toward the 400 animal goal.

• An additional unknown is the availability of a part-time labor force to cover the time invested in running 400 animals through the parlor as well as keeping feed costs in line.

• Moving to Watertown would require additional time to finish interior of house and bring the existing property up to speed in preparation for sale.

• Existing cash flow is a concern. Debt capacity is strong, but income from meat sales will decrease some as herd size is increased by retaining more young for breeding/milking potential.

• Moving to northern NY increases land base and should require very little debt if current farm is sold. However, the time involved may set back dairy plans by up to 12 months.
Summary
The dairy enterprise does develop positive cashflow and is within the management capabilities of the owner. The choice to construct a new facility in Arcade given the land constraints or move north for more land and less start-up costs is a challenging decision.

Both avenues can work, although long-term debt load is very different between the two choices. Moving costs were not analyzed as a part of this business plan development, but may be a factor in the decision as well. The John Doe Farm has strong herd numbers at this time with more growth available from within. The major issue is the choice of direction to go. Cash flow is improved by adding a dairy component versus relying on meat and breeding stock as an income source.

Financial Tools to Include:

- Income Statement
- Balance Sheet
- Cash Flow Statement
The Business of Indian Agriculture

MODULE 1: Business

LESSON 4: Risk Management

Lesson Topics

This lesson covers the following topics:

• What is Risk and Why is it an Important Agribusiness Management Issue?
• Risk Management Strategies.
• Where to Find Assistance in Developing a Risk Management Plan.

Learning Objectives

Upon completion of this lesson, participants will:

• Understand the definition, importance and types of an agribusiness risk management plan.
• Understand the basic types and steps of risk management strategies.
• Understand the resources available to assist in developing a risk management plan.

Definitions

Risk: the affect of an uncertain situation that represents an undesirable outcome to you and/or your business.

Risk management: the managing of business practices to avoid and/or protect against a certain level of unacceptable loss.

Uncertainty: a lack of complete knowledge about the future, which makes it a challenge to plan and to make decisions on how to operate a business. Uncertainty is associated with things like the weather, market supply/demand and prices, and other factors out of your control.
TOPIC 1: What is Risk and Why is it an Important Agribusiness Management Issue?

**Learning Outcome:** Students will understand the definition, importance and types of an agribusiness risk management plan.

- Risk is a part of everyday life. There is nothing in life that is completely risk-free, and so we go through life understanding, and accepting or rejecting, certain levels of risk.
  - For example, most of us know that driving a car has some risk. We understand that, and we are prepared to accept a certain level of risk to drive.
  - That level of risk may change depending on other factors. For instance, driving becomes riskier during a snow storm, or if your tires are worn.
  - The level of risk that you are comfortable with is based in part by your personality, your upbringing, and your ability to absorb a loss.
    - So, for example, you may decide that it is too risky to drive in a snow storm, but that it is okay to drive for a while with worn tires. You decided that the potential loss in a snow storm is too great to risk, but that the potential loss from a tire failure is not too much risk.
  - There are things you can do to manage your risk, by either reducing the likelihood of something bad happening, or by mitigating (making less severe) the loss when something bad does happen.
    - By not driving in a snow storm, you reduce the likelihood of something bad happening. By carrying a spare tire, you lessen the potential loss if a tire fails.
  - Risk management in agribusiness has the same basic considerations as the example here. It takes into account the level of risk of an activity, influencing factors, your personality about risk, and management practices that reduce risk or loss.

- Farming and ranching (and other agriculture-related operations) are businesses that deal with a high level of uncertainty and risk.
  - Uncertainty is a lack of perfect knowledge about the future. Uncertainty makes it a challenge to plan and to make decisions on how to operate the agribusiness. Uncertainty is related with things like the weather, market supply and demand, price fluctuations, and other factors that are out of your control.
Risk is when the outcome of an uncertain situation represents a concern to you and your agribusiness. It is the chance for some injury, damage or loss. Some uncertainty may not be associated with risk for you (like the weather in Antarctica) while other uncertainty may be risky for you (like the weather in Montana).

Risk management in agribusiness then is the managing of your business practices to avoid and/or protect yourself against a certain level of unacceptable loss.

Depending on the agricultural business, there are usually five basic types of risk to consider. The USDA’s Risk Management Agency lists the following types of risk:

1. **Production Risk:** from the uncertain nature of crop and livestock production due to weather, disease, pests and other factors.

2. **Marketing Risk:** from the uncertainty about the prices producers will get for their product and the prices they will pay for their inputs.

3. **Financial Risk:** from the obligation of debt and the uncertain ability to pay back the debt. It also includes rising interest rates, credit availability, cash flow maintenance and equity growth.

4. **Legal Risk:** from the uncertainty of legal arrangements, including ownership structures, leases and contracts, and legal regulations that may also include tax issues and environmental laws.

5. **Human Risk:** from the uncertainty caused by human error or resulting in harm to humans, including personal injury or illness, family relationships, retirement and succession, and labor relations.
Agribusiness risk management is important because it protects you, your family, and your agribusiness from losses that could, in the worst case, bankrupt you and your business.

- Even if the worst does not happen, unmanaged risk and loss could set your business and personal goals back many years, and create huge challenges for your future success.

- Every agribusiness has its own unique risk characteristics based on the type of business, its location, its owners, its finances and other factors. While many kinds of risks and management strategies will apply to businesses, each agribusiness owner should think about their risk characteristics based on their unique situation.

- Risk management provides you with the tools to understand different types of risk and then to apply the right strategies to reduce the potential loss associated with those risks.
TOPIC 2: Risk Management Strategies.

Learning Outcome: Students will understand the basic types and steps of risk management strategies.

➢ In general, for every type of risk, there are four basic steps to risk management:

1. **Risk Identification**: knowing and appreciating the risk.

2. **Assigning Probabilities and Outcomes**: determining the chance of the risk happening and the potential results if it happens.

3. **Identify Risk Goals**: deciding what you want or need to accomplish regarding the risk.

4. **Identify the Risk Management Strategies, Tools and Products**: learning about the risk management solutions and choosing the right ones.

➢ For each type of risk discussed in the previous topic, there are strategies, tools and products available to manage that type of risk. As a reminder, the five types of risk discussed were as follows:

1. **Production Risk** includes any unforeseen event that can lower your production or yield.

There have been major improvements in agricultural technologies that have reduced yield variability (and production risk), including genetic improvements, better agricultural practices, and more efficient farm/ranch technology. However, production risk is still the major concern of most agribusinesses.

   o First, following the four steps to risk management, risk identification in production involves carefully studying your entire production chain (from inputs to processes to outputs) for risk.

   ▪ This includes your ability to secure safe and affordable inputs; to maintain your production processes; and to deliver your product within quality and quantity standards. (Note: It may be helpful to review the production/operation function in Module 1: Business, Lesson 2: Basics of Agribusiness.)

   ▪ This includes your ability to secure safe and affordable inputs; to maintain your production processes; and to deliver your product within quality and quantity standards. (Note: It may be helpful to review the production/operation function in Module 1: Business, Lesson 2: Basics of Agribusiness.)
• You are in the best position to evaluate the risk in your production chain.

• You will know your business and yourself better than anyone.

• Ask yourself “What if?” questions about something bad affecting your production throughout the chain. For example, “What if there is a drought next season?”

  o Next, assigning probabilities and outcomes means that you consider the chances of each risk identified actually happening, and if it does, what that would mean to you and your business.

  • Ask yourself, “How likely is….to occur?” For example, “How likely is it that a drought will occur next season?” After doing some research, perhaps you decide that there is about a 1 in 10 chance (10%) of a drought happening.

  • Then ask yourself, “What would that do to my business production?” You may decide that if a drought was to occur, it could reduce yields significantly, which would lead to serious financial consequences.

  o Then, think about your risk goals. What do you want or need regarding the risk?

  • If you are in your 70s and have been farming your entire life, you may have the resources to withstand a poor crop. However, if you are a new farmer in your 20s, have a lot of debt, and are raising a young family, you may not be able to take on that risk.

  • You may decide that you need to protect yourself against the possibility of drought, and that you don’t have the resources to do so on your own.

  o Finally, consider your options for risk management strategies, tools and products. You should consult with a trusted professional to determine the best options for your agribusiness.

  • Implementing the appropriate farm practices should generally be your first step toward managing production risk. For example, if you think that drought represents a serious risk to your agribusiness, you might be able to reduce that risk by installing irrigation or planting more drought-resistant crops.

  • Diversification is another strategy to reduce production risk. Producers can add different enterprises to their operations so that no single event can cause catastrophic losses to the entire agribusiness.
So, for example, a producer might start raising chickens and hogs, in addition to his grain operation.

- Flexible farm management is a related strategy, where your operation shifts its production according to favorable market conditions. So, if grain prices are high and feed prices are low, you sell your grain and buy feed. But if prices for grain are low and feed is high, you feed your grain.

- Both diversification and flexible farm management are related to the concept of whole farm management, which emphasizes strategic, holistic, long-term planning.

- Crop insurance is probably the most well-known and used production risk management tool. There are many types of crop insurance. Generally, crop insurance (called Multi-Peril) protects the farmer against crop failure due to natural events, including drought, excessive moisture, freeze and disease.

- Remember though, an insurance payout is never as profitable as a good crop and should not be thought of as a good outcome.

- Returning to the example of drought risk, you may decide that you want to purchase crop insurance to cover the risk of drought.

2. **Marketing Risk** deals with uncertainty related to the prices that your products/services will sell for, and the costs of your inputs. Every year, producers plan to make money by trying to estimate the prices they will receive for their products, and the costs for their inputs. Yet, no matter how well the experts can forecast prices and costs, there are often unexpected price changes that can greatly affect businesses.

- Risk identification related to marketing involves careful forecasting of all market prices and costs associated with your agribusiness. It includes the expected selling prices for all your potential agribusiness products and services, and the expected costs for all your inputs.

  - Ask yourself “What if?” questions about price or cost changes that could negatively affect your business. For example, “What if my costs for fertilizer doubled?”

- Next, assign probabilities and outcomes.
For example, “How likely is it that fertilizer prices will double by next year?” Perhaps you decide that there is about a 1 in 10 chance (10%) of that happening.

Then consider the possible outcomes. You may decide that if fertilizer prices were to rise steeply, it could create a serious cash flow problem for the agribusiness.

- Then decide what do you want or need regarding the risk. These are your risk goals.
  - You decide that you need to protect yourself against the possibility of price hikes, and that you don’t have the financial resources to do so on your own.

- Finally, consider your options for risk management strategies, tools and products.
  - As mentioned earlier, the appropriate farm practices should be your first step toward managing risk. For example, if a farmer determines that uncertain fertilizer prices represents a serious risk to her business, she can implement farm practices to reduce that risk, such as planting nitrogen-producing cover or feed crops that reduce the need for purchased fertilizer.
  - Forward pricing can shift the risk of price changes to the buyer by locking in a selling price in advance of delivery. Of course, the seller also gives up the chance for added profit if prices go up. Likewise, advanced purchasing locks in input costs against rising prices.
  - Cash reserves and credit lines are a way to protect against changes in production costs. Cash reserves also provide flexibility to take advantage of profitable opportunities, like off-season and volume discounting. However, cash reserves can also tie up valuable liquid assets and lines of credit, and if they are used, they need to be repaid.
  - Some crop insurance policies protect against changes in market price. There are also some insurance policies that protect ranchers and their livestock against price changes.
  - Returning to the example of fertilizer price hikes, you decide that you want to secure a line of credit to cover any unexpected price increases in your fertilizer inputs.

3. **Financial Risk** deals with uncertainty related to the cost of debt capital, cash flow needs and equity. It should also be considered both in a family context and a business context because family finances can affect business finances, and vice versa.
Financial risk identification involves first having accurate information of your current financial standing, and then calculating various financial measures that can tell if you are at risk. (For more information on financial measurements, see Calculating The “Sweet 16” Farm Financial Measures, in the reference section).

- Ask yourself what are the potential risks about your finances? For example, “What if something bad happens and I can’t repay my bank loan?”

Assigning probabilities and outcomes about your financial risks is the next step.

- For example, “How likely is it that I won’t be able to repay my loan over the course of its life?” Perhaps you decide that there is about a 2 in 10 chance (20%) of that happening.
- Possible outcomes may include defaulting on the loan, damaging your credit standing, and risking your collateral, which might include valuable assets like your land or home.

Your risk goals may be to simply avoid any and all possibilities (risk) of a loan default because of the unacceptable outcomes of losing your land or home.

Finally, what are your options for financial risk management strategies, tools and products?

- Appropriate farm finance practices are the first step toward managing risk.
  - For example, regarding debt, simply avoiding new debt or debt beyond a certain debt-to-asset ratio, if at all possible, might be the best strategy.
  - Choosing the right kind of loan and repayment plan is another strategy that could reduce the likelihood of default.
  - Another strategy is to consider improving your debt ratio and/or increasing your asset liquidity by selling off rarely used but high-value capital equipment.

- Maintaining cash reserves, or liquid assets, is another important financial risk management strategy. Savings accounts, money market accounts, and short-term certificates of deposits (CDs) are places to keep cash reserves for unexpected needs. Cash reserves should be maintained for both the business and the family. Many times an
unexpected family expense (for example, a new roof) has negatively impacted business finances because there were insufficient family cash reserves.

- Credit reserves and credit lines are other ways to protect against financial risk. Credit reserves are the un-borrowed portions of an approved loan. For example, a farm manager might be approved for a $250,000 loan, but only borrow $150,000, with the option to borrow the rest later. Lines of credit are established with a financial institution with a preset limit, and interest is only charged when credit is used.

- Equity capital is another financial tool, where some percentage of the ownership of the business is sold to investors. This has the advantage over other debt because there is typically no interest or principal payback to the investor. Instead, the investor gets a percentage of the profits and the company. Of course, the downside is that you are diluting your ownership share of the company.

- Insurance, such as property and home owners, can protect capital-intensive or indebted assets that you can’t afford to lose or repay. Health insurance is also an important risk management tool because health costs are a common cause of personal bankruptcy.

- The financial strategies and tools mentioned here are only a small example of what is available. There are many different types of financial tools and products available in the marketplace, and the right one for your family and agribusiness will depend on your specific needs. Visiting with a trusted professional financial advisor is the best place to start your financial risk management planning.

- Finally, remember to consider the risks common to family finances, including risk involving the loss of employment, disability, credit card use, home mortgages, car loans and unexpected bills. These can all have a negative effect on your business.

4. **Legal Risk** deals with uncertainty related to the legal field. It can involve ownership arrangements, contracting, renting and leasing, taxes, regulatory matters and protection from being sued. Every business owner should consult with an attorney for advice regarding their specific situation.

   - Legal risk identification starts with listing all your legal arrangements and interactions, current and potential, and personal, family and business related.

   - Ask yourself what are the potential legal risks to you, your family and your agribusiness? For example, “What if my renter stops making payments for his pasture rental?”
Knowing the probabilities and outcomes of your legal risks is next.

- For example, “How likely is it that my renter will stop making payments?” Maybe you know he is having a hard time, and think that there is about a 4 in 10 chance (40%) of that happening.

- Possible outcomes may include missing the rent income to the point where your cash flow becomes a problem.

Your risk goals may be the need for a quick eviction and transition to a new renter, so you can maintain a stable income stream from the rented pasture.

Finally, what are your options for legal risk management strategies, tools and products?

- There are many legal strategies, tools and products regarding areas of business ownership, business insurance, leasing and renting agreements, contracting, tax planning, bankruptcy, environmental regulations, succession and estate planning, personal and business liability and more.

- Because the possible legal options for you, your family and business are many, variable, and highly dependent on your situation, you and your attorney are the best people to develop solutions that address your legal risks.

- In the example of the renter, you may decide to have your attorney draw up legal papers and processes for rental evictions and new rental agreements.

5. **Human Risk** deals with events caused by human error, or events resulting in harm to humans, including personal injury or illness. Farms and ranches are unique places where workers and families are at risk for many fatal and nonfatal injuries. There are many hazardous work areas associated with equipment, tools and machinery, storage areas, livestock, and chemicals and pesticides.

- Human risk identification includes assessing all areas of risk from, and to, persons in your family and business operations. This can include farm and ranch safety issues that could result in personal injury, or illness and disease from certain farm practices (like pesticide application).

  - Make sure to assess risks around the farm and ranch from a child’s perspective. Children see the world differently and have different ideas of how things can be used.

  - A safety audit involves “walking through” your entire operation looking for safety problems and fixes. Think about any “close calls” you, your family and your workers may have had in the past.
• Ask yourself the “What if?” questions. For example, “What if my horse throws me and I break a leg?”

  o What are the probabilities and outcomes of your human risks?

    • For example, “How likely is it that my horse will throw me and I’ll break my leg?” Maybe you have a good horse and you’re an experienced rider so you think that there is about a 1 in 50 chance (2%) of that happening.

    • The possible outcomes may include missing work while your leg heals, which could be 12-24 weeks or more. That would mean a critical loss of manpower and the need to hire temporary help.

  o Your risk goal may be the need for some disability support should you become injured.

  o Finally, what are your options for human risk management strategies, tools and products?

    • As before, your best first step is to implement practices that help to minimize the possible risk and outcomes. These practices may include strong farm safety training, using safe farm and livestock-handling practices, taking chemical and pesticide precautions, and using safer equipment and machinery.

    • Having an outsider conduct a safety audit is a good idea. They can identify risks you may not have thought about, as well as safer practices.

    • Personal injury (and health, disability and life) insurance for you, your family and your employees is an important risk management strategy to consider.

    • Liability insurance that protects the business against claims or lawsuits made for personal injury or damages due to alleged negligence is another important tool.

    • Finally, taking the time and attention to care for the relationships in your family and your agribusiness will help prevent damage to those relationships that are important to your family’s or business’s wellbeing.

  o In summary, acknowledge the importance and complexity of risk management. It is something that needs to be taken seriously because your family and business is nothing to gamble with.
TOPIC 3: Where to Find Assistance in Developing a Risk Management Plan.

**Learning Outcome:** Students will understand the resources at the local, state and federal level that are available to assist in developing a risk management plan.

➢ There is a great deal of help available for developing a good agribusiness risk management plan. At the national (federal) level, here are some useful resources:

   o The U.S. Department of Agriculture’s (USDA) Risk Management Agency maintains a New Farmer Risk Management website with information and planning tools.

   o USDA’s Economic Research Service provides Farm Risk and Risk Management websites with links to recommended readings, data and briefs on risk management strategies.

   o The Cooperative Extension System, which includes many state land-grant extension services, maintains eXtension, a web-based clearinghouse of extension publications and information.

   o Each of these resources provides contact information, as well as links to other resources throughout the web.

➢ At the state level there are useful resources specific to your state. Contact your local extension office or technical service providers for details.

**References**


The Business of Indian Agriculture

MODULE 2: Accounting

Lessons

This module covers the following lessons:

• Basics of Agribusiness Accounting & Bookkeeping.
• Journals and Ledgers.
• Preparing Financial Statements.
• Analyzing Financial Statements.
• Preparing for Credit Applications.
Module 2: Accounting
LESSON 1: Basics of Agribusiness
Accounting & Bookkeeping
LESSON 1: Basics of Agribusiness Accounting & Bookkeeping

Lesson Topics

This lesson covers the following topics:

- What is Agribusiness Accounting and Bookkeeping?
- Basic Accounting Concepts.
- The Importance of Recordkeeping.

Learning Objectives

Upon completion of this lesson, participants will:

- Understand the basic definition of accounting and its importance to agribusiness, and will know the difference between accounting and bookkeeping.
- Understand basic accounting concepts, including assets and liabilities, equity, income and expenses, inventory and depreciation.
- Understand the importance and basic considerations of recordkeeping.

Definitions

**Accounting:** the business function that involves the preparation, review and understanding of the financial situation of an agribusiness. It has two purposes: to provide an accurate picture of the financial situation of a business, and to develop a set of standard financial documents that others can use to assess the finances of the business.

**Accrual Accounting:** the type of accounting that records income when it is earned (not yet received) and expenses when they are incurred (not yet paid).

**Assets:** financial holdings that represent a company’s net worth by accounting for the things of value in a business. Assets include cash on hand, cars and trucks, property and land, equipment and outstanding claims. Some assets are more intangible, such as patents and trademark rights.

**Bookkeeping:** the business function that involves the actual recording of the business transactions into various record books, journals or ledgers.

**Cash Basis Accounting:** the type of accounting that records the cash that you receive as income when it is received, and records expenses when they are paid out.

**Cash Flow:** the accounting of cash receipts and payments over a period of time. Cash flow can be analyzed as a report that summarizes past cash flow, or as a planning budget that forecasts cash flows into the future.
Cost of Sales: the expenses and labor that are needed to produce the product or service to be sold. It is also referred to as the “cost of goods sold.”

Depreciation: the deduction of value of a tangible asset over the useful lifetime of that item. Most businesses, including agribusinesses, can treat depreciation as a business expense.

Expenses: financial flows that represent money going out of the agribusiness. Expenses can be categorized as recurring (or operating), such as monthly payments for utilities, salaries and wages, rentals and credit payments. Other expenses may be irregular (or incidental), such as repairs or one-time purchases.

Income: financial flows representing money coming into the agribusiness. Income can be generated from a number of sources, such as sales of various products or services, bank interest, or rental or leased property. It can also be from investments into owner equity, and loans and credit.

Inventory: this is the physical count of all the agribusiness’s assets and their value.

Liabilities: financial holdings that represent a company’s obligations to pay out value from the business. Liabilities are the opposite of assets, and are those things owed by a business, including accounts payable and debt.

Owner’s Equity: the difference between the business’s assets and liabilities. It is also sometimes referred to as the business’s “net worth.”

Profit and Loss: the agribusiness’s revenue minus the cost of sales. It is also referred to as the “profit margin.” It is often considered the agribusiness’s bottom line – whether the agribusiness is making money or not.

Recordkeeping: the orderly recording and safe storage of all business documents and activities. Recordkeeping is a term that is often used interchangeably with bookkeeping, however, strictly speaking, bookkeeping is more specific to financial matters and accounting functions.
TOPIC 1: What is Agribusiness Accounting and Bookkeeping?

Learning Outcome: Students will understand the basic definition of accounting and its importance to agribusiness, and will know the difference between accounting and bookkeeping.

➢ Accounting is preparing, reviewing and understanding the financial situation of an agribusiness. It also includes developing ways to improve the agribusiness's financial condition.

  o Accounting has two main objectives:
    ▪ to provide an accurate picture of the financial situation of an agribusiness; and
    ▪ to create a set of standard financial documents that others can review to assess the finances of the agribusiness.

  o Accounting is a critical function in any agribusiness because it provides vital information on the current business operations, and is required for future planning.

  o Accounting systems require that accurate business records exist that provide the necessary financial data to perform basic accounting tasks and to make financial decisions.

➢ The difference between accounting and bookkeeping can be confusing, but each function performs an important role and they both depend upon each other to keep the agribusiness financially healthy.

  o As mentioned above, accounting involves the preparation, review and understanding of the finances of an agribusiness.

    ▪ It has two purposes: to provide an accurate picture of the financial situation of a business, and to develop a set of standard financial documents that others can use to assess the finances of the business.

  o Bookkeeping, on the other hand, is the actual recording of the business transactions into various record books, journals or ledgers. This is often done with computers, but can also be done by hand.

    ▪ Recordkeeping is a term that is often used interchangeably with bookkeeping. Strictly speaking, recordkeeping involves the orderly recording and safe storage of all business documents and activities while bookkeeping is more specific to financial matters and accounting functions.
For example, bookkeeping would include the recording of transactions in journals and ledgers, and the storing of copies of the invoices (billing) of customers and of the payments received. Accounting would include analyzing the journal and ledger entries (and perhaps the stored copies) to determine the current cash flow of the business in order to prepare a Statement of Cash Flows.

Both accounting and bookkeeping are necessary, not only to run a successful business, but also to successfully apply for credit, government assistance programs, or claims for discriminatory practices.

- Good bookkeeping and accounting is also necessary for business ownership restructuring, crop and other insurance, land dealings and much more.

The technical skills required for accounting and bookkeeping are not especially difficult. However, successful accounting and bookkeeping require someone who is good with details, is orderly in their work, has strong basic math skills, and above all, approaches the tasks with a good attitude. Knowing how to use a computer is a definite plus.

- Accounting and bookkeeping is not for everyone. Sometimes, the best decision you can make is to recognize that accounting and bookkeeping is not for you, and to hire someone to do that work.

- Finally, all financial business transactions and holdings should be separated from your personal and household finances. This means separate bank accounts, credit cards, accounting and bookkeeping.
Case Study: Jeff, the Farm Equipment Repair Business, and the Retired Dad.

Jeff worked at his dad’s farm equipment repair business for years, and learned to fix just about anything. He loved his work, and he had earned a reputation as someone who you could depend on to do the job right. His dad managed the parts supply and the money side of the business. Jeff was the main mechanic, and that left him free to do what he really loved: work on tractors and other farm equipment.

Last spring, Jeff’s dad retired and Jeff took over the entire business. Before, when his dad ran the business side of things, Jeff would simply toss receipts or payments in the inbox on his dad’s desk, and go on to his next chore. Now, with his dad retired, Jeff kept doing the same thing: tossing papers on his dad’s desk. Except now it was his desk, and the inbox had turned into an in-pile. Also, Jeff now had to deal with the parts supply business and so there were order forms, invoices and receipts to handle. Checks had to be written, deposits had to be made, and someone had to go through all that mail that kept coming every day.

Jeff still loved to be a mechanic, so he spent as little time on paperwork as possible. In fact, he really disliked the paperwork, so he found lots of reasons to put off dealing with it. Things went along fine for a while, until one day in late March, when he got a call from the bank telling him that his checking account was over-drafted.

Jeff put the phone down, walked over to his desk, and looked at the mountain of papers. He had been thinking about applying for a loan to buy a new work truck. Now the bank was telling him his checking account was empty. He realized he didn’t know what to do, or where to start.

Questions:

What basic accounting and bookkeeping issues does Jeff need to understand and appreciate?

Besides the bank overdraft, what other problems do you see for Jeff’s agribusiness?

What do you think Jeff should do?
TOPIC 2: Basic Accounting Concepts.

Learning Outcome: Students will understand basic accounting concepts, including assets and liabilities, equity, income and expenses, inventory and depreciation.

➢ There are a number of basic accounting concepts that need to be understood before accounting decisions can be made for a successful agribusiness. In this lesson, the following basic accounting terms will be introduced and discussed, which will lay a foundation for the next lessons in the Accounting module:

  o **Types of Accounting – Cash Basis or Accrual:** there are two main types of accounting, and you can choose the one that fits your agribusiness the best.
    - Cash Basis accounting records the cash that you receive as income when it is received, and records expenses when they are paid out.
      - Cash Basis accounting works well for businesses that do not have large inventories, or are service-orientated. It is the simpler type of accounting and is favored by small businesses.
      - Many farm operations use Cash Basis accounting because it is easy to shift income and expenses into different tax years by timing the transactions.
    - Accrual accounting records income when it is earned (not yet received) and expenses when they are incurred (not yet paid).
      - In this type of accounting, revenues are matched with their associated expenses, and are recorded when the business activity happens, not when money is exchanged.
      - It is a more complicated type of accounting, but provides a more accurate financial picture. For this reason, most large businesses use Accrual accounting.

  o **Income and Expenses:** these financial concepts represent money coming into the agribusiness (as income) and money going out of the agribusiness (as expenses).
    - Income can be made from a variety of sources, such as sales of products or services, bank interest, or rental or leased property. It can also come from investments in owner’s equity, and from loans and credit.
• If an agribusiness has multiple product lines or service offerings, it may make sense to have separate income accounts so that you can track the income of each line of your agribusiness. However, too many income accounts can become difficult to manage.

• The term revenue is often used interchangeably with income. Strictly speaking, revenue includes all sources of money coming into the company, while income is money coming in minus expenses (often called net income).

  ▪ Expenses can be categorized as recurring (or operating), such as monthly payments for utilities, salaries and wages, rentals and credit payments. Other expenses may be irregular (or incidental), such as repairs or one-time purchases.

  • Expense accounts can also be separated by different business lines if they are unique to particular products or services.

  • A reserve or emergency fund is often kept as an account for unexpected expenses.

  o **Cost of Sales:** this is the expenses and labor that were needed to produce the product or service to be sold. It is also called the “cost of goods sold.”

    ▪ It can include packaging, storage and transportation costs.

    ▪ In many service-related agribusinesses, there may be no cost of sales involved.

  o **Profit and Loss:** this is the agribusiness’s revenue minus the cost of sales. It is also referred to as the “profit margin.” It is often considered the agribusiness’s bottom line – a measure of whether the agribusiness is making money or not.

    ▪ If revenue minus cost of sales is positive, then a profit is being made.

    ▪ If revenue minus cost of sales is negative, then a loss is happening.

  o **Cash Flow:** this is the level of cash receipts and payments over some period of time. Cash flow can be used as a report that summarizes past cash flow, or as a planning budget that forecasts future cash flows.

    ▪ Cash flow, by itself, does not provide a full picture of the business’s finances, but it is an important accounting measure for the operation of the business.

    • If cash flows become too low, you may run out of cash and short-term credit may be necessary. If cash flows are too high,
then money is sitting and not being used and should be invested to make more income.

- **Assets and Liabilities:** these financial holdings together represent your company’s net worth by accounting for the things of value owned by your business (assets) and the obligations that pay out value from the business (liabilities).
  - Assets are those things of value that are owned by your business, including cash on hand, cars and trucks, property and land, equipment and outstanding claims. Some assets are more intangible, such as patents and trademark rights.
  - Liabilities are the opposite of assets, and are those things owed by your business, including accounts payable and debt.

- Usually, liabilities are categorized as short-term (which means to be paid within the accounting period – 12 months or less) or as long-term (to be paid beyond the accounting period). These categories provide a more accurate picture of your liabilities.

- **Owner’s Equity:** this is the difference between the business's assets and liabilities, and it is hopefully a positive amount. It is also sometimes referred to as the business’s “net worth.”
  - Retained earnings (or accumulated profits), company stock and partners’ investments also count toward owner’s equity.
  - A related accounting concept is owner’s capital, which represents the investment by the owner in the business, and includes the start-up funding from the owner, as well as any equipment and buildings.

- **Inventory:** this is the physical count of all the agribusiness’s assets and their value.
  - Inventories should be done at the same time each year so that accurate yearly comparisons can be made. Inventories are usually conducted during slow business periods, or they match the tax calendar.
  - There are two main methods of determining inventory value: book value and market value.
    - Book value represents the original cost of an item minus depreciation. This is usually used for tax purposes and estate planning.
• Market value represents the book value minus additional costs (such as transportation or marketing costs). This is typically used for insurance and credit purposes.

• There are many variations of the two main inventory methods. Whichever method is chosen, it should be used consistently throughout the years.

  o **Depreciation:** this is the deduction of value of a tangible asset over the useful lifetime of that item.

    ▪ Most businesses, including agribusinesses, can treat depreciation as a business expense.

    • Depreciation of agricultural machinery, buildings, equipment and storage facilities represents a major agribusiness expense.

    • Capital improvements, such as a new roof, remodeling or building additions are also subject to the same depreciation principles.

    ▪ There are various ways to calculate depreciation. One popular and simple method is called straight-line depreciation. The depreciation per year is calculated by dividing the value of the asset over the expected life of the item.
TOPIC 3: The Importance of Recordkeeping.

Learning Outcome: Students will understand the importance and basic considerations of recordkeeping.

- Recordkeeping is the orderly recording and safe storage of all important business documents and activities. Recordkeeping is a term that is often used interchangeably with bookkeeping; however, strictly speaking, bookkeeping is more specific to financial matters and accounting functions.
  - Recordkeeping involves the documenting and storing of evidence of all the major functions, systems and processes associated with a business.
  - Recordkeeping is based on a basic principle that, “if it isn’t in writing, then it didn’t happen.”
  - Recordkeeping is necessary for a variety of critical agribusiness needs, including:
    - Applying and securing capital loans and investments;
    - Tracking crop inputs and yields and/or herd management;
    - Making insurance claims for crop and/or livestock losses;
    - Applying for conservation programs;
    - Preparing financial statements and performing basic accounting;
    - Paying taxes;
    - Strategic and budget planning;
    - Managing employees;
    - Tracking customers and marketing;
    - Tracking inventory, equipment and machinery;
    - Managing product and/or service development and delivery;
    - Storing official letters and correspondence, titles, deeds and other legal documents; and
    - Even keeping track of weather data, which is becoming increasingly important.
There are many good ways to keep accurate and complete records of your agribusiness. They range from comprehensive computer applications or web-based online systems to simple hand-written logs and notes.

- No matter what type of system you use, the fundamental processes remain the same.
- You should choose the system that best fits with your skill set, and that best meets the needs for your business.
- If recordkeeping is not something you want to do, then consider hiring someone who can, at the least, help set up a recordkeeping system that is easy for you to use.
- Whatever system you use, you should have a backup set of records in case your primary set is lost or damaged.

There are several basic steps to developing a recordkeeping system for your agribusiness.

- First, you should decide your goals and purposes for recordkeeping: what business functions do you need to track? These may include major functions such as finances (e.g., expenses and revenue), crop inputs and production, employee records and customer data.
- Next, you should choose the type of system that best fits your needs and skills (e.g., computer system, hand-written or a combination of both). You may decide to hire some help at this point.
- The next step is to create recording templates for each of the functions that you need to document. There are a variety of templates available on the web that can be copied and adapted for many uses. Most of these templates are computer-based, but they can be easily adapted for hand-written use.
- Once you have created your templates, record your entries. Recordkeeping only works if you use your system on a regular, consistent and accurate basis. It also means writing legibly, so that it is readable to anyone who will need to review a document.
- Finally, keep your records in a safe and accessible place.
  - This includes making backup copies in case your primary copy is lost or damaged. Depending on the frequency of entries, you may want to make regular backup copies on a daily, weekly or monthly basis.
• Backup copies should be kept in an entirely separate system and location. So, for example, if you have a system that resides on your office computer, then your backup should be on an external storage device outside your office (and perhaps building). Or, the data could be stored in a “cloud” (online storage) app.

• For very important documents, people often use a bank’s safe deposit box and/or fireproof safe storage boxes.
  
  ▪ Because your business information is sensitive, it should always be password protected.
  
  ▪ If you have field logs to record, consider using durable materials such as heavy stock paper and water-proof containers.

➤ Let’s go through some selected examples of recordkeeping. In the tables below, review the record templates with the information given.

  o To record harvest data, record the harvest date, crop, field and the quantity harvested. If your harvest will be stored or delivered in certain ways, you can add additional information such as a lot or other identifying number.

    ▪ You can also add information about the harvesting equipment used and when it was cleaned, buyer’s information or storage locations.

<table>
<thead>
<tr>
<th>CROP HARVEST RECORD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harvest Date</td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>08/27</td>
</tr>
<tr>
<td>08/29</td>
</tr>
</tbody>
</table>

  o To record sales data, record the sales date, item, quantity sold, buyer and price. You can add additional information such as lot or other identifying number that would allow you to track the items to the harvest record.

    ▪ Your buyer information could also link with a customer record template, which would contain more information about each customer and their purchasing history.
### SALES RECORD

<table>
<thead>
<tr>
<th>Sell Date</th>
<th>Item</th>
<th>Units</th>
<th>Buyer</th>
<th>Unit Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>08/30</td>
<td>Sweet Corn</td>
<td>150 ears</td>
<td>Lakeside Market</td>
<td>4/$1</td>
</tr>
<tr>
<td>09/02</td>
<td>Tomatoes</td>
<td>30 cartons</td>
<td>CSA</td>
<td>$2/cnt.</td>
</tr>
</tbody>
</table>

**References**


The Business of Indian Agriculture
Module 2: Accounting
LESSON 1: Basics of Agribusiness Accounting & Bookkeeping
TOPIC 2: Basic Accounting Concepts

Crossword Puzzle

ACROSS
1. The physical count of all the agribusiness's assets and their value.
5. The deduction of value of a tangible asset over the useful lifetime of that item.
6. The preparation, review and understanding of the financial situation of an agribusiness.
7. The state of cash receipts and payments over a period of time.
9. The agribusiness's revenue minus the cost of sales.
10. The difference between the business's assets and liabilities.
12. The expenses and labor needed to produce the product or service to be sold.
13. Financial holdings that represent a company's obligation to pay out value from the business.

DOWN
2. Financial flows representing money going out of the agribusiness.
3. The type of accounting that records income when earned and expenses when incurred.
4. The recording of business transactions into record books, journals and ledgers.
8. Financial holdings that represent things of value owned by the company.
11. Financial flows representing money coming into the agribusiness.
The Business of Indian Agriculture
Module 2: Accounting
LESSON 1: Basics of Agribusiness Accounting & Bookkeeping
TOPIC 3: Importance of Recordkeeping

Planting and Harvesting Record

Instructions: Complete the Planting and Harvesting Record below as follows:

**Crop:** name of the crop.

**Field:** where the seed or plant is planted on your farm.

**Planting Date:** date the crop seed was planted, or date the crop plant was transplanted to the land.

**Acres or # rows:** number of acres or number of rows planted for each crop.

**Harvest dates:** dates the crop is harvested.

**Harvest units:** amount of harvest in units appropriate for each crop.

The information you are to record is as follows:

- You planted five acres of sweet corn seed in field # 3 on May 17, and harvested 1,100 crates on August 4th.
- Ten rows of zucchini seed were planted in field # 1 on May 22, with 500 lbs. harvested on July 20.
- You planted 25 acres of alfalfa seed in field #5 on May 10, with the first cutting on July 10, which yielded 7 tons per acre.

---

<table>
<thead>
<tr>
<th>PLANTING AND HARVEST RECORD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Crop</strong></td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
MODULE 2: Accounting

LESSON 2: Journals and Ledgers

Lesson Topics

This lesson covers the following topics:

- What are Journals and Ledgers?
- How to Use Journals.
- How to Use Ledgers.

Learning Objectives

Upon completion of this lesson, participants will:

- Understand the basic definition of journals and ledgers in accounting and bookkeeping, as well as the terms debit and credit.
- Understand journals and gain practical experience on how to use journals.
- Understand ledgers and gain practical experience on how to use ledgers.

Definitions

Credits: the part of an accounting transaction that will increase liabilities and equity and decrease assets. Credits increase income accounts and decrease expense accounts. This term has a specific meaning to bookkeeping and accounting, and should not be confused with other uses of the word.

Debits: the part of an accounting transaction that will increase assets and decrease liabilities and equity. Debits decrease income accounts and increase expense accounts. This term has a specific meaning to bookkeeping and accounting, and should not be confused with other uses of the word.

Double-entry bookkeeping system: an accounting system that records every transaction in two places, with a matching credit and a debit entry. This system reduces the likelihood of errors, and provides a more accurate picture of the financial situation.
**Journals:** the chronological (time-based) record of business transactions. Information is recorded as it happens, and includes the date of the transaction, the amount and an explanation.

**Ledgers:** the records of business transactions categorized by separate accounts. Account groups include the business's assets and liabilities, such as cash, expense accounts and owner's equity.

**Posting:** the process where debits and credits are transferred from the journal to account ledgers.

**Single-entry bookkeeping system:** an accounting system that records every transaction only once (such as in a checkbook). It is simple and easy to use, but is more error prone and provides less information than a double-entry system.
TOPIC 1: What are Journals and Ledgers?

Learning Outcome: Students will understand the basic definition of journals and ledgers in accounting and bookkeeping, as well as the terms debit and credit.

- Journals and ledgers are two important tools used to keep accurate records of an agribusiness’s finances.
  - Journals are the chronological (time-based) record of business transactions. Information is recorded as it happens, and includes the date of the transaction, the amount and an explanation.
  - Ledgers are the records of business transactions grouped by separate accounts. Account groups include the business’s assets and liabilities, such as cash, expense accounts and owner’s equity.

- Before we learn more about journals and ledgers, there are two important terms that need to be understood: debits and credits.
  - **Debits and Credits**: these two terms have a specific meaning to bookkeeping and accounting, and should not be confused with other uses of the words (such as credit or debit cards, or taking on debt, or using credit).
    - Debits and credits are the basic building blocks of the double-entry bookkeeping system (as opposed to the single-entry bookkeeping system).
      - A double-entry bookkeeping system records every transaction in two places, with a matching credit and a debit entry. This system reduces the likelihood of errors, and provides a more accurate picture of the financial situation.
      - A single-entry bookkeeping system records every transaction only once (such as in a checkbook). It is simple and easy to use, but is more error prone and provides less information than a double-entry system.

- Debit and credit represent the recording of the two sides of a transaction in an accounting system; for every debit transaction there must be a corresponding credit transaction and vice versa.
  - In strict accounting terms, debits are recorded on the left side of the ledger, credits on the right side. We will learn more about this in the following topics on journals and ledgers.
Debits are the part of a transaction that will increase assets and decrease liabilities and equity. Credits are the part of a transaction that will increase liabilities and equity and decrease assets.

- Credits increase income accounts and decrease expense accounts, while debits decrease income accounts and increase expense accounts.

The table below shows how debit and credit transactions correspond to the five major types of ledger accounts.

<table>
<thead>
<tr>
<th>Ledger Accounts</th>
<th>Debits/Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assets</td>
<td>An increase is a debit.</td>
</tr>
<tr>
<td></td>
<td>A decrease is a credit.</td>
</tr>
<tr>
<td>Liabilities</td>
<td>An increase is a credit.</td>
</tr>
<tr>
<td></td>
<td>A decrease is a debit.</td>
</tr>
<tr>
<td>Owner’s Equity</td>
<td>An increase is a credit.</td>
</tr>
<tr>
<td></td>
<td>A decrease is a debit.</td>
</tr>
<tr>
<td>Income</td>
<td>An increase is a credit.</td>
</tr>
<tr>
<td></td>
<td>A decrease is a debit.</td>
</tr>
<tr>
<td>Expense</td>
<td>An increase is a debit.</td>
</tr>
<tr>
<td></td>
<td>A decrease is a credit.</td>
</tr>
</tbody>
</table>

Let’s take several simple examples to help us understand the table.

- You just took out a $20,000 loan and bought a truck. You have just increased value to your assets because you now have a truck. You have also increased the value of your liability because you now have a truck loan. In a double-entry bookkeeping system, you would debit (increase) your asset account by $20,000 and credit (increase) your liability account by $20,000. The transaction is recorded twice, in two matching parts.

- You paid the monthly phone bill for $135.72. You increased the value of the expense account (a debit) by $135.72, and you decreased the value of the cash asset account (a credit) by $135.72.
• You received a $250 payment from a customer for a service. You increased the value of your income account (a credit) by $250 and increased your cash asset account (a debit) by $250.

• You buy a computer for the business with $1,200 cash. You decreased your cash asset account (a credit) by $1,200 and increased your equipment asset account (a debit) by $1,200.

- Finally, there are many computer software products that provide relatively easy-to-use accounting systems.
  - They will help make your journal and ledger tasks (and preparation of financial documents) much easier and more error free. If you are comfortable using computers, you should shop around for the accounting system that best fits your needs.
  - There are also many computer accounting systems that are specifically tailored for farm and ranch businesses. You should contact a trusted accountant and experienced farmers or ranchers for references.
TOPIC 2: How to Use Journals.

**Learning Outcome:** Students will understand journals and gain practical experience on how to use journals.

- As mentioned in the last topic, journals are the chronological (time-based) record of business transactions. Information is recorded as it happens, and includes the date of the transaction, the amount and an explanation.
  - Journals are also called the “book of original entry.”
  - Once the transaction is initially recorded in the journal, the debit and credit entries are then recorded in the account ledgers. So, the journal entries come first, before the ledger entries.
  - Before a journal entry is made, a decision needs to be made about which accounts will be affected by the transaction with both a credit and a debit entry.
  - The figure below shows an example of a journal with several entries. (These entry examples were introduced in the previous topic). Note that debits are in the left column and credits are in the right column.

<table>
<thead>
<tr>
<th>Date</th>
<th>Accounts and Explanation</th>
<th>LP</th>
<th>Debit</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan. 5</td>
<td>Assets: Equipment</td>
<td></td>
<td>20,000.00</td>
<td>20,000.00</td>
</tr>
<tr>
<td></td>
<td>Liabilities: Truck loan</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Original loan to buy work truck</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jan. 28</td>
<td>Expenses: Accounts Payable</td>
<td></td>
<td>135.72</td>
<td>135.72</td>
</tr>
<tr>
<td></td>
<td>Assets: Cash</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Paid monthly telephone bill</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feb. 3</td>
<td>Assets: Cash</td>
<td></td>
<td>250.00</td>
<td>250.00</td>
</tr>
<tr>
<td></td>
<td>Income: Accounts Receivable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Received payment from S. Jones</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feb. 16</td>
<td>Assets: Equipment</td>
<td></td>
<td>1,200.00</td>
<td>1,200.00</td>
</tr>
<tr>
<td></td>
<td>Assets: Cash</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Bought computer for work</em></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- The General Journal above shows four transactions:

  - On January 5, you took out a $20,000 loan and bought a truck. You increased value to the equipment assets account because you now have a truck and you also increased value of the liability account because you now have a loan. You debit (increase) the equipment asset account by $20,000 and credit (increase) the liability account by $20,000.
On January 28, you paid the monthly phone bill for $135.72. You increased value of the expense account (a debit) by $135.72, and you decreased value of the cash asset account (a credit) by $135.72.

On February 3, you received a $250 payment from a customer. You increased the cash asset account (a debit) by $250 and increased the income account (a credit) by $250.

On February 15, you bought a computer for the business with $1,200 cash. You increased your equipment asset account (a debit) by $1,200 and decreased the cash asset account (a credit) by $1,200.
TOPIC 3: How to Use Ledgers.

Learning Outcome: Students will understand ledgers and gain practical experience on how to use ledgers.

As mentioned earlier in this lesson, ledgers are the records of business transactions grouped by separate accounts.

- Each account (such as cash, inventory, equipment or owner's equity) has its own separate ledger record, and is sometimes called a “ledger account.”
- Collectively, all the ledger accounts are called the “ledger.”
- Typically, a ledger account page contains the title of the account, the date of the transaction, a place for explanations, a left side column for debits, a right side column for credits, and a balance column for a running total. See the figure below for an example.

<table>
<thead>
<tr>
<th>Date</th>
<th>Explanation</th>
<th>LP</th>
<th>Debit</th>
<th>Credit</th>
<th>Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan. 15</td>
<td>Original investment in business</td>
<td></td>
<td>20,000.00</td>
<td></td>
<td>20,000.00</td>
</tr>
<tr>
<td>Jan. 28</td>
<td>Bought farm equipment (tractor)</td>
<td></td>
<td></td>
<td>12,000.00</td>
<td>8,000.00</td>
</tr>
<tr>
<td>Feb. 2</td>
<td>Payment from S. Jones for services</td>
<td></td>
<td>500.00</td>
<td></td>
<td>8,500.00</td>
</tr>
</tbody>
</table>

- In the example above, the Cash account ledger shows entries that recorded an initial investment of $20,000 in the business by the owner, a purchase of a tractor for $12,000, and receipt of a $500 payment.
- Remember, for each debit or credit entry there needs to be a second matching entry somewhere in an account ledger. Can you identify those other matching ledger accounts and entries?
- The $20,000 investment in the business, a debit (increase) to the cash account corresponds to a $20,000 credit (increase) in the owner’s equity account ledger.
- The $12,000 payment for a tractor, a credit (decrease) to the cash account, corresponds to a $12,000 debit (increase) in the equipment assets account ledger.
- The $500 payment for services, a debit (increase) to the cash account, corresponds to a $500 credit (increase) in the accounts receivable income account ledger.
Remember that a journal entry is made first, before entries are made into the account ledgers. Posting is the process where debits and credits are transferred from the journal to account ledgers.

- Posting can take place at any time, but should be done regularly without too much time gap. There are different ways to post transactions from journals to ledgers, and people usually prefer to post the way that they feel is most comfortable.

- One typical way to post is as follows:
  - Find the account ledger that matches with the first journal entry that needs posting.
  - In the debit column of the ledger account, enter the debit amount from the journal entry.
  - Enter the date from the journal entry into the ledger account, along with any explanation.
  - In the reference column (labeled “LP”) of the ledger account, enter the journal page number where the entry is located.
  - In the reference column (“LP”) of the journal, enter the ledger account page number of the corresponding entry. Now, both the journal and account ledger have reference page numbers showing that the posting has been completed.
  - Finally, repeat the process for the credit amount from the journal entry.

- See the example on the next page that shows a posting from a journal entry to ledger accounts.
In the example above, the January 5 journal entry shows a loan of $20,000 to purchase a work truck. The equipment assets account shows a debit (increase) of $20,000, and the liabilities account shows a credit (increase) of $20,000. The posting process would be as follows:

- Find the equipment account ledger that matches with the first journal entry.
- In the debit column of the equipment ledger account, enter the debit amount $20,000 from the journal entry.
- Enter the date, Jan. 5, from the journal entry into the equipment ledger account, along with the explanation.
- In the reference column (labeled “LP”) of the ledger account, enter the journal page number 5 where the entry is located.
- In the reference column (“LP”) of the journal, enter the ledger account page number 4 of the corresponding entry. Now, both the journal and account ledger have reference page numbers showing that the posting has been completed.
• Repeat the process for the credit amount from the journal entry. Find the liabilities account ledger, enter a $20,000 credit, record the date Jan. 5 in the account ledger along with an explanation, enter the journal page number 5 in the account ledger reference column, and then enter the account ledger page number 9 in the journal reference column.

References

Baskerville, Peter. nd. Basic Accounting Concepts 2 - Debits and Credits. knoll: A unit of knowledge.

**Journal Worksheet**

Use the following example transactions to create journal entries in the General Journal below. Remember to decide which account to debit and which account to credit before you make your entry. The first entry in the journal is done for you.

1. On March 29, you paid $239.11 cash for an office filing cabinet.
2. On April 1, you paid by check your monthly electricity bill of $175.96.
3. On May 3, you received a $500 payment from Sam Jones for a tractor part that you sold him.
4. On June 11, you took out a $5,000 short-term loan to buy hay for the winter.
5. On June 27, you took $2,500 of your company’s profit out of cash reserves and invested it in a personal (non-business) retirement account.

**General Journal**

<table>
<thead>
<tr>
<th>Date</th>
<th>Accounts and Explanation</th>
<th>LP</th>
<th>Debit</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mar. 29</td>
<td>Assets: Equipment</td>
<td></td>
<td>239.11</td>
<td>239.11</td>
</tr>
<tr>
<td></td>
<td>Assets: Cash</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Bought office filing cabinet.</em></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The Business of Indian Agriculture

MODULE 2: Accounting

LESSON 2: Journals and Ledgers

TOPIC 3: How to Use Ledgers

Ledger Worksheet

In the previous topic’s Journal Worksheet, you should have created journal entries similar to what is shown below.

<table>
<thead>
<tr>
<th>Date</th>
<th>Accounts and Explanation</th>
<th>LP</th>
<th>Debit</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mar. 29</td>
<td>Assets: Equipment</td>
<td>239.11</td>
<td>239.11</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Assets: Cash</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Bought office filing cabinet.</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apr. 1</td>
<td>Expenses: Accounts Payable</td>
<td>175.96</td>
<td>175.96</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Assets: Cash</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Paid monthly electricity bill</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>May 3</td>
<td>Assets: Cash</td>
<td>500.00</td>
<td>500.00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Income: Accounts Receivable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Payment from S. Jones; tractor part</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jun. 11</td>
<td>Assets: Inventory</td>
<td>5,000.00</td>
<td>5,000.00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Liabilities: 90-day loan</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Loan to buy winter hay</em></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jun. 27</td>
<td>Owner’s Equity: Cash</td>
<td>2,500.00</td>
<td>2,500.00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Assets: Cash</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Took profit to retirement savings</em></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Now, post the journal entries shown above to the account ledgers on the following pages. Don’t forget to fill out the reference column (LP) in the journal entries above. As a reminder, the basic steps to posting are located in Topic 3 in your workbook.
### Account Ledger: Equipment
**Page 2**

<table>
<thead>
<tr>
<th>Date</th>
<th>Explanation</th>
<th>LP</th>
<th>Debit</th>
<th>Credit</th>
<th>Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
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</tbody>
</table>

### Account Ledger: Cash
**Page 4**

<table>
<thead>
<tr>
<th>Date</th>
<th>Explanation</th>
<th>LP</th>
<th>Debit</th>
<th>Credit</th>
<th>Balance</th>
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</thead>
<tbody>
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### Account Ledger: Accounts Payable
**Page 14**

<table>
<thead>
<tr>
<th>Date</th>
<th>Explanation</th>
<th>LP</th>
<th>Debit</th>
<th>Credit</th>
<th>Balance</th>
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</table>
## Account Ledger: Accounts Receivable

Page 11

<table>
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<tr>
<th>Date</th>
<th>Explanation</th>
<th>LP</th>
<th>Debit</th>
<th>Credit</th>
<th>Balance</th>
</tr>
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<tbody>
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</tbody>
</table>

## Account Ledger: Inventory

Page 9

<table>
<thead>
<tr>
<th>Date</th>
<th>Explanation</th>
<th>LP</th>
<th>Debit</th>
<th>Credit</th>
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</tr>
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</tbody>
</table>

## Account Ledger: Liabilities

Page 1

<table>
<thead>
<tr>
<th>Date</th>
<th>Explanation</th>
<th>LP</th>
<th>Debit</th>
<th>Credit</th>
<th>Balance</th>
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<tbody>
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</table>

## Account Ledger: Owner’s Equity

Page 2

<table>
<thead>
<tr>
<th>Date</th>
<th>Explanation</th>
<th>LP</th>
<th>Debit</th>
<th>Credit</th>
<th>Balance</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>
The Business of Indian Agriculture

MODULE 2: Accounting

LESSON 3: Preparing Financial Statements

Lesson Topics

This lesson covers the following topics:

• The Importance and Uses of Financial Statements.
• Preparing an Income Statement.
• Preparing a Balance Sheet.
• Preparing a Statement of Cash Flows.
• Preparing a Statement of Owner’s Equity.

Learning Objectives

Upon completion of this lesson, participants will:

• Understand the importance and basic uses of the four major business financial statements.
• Understand and gain practical experience on how to prepare an Income Statement.
• Understand and gain practical experience on how to prepare a Balance Sheet.
• Understand and gain practical experience on how to prepare a Statement of Cash Flows.
• Understand and gain practical experience on how to prepare a Statement of Owner’s Equity.
Definitions

**Income Statement:** this financial document reports the profit earned (or loss incurred) by the agribusiness over a period of time. Typically, this report is produced annually, but can be produced quarterly or monthly.

**Balance Sheet:** this financial document reports the assets, liabilities and owner’s equity of an agribusiness. The term balance means that total assets must balance or be equal with total liabilities and owner’s equity.

**Statement of Cash Flows:** this financial document reports cash receipts and expenditures related to the agribusiness over a period of time.

**Statement of Owner’s Equity:** this financial document reports the change in owner equity between the beginning and ending balance sheet periods.
TOPIC 1: The Importance and Uses of Financial Statements.

Learning Outcome: Students will understand the importance and basic uses of the four major business financial statements.

- Financial statements are the documents produced by an accounting system that serve the two main purposes of accounting – to provide an accurate financial picture of the agribusiness so that:
  1. sound business decisions can be made, and so that
  2. interested parties can accurately assess the financial standing of the agribusiness.

- They are critical tools that are needed to access credit, file taxes, solicit investments and change ownership structure.
  - Almost any serious business decision requires the information contained in these financial statements.

- Not only do they provide a snapshot of the current financial picture, they also provide information on how the agribusiness is doing financially over time.

- Financial statements are part of the generally accepted accounting principles (GAAP) developed by the Federal Accounting Standards Advisory Board, and as such, are an accounting requirement for businesses.

- Financial statements summarize the information contained in the agribusiness’s ledgers, and they reflect the financial transactions (changes to the business’s financial situation) since the last time financial statements were produced.

- There are four main financial statements of importance for most businesses:
  1. **Income Statement:** this financial document reports the profit earned (or loss incurred) by the agribusiness over a period of time. Typically, this report is produced annually, but can be produced quarterly or monthly. It is sometimes called the “Profit and Loss Statement.”
  2. **Balance Sheet:** this financial document reports the assets, liabilities and owner’s equity of an agribusiness. The term balance means that total assets must balance or be equal with total liabilities and owner’s equity.
  3. **Statement of Cash Flows:** this financial document reports cash receipts and expenditures related to the agribusiness over a period of time.
  4. **Statement of Owner’s Equity:** this financial document reports the change in owner equity between the beginning and ending balance sheet periods.
TOPIC 2: Preparing an Income Statement.

Learning Outcome: Students will understand and gain practical experience on how to prepare an Income Statement.

- As mentioned in the last topic, an Income Statement reports the profit earned (or loss incurred) by the agribusiness over a period of time.
  - Typically, this report is produced annually, but can be produced quarterly or monthly.
  - It is sometimes called the “Profit and Loss Statement.”
  - The four major components of the Income Statement are revenue, expenses, taxes and “other.”
    - Revenue can come from a variety of sources, such as services, various product and service lines, or interest and dividend income. Wages from off-farm jobs also count as revenue.
      - Remember (from Lesson 1: Basics of Agribusiness Accounting & Bookkeeping) that income is different than revenue. Income is money coming in (revenue) minus expenses (cost of goods sold).
    - Expenses include operating expenses, incidental or one-time expenses, depreciation and interest payments.
    - Taxes include income and self-employment taxes, but not property taxes or employee taxes (they are treated as an expense).
    - The “other” category includes any unusual financial event, such as a crop insurance payout.
  - The figure on the next page provides an example of a simplified Income Statement for Joe’s Asparagus Farm. Note the four main categories on the statement.
    - Revenue comes from asparagus sales and farm accessories sales, and totals $83,000.
    - The cost of goods sold are those costs needed to produce the products for sale. They include transplants and fertilizer and total $7,500.
    - Total income is revenue minus any cost of goods sold, and is $75,500 in the example.
- Expenses include labor, office expenses and equipment depreciation, and they total $43,000.
- Total net income (total income minus total expenses) is $32,500 before tax.
- Tax expense is $10,725 and is subtracted from total net income for the final income total of $21,775.
- Note that there was no “other” category in this example.

<table>
<thead>
<tr>
<th>Joe’s Asparagus Farm</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Income Statement</strong></td>
</tr>
<tr>
<td>For the Year Ended December 31, 20xx</td>
</tr>
</tbody>
</table>

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenue</strong></td>
<td></td>
</tr>
<tr>
<td>Asparagus sales</td>
<td>80,000</td>
</tr>
<tr>
<td>Farm accessories sales</td>
<td>3,000</td>
</tr>
<tr>
<td><strong>Total revenue</strong></td>
<td>83,000</td>
</tr>
<tr>
<td><strong>Cost of goods sold</strong></td>
<td></td>
</tr>
<tr>
<td>Transplants</td>
<td>5,000</td>
</tr>
<tr>
<td>Fertilizer</td>
<td>2,500</td>
</tr>
<tr>
<td><strong>Total Cost of Goods sold</strong></td>
<td>7,500</td>
</tr>
<tr>
<td><strong>Total Income</strong></td>
<td>75,500</td>
</tr>
<tr>
<td><strong>Expenses</strong></td>
<td></td>
</tr>
<tr>
<td>Labor, salaries and wages</td>
<td>40,000</td>
</tr>
<tr>
<td>Office expense</td>
<td>2,000</td>
</tr>
<tr>
<td>Depreciation, equipment</td>
<td>1,000</td>
</tr>
<tr>
<td><strong>Total expenses</strong></td>
<td>43,000</td>
</tr>
<tr>
<td><strong>Total net income (before tax)</strong></td>
<td>32,500</td>
</tr>
<tr>
<td>Tax expense</td>
<td>10,725</td>
</tr>
<tr>
<td><strong>Net income</strong></td>
<td>21,775</td>
</tr>
</tbody>
</table>
TOPIC 3: Preparing a Balance Sheet.

Learning Outcome: Students will understand and gain practical experience on how to prepare a Balance Sheet.

- As mentioned in the introductory topic, a Balance Sheet reports the assets, liabilities and owner’s equity of an agribusiness.
  - It shows the financial condition of the agribusiness at a certain point in time. It offers a financial snapshot on a given date, and so it can be very useful for lenders who are looking for current information.
  - The Balance Sheet is sometimes called the “Statement of Financial Position,” or the “Profit and Loss Statement.”
  - The Balance Sheet must follow the fundamental accounting rule that says that total assets must be equal with total liabilities and owner’s equity.
  - The Balance Sheet usually has two columns: assets are listed on the left side, and liabilities and net worth are on the right side.
  - The three major components of the Balance Sheet are assets, liabilities and owner’s equity.
    - Recall (from Lesson 1: Basics of Agribusiness Accounting & Bookkeeping) that assets are all the things of value that are owned by the business. Some Balance Sheets will place assets into different groups depending on their characteristics or timing (for example, long-term assets like buildings vs. short-term assets like cash).
    - Also remember that liabilities represent your company’s obligations to pay out value from the business, such as debt.
    - Finally, remember that owner’s equity is the difference between assets and liabilities and represents the net worth of the business held by the owner. It can include retained earnings (accumulated profits), company stock and partner’s investments.
  - The figure on the next page provides an example of a simplified Balance Sheet for Joe’s Asparagus Farm. Note the three main categories on the statement.
    - Assets (listed on the left side of the sheet) include cash, accounts receivable, inventory, supplies, land, buildings and machinery and equipment, and they all total $121,500.
    - Liabilities (top of the right side) include accounts payable, short- and long-term debt, and land mortgage, and total $62,000.
- Owner’s equity (down the right side) includes an original investment in the company, retained earnings (profit), and the current year’s income, which totals $59,500.

- Liabilities and owner’s equity together (right side) total $121,500, which balances or equals with the assets total.

<table>
<thead>
<tr>
<th>Joe’s Asparagus Farm</th>
<th>Balance Sheet</th>
<th>December 31, 20xx</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assets</strong></td>
<td><strong>Liabilities</strong></td>
<td></td>
</tr>
<tr>
<td>Cash</td>
<td>20,000</td>
<td>Accounts Payable</td>
</tr>
<tr>
<td>Accounts Receivable</td>
<td>3,000</td>
<td>Short-term Debt</td>
</tr>
<tr>
<td>Inventory</td>
<td>16,000</td>
<td>Long-term Debt</td>
</tr>
<tr>
<td>Supplies</td>
<td>2,500</td>
<td>Mortgage (land)</td>
</tr>
<tr>
<td>Land</td>
<td>35,000</td>
<td></td>
</tr>
<tr>
<td>Buildings</td>
<td>25,000</td>
<td><strong>Total Liabilities</strong></td>
</tr>
<tr>
<td>Machinery and Equipment</td>
<td>20,000</td>
<td></td>
</tr>
<tr>
<td><strong>Total Assets</strong></td>
<td>121,500</td>
<td><strong>Owner’s Equity</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Original Investment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Retained Earnings</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Current Year Income</td>
</tr>
<tr>
<td><strong>Total Owner’s Equity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total Liabilities &amp; Owner’s Equity</strong></td>
</tr>
</tbody>
</table>

Learning Outcome: Students will understand and gain practical experience on how to prepare a Statement of Cash Flows.

➢ As mentioned in the introductory topic, a Statement of Cash Flows is a financial document that reports cash receipts and expenditures related to the agribusiness over a period of time.

- The Statement of Cash Flows answers basic questions about where your cash comes from, and how it was spent.
- Only cash and cash-related entries are allowed in the Statement of Cash Flows. Cash-related entries include checking and savings accounts, certificates of deposit, government notes and so forth. These are liquid assets that are easily and immediately accessible.
- Entries in the Statement of Cash Flows fall into three major activity categories: operating, investing and financing.
  - Operating cash income and expenses include entries related to the production of goods and services, sales, payments, inventory and taxes.
  - Investment cash entries include income or expenses associated with land, buildings, loans and retirement accounts.
  - Financing cash entries are mostly related to the servicing of debt.
- The Statement of Cash Flows is an important analysis and planning document. A related document, the Cash Flow Statement, projects cash flows into the future and is a good forecasting tool.
- The figure on the next page provides an example of a simplified Statement of Cash Flows for Joe's Asparagus Farm. Note the three main categories on the statement. Also note that cash outflows are indicated using parentheses, as in (1,000).
  - Operating income and expenses (listed first) include sales, payments from accounts receivable, inventory expenditures, operating expenses, and income tax paid, which all total $34,775 net cash flow.
  - Investment entries include payments to a retirement account, mortgage payments, and dividends received, and total ($16,575) net cash flow.
  - Financing entries include payments for short-term and long-term debt, and total ($4,500).
- The net change in cash for the year is $13,700, and is added to the cash at the beginning of the year, $16,000. The total cash at the end of year is $29,700.

<table>
<thead>
<tr>
<th>Joe's Asparagus Farm</th>
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</thead>
<tbody>
<tr>
<td><strong>Statement of Cash Flows</strong></td>
</tr>
<tr>
<td>For the Year Ended December 31, 20xx</td>
</tr>
</tbody>
</table>

**Cash flows from Operations:**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>83,000</td>
</tr>
<tr>
<td>Payments from Accounts Receivable</td>
<td>13,000</td>
</tr>
<tr>
<td>Inventory</td>
<td>(5,000)</td>
</tr>
<tr>
<td>Operating expenses</td>
<td>(45,500)</td>
</tr>
<tr>
<td>Income taxes paid</td>
<td>(10,725)</td>
</tr>
<tr>
<td><strong>Net cash from Operations</strong></td>
<td>34,775</td>
</tr>
</tbody>
</table>

**Cash flows from Investments:**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retirement account</td>
<td>(5,000)</td>
</tr>
<tr>
<td>Mortgage payments</td>
<td>(12,000)</td>
</tr>
<tr>
<td>Dividends</td>
<td>425</td>
</tr>
<tr>
<td><strong>Net cash from Investments</strong></td>
<td>(16,575)</td>
</tr>
</tbody>
</table>

**Cash flows from Financing:**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payment of short-term debt</td>
<td>(1,500)</td>
</tr>
<tr>
<td>Payments of long-term debt</td>
<td>(3,000)</td>
</tr>
<tr>
<td><strong>Net cash from Financing</strong></td>
<td>(4,500)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Net change in cash</strong></td>
<td>13,700</td>
</tr>
<tr>
<td><strong>Cash at beginning of year</strong></td>
<td>16,000</td>
</tr>
<tr>
<td><strong>Cash at end of year</strong></td>
<td>29,700</td>
</tr>
</tbody>
</table>
TOPIC 5: Preparing a Statement of Owner’s Equity.

**Learning Outcome:** Students will understand and gain practical experience on how to prepare a Statement of Owner’s Equity.

- As mentioned in the introductory topic, a Statement of Owner’s Equity is a financial document that reports the change in owner equity between the beginning and ending balance sheet periods.
  - The Statement of Owner’s Equity provides a final check on the accuracy of the other three major financial documents. It relies upon information from those three documents to produce a picture of owner’s equity, as follows:
    - Net income comes from the Income Statement.
    - Beginning and ending owner’s equity amounts come from the Balance Sheet.
    - Other information comes from the Statement of Cash Flows.
  - Owner’s equity is the most fundamental picture of the financial health of an agribusiness – it tells whether agribusiness is adding worth to the owner.
  - The figure on the next page provides an example of a simplified Statement of Owner’s Equity for Joe’s Asparagus Farm. Note that there are eight entries, as follows:
    1. Beginning owner’s equity, which comes from the previous year’s Balance Sheet, was $42,300.
    2. Net income, or profit, comes from the Income Statement, and is $21,755.
    3. There were no gifts and inheritances, which would be listed in the Statement of Cash Flows.
    4. Additions to capital include a $425 dividend contribution from a stock investment, from the Statement of Cash Flows.
    5. There were no distribution of dividends, capital or any gifts made, which would be listed in the Statement of Cash Flows.
    6. Withdrawals include a $5,000 contribution to a retirement savings account, from the Statement of Cash Flows.
    7. The total change in contributed capital and retained earnings is calculated as line 2 + line 3 + line 4 – line 5 – line 6 = line 7. In this case, the total change is $21,775 + $0 + $425 - $0 - $5,000 = $17,200.
8. The ending owner’s equity, is calculated as line 1 + line 7, or $42,300 + $17,200 = $59,500. This should agree with this year’s Balance Sheet owner’s equity entry, $59,500.

Joe’s Asparagus Farm

**Statement of Owner's Equity**

For the Year Ended December 31, 20xx

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Beginning owner's equity</td>
<td>42,300</td>
</tr>
<tr>
<td>2. Net income (profit)</td>
<td>21,775</td>
</tr>
<tr>
<td>3. Gifts and inheritances</td>
<td>0</td>
</tr>
<tr>
<td>4. Additions to capital (including personal investments into the business)</td>
<td>425</td>
</tr>
<tr>
<td>5. Distribution of dividends, capital or gifts made (cash or property)</td>
<td>0</td>
</tr>
<tr>
<td>6. Withdrawals for family living, gifts made and investments into personal assets</td>
<td>(5,000)</td>
</tr>
<tr>
<td>7. Total change in contributed capital and retained earnings (line 2 + line 3 + line 4 – line 5 – line 6 = line 7)</td>
<td>17,200</td>
</tr>
<tr>
<td>8. Ending owner’s equity</td>
<td>59,500</td>
</tr>
</tbody>
</table>

**Reference**

The Business of Indian Agriculture

MODULE 2: Accounting

LESSON 3: Preparing Financial Statements

Income Statement Worksheet

On the next page, there is a blank template of a simplified Income Statement. Using only the information below, complete the Income Statement and be prepared to discuss your results.

- The company’s name is Susan’s Strawberry Patch Preserves.
- Revenue for the agribusiness comes from sales of strawberry jams and jellies ($42,500), and from locally produced arts and crafts that feature a strawberry theme ($10,000). Total revenue for the past year ending on December 31 was $52,500.
- The cost of goods sold necessary to produce the strawberry preserves included canning materials and supplies ($4,500), and fertilizer and other growing supplies ($5,000). Together, they totaled $9,500.
- Expenses for the agribusiness included labor ($25,000), store rental ($3,600) and advertising ($1,500), and they totaled $30,100.
- The tax expense was $3,800.
- There were no “other” financial events to report.
### Income Statement
For the Year Ended December 31, 20xx

<table>
<thead>
<tr>
<th>Revenue</th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total revenue</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cost of goods sold</th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Cost of goods sold</strong></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Total Income</th>
<th></th>
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<tbody>
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</table>

<table>
<thead>
<tr>
<th>Expenses</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total expenses</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Total net income (before tax)</th>
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<tbody>
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<table>
<thead>
<tr>
<th>Tax expense</th>
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<tbody>
<tr>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Net income</th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
Balance Sheet Worksheet

On the next page, there is a blank template of a simplified Balance Sheet. Using only the information below, complete the Balance Sheet and be prepared to discuss your results.

- The company’s name is Susan’s Strawberry Patch Preserves.
- The Balance Sheet represents the financial position of the company as of March 18, 2012.
- As of March 18, 2012, assets owned by the agribusiness included:
  - cash on hand ($3,400),
  - accounts receivable ($500),
  - canning supplies ($4,100),
  - canning equipment and machinery ($10,000),
  - inventory ($7,500),
  - land ($5,000), and
  - a storage shed ($1,500).
- As of March 18, 2012, the liabilities held by the agribusiness included:
  - short-term debt ($5,500),
  - long-term debt ($10,000),
  - accounts payable ($1,000), and
  - land mortgage ($10,000).
- As of March 18, 2012, the owner’s equity in the agribusiness included:
  - an original investment ($5,000),
  - retained earnings ($450), and current year net income ($50).
<table>
<thead>
<tr>
<th>Balance Sheet</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assets</strong></td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
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<td></td>
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<tr>
<td></td>
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<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Total Liabilities</strong></td>
</tr>
<tr>
<td><strong>Owner’s Equity</strong></td>
</tr>
<tr>
<td><strong>Total Assets</strong></td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
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<td></td>
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<tr>
<td></td>
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<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Total Owner’s Equity</strong></td>
</tr>
<tr>
<td><strong>Total Liabilities &amp; Owner’s Equity</strong></td>
</tr>
</tbody>
</table>
The Business of Indian Agriculture

MODULE 2: Accounting

LESSON 3: Preparing Financial Statements

TOPIC 4: Preparing a Statement of Cash Flows

Statement of Cash Flows Worksheet

On the next page, there is a blank template of a simplified Statement of Cash Flows. Using only the information below, complete the Statement of Cash Flows and be prepared to discuss your results.

- The company’s name is Susan’s Strawberry Patch Preserves.
- The Statement of Cash Flows represents the cash position of the company as of December 31, 2011.
- At the end of the year, the cash flows from operations included:
  - $52,500 received from sales,
  - ($9,500) in supply expenses,
  - ($30,100) in operating expenses, and
  - ($3,800) in tax expense.
- At the end of the year, the cash flows from investments included:
  - a ($2,500) payment to a retirement account, and
  - ($5,000) in land mortgage payments.
- At the end of the year, the cash flows from financing included:
  - a ($1,000) payment for short-term debt, and
  - a ($2,000) payment for long-term debt.
- Cash at the beginning of the year was $6,000.
**Statement of Cash Flows**
*For the Year Ended December 31*

<table>
<thead>
<tr>
<th>Cash flows from Operations:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Net cash from Operations</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cash flows from Investments:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Net cash from Investments</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cash flows from Financing:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Net cash from Financing</strong></td>
</tr>
</tbody>
</table>

| **Net change in cash**            |
| **Cash at beginning of year**     |
| **Cash at end of year**           |
The Business of Indian Agriculture

MODULE 2: Accounting

LESSON 3: Preparing Financial Statements

TOPIC 5: Preparing a Statement of Owner’s Equity

Statement of Owner’s Equity Worksheet

On the next page, there is a blank template of a simplified Statement of Cash Flow. Using only the information below, complete the Statement of Cash Flow and be prepared to discuss your results.

✓ The company’s name is Susan’s Strawberry Patch Preserves.
✓ The Statement of Owner’s Equity represents the owner’s position in the company as of December 31, 2011.
✓ At the end of the previous year, the owner’s equity was ($1,100) – that’s a negative amount. In other words, the owner had invested more into the company than she now had.
✓ Net income, or profit, for this year was $9,100.
✓ There were no gifts and inheritances to report.
✓ There were no additions to capital to report.
✓ There were no distributions of dividends, capital or gifts made.
✓ There was a $2,500 contribution to a retirement savings account.
<table>
<thead>
<tr>
<th>Statement of Owner’s Equity</th>
</tr>
</thead>
<tbody>
<tr>
<td>For the Year Ended December 31</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1. Beginning owner’s equity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Net income (profit)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3. Gifts and inheritances</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4. Additions to capital (including personal investments into the business)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5. Distribution of dividends, capital or gifts made (cash or property)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6. Withdrawals for family living, gifts made and investments into personal assets</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>7. Total change in contributed capital and retained earnings (line 2 + line 3 + line 4 – line 5 – line 6 = line 7)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>8. Ending owner’s equity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>
The Business of Indian Agriculture

MODULE 2: Accounting

LESSON 4: Analyzing Financial Statements

Lesson Topics

This lesson covers the following topics:

- Using Financial Statements to Provide a Financial Picture of a Business.
- Using Ratio Analysis.
- A Case Study in Analyzing Financial Statements.

Learning Objectives

Upon completion of this lesson, participants will:

- Understand the objective and basic methods of analyzing financial statements.
- Understand and gain practical experience on how to use ratio analysis.
- Gain practical experience on analyzing financial statements through a case study.

Definitions

Activity Ratio: This measure represents how efficiently a company uses its assets. Also called a “turnover ratio,” this ratio shows how quickly a company uses its investments in assets to benefit the company.

Comparative Analysis: An analysis comparing financial statements of a company with similar businesses over the same time period.

Debt Ratio: This measure shows the amount of relative debt that a company holds. It is an important measure of financial health. Servicing too much debt can be a drain on operating resources. There are at least two important ways to calculate a debt ratio: debt-to-owner’s equity, and debt-to-assets.
**Historical analysis:** An analysis comparing financial statements over years, so that a business’s progress can be evaluated throughout some time period. This may also be called horizontal or trend analysis.

**Liquidity Ratio:** This measure shows the ability of a company to repay its short-term debt and pay other immediate obligations. The liquidity ratio is calculated by dividing a company’s current assets by its current liabilities.

**Profitability Ratio:** This measure shows the ability of a company to make a profit, and is sometimes called the “performance ratio.” Profitability ratios can be calculated as the relationship of income with sales, owner’s equity, shares or other values. The profitability ratio is calculated by dividing a company’s net income (from the Income Statement) by its sales, owner’s equity, shares or other values.

**Ratio analysis:** Analyses that calculate important financial measurements that represent the company’s financial health.
TOPIC 1: Using Financial Statements to Provide a Financial Picture of a Business.

**Learning Outcome:** Students will understand the objective and basic methods of analyzing financial statements.

- The major objective of analyzing financial statements is to understand the financial strengths or weaknesses of a business, and to be able to make some prediction of its financial performance into the future.
  - Analyzing financial statements is required when making a decision to invest in a company, assume ownership of a company, lend to a business and for many other reasons.
    - It is also an important skill for business owners who need to understand their business finances.
  - Although financial statements for large companies can look very complicated, the basic principles of analyzing financial statements are the same for any business, large or small, complex or simple.

- There are three major methods of analyzing financial statements. Ideally, you should use several methods when evaluating a business.
  - **Historical analysis:** comparing financial statements over years, so that a business’s progress can be evaluated over some time period. This may also be called horizontal or trend analysis.
  - **Comparative analysis:** comparing the financial statements of a company with similar businesses over the same time period.
  - **Ratio analysis:** calculating important financial measurements that represent the company’s financial health.

- There are “red flags” that one should be looking for when analyzing a company’s financial statements. For example, here are just a few “red flags” to watch out for:
  - **The cash:** Analyzing the Statement of Cash Flows provides several important indicators.
    - First, because the Statement of Cash Flows can be reported at any given time, it can provide you with the most current snapshot of the company’s health.
• Second, look to see if the company has adequate cash flow to operate the business. If the company runs out of cash and can’t access short-term credit, it may be in danger of failing.

• Third, follow the cash inflows and outflows to make sure that there are no questionable entries that need more explanation.

  o **The debt**: There are several debt ratios that can help determine if a company is carrying too much relative debt. Debt is a valid business tool, but servicing too much debt can be a drain on a company’s operating finances. In the next topic, we will learn about various debt ratios.

  o **Sudden and big changes**: Analyzing the Balance Sheet for at least the past three years can show the financial stability of the business. Any sudden and/or big changes in entries to the Balance Sheet should be questioned. Any dramatic changes in income from the Income Statement should also raise questions.

  o **Over-reliance on a single service or product**: Generating income from a single product or service could potentially put the business in jeopardy if the market were to change.

    • Research the product or service generating the income (from the Income Statement) to see if the company is vulnerable to a shift in the market.

    • Study the business to see if there are contingency plans or plans to diversify.

    • Compare the business with similar businesses with similar product/service lines.
TOPIC 2: Using Ratio Analysis.

Learning Outcome: Students will understand and gain practical experience on how to use ratio analysis.

➢ A ratio is simply a mathematical relationship between one thing and another.
  o For example, if you have a personal savings plan to save $1 for every $10 you earn, you have a ratio relationship between savings and earnings of 1 to 10, or 10%.
  o Ratios can be expressed as a fraction such as 1/10, or as a percentage such as 10%, or as a number such as 0.10.
  o Financial ratios simply compare one financial value against another.
  o Financial ratio analysis calculates important financial measurements that represent the company’s financial health.

➢ There are many different ratio calculations that can show various views of a company’s financial health. The following represents a few of the more important ratios.
  o Debt Ratio: This measure represents the amount of relative debt that a company holds. It is an important measure of financial health. Servicing too much debt can be a drain on operating finances. There are at least three ways to calculate a debt ratio: debt-to-equity, debt-to-assets, and debt-to-income.
    ▪ The debt-to-equity ratio is calculated by dividing a company’s total liabilities (from the Balance Sheet) by the owner’s equity (Balance Sheet).
    ▪ The debt-to-assets ratio is calculated by dividing a company’s total liabilities (Balance Sheet) by the total assets (Balance Sheet).

\[
Debt\ ratio = \frac{Total\ liabilities}{Owner's\ equity\ <OR>\ Total\ assets}
\]
For example, say a company has $100,000 in total liabilities and $250,000 in owner’s equity. The debt-to-owner’s equity ratio would be calculated as follows:

\[
\text{Debt-to-equity ratio} = \frac{100,000}{250,000} = 40.0\%
\]

A debt-to-equity ratio of 40% is an indication of low relative debt. Typically, a debt-to-equity ratio up to about 100 percent (1 to 1) is acceptable, but that rule varies across industries. A general farming/ranching standard is that a debt-to-assets ratio of about 60 percent or greater should raise concerns.

- A ratio far above 100% would raise concerns, because that would mean that a company owed more in debt than it has equity.
- A debt ratio too far below 100% might mean missed opportunities because debt can be a powerful business tool when used properly.
- A historical analysis would let you track the debt ratio over the past years, and a comparative analysis of similar businesses would help determine an acceptable debt ratio for that particular industry.

A debt-to-income ratio often helps a lender determine if you can make or service the necessary loan repayments. The debt-to-income ratio is calculated by dividing a company’s liability or debt payments (Statement of Cash Flows) by the total income (Statement of Cash Flows). A lender interested in your cash flow may want to calculate a debt-to-income ratio based on monthly income and liabilities instead of annual, although longer periods provide a more stable and reliable ratio.

For an example of a debt-to-income ratio, let’s say a company has $50,000 in annual debt payments and $120,000 in annual income. The debt-to-income ratio would be calculated as follows:

\[
\text{Debt-to-income ratio} = \frac{50,000}{120,000} = 42\%
\]
A ratio of 42% is an indication of an acceptable level of debt. Lenders will typically only lend up to 43-50% of your monthly gross income, meaning that your combined monthly loan payments cannot exceed a maximum of 50% ratio. However, if you are currently at 42% but are requesting a loan that will raise your debt-to-income ratio beyond 50%, you may be denied because your debt-to-income ratio is now too high.

- **Liquidity Ratio**: This measure represents the ability of a company to repay its short-term debt and pay other immediate obligations. The liquidity ratio is calculated by dividing a company’s current assets by its current liabilities.

  - Liquid assets are those things that can be quickly converted to cash, and are also called “current assets.” They include cash, short-term investments, accounts receivable, inventory and prepaid expenses (from the Balance Sheet).

  - Current liabilities are due within one year and include short-term debt, accounts payable, and other debts.

  \[
  \text{Liquidity ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}
  \]

  - For example, let’s say a company has $75,000 in current assets and $50,000 in current liabilities. The liquidity ratio would be calculated as follows:

    \[
    \text{Liquidity ratio} = \frac{75,000}{50,000} = 1.5
    \]

  - The liquidity ratio of 1.5 indicates that this company has $1.50 of current assets for every $1 of current liabilities. Generally, the higher the liquidity ratio, the better, but that may not always be true.

    - A ratio far below 1.0 would raise questions because that would mean that a company has fewer current assets than current liabilities and might not be able to pay its immediate and short-term obligations.

    - A ratio far above 1.0 might raise questions about the productive use of current assets. If too many assets are being kept liquid and not used, it might mean that those assets are not benefiting the business.
- **Profitability Ratio:** This measure represents the ability of a company to make a profit, and is sometimes called the "performance ratio."
  
  - Profitability ratios can be calculated as the relationship of income with sales, owner’s equity, shares or other values.
  
  - The profitability ratio used in the following example is calculated by dividing a company’s net income (from the Income Statement) by its sales (Income Statement), and is often called a “net profit margin.”

\[
\text{Profitability ratio} = \frac{\text{Net income}}{\text{Sales}}
\]

  - For example, let’s say a company has $15,000 in net income and $100,000 in sales. The profitability ratio would be calculated as follows:

\[
\text{Profitability ratio} = \frac{15,000}{100,000} = 15.0\%
\]

  - The profitability ratio of 15% indicates that for every $1 of sales, the business is generating 15 cents in profit.

  - A profitability ratio above 0 indicates that the company is making a profit. There are no general guidelines of what the profitability ratio should be for a given company or industry, although you could probably argue that more profit is always better than less.

  - Profit margins depend on the type of product/service, the kind of industry, the current economic conditions and the specific goals of the company.

  - When making comparisons using profitability ratios, remember that profits can rise and fall by cycles in the marketplace, so make sure that you are comparing similar time periods.

- **Activity Ratio:** This measure represents how efficiently a company uses its assets. Also called a “turnover ratio,” this ratio shows how quickly a company uses its investments in assets to benefit the company.

  - The most common activity ratios are inventory turnover, accounts receivable turnover, total assets turnover and fixed assets turnover.
The total asset turnover ratio used in the following example is calculated by dividing a company’s total gross revenues (Income Statement) by its total assets (Balance Sheet).

\[
\text{Asset turnover ratio} = \frac{\text{Total gross revenue}}{\text{Total assets}}
\]

For example, let’s say a company has $100,000 total gross revenue and $350,000 in total assets. The asset turnover ratio would be calculated as follows:

\[
\frac{100,000}{350,000} = 28.5\%
\]

The asset turnover ratio of 28.5% indicates that for every $1 of assets, the company generated about 28.5 cents in revenue.

A desirable asset turnover ratio is specific to an industry. Using assets better means that the company can make more profit because fewer company resources are locked up in assets and more resources are being used productively.

- High-volume/low profit margin businesses (like grocery stores) will have higher asset turnover than lower-volume/higher margin (like manufacturing).

If a company uses assets inefficiently and has too many unproductive assets, then it will have a turnover rate that is lower than industry standards.

- If a company does not keep enough assets on hand and then loses sales, it will have a turnover rate that is higher than the industry standards.
TOPIC 3: A Case Study in Analyzing Financial Statements.

Learning Outcome: Students will understand and gain practical experience on analyzing financial statements through a case study.

- Analyzing financial statements is a skill that is built through experience. Case studies are a good way to build your understanding of basic accounting principles and your skills in preparing and analyzing financial statements.
  - Analyze the financial statements in the following case study to help you decide whether to lend to this agribusiness or not. Remember to apply the tips for analyzing financial statements discussed earlier in the lesson.

Case Study: Joe’s Cattle Company and the Bank: To Lend or Not to Lend.

You are a loan officer for the local community bank, which has a good reputation in the community as a supporter of local businesses. Agriculture is the main economic activity in the area, with a mix of ranching and farming operations, and many related agribusiness service and supply companies. Your bank is in solid financial position, and is looking to lend money to local businesses with good credit histories and financial numbers. For a standard business loan, you require an application, a good credit score, and three years of past financial statements that show solid financial standing.

You have been working with Joe Turner, who is the principal operator of Joe’s Cattle Company. Joe and his family have operated their business for generations, and are well-known and liked in the community. Recently, Joe approached your bank to discuss a long-term loan that would allow him to purchase more land and expand his operation so that his teenage children could begin to build up their own herds.

Joe has dropped off his paperwork. You review the loan application and see that Joe is asking for a $150,000, 15-year loan. Your bank is offering a 5.5% interest rate for people with good credit, which is historically a low rate. The monthly payment for the principal and interest would be about $1,125.00. You next turn to Joe’s financial documents and begin to review them, paying particular attention to the most recent year.....
Joe’s Cattle Company

**Balance Sheet**

**December 31, 20xx**

<table>
<thead>
<tr>
<th>Assets</th>
<th>Liabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>Short-term Debt</td>
</tr>
<tr>
<td>5,000</td>
<td>25,500</td>
</tr>
<tr>
<td>Equipment and machinery</td>
<td>Long-term Debt</td>
</tr>
<tr>
<td>140,000</td>
<td>250,000</td>
</tr>
<tr>
<td>Farm vehicles</td>
<td>Accounts Payable</td>
</tr>
<tr>
<td>54,000</td>
<td>500</td>
</tr>
<tr>
<td>Inventory (breeding livestock)</td>
<td>Buildings, improvements</td>
</tr>
<tr>
<td>250,000</td>
<td>65,000</td>
</tr>
<tr>
<td>Inventory (market livestock)</td>
<td>Mortgage (land)</td>
</tr>
<tr>
<td>157,500</td>
<td>434,000</td>
</tr>
<tr>
<td>Land</td>
<td>Farm vehicles</td>
</tr>
<tr>
<td>495,000</td>
<td>100,000</td>
</tr>
<tr>
<td>Buildings, improvements</td>
<td></td>
</tr>
<tr>
<td>108,950</td>
<td></td>
</tr>
<tr>
<td><strong>Total Assets</strong></td>
<td><strong>Total Liabilities</strong></td>
</tr>
<tr>
<td>1,210,450</td>
<td>910,000</td>
</tr>
<tr>
<td><strong>Owner’s Equity</strong></td>
<td></td>
</tr>
<tr>
<td>Original Investment</td>
<td></td>
</tr>
<tr>
<td>50,000</td>
<td></td>
</tr>
<tr>
<td>Retained Earnings</td>
<td></td>
</tr>
<tr>
<td>350,450</td>
<td></td>
</tr>
<tr>
<td><strong>Total Owner’s Equity</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>400,450</td>
</tr>
<tr>
<td><strong>Total Liabilities &amp; Owner’s Equity</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1,210,450</td>
</tr>
</tbody>
</table>
### Joe’s Cattle Company

**Income Statement**

For the Year Ended December 31, 20xx

<table>
<thead>
<tr>
<th><strong>Revenue</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Livestock sales</td>
<td>142,500</td>
</tr>
<tr>
<td><strong>Total revenue</strong></td>
<td>142,500</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Cost of goods sold</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Feed</td>
<td>44,500</td>
</tr>
<tr>
<td>Veterinary services</td>
<td>15,000</td>
</tr>
<tr>
<td>Transportation services</td>
<td>3,000</td>
</tr>
<tr>
<td>Breeding fees</td>
<td>5,000</td>
</tr>
<tr>
<td><strong>Total Cost of goods sold</strong></td>
<td>67,500</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Total Income</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>75,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Expenses</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Contract Labor</td>
<td>25,000</td>
</tr>
<tr>
<td>Fuel, vehicles and machinery</td>
<td>3,600</td>
</tr>
<tr>
<td>Utilities</td>
<td>2,850</td>
</tr>
<tr>
<td>Advertising</td>
<td>1,500</td>
</tr>
<tr>
<td><strong>Total expenses</strong></td>
<td>32,950</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Total net income (before tax)</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>42,050</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Tax expense</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>13,800</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Net income</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>28,250</td>
</tr>
<tr>
<td>Joe's Cattle Company</td>
<td></td>
</tr>
<tr>
<td>----------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Statement of Cash Flows</strong></td>
<td></td>
</tr>
<tr>
<td>For the Year Ended December 31, 20xx</td>
<td></td>
</tr>
</tbody>
</table>

**Cash flows from Operations:**

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>142,500</td>
</tr>
<tr>
<td>Non-farm income</td>
<td>34,000</td>
</tr>
<tr>
<td>Inventory (replacement livestock)</td>
<td>(19,500)</td>
</tr>
<tr>
<td>Operating expenses</td>
<td>(100,450)</td>
</tr>
<tr>
<td>Income taxes paid</td>
<td>(13,800)</td>
</tr>
<tr>
<td><strong>Net cash from Operations</strong></td>
<td>42,750</td>
</tr>
</tbody>
</table>

**Cash flows from Investments:**

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retirement account</td>
<td>(5,000)</td>
</tr>
<tr>
<td>Mortgage payments</td>
<td>(17,000)</td>
</tr>
<tr>
<td><strong>Net cash from Investments</strong></td>
<td>(22,000)</td>
</tr>
</tbody>
</table>

**Cash flows from Financing:**

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payment of short-term debt</td>
<td>(1,000)</td>
</tr>
<tr>
<td>Payments of long-term debt</td>
<td>(5,000)</td>
</tr>
<tr>
<td><strong>Net cash from Financing</strong></td>
<td>(6,000)</td>
</tr>
</tbody>
</table>

**Net change in cash**

<table>
<thead>
<tr>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>14,750</td>
</tr>
</tbody>
</table>

**Cash at beginning of year**

<table>
<thead>
<tr>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>16,000</td>
</tr>
</tbody>
</table>

**Cash at end of year**

<table>
<thead>
<tr>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>30,750</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td><strong>Joe’s Cattle Company</strong></td>
</tr>
<tr>
<td><strong>Statement of Owner’s Equity</strong></td>
</tr>
<tr>
<td>For the Year Ended December 31, 20xx</td>
</tr>
<tr>
<td>1. Beginning owner’s equity</td>
</tr>
<tr>
<td>2. Net income (profit)</td>
</tr>
<tr>
<td>3. Gifts and inheritances</td>
</tr>
<tr>
<td>4. Additions to capital (including personal investments into the business)</td>
</tr>
<tr>
<td>5. Distribution of dividends, capital or gifts made (cash or property)</td>
</tr>
<tr>
<td>6. Withdrawals for family living, gifts made and investments into personal assets</td>
</tr>
<tr>
<td>7. Total change in contributed capital and retained earnings (line 2 + line 3 + line 4 – line 5 – line 6 = line 7)</td>
</tr>
<tr>
<td>8. Ending owner’s equity</td>
</tr>
</tbody>
</table>
While you review the financial statements, you remind yourself that about a 5% profit margin is minimal for a ranching operation. A debt-to-equity ratio of about 100%, and a debt-to-assets ratio of less than 60% is acceptable. A 20% asset turnover rate is desired, but it is recognized that farming and ranching businesses will have low asset turnover because much of their assets are in livestock, machinery and land.

After reviewing the current year’s financial documents, you compare them with earlier years and find nothing that indicates any sudden or unexplained changes. You write down some notes, and prepare for a meeting with Joe to discuss your decision to lend or not.

Discussion questions:

What questions will you have for Joe?

Will you lend to Joe?

Why or why not?

If not, what recommendations do you have for Joe to strengthen his financial position?

• There may be some questions regarding the Statement of Cash Flows. For example:

  ✓ What is the source of the non-farm income and how stable is that source? Losing that non-farm income source would result in a negative cash flow.

  ✓ Are the cash flows consistent throughout the year, or do they fluctuate by large amounts through the seasons? If sales are primarily from livestock, which occur during a short period during the year, how does cash flow look during the non-sales months?

• Is there an over-reliance on a single product or service? Should the company think about diversifying its business to lower its risk?

References

Doye, Damona. nd. *Farm and Ranch Stress Test*. Oklahoma Cooperative Extension Service AGEC-237.


The Business of Indian Agriculture

MODULE 2: Accounting

LESSON 4: Analyzing Financial Statements

Ratio Analysis Worksheet

Calculate and interpret the financial ratios below, using only the information from the Balance Sheet and Income Statement on the next page (from Lesson 3 Worksheets). Show your work, and be prepared to discuss your results.

- Calculate the **debt-to-equity** and **debt-to-assets** ratios for Susan's Strawberry Patch Preserves:

  \[
  \text{Debt-to-equity ratio} = \frac{\text{Debt}}{\text{Equity}} = \\
  \text{Debt-to-assets ratio} = \frac{\text{Debt}}{\text{Assets}} = \\
  \]

  What do these debt ratios mean for the agribusiness?

- Calculate the **debt-to-income** ratio for Susan's Strawberry Patch Preserves:

  \[
  \text{Debt-to-income ratio} = \frac{\text{Debt}}{\text{Income}} = \\
  \]

  What does this debt-to-income ratio mean for the agribusiness?

- Calculate the **liquidity** ratio for Susan's Strawberry Patch Preserves:

  \[
  \text{Liquidity ratio} = \frac{\text{Current assets}}{\text{Current liabilities}} = \\
  \]

  What does this liquidity ratio mean for the agribusiness?

- Calculate the **profitability** ratio for Susan's Strawberry Patch Preserves:

  \[
  \text{Profitability ratio} = \frac{\text{Net income}}{\text{Total assets}} = \\
  \]

  The small specialty retail industry standard profitability ratio is 20%. What does Susan's Strawberry Patch Preserves's profitability ratio mean for the agribusiness?

- Calculate the **asset turnover** ratio for Susan's Strawberry Patch Preserves:

  \[
  \text{Asset turnover ratio} = \frac{\text{Revenue}}{\text{Average assets}} = \\
  \]

  The specialty retail industry standard asset turnover ratio is 30%. What does Susan's Strawberry Patch Preserves's inventory turnover ratio mean for the agribusiness?
Susan’s Strawberry Patch Preserves

**Income Statement**

For the Year Ended December 31, 2012

<table>
<thead>
<tr>
<th>Revenue</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jams and jellies sales</td>
<td>42,500</td>
</tr>
<tr>
<td>Arts and crafts sales</td>
<td>10,000</td>
</tr>
<tr>
<td><strong>Total revenue</strong></td>
<td><strong>52,500</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cost of goods sold</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canning materials and supplies</td>
<td>4,500</td>
</tr>
<tr>
<td>Fertilizer and growing supplies</td>
<td>5,000</td>
</tr>
<tr>
<td><strong>Total Cost of goods sold</strong></td>
<td><strong>9,500</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total Income</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>43,000</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Expenses</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor</td>
<td>25,000</td>
</tr>
<tr>
<td>Store rental</td>
<td>3,600</td>
</tr>
<tr>
<td>Advertising</td>
<td>1,500</td>
</tr>
<tr>
<td><strong>Total expenses</strong></td>
<td><strong>30,100</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total net income (before tax)</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>12,900</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tax expense</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>3,800</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Net income</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>9,100</strong></td>
</tr>
</tbody>
</table>
Susan's Strawberry Patch Preserves

**Balance Sheet**

**December 31, 2012**

<table>
<thead>
<tr>
<th>Assets</th>
<th>Liabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>3,400</td>
</tr>
<tr>
<td>Accounts Receivable</td>
<td>500</td>
</tr>
<tr>
<td>Canning Supplies</td>
<td>4,100</td>
</tr>
<tr>
<td>Equipment and Machinery</td>
<td>10,000</td>
</tr>
<tr>
<td>Inventory</td>
<td>7,500</td>
</tr>
<tr>
<td>Land</td>
<td>5,000</td>
</tr>
<tr>
<td>Storage shed</td>
<td>1,500</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Assets</strong></td>
<td><strong>32,000</strong></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Susan’s Strawberry Patch Preserves

**Statement of Cash Flows**

*For the Year Ended December 31, 2012*

**Cash flows from Operations:**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>52,500</td>
</tr>
<tr>
<td>Supplies</td>
<td>(9,500)</td>
</tr>
<tr>
<td>Operating expenses</td>
<td>(30,100)</td>
</tr>
<tr>
<td>Income taxes paid</td>
<td>(3,800)</td>
</tr>
<tr>
<td><strong>Net cash from Operations</strong></td>
<td><strong>9,100</strong></td>
</tr>
</tbody>
</table>

**Cash flows from Investments:**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retirement account</td>
<td>(2,500)</td>
</tr>
<tr>
<td>Mortgage payments</td>
<td>(5,000)</td>
</tr>
<tr>
<td><strong>Net cash from Investments</strong></td>
<td><strong>(7,500)</strong></td>
</tr>
</tbody>
</table>

**Cash flows from Financing:**

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payment of short-term debt</td>
<td>(1,000)</td>
</tr>
<tr>
<td>Payments of long-term debt</td>
<td>(2,000)</td>
</tr>
<tr>
<td><strong>Net cash from Financing</strong></td>
<td><strong>(3,000)</strong></td>
</tr>
</tbody>
</table>

**Net change in cash**

<table>
<thead>
<tr>
<th></th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(1,400)</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Cash at beginning of year**

<table>
<thead>
<tr>
<th></th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>6,000</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Cash at end of year**

<table>
<thead>
<tr>
<th></th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>4,600</strong></td>
<td></td>
</tr>
</tbody>
</table>
Module 2: Accounting
LESSON 5: Preparing for Credit and Assistance Applications
The Business of Indian Agriculture

MODULE 2: Accounting

LESSON 5: Preparing for Credit and Assistance Applications

**Lesson Topics**

This lesson covers the following topics:

- General Guidelines for Preparing for Credit and Assistance Applications.
- Preparing for USDA Farm Service Agency Program Applications.
- Where to Find Resources for More Assistance.

**Learning Objectives**

Upon completion of this lesson, participants will:

- Understand the general guidelines for preparing for credit and assistance applications.
- Understand the preparation guidelines for applying for USDA Farm Service Agency programs.
- Gain knowledge on other resources that are available to assist with credit and assistance applications.

**Definitions**

**Beginning Farmer and Rancher:** A USDA Farm Service Agency (FSA) designation that includes an individual or entity who (1) has not operated a farm or ranch for more than 10 years; (2) meets the loan eligibility requirements of the program to which he/she is applying; (3) substantially participates in the operation; and, (4) for Farm Operating loan purposes, does not own a farm greater than 30% of the median size farm in the county. If the applicant is an entity, all members must be related by blood or marriage, and all stockholders in a corporation must be eligible beginning farmers.

**Direct Loans:** Farm loans that are made by FSA with government funds. FSA also services these loans and provides Direct Loan customers with supervision and credit counseling.
**Guaranteed Loans:** Farm loans provided by lenders (e.g., banks, Farm Credit System institutions, credit unions) with a guarantee of up to 95% of the loss of principal and interest on a loan. Farmers and ranchers apply to an agricultural lender, which then arranges for the guarantee. The FSA guarantee permits lenders to make agricultural credit available to farmers who do not meet the lender’s normal underwriting criteria.

**Socially Disadvantaged (SDA) Farmer and Rancher:** A USDA FSA designation that includes a farmer, rancher or agricultural producer as one of a group whose members have been subjected to racial, ethnic or gender prejudice because of their identity as a member of the group without regard to his or her individual qualities. SDA groups are women, African Americans, American Indians, Alaskan Natives, Hispanics, Asian Americans and Pacific Islanders.
TOPIC 1: General Guidelines for Preparing for Credit and Assistance Applications.

**Learning Outcome:** Students will understand the general guidelines for preparing for credit and assistance applications.

- Applying for credit or assistance is much like taking a test: it pays to prepare. Good principles for preparing for credit or assistance for your agribusiness are, in many ways, similar to preparing for personal credit or assistance.
  - You should begin preparing well in advance of your application – at least six months before, and preferably more.
  - You should know your credit history and score, make sure that there are no errors, and resolve any outstanding issues.
  - You should have good records of your finances, including:
    - at least three years of any financial statements and tax filings,
    - at least three years of farm or ranch production records,
    - current bank account, deposit, and investment statements,
    - mortgage statements,
    - loan and lease agreements, and
    - proof of collateral assets.
  - You should not take on any new sizeable debts (including new credit cards) or purchases within at least six months prior to your application.
  - You should evaluate your debt ratios and make sure you are not too highly indebted. If you are, try to reduce your debt load first by paying down debt and/or increasing revenues or income, assets or equity.
  - You should make sure that you have a reserve fund that can sustain you and/or your business for at least six months should something bad happen.
  - You should have your business plan updated and ready to present. Be prepared to explain specifically how the credit or assistance will be used, and how it will help the business.
  - You should research exactly how much credit or assistance you will need. Asking for too much, or too little, can cause problems down the road.
You should study the types of loans and assistance products and services that are available, and choose the ones that are right for you. Make sure that you work with reputable organizations with proven track records.

Your personal and household finances affect your agribusiness's finances, and vice versa. So, make sure that your personal and household finances are in good standing. Establishing good financial habits and practices at home will reap benefits for your agribusiness too.

- There are many good financial education programs that assist people in building financial health for themselves and their families. Ask your local college or extension agent for information. There are many important financial topics to understand, and some include:
  - Understanding credit
  - Managing savings and checking accounts
  - Budgeting
  - Planning for retirement
  - Owning a home
  - Tax assistance

- Even though your personal and business’s financial health depend on each other, remember to treat them separately in all your accounting and bookkeeping. This will greatly simplify your financial reporting.

- Remember, the main purpose of requiring information in applications is not to make your life difficult, but rather to help the lender or provider feel comfortable and confident in providing credit or assistance to you. Their bottom line to success relies on you succeeding.

- The first step in preparing to apply for a loan and assistance program is to get to know your local bank, Farm Credit System institution, or other agricultural lender. They can help prepare and guide you through their application process.
TOPIC 2: Preparing for USDA Farm Service Agency Program Applications.

Learning Outcome: Students will understand the preparation guidelines for applying for USDA Farm Service Agency programs.

➢ The USDA Farm Service Agency (FSA) provides direct and guaranteed farm ownership (FO) and operating loans (OL) to family-sized farmers and ranchers who cannot obtain commercial credit from a bank, Farm Credit System institution, or other lender.

  o Remember that FSA loans are for those who have been denied credit from traditional lenders. So, apply to those lenders first, and then if you are denied, consider applying for FSA loans.

  o Farm ownership (FO) loans can be used to purchase farmland, construct or repair buildings and other fixtures, and practice soil and water conservation.

  o Operating loans (OL) may be used to purchase items such as livestock, farm equipment, feed, seed, fuel, farm chemicals, insurance and other operating expenses. OLs can also be used to pay for minor improvements to buildings, costs associated with land and water development, family subsistence, and to refinance debts under certain conditions.

  o “Direct” farm loans are made by FSA with government funds. FSA also services these loans and provides direct loan customers with supervision and credit counseling.

  o “Guaranteed” farm loans provide lenders (for example: banks, Farm Credit System institutions, credit unions) with a guarantee of up to 95% of the loss of principal and interest on a loan. Farmers and ranchers apply to an agricultural lender, which then arranges for the guarantee. The FSA guarantee allows lenders to make agricultural credit available to farmers who do not meet the lender’s normal underwriting criteria.

➢ FSA also provides direct and guaranteed loans to “beginning farmers and ranchers” who are unable to obtain financing from commercial credit sources. Each year, a portion of FSA’s direct and guaranteed FO and OL funds are targeted to beginning farmers and ranchers.

➢ In a similar way, FSA provides direct and guaranteed loans to “socially disadvantaged farmers and ranchers” who are unable to obtain financing from commercial credit sources.
There are many other types of FSA loan and assistance products and services, some of which include:

- **Emergency Farm Loans**: help producers recover from production and physical losses due to drought, flooding, other natural disasters or quarantine.

- **Youth Loans**: operating loans of up to $5,000 to eligible individual rural youths age 10 through 20 to finance income-producing, agriculture-related projects. The project must be of modest size, educational and initiated, developed and carried out by rural youths participating in 4-H clubs, FFA or a similar organization.

- **Disaster Assistance Programs**: provide assistance for natural disaster losses, resulting from drought, flood, fire, freeze, tornadoes, pest infestation and other calamities.

- **Conservation Programs**: provide assistance for protecting various types of farmland and environmentally sensitive lands.

The first step in preparing to apply for FSA loan and assistance programs is to get to know your local FSA office representative. He or she can help prepare and guide you through the application process.

- FSA provides local services through a network of State Offices and county Service Center Offices located throughout the U.S.

- Your local FSA representative will know the agribusiness conditions in your area and will be in the best position to offer you guidance.

- While most of FSA’s processes are standard across the U.S., there may be some specific requirements for your area. This is another reason it is important to start the process by visiting with your local FSA office.

Once you have established contact with the FSA office and determined that you want to apply for a FSA loan or service, you will be provided an application package for the particular product or service you desire.

- A typical FSA loan application package will include many forms, such as:
  - Request for Direct Loan Assistance (FSA-2001)
  - Three-Year Financial History (FSA-2002)
  - Three-Year Production History (FSA-2003)
  - Authorization to Release Information (FSA-2004)
- Creditor List (FSA-2005)
- Property Owned and Leased (FSA-2006)
- Farm Business Plan Worksheet Balance Sheet (FSA-2037)
- Farm Business Plan Worksheet Projected/Actual Income and Expense (FSA-2038)
- Request for Verification of Employment (FSA-2014)
- Verification of Debts and Assets (FSA-2015)

  - Although the application package may appear overwhelming at first, it is simply asking for financial and business information that you should already have (as you have already applied to a traditional lender).

  - Remember, the goal of the application process is to help the lender or provider of services feel confident in your ability to be successful.
TOPIC 3: Where to Find Resources for More Assistance.

**Learning Outcome:** Students will gain knowledge on other resources that are available to assist with applications.

- As mentioned earlier in this lesson, your first contact should be with your local agricultural lender or service provider.
  - The local USDA FSA Service Center office is another important local resource.

- State and tribal resources that are available will depend on where your agribusiness is located.
  - Your state USDA Rural Development offices (often located alongside the FSA office) can provide assistance on their products and services, which may include Value-Added Producer Grants, Rural Energy For America Program Grants, and the Business and Industry Guaranteed Loan Program.
  - Your local tribal college or university may have extension specialists who can provide assistance. Additionally, tribal or county extension specialists may be able to assist.
  - The Intertribal Agriculture Council is a non-profit organization that works on behalf of individual Indian producers and tribal enterprises.

- There are other national organizations that provide excellent information on assistance programs, such as:
  - The USDA National Agricultural Library’s Rural Information Center maintains a Business Resources for Rural Citizens website.
  - USDA’s New Farmers website maintains a comprehensive clearinghouse on assistance programs for beginning farmers.
  - Finally, there are a great number of resources that offer basic education for personal and household finances, such as:
    - Practical Money Skills for Life maintains a comprehensive website for all members of the family.
    - The Federal Deposit Insurance Corporation’s (FDIC) Money Smart-A Financial Education Program is a widely used curriculum.
    - The First Nations Development Institute’s Building Native Communities Financial Education Curriculum is also a great resource.

**References**

Farm Service Agency. nd. Farm Loan Programs. Washington, DC: USDA.
Module 3: Financial Management
Participant Guide
The Business of Indian Agriculture

MODULE 3: Financial Management

**Lessons**

This module covers the following lessons:

- Spending, Saving and Budgeting.
- Understanding Credit.
- Understanding Insurance.
- Financial and Strategic Planning.
LESSON 1: Spending, Saving and Budgeting

Lesson Topics

This lesson covers the following topics:

- Introduction to Personal and Business Financial Management.
- Developing a Spending Plan.
- Developing a Savings Plan.
- Payments and Invoicing.
- Developing a Budget.

Learning Objectives

Upon completion of this lesson, participants will:

- Understand the differences of personal and business finances, and the considerations of co-mingling personal and business finances, particularly in family-operated businesses.
- Understand and gain practical experience in how to develop a spending plan.
- Understand and gain practical experience in how to develop a savings plan.
- Understand and gain practical experience in payments and invoicing.
- Understand and gain practical experience in how to develop an operating budget.

Definitions

Certificate of Deposit (CD): A financial savings product that pays higher interest rates than traditional savings accounts, and in return, keeps money in the account until it reaches the end of an agreed-upon time period.

Enterprise budget: A budget that covers all the income and costs associated with a part or business unit of the agribusiness.

Individual Development Account (IDA): A matched savings account designed to help families and individuals save for specified long-term goals. A matched savings account means that for every dollar an IDA participant saves, the program will match that amount with additional money paid toward an asset goal.

Liquidity: The ability or degree with which an asset can be converted into cash quickly.

Operating budget: A budget that covers all income and expenses over a period of time, usually for a year.
TOPIC 1: Introduction to Personal and Business Financial Management.

**Learning Outcome:** Students will understand the differences of personal and business finances, and the considerations of co-mingling personal and business finances, particularly in family-operated businesses.

- For many operators, farming or ranching is more than a job – it is a way of life. So, it can be strange to think about separating the business aspect of farming and ranching with the personal side.
  - Yet, that is exactly what should occur in the realm of financial management: the financial management of your business life should be separate from your personal life.
  - Although there is often a temptation to “borrow” from your business or personal accounts to make ends meet, co-mingling your personal and business finances is almost always a bad idea.
  - There are a number of important reasons personal and business finances should be separated. Here are just a few:
    - Financial obligations in your personal life may negatively affect your business's financial position and likewise, financial obligations in your business may negatively affect your personal finances.
    - Your personal or household assets should be sheltered from the risks associated with your agribusiness.
    - For tax purposes, your personal and business financial account and recordkeeping must be clearly separated. If you have off-farm income, this also needs to be separately managed.
    - Having an accurate picture of your business's performance is difficult if your personal finances are co-mingling with your business accounts.
    - Future financing opportunities (such as loans and ownership shares) may be jeopardized if personal finances are mixed within your business finances.
    - The goals for personal finances and business finances may be different. Personal finances may sustain a family, build security and perhaps save toward some goal. Business finances may seek to make profit, increase market share or develop new product lines.
  - Note that in some cases, personal and business finances legitimately interconnect, as when the owner or family member collects a salary from the business or draws upon owner's equity through profit taking.
Also, lenders will want to see both personal and business financial holdings and will often include personal finances in their decision to lend to the business.

Because many operators’ personal lives are so intertwined with their work, sometimes it may be difficult to determine which financial holdings are personal, family or household, and what are business financial holdings.

- Generally speaking, personal, family and household financial holdings include income, expenses, liabilities and assets NOT associated with the agribusiness. These financial holdings may include the following:
  - Off-farm family income from jobs not directly related to the agribusiness (for example, a spouse’s job working in town or temporary work).
  - Interest and dividend income from personal savings and investment accounts.
  - Pension, disability, unemployment or other disbursements.
  - Payments for home mortgages, car loans, personal credit cards and other short- and long-term liabilities.
  - Payments for recurring expenses such as home utilities, health insurance and contributions to savings and pensions.
  - Payments for irregular expenses, such as home and auto repair, travel or health care.
  - Payments for food, clothing and personal supplies.
  - Assets such as home equity, vehicles, personal property, life insurance payouts, pensions plans, investments and savings.

- Business-related financial holdings include income, revenues, liabilities and assets such as the following:
  - Business income and revenue from sales and services, and any rents.
  - Interest and dividend from any business savings and investment accounts.
  - Cash reserves, inventories and accounts receivable.
  - Payments for land mortgages and leases, business debt, accounts payable, and other short- and long-term liabilities.
  - Payments for recurring business expenses, such as utilities, insurance, salaries, service or maintenance contracts, and taxes.
- Payments for irregular expenses such as equipment purchases, and maintenance and repair.
- Assets such as owner’s equity, land, buildings and structures, and equipment.

Keeping your personal and business finances separate involves several practical steps, including the following:

- Maintain a completely separate set of accounting books and records for personal and business finances. This greatly simplifies tax accounting (and audits) and provides an accurate financial picture of your business.
- Maintain separate bank accounts. This sends a signal that your business is more than just a hobby and that it is a professional endeavor. Many vendors and suppliers will not accept personal checks.
- Maintain separate credit card accounts. Get a business credit card if you don’t have one. This will also help your business establish its own credit rating.
- Consider forming a limited liability company (LLC) or an S Corp for the business entity. This protects your personal finances should the company incur financial damages.

Although personal and business finances should be separate, building good habits that deal with one aspect of your financial life will benefit the other financial parts of your life.

- This module’s lessons will discuss strategies that will apply to and benefit both your personal and business finances.
Case Study: Sue’s Gardening Business Takes Off

Sue had always been an avid gardener and was well-known for growing the best tomatoes in the county. Over the years, her garden grew and grew in size, and as she planted more vegetables (squash, melons, cucumbers, peppers), she harvested more and more produce. She gave much of her produce away until one year a friend suggested that she sell some of her fruits and vegetables at the farmers market in town.

Much to Sue’s delight, her experience at the farmers market was both fun and profitable. She enjoyed interacting with customers and other producers, and she started to make a lot of money. What started out as a hobby was turning into a profitable business. After a few seasons, she started to expand her product line to canned vegetables, pickles, and salsas that were sold in local stores off-season and at the farmers market in summer and fall.

At first, Sue just pocketed the money she made at the farmers market. But after a while, it became difficult to keep track of her business income and expenses. Her personal checkbook was filled with check entries for purchases related to her business and deposits from her sales. Likewise, her credit card was used for both personal and business needs, and she was never quite sure that she had enough money in her checking account to pay off the credit card balance each month.

Finally, Sue was thinking about asking the local bank for a loan to buy a small tractor so that she could increase the size of her garden operations. She knew her business was doing well, but she couldn’t say how well.

Discussion questions:

What personal and business financial co-mingling issues does Sue have?

What potential financial problems are there for Sue’s business?

What do you think Sue should do?
TOPIC 2: Developing a Spending Plan.

Learning Outcome: Students will understand and gain practical experience in how to develop a spending plan.

➢ One of the leading causes of personal or business bankruptcy is simply spending more than you make. This may seem like stating the obvious, but you will be surprised at how often businesses fail, and personal finances fall apart, because of overspending.

1. Overspending is common, and is encouraged by easy access to credit cards and a society that promotes consumerism and consumption.

2. Most of the problems with overspending can be fixed with better tracking of income and expenses.
   ▪ Once income and expenses are known, a spending plan can be developed that makes sure that one spends less than one brings in.

➢ There are six basic steps to developing a spending plan (you should do this for your personal/household finances, and then separately for your business):

1. First, income needs to be calculated. This includes salaries and wages and other sources of income over a certain period of time (usually monthly).
   ▪ Find your paystubs, bank deposits, copies of receipts and any other documentation of income.

2. Second, your daily spending habits need to be tracked. This may take a little work over a few weeks, but you may be surprised in what you learn.
   ▪ Be sure to count your morning coffee, newspaper, lunch and other small purchases that occur daily.

3. Third, identify expenses that occur regularly (monthly and yearly), such as utility bills, mortgage payments and car insurance.
   ▪ Don’t forget gas costs, travel and the holidays. If you give gifts at a certain time each year, count them.

4. Fourth, assess your total debt (including credit cards) and determine how much you need to pay off each month.
   ▪ Don’t count what you are currently paying, but what you need to pay to lower and eventually eliminate your debt. This is especially important with credit card debt, where making the minimum payment means that it will take a very, very long time (and a lot of money) to pay off the entire debt.
5. Fifth, summarize your daily spending, recurring payments and debt payments to record your total monthly expenses.

6. Finally, subtract your total monthly expenses from your total monthly income.
   - If you have money left, congratulations. This is what can be saved and/or used to further reduce your debt.
     - Saving should not be an afterthought, or something to do if you just happen to have money left. Rather it is a critical component of your spending plan. So, make sure that you are saving something each month.
   - If you spending more than you make, as said earlier, you are not alone. Nevertheless, this is time to review and adjust your expenses downward so that you are not over-spending.
     - This is often easier said than done. Many times, families are barely making ends meet and it can be difficult to see how to cut your household budget any further.
     - Many times, reducing your spending comes down to a decision about what you value. Take a moment to list and rank the things that you value in life (family, health, education, community, culture). Your spending should be in alignment with your values and if you discover that you are spending a lot on something that you don’t value highly in life, this may be an area to reduce spending.
     - Another approach is to think about what you “need” versus what you “want.” Only you can decide if you “need” an item or if you “want” it. If you truly need something, then that is something you should support, but if you only “want” something, then consider if that is something you should spend your money on.

➢ There are many types of tracking systems and tools that can assist you in developing a spending plan.
   - One of the simplest systems is to use a journal or log to record expenditures during the day, or over a month or year. This can be written down or can be entered into a computer spreadsheet.
   - A debt tracker is also easy to create. It can be a journal that lists a debt, its starting balance, interest rate, payment amount and the new balance.
There are many software programs that help you track spending. Many are free to download, or come with the base software that came with your computer.

There are also financial education workshops that are often provided by your local college or university, or other community organization such as nonprofits and local banks.

Let’s go through an example of developing a spending plan, following the six steps described previously.

1. First, calculate your monthly income. Let’s say that you earn $2,200 per month take home pay (after taxes) as a wage earner.

2. Next, let’s calculate your daily spending. Let’s say that you tracked your daily spending over the past month and that your routine daily spending is as follows:
   - A cup of morning coffee, at $2.
   - Lunch at the local diner, at $7.
   - Afternoon snack, at $2.
   - Evening newspaper, at $1.
   - These daily expenditures total $12 per working day. Multiply the daily amount by five work days, which equals $60 per week. Then multiply the weekly amount by four weeks for your monthly amount, which equals $240.

3. Now we identify the expenses that occur regularly (let’s say monthly), such as utility bills, mortgage payments and car insurance. For our simple example, we’ll use the following expenses:
   - Rent, at $400 per month.
   - Utilities (power, gas, water and garbage) totaling $300 per month.
   - Car payment, plus insurance, totals $300 per month.
   - Cable, phone and Internet, at $100 per month.
   - Entertainment, which includes movies, dining out and events, at $150 per month.
   - These monthly expenses total $1,250 per month.

4. Fourth, we calculate our debt payments, which include credit card and loan repayments. We’ll use the following payments for our example:
- Credit card payment, at $50 per month.
- Student loan repayment, at $100 per month.
- Total monthly debt payments are $150 per month. (Note that we could have listed the car payment as a loan repayment, but chose to combine it with insurance and treat it as a monthly expense.)

5. Now we summarize our daily spending, recurring payments and debt payments to record our total monthly expenses, as shown below.

6. Finally, we subtract our total monthly expenses (daily spending, monthly expenses, and monthly debt payments) from our total monthly income, as shown below.

- From the example above, you can see a monthly balance surplus of $560. This means that the person above is making more than they are spending, which is good. However, before we congratulate them, remember what this example does not take into account.
First and foremost, there is no monthly savings contribution in our example. As we will see in the coming lessons, savings is a critical component to your financial health.

Second, there are no irregular (or one-time) expenses that often cannot be anticipated, such as household repairs (e.g., leaking roof, appliance breakdown, car maintenance or repair, emergency family needs). These can be planned for by creating a “rainy day” fund or emergency savings.

Third, the numbers used here were hypothetical and do not reflect the variability and uncertainty of real life. For example, your utility bill may be much higher in the winter and, if so, your $560 surplus may be in fact much less. Likewise, your car insurance could go up due to an accident, or you could take a pay cut during the summers.

All these factors need to be considered when analyzing your spending plan.

Once you have developed your spending plan, consider the following questions:

Am I financially secure on a month-to-month basis?
What costs can I reduce or eliminate, and what income can I increase?
Am I saving enough for the future?
Am I saving for emergency needs?
Am I paying down my debt at an appropriate rate?
What trends am I seeing from month-to-month? Is my monthly balance steady throughout the year?
TOPIC 3: Developing a Savings Plan.

**Learning Outcome:** Students will understand and gain practical experience in how to develop a savings plan.

- As mentioned in the previous topic, saving should not be an afterthought, or something to do if you just happen to have money left. Rather, it is a critical component of good financial health, both for your household and for your business.

  - Having inadequate reserves (or savings) is another common factor in business failure and personal bankruptcy.
    - Savings provide a buffer in case of unexpected expenses (for example, accidental damage to equipment or buildings, medical bills), and unanticipated loss of income/revenue (job layoff, loss of a customer, sales or price decline).

  - Savings is also a way to plan for a major purchase without having to use credit or take out a loan. Savings can be used toward a down payment that reduces the amount borrowed, lowers the interest rate, and/or reduces the loan term.

  - Savings improves your credit standing, allowing you to obtain loans more easily, and at more favorable terms.

  - Long-term savings are a way to secure your financial future. Saving for retirement or a college education or a business start-up are important ways to provide security for your family.

  - Financial savings, and the sense of security it provides, is an important factor in a family’s (and a business owner’s) emotional and even physical health. The stress that financial insecurity brings can often cause conflict and sickness within families and businesses.

- As important as savings are to a business or household, there are many factors in today’s society that discourage savings.

  - First, our nation’s economy is based in large part on consumer spending, and so businesses devote much of their revenue-making strategies toward advertising and marketing to customers, and providing easy access to products and to credit.

  - For most Americans, real wages that are adjusted for inflation have been flat or falling over the past years, while prices for most items have risen. In order to make ends meet, many households have had to stop saving, tap their savings, and in many cases, borrow themselves into debt.
In the late 2000s and 2010s after the Great Recession, the nation’s fiscal policy has been to encourage spending as a way to stimulate economic growth. One tool to do this is to set interest rates at historically low levels, providing virtually no interest returns on savings. In general, low interest rates encourage spending (and borrowing) and discourage saving.

➢ The first step in developing a savings plan is to identify your savings goals.

- Savings goals are statements about things you wish you could afford. You can accomplish these goals if you manage your finances and set aside savings on a regular basis.

- Savings goals can be short-term and long-term. Short-term savings goals are things that you can save for in a few weeks or months. Long-term savings goals are things that you can save for in a few years or longer.

- Remember, just like your spending preferences, savings goals are often linked with your personal values. The things that you choose to save for should be related to the things that you value in life.

- Likewise, savings goals should first be about the things that you “need,” as opposed to the things that you “want.” If you have all your needs met, then you can think about your wants. But, for most of us, there are plenty of unmet needs to work toward.

- Let’s go through an example of creating some savings goals. For example, let’s say that an individual has several short-term goals such as:
  - Buy a new washing machine in three months, which will cost $450.
  - Purchase a birthday gift for a child next month, which will cost $75.
  - Buy a new pair of shoes next month, for $150.

- Let’s also say that there are several long-term savings goals, as follows:
  - Buy a used car in a year, which will cost $2,500.
  - Go on a two-week vacation for the whole family in two years, which will cost $5,000.
  - Build an add-on room to the house in five years, which will cost about $15,000.

- Next, list the short- and long-term savings goals as shown below.
Short-Term Goals | Long-Term Goals
---|---
Item | Approximate Cost | Item | Approximate Cost
Washing machine | $450 in 3 months | Used car | $2,500 in 1 year
Birthday gift | $75 in 1 month | Vacation | $5,000 in 2 years
New shoes | $150 in 1 month | Add-on room | $15,000 in 5 years

- Now, calculate each of your savings goals into a dollar amount per month by dividing the approximate cost by the number of months, and then total all your savings goals as a monthly amount, as shown below. For long-term goals, divide years into months first, then divide approximate costs by months.

<table>
<thead>
<tr>
<th>Short-Term Goals</th>
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</thead>
<tbody>
<tr>
<td>Item</td>
<td>Approximate Cost</td>
</tr>
<tr>
<td>Washing machine</td>
<td>$450 in 3 months</td>
</tr>
<tr>
<td>Birthday gift</td>
<td>$75 in 1 month</td>
</tr>
<tr>
<td>New shoes</td>
<td>$150 in 1 month</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Long-Term Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item</td>
</tr>
<tr>
<td>Used car</td>
</tr>
<tr>
<td>Vacation</td>
</tr>
<tr>
<td>Add-on room</td>
</tr>
</tbody>
</table>

**Total savings per month: $1,041**

- As you can see from the table above, listing your savings goals can quickly and clearly show how realistic your goals may be, and what financial planning is needed to achieve those goals.

- A consideration of your savings goals should prompt questions about your “needs” versus “wants.” For example, are some of the savings goals really necessary (e.g., new shoes), and/or could some of them be scaled back (e.g., a one-week vacation instead of two weeks)?

- Finally, developing savings goals should ideally be a family and/or business endeavor because there will be different goals and perspectives for different members of the family or business.

➢ The next step in developing a savings plan is to incorporate your savings goals into your spending plan (discussed in the previous lesson topic).
Add your savings goals (as a per month amount) into your Spending Plan’s Monthly Expense Tracker. Recalculate the Spendable Income (top table), and then the Total Spendable Income minus Total Expenses (bottom table).

If you are unable to save the amount of your goals without going into deficit spending, then you will need to adjust your savings goals expenditures, or spendable income.

- This is rarely an easy task, and it may take months or even years to achieve the ideal mix of income, expenses and savings for your household or business.

- Before you get discouraged, think of your savings plans as a roadmap that helps you get to your final financial destination. Just like any journey, it starts with a first step, and it will take time to complete. But you will also find that it can go by quickly and that before you know it, you’ll have achieved your savings goals.

There are many products in the financial marketplace to help you save money.

- Perhaps the simplest product is a savings account at your local bank. There are several advantages to using a bank savings account.

  - First, your savings account can be linked to a checking account at the same bank, which makes transferring money between accounts easy.
    - In many cases, you can set up an automatic transfer of funds from your checking account to your savings account each month, thereby ensuring that you save a certain amount each month.

  - Bank savings accounts are very liquid. In other words, you can withdraw savings immediately and easily with few, if any, withdrawal penalties or fees.

  - There may be minimum amounts required for your savings account, so be aware of those limits. Many times, if an account is below a minimum amount, a monthly maintenance fee will be charged.
    - You should always make sure that you are not paying a monthly maintenance fee for the savings account.
    - If your bank does charge a fee and/or has an unreasonable minimum limit, shop around. There are many savings plans in the marketplace that do not charge maintenance fees and have very modest minimum account limits.
Bank savings (and checking) accounts are very safe. They are insured by the Federal Deposit Insurance Corporation (FDIC), which insures your deposits up to $250,000 per account. Even if the bank fails and cannot pay you back the money you deposited, the FDIC will pay you.

The major disadvantage of bank savings accounts is that they have offered little or virtually no interest yield in recent years. Thus, your savings are earning almost nothing and, if you consider the effect that inflation has on reducing the value of money, your savings may actually be losing net worth over time.

Nevertheless, it is still important to have an easily accessible amount of cash that can be used in an emergency or for an urgent need.

Another popular savings product is a money market account.

These are FDIC-insured bank savings accounts that offer a higher rate of interest return on deposits.

Money market accounts are also highly liquid, that is, you can withdraw funds at any time.

The limitation with money market accounts is that there is usually a higher minimum amount that must be maintained, and there is usually a limitation on how many withdrawals can be made within a given time.

Another widely used savings product is a certificate of deposit, commonly referred to as a CD.

A CD pays more interest, but in return, you must agree to keep your money in the account until it “matures,” or reaches the end of an agreed-upon time period.

There are many time periods you can choose from, ranging from as short as 30 days, to as long as five years. Typically, the interest rate will rise with an increasing time period.

You may be able withdraw your CD account before maturity, but there will probably be an early withdrawal penalty that will typically mean that you forfeit some or all the interest earned so far.

Thus, it is important that you carefully consider how long you will be able to keep your money in the CD account without withdrawing it.

CDs are also FDIC-insured up to $250,000 per account, so there is no risk.
Finally, every bank offers different CD rates and rates change every week or so. So, it pays to shop around.

- You may wish to support your local bank by purchasing their CD product, which is commendable. However, the CD market is national in scope, and many banks are competing for your dollars.
- It is relatively easy to purchase CD products at any bank that is FDIC insured, no matter where they are located.
- However, before sharing any sensitive information or depositing any money, be sure to check the legitimacy of any bank you are considering.

Finally, an Individual Development Account (IDA) is a relatively recent financial product that is available under certain circumstances.

- An IDA is a matched savings account (usually deposited in a local bank) designed to help families and individuals save for long-term goals that will help them build their financial futures.

- Some IDA programs may encourage you to save money to buy a new home, start a business or go back to school. Other programs may let you use your savings to repair your existing home, or buy a car to get to work, or invest in some other type of savings goal. Your asset goal is determined by you and your IDA program staff.

- “Matched savings account” means that for every dollar an IDA participant saves, the program will match that amount with additional money paid toward an asset goal.
  
  - For example, if the match rate is $1.00 for every $1.00 saved (also known as a “1-to-1” or 1:1 match rate), for every $1.00 you save, the IDA program will match it by providing $1.00 towards your designated asset purchase.
  
  - For example, if you save $25 per month for one year, that would equal $300 ($25 X 12 months) plus $300 in matched money for a total of $600 at the end of the year.

- In order to earn the savings match, you usually have to make a deposit every month, take financial education classes, and learn to budget and save.
Some IDAs require you to put your money in a savings account that is in both your name and the name of the program. That way, you will not be tempted to make a withdrawal because you cannot make a withdrawal without the permission of the program staff. This is called a “custodial” account.

Other IDA programs require you to open a savings account and practice self-discipline by not taking money out of the account. This is called a “non-custodial” account.

IDAs are only available in communities where IDA programs exist. IDA programs may be administered by tribal agencies, community development financial institutions (CDFIs), or non-profit organizations.

Contact your local bank or tribal office to see if an IDA program is available in your community.

The financial products mentioned above are not the only ones that can help you save money. These products were mentioned first because they have no risk.

- There is another class of savings, commonly referred to as investments, which may yield considerably greater returns, but contain various levels of risk.

- Investments are beyond the scope of this curriculum, but an excellent resource on investments is available from the First Nations Development Institute, and FINRA Investor Education Foundation, and is called Building Native Communities: Investing For the Future.
TOPIC 4: Payments and Invoicing.

Learning Outcome: Students will understand how to make payments, and how to issue invoices for products and services rendered.

➢ In a certain sense, making payments, issuing invoices and receiving payments represents the lifeblood of a business. Without the cash flow of money going out to pay suppliers and creditors, and money coming in from sales of products or services, a business would soon fail.

   o Typically, these business transactions are accounted for in the Accounts Payable and Accounts Receivable journal entries. There are many computer-based payment and billing systems available to help with these functions.

➢ As important as these payment and invoice functions are, this is an area where many business operators can fall short, causing cash flow problems that can become quite severe and even fatal to the business.

   o Most of the time, the problems that occur are the result of the timeliness of making payments (paying your bills on time), issuing invoices (billing your customers promptly), and receiving payments (ensuring customer payment has been made and then recording and depositing the payment).

➢ Making payments, and paying your bills on time, is very important to the financial health of a business for several reasons.

   o First, it helps build and maintain a positive credit history and score, which is vital to a business’s ability to access credit.

   o Second, it keeps your suppliers and creditors happy and loyal to your business. Keeping your suppliers satisfied helps protect your supply chain, which is vital for your product cycle. A supplier is much more likely to offer you attractive terms and to make your business a priority if you have a history of paying on time. Likewise, a creditor is much more likely to offer you credit in the future if you have proven to be reliable in making your payments.

   o Making timely payments helps you avoid penalties and interest charges, which can be quite expensive, especially for credit cards.

   o Finally, making timely payments keeps your cash flow and balance accounting numbers accurate and current. You can be confident that you are looking at an accurate picture of your business’s financial condition when your payments are up to date.

➢ In practice, making payments is simple and we have all had experience paying bills. You receive a bill, check the balance in an account, make and record the payment, and then archive the documentation.
The challenge is often a matter of time and efficiency. When you only have a handful of bills, it’s often not a problem to pay them as you go. However, an active business can often have dozens of bills or more coming in each month, which can easily overwhelm a business operator.

Often times, a company will hire clerical staff to make payments, but if this is not practical, then the business operator must become efficient and accurate in handling payments. Here are several tips to consider.

- Consider making payments (or “cutting checks”) on a regular schedule, such as one day per week. Over the course of each week, set aside your bills in a safe place for processing on your payment day. That way, you will have your full attention to the task, and you will be more efficient by making multiple payments at the same sitting. Related to this, create an office space to pay your bills so that you have all of your materials in a reliable place.

- Create an organized payment tracking system using an off-the-shelf computer application, or your own spreadsheets. Make sure you link these systems to your banking information so that you can keep your balances accurate.

- Consider setting up auto-pay for regular expenses and payments that you know occur monthly.

- Consider pre-paying or bulk paying for some expenses to help reduce the number of bills you receive. You can also look for ways to consolidate some payments.

- Finally, make sure you keep proof of payment in case you are questioned by the biller and also to be able to write off your business expenses for tax purposes.

Issuing invoices is also not a difficult task in concept. It involves billing a customer for some service rendered or product delivered. Like making payments, the challenge is with the timeliness and efficiency of issuing invoices.

- Typically, customer payments are due upon receipt of a service or product, but these terms can vary. For example, retainers, down payments, upfront parts or material payments may be required in advance before a product or service is delivered. Installment payments can be agreed upon, whereby the customer has a scheduled payment plan after the product or service is delivered.

- In any case, invoices are the official document that trigger customer payments and are usually required by customers to justify payments.
Like making payments, there are many strong reasons for issuing timely invoices.

- First, timely invoicing helps to ensure that you are paid on time and that your cash flows remain healthy.

- Second, it keeps your customers happy and loyal to your business. This may not seem obvious because we often think of getting a bill as a bad thing. But, in fact, responsible customers expect to get a bill on time and want to reconcile their payments and obligations in a timely fashion. Failing to invoice a customer keeps an outstanding obligation on their books and can distort their financial balances.

- It provides official documentation of attempts to bill a customer, should lack-of-payment issues arise.

There are several practical tips to make invoicing more efficient and accurate.

- First, be on time. As with payments, schedule a regular time each week or so when you issue your invoices. Set up a space in your office where all your materials are handy. Use a computerized tracking system, if appropriate.

- Second, keep good records, sorted by customer. Just like a creditor, you will want to create your own payment history for each customer so that you will know what to expect from them in the future.

- Third, create a clean, consistent and informative format for your invoice. Don't clutter your invoice with too much information or too many distracting logos or graphics. The invoice is an official business document and should look clean and professional. At a minimum, each invoice should contain the following information:
  - Description of the product delivered or service rendered
  - Order number
  - Item and quantity amounts, and total amounts due
  - Summary of the total payment (bottom line total due)
  - Due date
  - Payment options
  - Details of any discounts
  - Outstanding payment details (if there are past due charges)
• Delivery charges if any
• Late payment charges
• Details of any taxes charged
• Contact number for any queries

Let’s go through an example of creating an invoice. This company sells commercial construction equipment, including air compressors. Below you will see an invoice template (from Microsoft Office) for two air compressors. Note the basic information that is contained and how easily one could modify the template for a variety of purposes.
Now, let's try creating an invoice below with the following information:

- You are billing a customer for three (3) portable generators. The item description is “Generac GP17500E Electric Start Portable Generator Model No. 5735.” The unit cost is $2,999.00.
- There is 7% sales tax.
- There are no shipping or handling fees.

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Description</th>
<th>Unit Price</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>NorthStar® heavy-duty 3 HP, 60-gallon electric commercial air compressor</td>
<td>599.99</td>
<td>1,199.90</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Subtotal: 599.99
Sales Tax: 41.99
Shipping & Handling: 0

Total Due: 641.88

Due upon receipt
Thank you for your business!
Finally, ensuring that customers have indeed paid their invoices is the final step. The challenge here is with tracking payments, issuing reminders and reissuing invoices (if needed), adding any penalty and interest charges, and proceeding with payment collection if required.

- Once you have received payment, make sure to record the payment at the same time as it is deposited into your business accounts. Make sure to keep the checks safe and actually deposit them – this sounds obvious, but there are numerous examples of checks getting misplaced and lost. Asking a customer to cancel a lost check and then reissue a new check is costly to them and sends a bad signal.

- On a regular basis, check on all outstanding invoices and set up a policy on when you will issue reminders, how you will handle late payments, and what you will do when payment becomes uncollectable.

- Of course, we all want to avoid a situation where bill collection is necessary. There are several ways that you can encourage your customers to pay on time.
  - First, make your payments “payable upon receipt” rather than offering 30-, 45- or even 60-day payment deadlines.
  - Second, set up and send automatic reminders through e-mail or text messages so that your customers don’t forget. You can follow up with mailings also.
  - Third, offer a variety of ways to pay. Consider offering payment options through online payment systems (such as PayPal) or with credit cards. However, remember that these options will charge merchant processing fees that will cut into your profits. Requiring advance payments and down payments can also help.
  - Consider offering “early payment” incentives such as discounts for payment at the time of sale.
- Make sure you have all your payment terms in writing, on the invoice and in the sales agreement or receipt.

- Finally, try to maintain a respectful and professional relationship with your customer as you work with them on payments. It is a rare case when customers are intentionally trying to avoid payment – more typically they have forgotten or misplaced your invoice, and have other things on their mind.
TOPIC 5: Developing a Budget.

Learning Outcome: Students will understand how to develop a budget, and will gain practical experience in developing an operating budget.

➤ A “budget” can mean different things depending on how it is used and whether it is used for household or business purposes.

  o In its simplest form, using a budget is a way to limit your spending, and its most common form is the household monthly budget.
    ▪ In this context, it is similar to the spending and saving plans discussed in the previous lesson topics. You have “x” amount of money to spend each month, and your budget helps you keep within that amount.

  o Let’s go through a simple example of a household budget, using the spending and savings plans we developed in the previous topics. If we transfer our spending and savings plan information into a budget spreadsheet, it might look something like this (note we included daily spending into regular costs):
# Household Budget (monthly)

<table>
<thead>
<tr>
<th><strong>Income:</strong></th>
<th>Target</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salaries and wages</td>
<td>2,200</td>
<td>2,200</td>
</tr>
<tr>
<td><strong>Total Income</strong></td>
<td><strong>2,200</strong></td>
<td><strong>2,200</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Regular Costs:</strong></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily spending</td>
<td>240</td>
<td></td>
</tr>
<tr>
<td>Rent</td>
<td>400</td>
<td></td>
</tr>
<tr>
<td>Utilities</td>
<td>300</td>
<td></td>
</tr>
<tr>
<td>Car payment and insurance</td>
<td>300</td>
<td></td>
</tr>
<tr>
<td>Cable, Internet, phone, TV</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Entertainment</td>
<td>150</td>
<td></td>
</tr>
<tr>
<td><strong>Total Regular Costs</strong></td>
<td><strong>1,490</strong></td>
<td><strong>1,490</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Irregular Costs:</strong></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Irregular Costs</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Debt payments:</strong></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Credit card</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Student loan</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td><strong>Total Debt Payments</strong></td>
<td><strong>150</strong></td>
<td><strong>150</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Savings goals contributions:</strong></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency “rainy day” fund</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Washing machine</td>
<td>150</td>
<td></td>
</tr>
<tr>
<td>Used Car</td>
<td>208</td>
<td></td>
</tr>
<tr>
<td><strong>Total Savings contributions</strong></td>
<td><strong>383</strong></td>
<td><strong>383</strong></td>
</tr>
</tbody>
</table>

| **Net Balance: Total of Income – Costs, Debt payments and Savings** | 177 |

Note that this budget has “target” and “actual” columns. This highlights the main purpose of a household budget, which is to hold you on track and accountable to your budget. You set a spending amount as a “target”, and then at the end of the month you record your “actual” spending. Hopefully, your actual spending is equal or less than your target, which means you are spending within your budget.
Also note, as we discussed before, that there are no irregular costs included, which could negatively affect your budget. To help plan for irregular costs, we included a savings payment of $25 each month into a “rainy day” fund.

You will also notice that a budget only acts as a cash flow sheet, and does not account for assets (such as money in checking and savings accounts) or liabilities (debt and loan amounts that are owed). These financial items should also be tracked on a monthly basis, along with your household budget.

In a business, a budget can be used as a tool for planning and decision-making.

There are four basic types of budgets used in business.

- An Operating Budget covers all income and expenses over a period of time, usually for a year, but it could be monthly.
  - Operating budgets can be applied to both household finances and to business finances.

- An Enterprise Budget covers all the income and costs associated with a part of the agribusiness. For example, a farm operation may have an enterprise budget for its hay production, and another enterprise budget for a cow/calf operation.
  - Enterprise budgets allow operators to accurately monitor the performance of various units of the business, and to make informed plans and decisions.

- Partial Budgets cover the income and costs associated with a specific decision.
  - For example, a business owner may be considering the purchase of a new truck and the partial budget would include the income (old truck sale/trade-in, maintenance/repair savings) and costs (new truck payments) of the decision.

- A Cash Flow Budget monitors the cash that comes into the business and that is used to pay bills.
  - It is an extremely useful tool to ensure that you have enough cash flow to pay your immediate obligation, and/or to plan for when short-term credit may be needed.

An operating budget for a farm, ranch or agribusiness is an essential management tool. It can tell you if your business is profitable, it can warn you of potential shortfalls, it can help you make important decisions, and it can help you plan for various situations.
Operating budgets contain three major sections: revenue (usually from sales/services), expenses (fixed and variable costs) and income (other sources of money).

To develop an operating budget, which is a forecast, you need to first gather records of your past financial performance.

All the information needed for your operating budget comes from your businesses journals, ledgers and financial statements (see Module 2: Accounting).

Typically you will need to make some educated predictions of future sales and pricing, as well as the costs of your inputs.

- Trial budgets are your first attempts at an operating budget and they will include your best estimates of the future.
  - If your trial budget shows a net loss, then adjustments will need to be made to lower costs or raise revenues and income.
  - Because no one can predict the future with certainty, it is recommended to develop a trial budget for the best-case scenario, a budget for a worst-case scenario, and a budget for what is most likely to happen.
  - As the year unfolds, you may find yourself reviewing and updating your various trial budgets, hopefully working with the best-case budget.

Usually, it is best to start with enterprise budgets for each part of your agribusiness, and then to combine them together for an overall operating budget.

Let’s go through an example of creating an operating budget for a small household business. The business caters meals to community organizations and events. The business has forecasted its sales to be 5% higher in the coming year, and its variable costs as 10% higher in the coming year.

- At the end of last year, the revenue to the business from sales was $34,500.
- At the end of last year, other income included $230 in interest earned from savings and investments.
- At the end of last year, fixed costs included:
  - $3,600 in car loan payments
  - $3,900 for utilities
  - $15,000 in hired labor
- $4,500 taxes and insurance
- At the end of last year, variable costs included:
  - $1,100 in repairs and maintenance
  - $3,900 for supply inventories
  - $1,100 in miscellaneous purchases
- Cash at the beginning of last year was $3,250.
- Based on the information above, we would develop an operating budget as shown in the table below.
  
  Note that although variable costs are rising by 10%, sales represent a much greater number and so a 5% increase in sales more than offsets the rise in costs.

  Also note that cash at the end of the year is rising and that, while the business is only barely profitable, if the trend continues it will be in good financial condition.

<table>
<thead>
<tr>
<th>Operating Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>For the Year</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Last Year</th>
<th>Coming Year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenue:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales</td>
<td>34,500</td>
<td>36,225</td>
</tr>
<tr>
<td><strong>Total Revenue</strong></td>
<td>34,500</td>
<td>36,225</td>
</tr>
</tbody>
</table>

|                      |           |             |
| **Income:**          |           |             |
| Interest             | 230       | 230         |
| **Total Income**     | 230       | 230         |

<p>| | | |
|                      |           |             |
| <strong>Fixed Costs:</strong>     |           |             |
| Car loan payment     | 3,600     | 3,600       |
| Utilities            | 3,900     | 3,900       |
| Hired labor          | 15,000    | 15,000      |
| Taxes and Insurance  | 4,500     | 4,500       |
| <strong>Total Fixed Costs</strong>| 27,000    | 27,000      |</p>
<table>
<thead>
<tr>
<th>Variable Costs:</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Repairs and maintenance</td>
<td>1,100</td>
<td>1,210</td>
</tr>
<tr>
<td>Supply inventory</td>
<td>3,900</td>
<td>4,290</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>1,100</td>
<td>1,210</td>
</tr>
<tr>
<td><strong>Total Variable Costs</strong></td>
<td>6,100</td>
<td>6,710</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Net Total of Revenue + Income - Costs</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cash at beginning of year</strong></td>
<td>3,250</td>
<td>4,880</td>
</tr>
<tr>
<td><strong>Cash at end of year</strong></td>
<td>4,880</td>
<td>7,625</td>
</tr>
</tbody>
</table>

**References**


The Business of Indian Agriculture

MODULE 3: Financial Management

LESSON 1: Spending, Saving, and Budgeting

Spending Plan Worksheet

On the next pages, there are blank templates of a monthly income tracker, a daily expense tracker, monthly expenses tracker, an annual expense tracker, and a debt tracker.

As a group, pretend that you are all members of the same family. Fill out the trackers for your family finances (not your business) using the following information. If information is not provided, you may make up your own answers. Try to base your answers on what you typically spend.

- Your family income is $2,000 per month (after taxes) in salary. There is no other source of income.
- Your monthly rent payment is $400.
- You have a monthly car payment of $220, with a current balance of $4,400.
- You have total credit card debt balance of $1,615.93, with an annual interest rate of 15%. Your monthly minimum payment due is $24.00.
### Income Tracker

Identify the money that comes into your household – your income. Afterwards, calculate your total monthly income.

<table>
<thead>
<tr>
<th>Income Source</th>
<th>Monthly Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salary</td>
<td>$</td>
</tr>
<tr>
<td>Per Capita Earnings</td>
<td>$</td>
</tr>
<tr>
<td>Food Stamps</td>
<td>$</td>
</tr>
<tr>
<td>Seasonal Earnings</td>
<td>$</td>
</tr>
<tr>
<td>Social Security</td>
<td>$</td>
</tr>
<tr>
<td>Military</td>
<td>$</td>
</tr>
<tr>
<td>Child Support</td>
<td>$</td>
</tr>
<tr>
<td>Dividends/Investment Income</td>
<td>$</td>
</tr>
<tr>
<td>Other</td>
<td>$</td>
</tr>
<tr>
<td>Other</td>
<td>$</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>$</td>
</tr>
</tbody>
</table>

**Daily Expense Tracker**

Track how much you spend on a daily basis. Use this worksheet to keep track of everything you spend each day.

<table>
<thead>
<tr>
<th>Day</th>
<th>What did you buy?</th>
<th>How much did it cost?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunday</td>
<td></td>
<td>$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$</td>
</tr>
<tr>
<td></td>
<td>Daily Total</td>
<td>$</td>
</tr>
<tr>
<td>Monday</td>
<td></td>
<td>$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$</td>
</tr>
<tr>
<td></td>
<td>Daily Total</td>
<td>$</td>
</tr>
<tr>
<td>Tuesday</td>
<td></td>
<td>$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$</td>
</tr>
<tr>
<td></td>
<td>Daily Total</td>
<td>$</td>
</tr>
<tr>
<td>Wednesday</td>
<td></td>
<td>$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$</td>
</tr>
<tr>
<td></td>
<td>Daily Total</td>
<td>$</td>
</tr>
<tr>
<td>Thursday</td>
<td></td>
<td>$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$</td>
</tr>
<tr>
<td></td>
<td>Daily Total</td>
<td>$</td>
</tr>
<tr>
<td>Friday</td>
<td></td>
<td>$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$</td>
</tr>
<tr>
<td></td>
<td>Daily Total</td>
<td>$</td>
</tr>
<tr>
<td>Saturday</td>
<td></td>
<td>$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$</td>
</tr>
<tr>
<td></td>
<td>Daily Total</td>
<td>$</td>
</tr>
</tbody>
</table>

Evaluate your week’s spending. Circle items that you could have gone without. Calculate how much money you could have saved by adding all the circled items. What could you have saved? $ __________

## Monthly Expense Tracker

Use information from the Daily Expense Tracker to estimate monthly expenses. How much do you spend each month on the following items?

<table>
<thead>
<tr>
<th>Monthly Expenses</th>
<th>Monthly Payments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Housing Expenses</strong></td>
<td></td>
</tr>
<tr>
<td>Rent or Mortgage</td>
<td>$</td>
</tr>
<tr>
<td>Utilities (Elec., Phone/Cell, Cable/Sat., Water/Sewer)</td>
<td>$</td>
</tr>
<tr>
<td>Insurance (do not enter here if already included in Annual Expenses)</td>
<td>$</td>
</tr>
<tr>
<td>Repairs (do not enter here if already included in Annual Expenses)</td>
<td>$</td>
</tr>
<tr>
<td>Taxes (do not enter here if already included in Annual Expenses)</td>
<td>$</td>
</tr>
<tr>
<td>Subtotal of Housing Expenses</td>
<td>$</td>
</tr>
</tbody>
</table>

| Car Expenses                      |                  |
| Loan Payment(s)                   | $                |
| Gas                               | $                |
| Insurance (do not enter here if already included in Annual Expenses) | $                |
| Maintenance & Repairs (do not enter here if already included in Annual Expenses) | $                |
| Subtotal of Car Expenses          | $                |

| Food Expenses                     |                  |
| Groceries                         | $                |
| Eating out                        | $                |
| Subtotal of Food Expenses         | $                |

| Monthly Expense Totals            |                  |
| Subtotal of Monthly Annual Expenses | $          |
| Subtotal of Monthly Debt Repayment | $          |
| Subtotal of Housing Expenses      | $                |
| Subtotal of Car Expenses          | $                |
| Subtotal of Food Expenses         | $                |
| Subtotal of Miscellaneous Expenses | $          |

| Monthly Surplus or Shortage       |                  |
| Total Spendable Income minus Total Expenses | $          |

### Annual Expense Tracker

In addition to your monthly spending, think about those bills that are due periodically throughout the year. If you don’t know how much you spend on these less frequent expenses, then look through your account statements and old receipts, or just call the companies you owe. The following worksheet will help you calculate the amount you need to put aside each month to prepare for these bills.

What costs do you have multiple times a year?

<table>
<thead>
<tr>
<th>Expense</th>
<th>Cost</th>
<th>Divided by # of months</th>
<th>To be saved each month</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example Expense</td>
<td>$300/year</td>
<td>$300/12 months = $25 per month</td>
<td>$25</td>
</tr>
<tr>
<td>1. Car Insurance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Renters Insurance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Ceremony Expenses</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Sport Activities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. School Supplies</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Holidays &amp; Gifts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Vacation &amp; Travel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Taxes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Other:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Other:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Other:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Other:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Annual Expenses</td>
<td></td>
<td>Total to be Saved Each Month for Annual Expenses</td>
<td></td>
</tr>
</tbody>
</table>

Debt Tracker

Your spending plan needs to include a strategy for paying off debts. Some types of debt (for example, car loans) require a set of monthly payments that needs to be a part of your spending plan. Other types of debt allow you to pay a minimum monthly payment (for example, credit cards). Try to repay more than the minimum payment due each month.

List your debts in the chart below.

<table>
<thead>
<tr>
<th>Creditor/Debts</th>
<th>Balance</th>
<th>Interest Rate</th>
<th>Other Finance Charges</th>
<th>Minimum Payment</th>
<th>Amount You Can Pay Each Month</th>
<th>New Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example: credit card</td>
<td>$1,500.00</td>
<td>% 26</td>
<td>$30.00</td>
<td>$39.00</td>
<td>$50.00</td>
<td>$1,488.00</td>
</tr>
<tr>
<td>1.</td>
<td>$</td>
<td>%</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>2.</td>
<td>$</td>
<td>%</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>3.</td>
<td>$</td>
<td>%</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>4.</td>
<td>$</td>
<td>%</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>5.</td>
<td>$</td>
<td>%</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>6.</td>
<td>$</td>
<td>%</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>7.</td>
<td>$</td>
<td>%</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>8.</td>
<td>$</td>
<td>%</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>9.</td>
<td>$</td>
<td>%</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>10.</td>
<td>$</td>
<td>%</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>11.</td>
<td>$</td>
<td>%</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
</tbody>
</table>

Estimated Total Debt Repayment You Can Make Each Month $
The Business of Indian Agriculture

MODULE 3: Accounting

LESSON 1: Spending, Saving and Budgeting

Savings Goals Worksheet

Below, list some things you would like to be able to afford.

Short-term goals: Identify some things you can save enough money for in a few weeks or months.

Long-term goals: Identify some things you can save enough money for in a few years or more.

<table>
<thead>
<tr>
<th>Short-Term Goals</th>
<th>Approximate Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item</td>
<td></td>
</tr>
<tr>
<td>Ex: Kids’ bicycles</td>
<td>$500 in 6 months</td>
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<table>
<thead>
<tr>
<th>Long-Term Goals</th>
<th>Approximate Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item</td>
<td></td>
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<tr>
<td>Ex: Used car</td>
<td>$1500 in 1 year</td>
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</tbody>
</table>


Calculate each of your savings goals into a dollar amount per month, and then total all your savings goals as a monthly amount. How much per month do you need to save? $__________.

Next, incorporate your monthly savings amount into your spending plan’s monthly expense tracker (from the previous lesson topic). How do your savings goals affect your spending plan?
The Business of Indian Agriculture

MODULE 3: Financial Management

LESSON 1: Spending, Saving and Budgeting

Operating Budget Worksheet

On the next page, there is a blank template of a simplified operating budget. Using only the information below, complete the budget for the last year and coming year and be prepared to discuss your results. Forecast your equipment and supply sales to be 5% higher in the coming year, and your variable costs as 10% higher in the coming year.

➤ The company’s name is AAA Farm Equipment and Supplies.

➤ At the end of last year, the revenue from operations included:
  o $214,500 received from equipment sales
  o $49,500 in supply sales

➤ At the end of last year, other income from operations included:
  o $2,500 in payments for land you leased
  o $450 in interest earned from savings and investments

➤ At the end of last year, the fixed costs included:
  o $1,800 in payments for truck loan
  o $2,900 for utilities
  o $5,000 in land mortgage payments
  o $32,000 hired labor
  o $6,500 taxes and insurance

➤ At the end of last year, the variable costs included:
  o $3,100 in repairs and maintenance
  o $192,900 for equipment and supply inventories
  o $4,100 in miscellaneous purchases
  o Cash at the beginning of last year was ($2,650) – that’s a negative amount.
### Operating Budget

For the Year

<table>
<thead>
<tr>
<th>Revenue:</th>
<th>Last Year</th>
<th>Coming Year</th>
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**Total Revenue**

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<thead>
<tr>
<th>Income:</th>
<th>Last Year</th>
<th>Coming Year</th>
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**Total Income**

<table>
<thead>
<tr>
<th>Fixed Costs:</th>
<th>Last Year</th>
<th>Coming Year</th>
</tr>
</thead>
<tbody>
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**Total Fixed Costs**

<table>
<thead>
<tr>
<th>Variable Costs:</th>
<th>Last Year</th>
<th>Coming Year</th>
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**Total Variable Costs**

<table>
<thead>
<tr>
<th>Net Total of Revenue + Income - Costs</th>
<th>Last Year</th>
<th>Coming Year</th>
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<table>
<thead>
<tr>
<th>Cash at beginning of year</th>
<th>Last Year</th>
<th>Coming Year</th>
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**Cash at end of year**
Lesson Topics

This lesson covers the following topics:

• Introduction to Credit.
• Short-Term Operating Credit or Loans.
• Intermediate Operating Credit or Loans.
• Long-Term Mortgages and Contracts.

Learning Objectives

Upon completion of this lesson, participants will:

• Understand credit as a business management tool and the decisions and plans needed to make wise use of credit.
• Understand the use of short-term credit for operating expenses compared to using cash reserves.
• Understand intermediate operating loans and various repayment options.
• Understand the advantages and disadvantages of long-term mortgages and contracts, and be able to calculate annual payments and total borrowing costs.

Definitions

Amortizations: the reduction of the value of an asset (for example, a loan) through regular payments over a period of time.

Contract sale: a purchase agreement directly between a seller and a buyer with specified terms and conditions. Ownership in the property transfers upon the complete payment of the full purchase price.

Lien: the right to possess something that is owned by someone else until a debt is repaid.

Mortgage sale: a purchase agreement using a third-party financial institution that lends to the buyer and provides full payment to the seller. The seller transfers ownership to the buyer immediately, while the financial institution holds a lien on the property.
TOPIC 1: Introduction to Credit.

Learning Outcome: Students will understand credit as a business management tool and the decisions and plans needed to make wise use of credit.

- The wise use of credit is an important business management tool that has many advantages for agricultural producers and entrepreneurs.
  - Credit provides capital (cash) at important phases in the development of the agribusiness, such as during start-up, expansion or improvements.
  - Credit provides funds for operating expenses during off-season or low revenue periods, and reduces the need for large reserves to keep an adequate cash flow.
  - Credit allows for the ownership of large capital assets (such as land and buildings) that are often too costly to purchase outright.
  - Credit increases your purchasing power because it spreads out repayments over a longer period of time.
  - Credit provides a source of cash for emergencies and unexpected expenses.
  - The responsible use of credit can build the agribusiness’s credit rating, which in turn will make future lines of credit more accessible with more favorable terms.
  - Some businesses that take loans from banks may receive tax benefits, as the profits used to repay the loan principal or interest may be exempted from tax.

- Credit also has several disadvantages that need to be considered carefully.
  - Loan repayments can lower cash flows and create thin operating margins.
  - An unexpected loss of revenue may result in the inability to repay loans, default, or damaged credit ratings.
  - High or variable interest rates may make the repayment of the loan’s principal difficult and costly.
  - Collateral (assets used to secure your loan) may be at risk if the business defaults on the loan.
  - A business’s debt load may reduce the flexibility to make financial decisions that take advantage of profitable business opportunities.
  - High debt loads may lower your credit ratings and your credit worthiness from a lender’s perspective.
The first step in making the decision to use credit is to clearly identify its purpose and a plan on how it will be used.

- There are two basic kinds of credit: consumption credit and production credit.
  - Consumption credit is used to purchase consumable products such as food and clothing that are not related to the agribusiness.
    - Consumption credit should not be intermingled with your business finances. In fact, debt from consumption credit can limit the ability of an agribusiness to access production credit.
    - Typically, consumption credit is secured through the use of credit cards, but other types of credit can be used such as payday loans or home equity loans.
  - Production credit is used to increase or improve farm production or income through the purchase of land, equipment, inputs or other uses.
  - Your use of production credit should be directly related to your business plan.
    - For example, if your business plan calls for diversifying your farm operation by adding a specialty vegetable crop for off-season revenue, then your use of credit should directly support that goal.
    - Your business plan will dictate the type of credit needed. There are three major types of credit:
      - Mortgages and long-term contracts used for major purchases, such as land and buildings.
      - Intermediate-term operating credit, with terms usually more than one year but less than 10 years. This type of credit typically finances equipment purchases or building improvements.
      - Short-term operating credit, with terms less than a year, typically is used to maintain adequate cash flows and meet short-term obligations or unexpected expenses.
        - Often times, a line of credit can be secured in advance for short-term needs, even though it is not used immediately.
The purpose of production credit should be clear, so that you and your lender understand exactly how the credit will help the agribusiness achieve its goals.

- For example, let’s say that the purpose of a loan is to purchase a greenhouse with heating and irrigation systems to support winter tomato production.

- Start-up costs to install and operate an 84 x 91 ft. polycarbonate greenhouse with propane heating and drip irrigation systems will require about $80,000.

- Next, the plan for using the credit should include specific tasks, a timeline and how the loan will be repaid.

- For example, the purchase and installation of the greenhouse will occur in the spring so that the initial establishment of the tomato crop can occur during the fall with production during the first winter season. By the second winter season, full production will be established.

- After the operation is fully established by its second season, the estimated yield will be about 50,000 pounds of fresh greenhouse tomatoes per season. At about $1.10 per pound retail, the estimated gross revenue for the season is around $55,000, with about a 17% profit margin.

- Until profits are realized, loan repayments will be made from profits from other parts of the farm operation.

- Be sure to factor in the full costs of borrowing, which includes the interest, but may also include servicing fees and insurance. These exact costs will not be known until you select a lender, but you can estimate these costs for planning purposes.

- Consider that longer-term credit will have higher total borrowing costs than shorter-term credit. The more you borrow, the higher the costs. The higher the interest rate, the higher the cost.

Your financial statements should be used to help make your decision, and to support it with your lenders.

- Reviewing Lesson 2-4: Analyzing Financial Statements provides you with a good foundation on how financial statements can be used in making a credit decision.
• Pay particular attention to the debt and liquidity ratios. High debt-to-equity and debt-to-assets ratios may mean that assuming additional debt is unwise at the time. Low liquidity ratios may call into question the agribusiness’s ability to repay the debt.

• Lesson 2-5: Preparing for Credit and Assistance Applications also provides important information on how to prepare for your credit application.

• Review the financial statements, use ratio analysis to support your decision, and then prepare your materials to present to your lender.

Once the decision has been made to use credit, the next step is to prepare yourself for your credit worthiness to be evaluated. There are several criteria that lenders use to evaluate the credit history and financial health of a potential borrower. One of the most common is the “Five Cs of Credit.”

• The Five Cs of Credit refers to the major criteria or areas of focus that lenders use to evaluate the credit worthiness of an applicant.

  • The first C stands for Character, and this is often determined by reviewing one’s credit history, which highlights your track record in making payments on time, paying off debts, and if your debt load is too high. Credit histories are maintained by three major credit bureaus: Experian, TransUnion and Equifax, and they provide your credit report to lenders.

    • You should check your credit history regularly with each of the three credit bureaus to make sure your information is accurate and current. AnnualCreditReport.com offers one-stop free credit reports that access all three credit bureaus.

  • The second C is for Capacity and refers to the ability of the borrower to repay the debt. Often times, financial ratios are used (such as debt-to-income) to determine this factor. Lenders may also look at the length of time at the current job and job stability.

  • The third C stands for Capital and refers to the ability to provide down payments or the borrower’s own assets. When a borrower is willing to include their own assets, this signals that they are serious and confident.

  • The fourth C is for Collateral and is the assets that the borrower is willing to place at risk (and thus share risk) with the lender. This lowers the risk for the lender and assures them that they can repossess or recover their losses if there is a loan default.
Finally, the fifth C is Conditions and refers to the terms of the loan (amount, interest rates, length, repayment plan), as well as the purpose of the loan and any market trends.

- Some of the Five Cs can be improved upon relatively quickly, but much of the criteria will take long-term planning to manage. For instance, if your credit history has information that lowers your credit worthiness, then it will take time and effort to repair that history.

- If you determine that your credit history needs to be repaired, there are several areas where you can (and should) focus your attention.
  
  - First, you must understand that your credit history is used to create a single overall credit score called a FICO score, which is the primary way that your credit worthiness is measured. You want a high FICO score – they generally range between 300 and 850. The higher your score, the less risk to the lender.
    
    - The score is calculated by accounting for your payment history (worth 35% of the FICO score), your debt and amounts owed (30%), how long of a credit history you have (15%), new credit or inquiries (10%), and the mix of accounts and types of credit (10%).

  - To improve your payment history, make sure you are always on time with your payments and that you fully repay all of your debts. Delinquent payments, even if only a few days late, and collections can have a major negative impact on your FICO scores.
    
    - If you are behind in your payments, work quickly to get current and stay current.
    
    - If you are having difficulty making your payments, talk to your lender to see if there are ways to adjust your repayment plan.
    
    - Set up automatic reminders and auto-pay so that you don’t forget to make your payments.
    
    - Finally, if you see errors in your payment history, work with your creditors and the credit bureaus to correct your information.

  - To improve your debt and amounts owed factor, keep your balances low on credit cards and other “revolving credit”. High amounts of debt can negatively affect your credit score.
• The most effective way to improve your credit scores in this area is by paying down your revolving (credit cards) debt. In fact, owing the same amount but having fewer open accounts may lower your scores.

• Pay off your debt rather than just moving it around.

• Don’t close unused credit cards as a short-term strategy to raise your scores. Also, don’t open a number of new credit cards that you don’t need just to increase your available credit. This approach could backfire and actually lower your credit scores.

▪ If you have a short credit history, don’t open a lot of new accounts too quickly. New accounts lower your average account age, which will have a more negative effect on your scores if you don’t have a lot of other credit information. Also, rapid account buildup can look risky if you are a new credit user.

▪ To improve your new credit or inquiries, shop for a given loan within a focused period of time. FICO scores can tell the difference between searching for a single loan versus searching for many new credit lines, in part by the length of time over which the inquiries occur.

• Be careful not to generate a lot of credit inquiries needlessly. For example, don’t generate a credit inquiry “just to see” unless you are seriously considering applying for that credit.

• Note that it’s fine to request and check your own credit report. This won’t affect a score, as long as you order your credit report directly from the credit reporting agency or through an organization authorized to provide credit reports to consumers.

▪ Finally, to improve the mix of accounts and types of credit, apply for and open new credit accounts only as needed. Don’t open accounts just to have a better credit mix – it probably won’t raise your credit score.

• Manage credit cards responsibly. In general, having credit cards and installment loans (and paying timely payments) will rebuild your credit scores. Someone with no credit cards, for example, tends to be higher risk than someone who has managed credit cards responsibly.

• Closing an account doesn’t make it go away. A closed account will still show up on your credit report, and may be considered by a score.
Once you have a plan to use credit and to strengthen your credit worthiness, the next step is to identify a lender.

- Many financial institutions will provide credit for your needs, but it is generally a good idea to work with a lender who is familiar with agribusiness clients.
- Lenders who are unfamiliar with agribusinesses may not even consider lending for operating expenses, which is typically not supported in many business sectors.
- Lenders who work with the agricultural sector will be familiar with the unique characteristics of farm and ranching operations, including the industry-accepted financial measures that indicate credit worthiness.
- They will also understand the seasonal nature of agribusinesses and cash flows, as well as the capital-intensive nature of farming and ranching operations.
- Agricultural banks, local banks, and Farm Credit Services institutions are good places to start your search for a lender. USDA’s Farm Service Agency (FSA) may provide loans when traditional lenders decline to provide a business credit.

Once you’ve identified a lender, it will help you understand your lender’s position if you understand his/her risk.

- In general, short-term operating loans represent greater risk than longer-term loans. That is because there is often no recoverable asset involved in a short-term operation loan.
  - For example, a loan to purchase seed or fertilizer leaves no asset to recover if the loan cannot be repaid. The lender may place a lien on the crop, but if the crop fails then there is nothing to recover.
- Long- and intermediate-term loans involve less risk because they often involve assets (land, buildings, equipment,) which can be repossessed to cover a lender’s loss.
  - Intermediate-term loans that involve equipment and vehicles are more risky because of depreciation and the potential wear and tear of the assets.
- Understanding your lender’s risk will help you appreciate the information that he/she requires from you, and the areas where both you and the lender need to work together toward a common outcome.

Carefully study the loan product being offered by looking at the total costs of borrowing the terms and conditions, and by comparing it with competitive products on the market.
Your lender should provide you with the total cost of borrowing, including service fees, insurance, and the interest rate and how it will be applied.

Typically for short-term loans with a single payment at the end of the term, interest will be simply calculated by the amount borrowed and is due at the end of the term.

For long-term loans (such as land mortgages), interest is usually calculated from the unpaid balance. The payment amount remains the same, but less interest and more principal is paid with each successive payment.

There are other ways that interest can be calculated and repayments scheduled. The best choice for you will depend on your specific needs and your ability to repay the loan over time.

Most lenders will use amortization tables to quickly determine a repayment schedule. There are also many loan calculators on the web that can assist you in evaluating various interest rates and repayment schedules.

Once a lender and the loan product have been chosen, the lender will assist you in preparing your application.

It will be helpful to review Lesson 2-5: Preparing for Credit and Assistance Applications, and have all the necessary supporting documentation ready for your lender.

Be honest about your agribusiness's financial situation. Don't try to hide any unfavorable information.

Keep in close communication with your loan officer. If something changes in your business, be sure to tell your lender. Touch base with your loan officer regularly to check on the status of your application.

Prepare yourself for the possibility that your loan application may be denied. If you are denied, don't take it personally. Denial may not reflect your financial standing as much as it reflects the lender’s finances.

Ask your lender why your application was denied and what you could do to improve your chances next time. This is an important learning moment.

Have a back-up plan ready if you are denied. There are many lending institutions on the market, and if your financial situation is solid, you will be able to find another lender.

- USDA's Farm Service Agency is now an option if you have been denied by a traditional lender.

A related topic to understanding credit is loan consolidation, where several outstanding loans are repackaged into a single loan.
Loan consolidation is usually undertaken when the agribusiness wants to lower its monthly payments, extend the length of the repayment term, or take advantage of lower interest rates.

Loan consolidation will typically raise the total borrowing costs, but in the case of lower interest rates, it may lower total borrowing costs. Don’t forget that there may be refinancing and servicing fees to consider in the costs.

As with any credit decision, loan consolidation should be directly related to the business’s plans and goals.

In many ways, loan consolidation has the same advantages and disadvantages as the basic use of credit decision.

Be careful that the short-term benefits of loan consolidation (such as improved cash flow with lower repayments) are not outweighed by longer-term problems (higher costs of borrowing that reduce profits).

One final topic related to credit is the decision to extend credit to an agribusiness’s customers.

The exact nature of the agribusiness will largely dictate whether credit should be a part of the services extended to customers.

In some types of agricultural businesses, a short-term line of credit is a natural part of the business transaction.

For example, farm inputs required to produce a crop are often paid when the crop is sold.

In other cases, credit may be requested under unusual circumstances. For these cases, it is helpful to develop a standing business policy before the situation arises so that the decision is based on careful thought and planning.

Exceptions to the policy can be made depending on the circumstances, but a standing credit policy provides the basis for the decision.

In many ways, the decision for an agribusiness to extend credit to its customers is similar to traditional lenders: assessing the risk and reward.

- The rewards may include continued customer business and loyalty, and increased sales and revenues.
- The risks include paying for inventories or services with your own money until the customer pays, the additional accounting necessary to track the credit, and ultimately, the potential risk of non-payment.
- Because most agribusinesses that choose to extend credit will offer unsecured short-term credit, there are few assets to recover if non-payment were to occur.
TOPIC 2: Short-Term Operating Credit or Loans.

**Learning Outcome:** Students will understand the use of short-term credit for operating expenses compared to using cash reserves.

- As mentioned in the previous topic, short-term operating credit are typically loans with terms less than a year, and are often used to maintain adequate cash flows and meet short-term obligations or unexpected expenses.
  - Short-term operating loans typically follow the agricultural production cycle, which is usually yearly, but can be longer or shorter.
    - They are often used to purchase farm inputs such as seed, fertilizer, fuel and chemicals, and are repaid when payment for the crop is received.
    - Short-term loans may also allow the business to take advantage of cash discounts, prepay for inputs while prices are low and gain some tax advantages.
    - A lender may secure the short-term loan with a crop lien or other business asset.
    - The risk involved in using annual operating loans includes the potential for crop failure or price drops that would lead to a loan default. Crop insurance should be considered to manage this risk.
  - A line of credit that can be secured in advance (and not used immediately) is also considered short-term operating credit.
    - A line of credit can be revolving (like a credit card), which means that money can be loaned and repaid over and over, within the limits of the credit agreement.
    - A non-revolving line of credit allows the agribusiness to draw upon the credit and repay it only once.
    - The advantage of a line of credit is that it doesn’t cost anything until it is used, and interest is charged only on the amount borrowed for a specific amount of time.

- The terms and conditions for short-term credit will depend on the specific lender and the loan product.
  - One type of payment arrangement may be interest-only payments made monthly, quarterly or semi-annually with the full principal payment due at the end of the term.
Another type is regular payments (of both principal and interest) of a fixed amount throughout the term of loan.

Interest rates may be fixed for the full term of the loan, or have a variable rate that resets at given intervals (for example, every three months).

Simple interest is often used for single payment loans. Interest is calculated on the loan amount for the given period of time and is due at the end of the term.

- For example, a person who borrows $10,000 at a 6% simple interest rate would pay $600 in interest at the end of the term (plus the principal amount).
- The effective interest rate in this example is also 6%, because $600 interest costs divided by the $10,000 loan amount is equal to 6%.

Discount interest is subtracted from the loan amount up front. It results in a higher effective interest rate than simple interest. It is usually used only for very short-term loans (for example, 30, 60 or 180 days).

- For example, a person who borrows $10,000 at a 6% discount interest rate would have $600 deducted from the loan amount, leaving $9,400 to borrow.
- The effective interest rate in this example is 6.4%, because $600 interest cost is divided by the $9,400 loan amount.

Compound interest is calculated on the principal and the accumulated interest at certain intervals. Usually this type of interest is not used for short-term agricultural operating credit.

Don’t forget to account for any fees and service charges for the credit, in addition to the interest.

As with any loan repayments, a major consideration is how the repayment schedule will affect the business’s cash flow and liquidity.

There are several alternatives to using short-term credit for operating expenses.

Cash reserves, if adequate, can be used for short-term obligations, emergencies and unexpected costs, and to maintain adequate cash flows.

- The benefits to using cash reserves for short-term operating expenses may include lower borrowing costs and interest payments for other credit, lower debt ratios, lower risk of default, easier and more favorable access to credit, and greater financial flexibility for other profitable opportunities.
The downside to using cash reserves may include the reduction of cash available for other uses such as emergencies or maintaining adequate cash flows. It may also lower asset ratios and reduce the business assets needed to stay credit worthy, making some credit more difficult to access.

If they are used, cash reserves should be restored as soon as possible.

Remember that there is an opportunity cost to using cash reserves or savings to fund your short-term business needs. That means the cash being used can’t be used for some other opportunity.

- Borrowing from owner’s equity (lending from yourself, from personal assets or profits to the business) may be an option, as long as the transaction and terms of repayment are clearly defined.
  - One concern with this option is that it could lead to a pattern of co-mingling of personal and business finances.
- Borrowing from family members or friends is also an option, but one that should be carefully considered.
  - You should treat any loan from family or friends with the same standards as you would for a business transaction. Terms and repayment plans should be clearly defined and agreed upon.

One type of short-term credit that bears special consideration is a paycheck advance (also known as payday loans), which provides short-term loans secured against the customer’s next wages or a delayed deposit of a customer’s check.

- Paycheck advance lenders charge a fee for a loan over a short period of time and while they may appear to be cheap, in fact, the annual percentage rate of these loans range from hundreds to over a thousand percent.
- These loans are very expensive, but because they are easily accessible and renewable, they encourage a cycle of indebtedness that often worsens the financial standing of the customer.
- These types of loans are sometimes called “predatory” because they target customers who may be uninformed about the true borrowing costs and are in desperate financial circumstances.
  - They also target customers during tax refund season, potentially sapping assets from individuals and communities.
  - Sometimes these tax refund loans are packaged with unaffordable big ticket purchases such as cars and furniture. This practice encourages people to buy things beyond their means.
- These types of loans are highly discouraged and should only be considered carefully under the most compelling reasons.
Case Study: Comparing Short-Term Operating Credit for Joe and Frank

Joe and Frank are both corn farmers on neighboring land in Clinton County. Joe and Frank have both estimated that they will need $10,000 for the purchase of seed, fertilizer and fuel for the coming season’s crop.

Joe chooses not to use his cash reserves for these purchases and so contacts a lender who will loan him $10,000 at 5% simple interest for six months, with no service charges or fees. His interest and principal will be due at the end of the term.

Frank has $5,000 cash reserves that he will use. It is in a money market account that earns 1% simple interest per year. So, Frank contacts a lender who will loan him $5,000 at 5% simple interest for six months, with no service charges or fees. Interest and principal are due at the end of the term.

Discussion questions:

What is the total cost of borrowing and interest for Joe and for Frank?

What are the benefits and costs to using cash reserves for short-term operating expenses?

Who made the better credit decision, Joe or Frank?
TOPIC 3: Intermediate Operating Credit or Loans.

**Learning Outcome:** Students will understand intermediate operating loans and various repayment options.

➢ As mentioned in the first topic of this lesson, intermediate-term operating credit has terms usually more than one year but less than 10 years, and typically finances equipment purchases, breeding livestock, building improvements or other operating capital needs.

  o Intermediate-term loans will have more options for terms and repayment than short-term operating loans, and so will require more analysis and decisions.

  o Loans of intermediate terms will also require forecasting into the future on expected revenues, expenses and cash flows, as well as the condition, maintenance and repair of equipment, buildings and other business assets.

  o Because intermediate-term loans typically involve large dollar amounts, lenders may be hesitant to lend the entire amount needed for the full potential of the business opportunity to be realized.

    ▪ A common pitfall is when a business owner accepts less credit than what is truly needed, and then risks the failure of the entire business opportunity.

    ▪ Lenders may also try to shorten the term of the loan which, if accepted, will mean higher payments and potential problems with cash flows.

  o Borrowers should also be aware of any “demand clauses” in the loan’s terms, which allow the lender to demand full repayment of the loan at any time for any reason.

  o As with all credit decisions, intermediate-term credit must directly support the business plan.

➢ There are several common types of intermediate-term repayment plans that may meet the needs of the agribusiness. Many times, the choice has more to do with
the ability of the business to maintain adequate cash flows and liquidity than with the total costs of borrowing.

- **Fixed, equal payments** are when interest and principal amortizations (meaning paying down over a period of time) occur at set times (monthly, quarterly, yearly), and where interest charges represent the bulk of early payments. The principal portion of the payment increases and the interest portion decreases over time, so that the bulk of the payment is for the principal near the end of the loan term.
  
  - The USDA Farm Service Agency and many farm credit service institutions use this type of repayment plan. This is the repayment method for many home mortgages.
  
  - The advantage of this type of repayment is that it is easier to plan and budget for fixed equal payments over the life of the loan. There may also be tax advantages associated with higher interest payments early in the loan term.
  
  - The disadvantage of this type of repayment is that there are higher total borrowing costs (more interest charges) than other methods, and the principal amount declines very slowly in the early term of the loan.

- **Fixed principal payments** are when the principal amortization is set to fixed, equal amounts over the life of the loan term, and interest is calculated on the declining principal amounts.
  
  - The advantage of this type of repayment is that there are lower total borrowing costs (less interest charges) than the fixed equal method because the principal amount declines faster and so less interest charges are generated.
  
  - The disadvantage of this type of repayment is that there are higher payments in the early part of the loan term, which may lead to cash flow problems.

- A third type of repayment plan is the balloon payment, which is a relatively short-term loan (for example, three years) but which calculates interest and principal payments based on a longer term (such as 10 years).
  
  - The understanding with a balloon payment is at the end of the shorter term, the full principal will become due, and the borrower will pay the principal in full, renew or refinance the loan.
  
  - The advantage of this type of loan is that it results in lower payments during the relatively short period of the loan term. Lower payments result in less stress on cash flows and liquidity.
 The obvious disadvantage is making the large bulk payment due at the end of the short term if the loan cannot be renewed or refinanced.

 Usually the lender will work with the borrower to renew or refinance the loan, but this is not certain, especially in cases where the borrower’s credit worthiness has been downgraded.

➢ Leasing may be an attractive alternative to taking out a loan to purchase equipment.

 o Leasing has several advantages over taking out a loan.

 It allows you to use equipment if you cannot secure credit to purchase it.

 Lease payments may be lower than loan repayments, which may help the cash flow situation.

 Leasing does not negatively impact the debt ratios of the business, so flexibility to take advantage of profitable opportunities is not reduced.

 Leasing shifts the depreciating ownership value of equipment to the lessee, and lease payments are typically a tax-deductible expense.

 In many cases, an option to purchase the equipment at the end of the lease is available. However, this is almost always more expensive than purchasing the equipment from the start.

 o Ownership has several advantages over leasing.

 You have full right to the equipment and can sell it if your business needs change, and so retire the debt.

 You can customize or modify your equipment to meet any unique needs of your operations.

 You can account for depreciation as a business expense, and you may be able to claim the interest portion of your loan repayment as a tax deduction.

 o The major considerations in deciding whether to lease or purchase equipment is cash flow (as discussed with other types of credit) and tax implications, which may be considerable.

 The tax considerations for purchasing equipment include the depreciation on the equipment and the interest payments for the loan.
The tax considerations for leasing are the tax deductions for the lease payments.

- Tax benefits vary by state and types of businesses. Your tax professional is the best source of advice on the tax advantages of ownership and leasing.

Case Study: Comparing Intermediate-Term Operating Credit for Joe and Frank

Joe and Frank are both corn farmers on neighboring land in Clinton County. Joe and Frank have both estimated that they will need $100,000 for the purchase of a new field tractor.

Joe meets with his local agricultural lender and agrees to a five-year loan at 10% interest, with fixed, equal payments, one payment per year.

Frank also meets with an agricultural lender and agrees to a five-year loan at 10% interest, with fixed principal payments, one payment per year.

Review the table below which summarizes the payments and costs associated with Joe and Frank’s loan agreements, and then discuss the questions following the table.

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</table>

Table adapted from Ellinger, Paul N. and Peter J. Barry. nd. A Farmer’s Guide to Agricultural Credit. The Center for Farm and Rural Business Finance, University of Illinois at Urbana-Champaign.

Discussion questions:

What is the total cost of borrowing and interest for Joe and Frank?

What are the benefits and challenges to cash flow with the two payment methods?

Assume that corn prices were high and yields were good in Years 1 and 2. Who made the better credit decision, Joe or Frank?

Assume that corn prices were low and yields were poor in Years 1 and 2. Who made the better credit decision, Joe or Frank?
TOPIC 4: Long-Term Mortgages and Contracts.

Learning Outcome: Students will understand the advantages and disadvantages of long-term mortgages and contracts, and be able to calculate annual payments and total borrowing costs.

➢ Long-term mortgages and contracts are typically used to purchase land and/or construct buildings, with terms longer than 10 years.

  o Mortgages are loans that are secured by real estate through a mortgage lender or bank, while contracts are lending agreements directly between a buyer and a seller. There are advantages and disadvantages to each type of agreement.

➢ Mortgages are where a lender provides most of the funds to purchase property. The seller is paid in full at the time of purchase, and the buyer agrees to make payments to the mortgage lender until the debt is retired. The mortgage lender maintains a lien on the property to secure the loan.

  o Mortgages are the most popular method to securing land, and they have several advantages.

    ▪ First, the major advantage is that the buyer owns the land at the time of purchase. He or she is then free to sell any part of the land. They can also make additional investments to the property.

      • The buyer can also build up equity as payments are made, and can refinance the loan if it makes sense to do so.

    ▪ Second, the seller is paid in full at the time of purchase and relinquishes ownership rights and responsibilities.

      • Thus, there is no longer any need for the buyer and seller to maintain any business relationship between themselves.

    ▪ Third, mortgage loans are an effective way to build a solid credit rating (assuming that payments are prompt). When working with a full-service lender, a mortgage may make access to short- and intermediate-term credit easier with more favorable terms.

    ▪ Fourth, mortgages are widely available from a variety of lenders at competitive terms.

  o The major disadvantages of mortgages (as compared with contracts) are that they typically require a larger down payment, and involve higher interest rates and closing costs and servicing fees.
Some mortgages may be available at lower interest rates if they are provided by lenders who use Farmer Mac (Federal Agricultural Credit Corporation) and other government-sponsored enterprises that buy mortgages on the secondary market.

- Farmer Mac ensures that more money is available in the agricultural mortgage market at reasonable rates and lower risk.
- Loans that are eligible for Farmer Mac support include first-lien mortgages that are secured by agricultural land or rural housing. Your local lender can provide more information on specific qualification criteria.

Contracts (sometimes called “contract for deed”) are typically made directly between a buyer and a seller, where the buyer agrees to make payments to the seller until the full amount of the debt (both principal and interest) is paid, whereupon the ownership title is transferred.

- A contract is especially attractive for a beginning or limited resource farmer who is looking to establish or expand their operation. A contract has several advantages for the buyer.
  - First, depending on the seller’s needs, contacts can involve smaller down payments and/or better interest rates than a traditional lender.
  - A seller may be more flexible regarding the credit worthiness of the buyer and with repayment options.
  - Contracts typically avoid closing costs and service fees charged by many traditional lenders, which can add up to significant amounts.

- There are also several advantages to the seller.
  - A seller may be able to sell the land more quickly through a contract instead of a traditional mortgage process because it increases the number of potential buyers.
  - A contract generates immediate and regular cash income to the seller through the payment plan.
  - A seller may be able to defer any capital gains taxes associated with the sale of land until the purchase is completed and title transferred.

- There are also a number of disadvantages to contracts, especially to the seller who assumes greater risk.
  - A seller is typically less sophisticated than financial institutions in assessing the credit history of buyers, and so may not fully understand the ability of the buyer to repay the debt.
 Should the buyer default on the contract, taking possession of the land can be costly in terms of time and money.
  • If the buyer refuses to leave the property, evictions can require lengthy and costly court proceedings.
  • If the seller still owes a mortgage on the land, then he or she will need to continue to make payments, even without payments from the buyer.

o There are disadvantages to the buyer as well.
   The major disadvantage of contracts for buyers is that they have no ownership rights until the contract is fulfilled.
    • This means that the buyer cannot make any investments in the land, sell any part of it, or use its equity without the permission of the seller.
    • Further, if the seller’s situation suddenly changes negatively (due to death, court judgments or bankruptcy, etc.), the buyer may be at risk of losing the land and any payments that have been made.
    • Some contracts have strict default clauses that allow the seller to take full possession of the land if a payment is missed. This may include forfeiting all payments made to that point.

o The bottom line is that contracts can provide more flexibility and efficiency, and lower costs than mortgages, but carry higher risk for both seller and buyer.
   Sellers need to carefully assess the buyer’s ability to fulfill the contract, and buyers need to carefully assess the seller’s character and the status of the property.

➢ Payment options and terms for long-term mortgages and contracts are similar to those discussed with intermediate-term credit, except that terms will usually be longer than 10 years.
  o Additionally, long-term credit can have interest rates that remain fixed through the life of the loan, or are adjusted at given points.
     Fixed interest rates provide a guaranteed rate and predictability, but are set higher than variable rate loans. Should interest rates fall, the loan may be refinanced, but additional service fees and costs need to be considered in the total costs of refinancing.
Variable rate loans typically have lower interest rates, but carry the risk of higher rates and costs if the adjustments occur as interest rates rise.

- Some variable rate loans will specify a “cap” or maximum amount that rates can be raised during an adjustment.
- You may be able to convert to a fixed rate loan product if rates rise to unacceptable levels.
  - However, the risk is that you may not be able to qualify for another loan product if your credit standing has been downgraded or if the financial marketplace is stressed. In that case, you may be stuck with your current adjustable rate loan.
  - Generally speaking, lenders are more willing to offer more loan products with flexible rates and terms when they know that their credit is secured with land or real estate.
  - It pays to shop around, and think carefully about how the agribusiness will manage its long-term debt obligations. As before, the use of long-term credit should be linked directly to the business plan.
### Amoritization Table. Annual Principal and Interest Paid on every $1 borrowed, by Length of Loan and Interest Rate.

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Table reproduced from Langemeier, Michael R. 2009. Interpretation and Use of the Amortization Table. Farm Management Guide MF-489. Department of Agricultural Economics, Kansas State University.
References


Ellinger, Paul N. and Peter J. Barry. nd. *A Farmer’s Guide to Agricultural Credit*. The Center for Farm and Rural Business Finance, University of Illinois at Urbana-Champaign.


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The Business of Indian Agriculture

MODULE 3: Financial Management

LESSON 2: Understanding Credit

Word Game Worksheet

Fill in the blank spaces with words having the exact number of letters, and then find the words in the word puzzle on the next page.

Mortgages and long-term contracts are used for major purchases, such as _ _ _ _ _ and buildings.

Intermediate-term operating credit, with terms usually more than one year but less than 10 years, typically finances _ _ _ _ _ _ _ purchases or building improvements.

Short-term operating credit, with terms less than a _ _ _, typically is used to maintain adequate _ _ _ _ _ _ , short-term obligations, or unexpected expenses.

The full costs of borrowing include the interest, but may also include _ _ _ _ _ _ _ fees and _ _ _ _ _ _ _ _ _.

When analyzing financial _ _ _ _ _ _ _ _ _, pay particular attention to the debt and liquidity _ _ _ _ _ _ _ _ .

USDA's _ _ _ _ Service Agency (FSA) may provide loans when traditional lenders decline to provide a business credit.

Loan consolidation, where several loans are repackaged into a single loan, may raise the total borrowing _ _ _ _ _.

The decision for an agribusiness to extend credit to its customers is similar to traditional lenders: assessing the _ _ _ _ _ _ _ and reward.

The plan for using the credit should include specific tasks, a _ _ _ _ _ _ _ , and how the loan will be _ _ _ _ _ _ _ _ _.

Your use of credit should be directly related to your _ _ _ _ _ _ _ _ _ plan.
L S T A T E M E N T S
A S K O M R E P A I D
N X E Q U I P M E N T
D S F V S S W A X Z I
S E Y W O K C K L A N
S R C A S H F L O W S
E V S K O U A W I P U
N I Q B I E R V Y U R
I C O S T S M X E W A
S I U E A P O S A Q N
U N Z R R C X U R E C
B G T I M E L I N E E
Module 3: Financial Management

LESSON 3: Understanding Insurance
Lesson Topics

This lesson covers the following topics:

- Introduction to Insurance.
- Making Decisions about Insurance.
- Life Insurance and Estate Planning.

Learning Objectives

Upon completion of this lesson, participants will:

- Understand insurance as a business tool used to manage risk.
- Understand the considerations in deciding to use insurance and what type of insurance to use.
- Understand the use of life insurance in estate planning.

Definitions

**Market value:** The value that is usually reflected by the initial purchase price of an asset and then is adjusted over time by factors such as depreciation, inflation or market forces.

**Replacement value:** The value that is the cost that it would take to replace the lost asset today.

**Term life insurance:** The simplest and least expensive type. It is an agreement that the insurance company will pay a certain amount to your beneficiary upon death, and in return a premium will be paid for a set time, or term.

**Universal life insurance:** A policy that combines the characteristics of whole life insurance, with an associated investment sub-account that is managed separately.

**Whole life insurance:** A policy that collects larger premiums in younger years to offset higher premiums in older years. A cash reserve is built with excess of premiums paid in early years and is used to support costs later.
TOPIC 1: Introduction to Insurance.

Learning Outcome: Students will understand insurance as a business tool used to manage risk.

➢ Insurance is an important business tool used to manage risk.
  
  o Insurance policies can provide protection against losses related to the business, household and individual.
  
  o Insurance works best when the chances of loss or damage are low, but the costs of such hazards are very high.
  
  o Insurance works by pooling the premiums paid by a large group of policy holders so that payments can be paid to a small group of claimants.
    ▪ The chance of a loss, or risk, is calculated carefully for each type of loss that can occur. Premiums, in large part, are based on the calculated risk and the size of the pool of policy holders.
  
  o At a minimum, every household should have insurance that protects them from the death/disability of the main wage earner, loss/damage of the home, health costs, and loss/liability of vehicles.

➢ There are several major categories of insurance that are especially relevant to an agribusiness.

  o Property insurance protects the agribusiness owner from loss/damage to buildings, equipment, crops or animals from a destructive event such as fire, hail storm or flood.
    ▪ Most property insurance policies are a combination of fire insurance and liability insurance (liability insurance will be discussed separately in a moment).
    ▪ A typical fire insurance policy will protect property from fire and lightening, and the removal of items from a burning structure.
      • Additional (or extended) protections beyond the basic fire policy require a rider or an endorsement.
      • Extended coverage can include damage from hail, wind, flood and snow. It can also include acts of vandalism and theft, and damage from electrical or water system failures.
      • Personal items (clothing, jewelry) may be covered, up to a set dollar amount.
• Separate structures from the farm home such as barns, sheds detached garages can be covered, but they need to be itemized.

• In general, a property insurance policy can be written to meet your unique needs. Coverage, exclusions, amounts of protection and deductible payments can all be tailored to meet your needs.

• The challenge for the agribusiness owner is to identify all the business’s risk management needs and the level of protection needed.
  
  o You are in the best position to determine the risks of your business. Think about all the “What if?” scenarios that are possible for your business. For example, what might happen if there was an accident while transporting livestock?
  
  o A review of Lesson 1-4: Risk Management would be helpful in identifying the different types of risk involved in your business.

  o Liability insurance protects the agribusiness owner against a lawsuit or claim for injuries to person or property due to some alleged negligence on the part of the agribusiness.
    
    ▪ Damages or injury can range from physical injury to somebody on the agribusiness’s property, to psychological and/or economic harm from a wrongful termination of employment.

  o Liability policies can have many exclusions, so it is important that the business owner reviews the policy carefully. For example, family members might be excluded from coverage, or the coverage may not extend to non-farm operations.

  o Crop insurance can protect the producer from losses due to crop failure or sharp market price changes.
    
    ▪ Generally, crop insurance (called Multi-Peril) protects the farmer against crop failure due to natural events including drought, excessive moisture, freeze and disease.
    
    ▪ There are many different types of crop insurance that cover different aspects of loss.
• One type of coverage protects against loss of crop yield, where a payout is made at the point where a certain loss of yield is realized. The specific levels of payment and yield loss need to be agreed upon in advance.

• Another type of coverage protects against revenue loss because of falling market prices, low yields or both.

  ▪ As with other types of insurance, there can be important exclusions and deductible payments involved, so it pays to review these policies carefully.

  o Health insurance is another important protection to consider.

    ▪ While one might not consider health insurance a central concern of the agribusiness, in fact, it is one of the most important.

    ▪ The human resources of any company are critical to its success, and the health of the company’s ownership and employees is directly related to the company’s bottom line.

    ▪ Providing health insurance for owners and employees protects the company from illnesses and injuries that can jeopardize work productivity, and also from the financial bankruptcy that medical bills can create.

    ▪ Closely related, disability insurance provides a steady income when an individual is unable to work for extended periods due to some illness or injury.

  o Finally, life insurance is an important part of estate planning and succession planning.

    ▪ For example, if the agribusiness will go to surviving family members upon the death of the principal owner, then a life insurance policy could ensure that estate taxes do not cripple the business.

      ▪ It could likewise ensure that other financial obligations do not harm the wellbeing and success of the family or the agribusiness operation.

    ▪ Long-term health care insurance is a closely related concern. It pays benefits if someone is in a nursing home or requires assisted living.

      ▪ This type of insurance can protect the family and agribusiness from the extremely high costs associated with long-term health care.
TOPIC 2: Making Decisions About Insurance.

Learning Outcome: Students will understand the considerations in deciding to use insurance and what type of insurance to use.

➢ When deciding to use insurance, there are a number of important considerations. The first step is to conduct a careful risk management analysis of the agribusiness. A review of Lesson 1-4: Risk Management would be helpful.

   o As mentioned in Lesson 1-4: Risk Management, there are four major steps to risk management:

      1. Risk Identification: knowing and appreciating the risks.
      2. Assigning Probabilities and Outcomes: determining the chance of the risk happening and the potential results of the risk if it happens.
      3. Identify Risk Goals: deciding upon what you want or need to accomplish regarding the risk.
      4. Identify the Risk Management strategies, tools and products: learning about the risk management solutions and choosing the right ones.

   o Once the business's risks have been identified and their probabilities and outcomes determined, then the decision is how to manage the risk. There are four major choices on how to manage risk:

      1. Shift the risk to someone else. You can shift risk through the use of insurance policies, as well as contracts, forward pricing and transferring the ownership of product.
      2. Reduce the risk. Reducing the likelihood of loss can include improving safety practices, for example.
      3. Avoid the risk. You can avoid the risk by simply not engaging in the activity that has that risk. For example, you may choose not to sell retail cuts of meat because of liability risks related to food safety.
      4. Do nothing. In other words, you decide that you will accept the risk and potentially absorb the full loss.

         ▪ This choice may involve self-insuring, which means that the business maintains a reserve that can be used to cover the loss.
         ▪ Doing nothing does not mean simply ignoring or denying the risk. It means making a deliberate decision to accept the risk and full loss. If your business cannot do that, then you need a different risk management plan.
In some cases, the decision is already made for you and insurance coverage will be required.

- For example, many financial institutions require business assets that have liens or mortgages on them to be insured, such as buildings and farm machinery.
- Some states may require insurance. For example, workers compensation insurance may be required if you have a certain number of employees.

Once a general risk management assessment is made for the business, the next step is to identify those assets that are at risk and need to be insured against loss.

- These assets should first be critical to the operations of the business, and second, of high enough value that their loss and replacement would be financially damaging to the company.
- The table below illustrates the types of risks and events that should be insured.

<table>
<thead>
<tr>
<th>Cost of Occurrence</th>
<th>Probability of Occurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low</td>
</tr>
<tr>
<td>Low</td>
<td>Keep Risk 1</td>
</tr>
<tr>
<td>High</td>
<td>Transfer Risk 3</td>
</tr>
</tbody>
</table>

Reproduced from Howell, Beverly Riggs. nd. Farm and Ranch Survival Kit, Issue 5. USDA Ag Risk Library.
In Box 1, the probability of the event occurring is low, and the costs of such an event are also low. In these cases, there is no need for insurance.

In Box 2, the probability of the event occurring is high, but the costs of the event are low. There is no need for insurance.

In Box 3, the probability of the event is low, but the costs of the event are high. These cases should be insured.

In Box 4, the probability of the event is high, and the costs of the event are high. Insurance companies will not cover these cases or if they do, the premiums will be very costly. In these cases, try to reduce or avoid the risk, or be prepared to accept the risk and absorb the loss.

Farm inventory checklists, financial statements, farm maps, and other business and household documents can help you identify those assets that should be insured against certain events.

After you have decided what to insure, the next decision is for how much? In other words, what dollar amount should an asset be insured for?

Assets can be insured at their market value. That value is usually reflected by the initial purchase price and then is adjusted over time by factors such as depreciation, inflation or market forces.

- Depreciation and normal use will lower the market value of assets over time.
- Inflation may cause the value of assets to rise beyond depreciation, for a net gain of market value.
- Other market factors, such as land values, may cause the values of assets to rise or fall over time.

Assets can also be insured at replacement value. That value is the cost that it would take to replace the lost asset today.

- For example, a farm house might have a market value of $40,000 (if it were sold today), but it might cost nearly $100,000 to build a new house if the old one were to burn to the ground.
  - In that case, if the home were insured at market value and was lost, you might only be able to afford to live in a trailer.

The bottom line is that when considering how much to insure an asset, think about how much it would cost to replace that item, how essential it is to your business, and how quickly it would need to be replaced to keep your business running.
The trick is to insure your assets for enough so that you avoid financial catastrophe, but not so much that you are overpaying premiums.

Once you have decided what to insure, and for how much, the next step is to identify an insurance agent and the types of policies that he or she can offer.

- The first step is to review all your existing insurance policies to make sure what is covered and at what premiums. You can often save money by bundling different types of insurance policies with the same insurance agent. You also want to make sure that you will not be insuring anything twice.

- Make sure to review the financial standing on the insurance company that the agent represents. An insurance agent might be a nice, honest person, but it is the insurance company that will provide you with protection.
  - Ask your local banker or a trusted financial advisor about potential insurance agents and the companies they represent.
  - Check with your state’s Insurance Commissioner. They can tell you what insurance companies have the fewest or most complaints as compared to the number of policies they have.

- Make sure that the insurance agent provides you with a complete insurance coverage plan that fits your needs. They should not try to sell you insurance you don’t need or for more than you need.

- Try to choose the highest deductible amounts that you can afford, as these will significantly lower your premiums.

- Always ask for any discounts, which may be available for good history or behaviors.

- Try to pay premiums annually, as they usually are cheaper than monthly payments.

- And, as always, carefully read and review the policies, paying particular attention to any exclusions or special conditions.
Case Study: Mary Makes the Decision on Insurance.

Mary and her husband John run a cow-calf operation on about 1,500 acres of land. They own the land with a mortgage and still owe about $120,000. They also own the farm house and detached structures that have a market value of about $50,000. Tractors and other farm machinery and equipment are probably worth about $100,000 on the market. Their livestock is worth about $40,000 on the market today. They employ one full-time ranch hand and some part-time help.

John runs the daily operations of the ranch, and Mary handles the bookkeeping and makes the major financial decisions. Mary also teaches at the local high school and her wages and benefits (health, disability and life insurance, pension plan) make her the primary wage earner for the family. Without Mary’s teaching job, the family and business could not continue to operate. Without John, the household could survive financially, but the ranch operation might not.

Mary and John are both in their fifties and want to retire in about 15 years. Their dream is to buy a beach house in Florida and spend their retirement days fishing and gardening. Mary and John have saved about $50,000 for their retirement, plus can count on a modest payout from Social Security and Mary’s school pension. Their two children are grown and have their own families and careers. They live in the city and are not interested in ranching.

Currently, Mary has health insurance for the whole family through her teaching job, and disability and life insurance ($100,000) on herself. Their property insurance (fire and liability) covers the house and detached structures for $50,000, with a personal items rider that covers an additional $2,000. The property insurance does not cover injuries for employees working on the farm property. They have basic auto insurance (public liability/property damage) on their two vehicles for $35,000 each. Both vehicles are paid for and have little market value.

One day, Mary read a newspaper story about a ranch family who lost everything when their house caught fire. It was a freak accident due to an electrical problem. That got her thinking about their retirement plans and the risks of life. John has no insurance except for medical through Mary’s job. The ranch’s land, livestock, equipment and machinery are not insured. What would happen if something terrible happened?

Discussion questions:

What should be Mary’s first steps in developing a risk management plan?

What decisions does Mary need to make regarding insurance?

What types and levels of insurance would you recommend for Mary?

What information is missing and needed before a final decision on insurance can be made?
TOPIC 3: Life Insurance and Estate Planning.

Learning Outcome: Students will understand the use of life insurance in estate planning.

➢ As mentioned in the first topic of this lesson, life insurance for farmers and ranchers is an important consideration in estate and succession planning.

   o Life insurance protects the family against perhaps the worst case scenario: the loss of a wage-earning family head.

   o In all families, life insurance provides protection against the death of a wage earner whose loss of income could have financially crippling effects on the household.
     ▪ Life insurance can replace lost wages and ensure that the family meets its living expenses.
     ▪ Life insurance can also pay off existing debts (such as the home mortgage) or anticipated debts (such as college loans for the children).

   o For farming and ranching families, life insurance offers additional estate transfer and succession benefits.
     ▪ Life insurance can pay estate taxes that can be so high as to force the family to sell the operation simply to pay the tax.
     ▪ Life insurance can also pay off outstanding business debts that the new owners cannot, or do not want to assume.
     ▪ Finally, life insurance can pay for costs associated with transferring the business to new ownership.

➢ Life insurance policies, like other types of insurance, are based on a large pool of policy holders contributing premiums, and a small group of claimants at any given time.

   o In general, life insurance premiums are based on life expectancy rates based on age, gender, health condition, lifestyle and other factors.

   o Of course, premiums are also based on the amount of payout should a claim be made.
     ▪ The amount of coverage needs to be carefully considered based on the current income of the wage earner, his or her remaining work years, as well as years and the amount of debt and other financial obligations that would need to be covered.
Your insurance agent can be helpful in advising you on the amount of life insurance you need, but the final decision should be based on your family’s needs.

There are several types of life insurance policies, each with advantages and disadvantages.

- Term life insurance is the simplest and least expensive type. It is an agreement that the insurance company will pay a certain amount to your beneficiary upon death, and in return a premium will be paid for a set time period or term.
  - Once the time period or term has concluded, the agreement ends. There is no residual value in the policy, and no further premiums are owed.
  - If additional life insurance is needed after the end of the term, a new policy must be written.
  - Premium payments can be level over the term, or can be graduated so that premiums are cheaper during the younger years of the term and become more expensive in the older years of the term.
  - The advantage of this type of life insurance is that it is relatively inexpensive, provides an immediate payout to your beneficiary, and provides good protection for the period of time.
  - The disadvantage of term life insurance is that there is no residual value in the policy after the term ends, and it is not permanent. Once the term ends, there is no protection.

- Whole life insurance collects larger premiums in younger years to offset higher premiums in older years.
  - In this way, it uses level (but higher) premium payments to provide permanent coverage.
  - Higher early premiums build up a cash reserve from the excess needed at that time. The cash reserve that generates interest and grows over time.
  - In some policies, the cash reserve is inseparable from the death benefit and so the beneficiary only receives the death benefit. Other policies may allow the beneficiary to receive a benefit from the cash reserve.
  - The advantage of this type of life insurance is that its premiums remain constant over the life of policy, payout is an immediate lump sum, and it is permanent (as long as premiums are paid).
The disadvantage of whole life insurance is its higher premium costs.

- Universal life insurance combines the characteristics of whole life insurance, with an associated investment sub-account that is managed separately.
  - Premium payments are flexible (as long as the base life insurance amount is met) and any excess cash reserves is put into investment sub-accounts.
  - The investment sub-accounts can include various types of investments that provide a range of growth rates and risk (relatively safe). These are sometimes called variable life insurance policies.
  - The advantage of this type of life insurance is that its premiums are flexible, the payout can also be flexible, and it is permanent (as long as premiums are paid).
  - The disadvantage of universal life insurance is its higher premium costs, and that you may find a higher rate of return in other investments.

- There are many other types and variations of life insurance policies on the market. It is important that you work with a trusted financial advisor and insurance agent to find the policy that best meets your needs.
  - Be aware that unscrupulous agents have been packaging some reverse mortgage products (where you draw upon the equity of your home), with insurance annuities that pay out at regular intervals.
    - Although combining a reverse mortgage with an annuity may sound attractive, it is almost always more expensive and more risky than using just a reverse mortgage.
    - These products may sound very good, but they are complex and require careful thought about how these products will meet your long-term needs.
    - You should ask yourself how these products will meet your needs now and 10 years and 20 years from now.
    - Some cross-selling of reverse mortgages and insurance annuities may break state insurance laws.

References

Howell, Beverly Riggs. nd. Farm and Ranch Survival Kit, Issue 5. USDA Ag Risk Library.
The Business of Indian Agriculture

MODULE 3: Financial Management

LESSON 3: Understanding Insurance

Introduction to Insurance Quiz

Circle the number, letter, or “True” or “False” corresponding to the best answer.

1. True or False: Disability insurance provides a steady income when an individual is unable to work for extended periods due to some illness or injury.

2. Choose the Best Answer: Insurance works by:
   1) Pooling the premiums paid by a large group of policy holders
   2) Making payments to a small group of claimants
   3) Calculating the chance of loss or risk carefully
   4) All of the above answers are true about insurance
   5) None of the above answers are true about insurance

3. True or False: Crop insurance is an important part of estate planning and succession planning.

4. True or False: Crop insurance can protect the farmer against crop failure due to natural events including drought, excessive moisture, freeze and disease.

5. Choose the Best Answer: Property insurance protects the agribusiness owner from loss/damage to:
   1) Buildings, equipment, crops or animals
   2) Long-term health care
   3) Crop failure or low yields
   4) Loss of life
   5) All of the above are true of property insurance

6. True or False: Liability insurance protects the agribusiness owner against a lawsuit or claim for injuries to person or property due to events considered as “acts of God” where no one is to blame.
7. Choose the Best Answer: Extended protections beyond a basic fire policy may include:
   
   a) Damage from hail, wind, flood and snow  
   b) Acts of vandalism and theft  
   c) Personal items such as clothing and jewelry  
   d) Separate structures from the farm home such as barns, sheds and detached garages  
   e) All of the above answers are correct  

8. True or False: Providing health insurance for owners and employees protects the company from illnesses and injuries that can jeopardize work productivity but also from the financial bankruptcy that medical bills can create.  

9. True or False: A life insurance policy could ensure that estate taxes do not cripple the business upon death of the business owner.  

10. True or False: Long-term health care insurance pays benefits if someone has a workplace injury and cannot work for an extended period.
The Business of Indian Agriculture

MODULE 3: Financial Management

LESSON 4: Financial and Strategic Planning

Lesson Topics

This lesson covers the following topics:

- Family Financial Planning.
- Long-term and Strategic Planning.
- Whole Farm Planning.

Learning Objectives

Upon completion of this lesson, participants will:

- Understand family financial planning as a critical component of successful financial management.
- Understand how long-range and strategic planning can help an agribusiness prepare for the future more effectively.
- Understand the use of whole farm planning as a holistic planning tool.

Definitions

Goals: Goals support the mission statement with detailed directions that can be planned and executed. Goals are realistic, achievable, measurable and directly related to the company's vision and mission statements.

Mission Statement: A mission statement is similar to a vision statement, but more detailed and more focused on the present. It supports the vision statement by adding more information on how that vision will actually be achieved.

Net Income: Total expenses subtracted from total income will equal net income. This value is often reflected in an income statement.
**Net Worth:** Total liabilities subtracted from total equity/assets will equal net worth. This value is often reflected in a balance sheet.

**Vision Statement:** The vision statement reflects the core values and deeply held beliefs of the company’s owners and employees. Its role is to communicate an overall purpose, direction and/or meaning of the company.

**Whole Farm Planning:** A holistic method of farm, ranch and agribusiness planning with a focus on the family-run business. It combines and integrates family planning, business planning, and natural resource and land use planning.
TOPIC 1: Family Financial Planning.

**Learning Outcome:** Students will understand family financial planning as a critical component of successful financial management.

- Just as a business plan represents the detailed goals and strategies of an agribusiness, so does a family financial plan for the family’s goals and strategies.
  - A family financial plan should contain all the family’s goals, aspirations, resources and roles of all the family members. It is a collective team effort.
  - Getting everyone in the family onboard with a financial plan may be a challenge when there are competing interests. A successful planning effort will require good communication, negotiation and compromise.
    - Some older members of the family may have goals related to retirement or a second career. Other family members may be interested in home ownership or establishing their first career. Younger members might want to save for college or a new car.
    - None of these goals prevents pursuing the other goals of the family. However, resources are limited, and so the financial plan will need to prioritize goals and share resources.
  - Another important aspect of family financial planning is creating an emergency plan if financial or other disaster hits the family.
    - This should include an analysis of risk, and using risk management strategies for the household.

- The first step in family financial planning is to understand your current financial situation.
  - The family should collect all the necessary financial information, such as income and expenses, liabilities and debt, and equity and assets.
    - In many ways, this is a similar process to developing financial statements for the agribusiness (discussed in Module 2: Accounting), except that it takes into account all the family’s members.
      - Family members may or may not all live in the same house. However, if they are participants in the financial life of the family, then they should be included in the planning.
      - The first discussions should take place between the principals (usually the husband and wife). Then discussions should involve children, grandparents and other family members.
Much of the work of gathering your financial information is discussed in Lesson 3-1: Spending, Saving and Budgeting.

Income should include any non-farm wages, rent payments, and interest earnings. If you pay yourself a salary from your agribusiness, then include that as well.

- Remember not to mix the agribusiness finances with your family financial planning. This planning is focused on the family.

Expenses include regular monthly bills such as mortgage or rent, car payments and utilities. They also include living expenses such as food, clothing and personal spending.

Liabilities and debt include any outstanding loans, mortgages and credit cards. List the total amount owed, not the monthly payment amounts (list the payments under expenses).

Equity and assets include everything you have that has value. Include the equity value in your home, land and cars, as well as savings, investments, insurance policies and pensions.

Subtracting your total expenses from total income will give you your net income. This is like a family income statement. If your net income is negative, then you are spending more than you make, which requires attention.

Subtracting your total liabilities from total equity/assets will give you your net worth. This is like a family balance sheet. If your net worth is negative, one of your first financial goals should be to move into positive net worth territory.

The next step in family financial planning is to identify and prioritize your family’s goals.

- As mentioned the goals can vary among family members, so start with the principals’ goals first, then work to include other family members.

- If you’ve discovered that you have negative net income and/or negative net worth, then fixing those situations should be one of your top financial goals. You will not be able to achieve any of your other goals until you correct negative spending or negative net worth.

- Financial goals will vary for different families, but some financial goals are important for all or most families. These goals may include the following:
  - Saving for a comfortable retirement
- Protecting the family in case of death or disability of a wage earner
- Protecting the family from health care costs
- Estate planning and succession planning
- Owning a home
- Starting a new business or a second career
- Having children
- Saving for college
- Paying off debt

  It will help to write down all the goals that are important to you.

  - You can categorize them as long-term (more than 10 years), medium-term (about 2 to 10 years), or short-term (1 year or less) goals.
  - Then, within each category, rank them in importance.
  - The table below provides an example. In this case, long-term goals include: 1) protecting the family from death and disability, 2) having a comfortable retirement and 3) downsizing the home after the children leave. Medium-term and short-term goals are likewise listed and ranked.

<table>
<thead>
<tr>
<th>Long-term goals</th>
<th>Medium-term goals</th>
<th>Short-term goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. protect family from death/disability</td>
<td>1. buy new car to replace old one</td>
<td>1. pay off credit card debt</td>
</tr>
<tr>
<td>2. have a comfortable retirement</td>
<td>2. save for college for children</td>
<td>2. buy a new washer and dryer</td>
</tr>
<tr>
<td>3. downsize home after children leave – sell house and buy smaller one</td>
<td>3. help children with down payment on their first house</td>
<td>3. put more money each month into savings account</td>
</tr>
<tr>
<td>4. have a smooth transfer of estate and business to children</td>
<td>4. save for month-long vacation in Europe</td>
<td>4. paint the exterior of house</td>
</tr>
<tr>
<td>5. start a new web-based business</td>
<td>5. remodel the kitchen, with all new appliances</td>
<td>5. save for one-week vacation at Disney World</td>
</tr>
</tbody>
</table>

- Then, rank the top 2 or 3 in each category across categories to give you your overall priorities, as in the example below.
### Long-term goals

<table>
<thead>
<tr>
<th>#</th>
<th>Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Protect family from death/disability</td>
</tr>
<tr>
<td>2</td>
<td>Pay off credit card debt</td>
</tr>
<tr>
<td>3</td>
<td>Save for college for children</td>
</tr>
<tr>
<td>4</td>
<td>Put more money each month into the savings account</td>
</tr>
<tr>
<td>5</td>
<td>Buy a new car to replace the old one</td>
</tr>
<tr>
<td>6</td>
<td>Saving money for college for the children</td>
</tr>
<tr>
<td>7</td>
<td>Planning for a comfortable retirement</td>
</tr>
</tbody>
</table>

### Medium-term goals

<table>
<thead>
<tr>
<th>#</th>
<th>Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Buy a new washer and dryer</td>
</tr>
<tr>
<td>2</td>
<td>Help children with down payment on their first house</td>
</tr>
<tr>
<td>3</td>
<td>Run a smooth transfer of estate and business to children</td>
</tr>
<tr>
<td>4</td>
<td>Save for a month-long vacation in Europe</td>
</tr>
<tr>
<td>5</td>
<td>Remodel kitchen, with all new appliances</td>
</tr>
<tr>
<td>6</td>
<td>Save for one-week vacation at Disney World</td>
</tr>
</tbody>
</table>

### Short-term goals

<table>
<thead>
<tr>
<th>#</th>
<th>Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Protect family from death/disability of the wage earner</td>
</tr>
<tr>
<td>2</td>
<td>Paying off credit card debt</td>
</tr>
<tr>
<td>3</td>
<td>Buying a new washer and dryer</td>
</tr>
<tr>
<td>4</td>
<td>Putting more money into the savings account each month</td>
</tr>
<tr>
<td>5</td>
<td>Buying a new car to replace the old one</td>
</tr>
<tr>
<td>6</td>
<td>Saving money for college for the children</td>
</tr>
<tr>
<td>7</td>
<td>Planning for a comfortable retirement</td>
</tr>
</tbody>
</table>

The other goals do not go away. They simply go to the back burner while the planning starts with the priority items.

Each priority goal should have a rationale or justification on why it is listed and how it is ranked. There should also be logic to the timing of these goals, so that accomplishing one goal prepares you for succeeding on the next goal. For example:

1. **Protecting the family from death and disability of the wage earner**: This is the worst thing that could happen to the family and, if it did, then it would be a financial disaster and all the other goals would be lost.

2. **Paying off credit card debt**: The family owes about $5,000 in credit card debt at 26% interest. The interest payments are extremely costly and are limiting the family’s ability to save and plan for the future. The family needs to first stop the financial bleeding.
3. **Buying a new washer and dryer**: Both appliances are over 10 years old and in constant need of repair. Repair costs are eating into the budget and are wasted money. New energy-efficient appliances will save money over time.

4. **Putting more money into the savings account each month**: The family is barely saving any money, which is necessary for reaching the other financial goals.

5. **Buying a new car to replace the old one**: The old car is paid for, but repair costs are rising and it gets terrible gas mileage. In a few years, it will be time for a new, more gas-efficient car, which will save money in the long-term.

6. **Saving money for college for the children**: The oldest child will be enrolling in college in 9 years. The average cost of tuition at the public university within the state is $18,600 per year. The second child will enter college in 12 years.

7. **Planning for a comfortable retirement**: Assuming that the house is paid for, about $1,000 a month is needed to live comfortably.

   - The final step is to develop detailed plans for achieving each goal. These plans should include realistic steps with a timeline and a responsible person. For example:

   1. **Protecting the family from death and disability of the wage earner**: Within one month, the husband and wife will review the current financial situation and research different types of insurance plans. By two months, they will contact an insurance agent and discuss options. By three months, they will purchase a life/disability insurance policy.

   2. **Paying off credit card debt**: Within one month, the wife will review the current family income and expenses, determine how much can be paid monthly to reduce credit debt as quickly as possible, and then begin making payments.

   3. **Buying a new washer and dryer**: Within one month, the husband will research the costs and features of new appliances, review the current family income and expenses, and determine how much can be saved each month for the new appliances. By two months, saving for appliances will start, and purchases will be made once the savings goals are reached.
4. **Putting more money into the savings account each month:** Within one month, the wife will review the current family income and expenses, and determine how much can be saved each month. By two months, saving will start. The start of this goal may be delayed until the previous two goals are achieved first.

5. **Buying a new car to replace the old one:** Within one year, the husband will research the costs and features of a new car. A savings goal will be made, and saving will start. The start of this goal may be delayed until the previous goals are achieved.

6. **Saving money for college for the children:** Within one year, the husband will research the costs of college tuition. A savings goal will be made, and saving will start. The start of this goal may be delayed until the previous goals are achieved.

7. **Planning for a comfortable retirement:** Within one year, the husband and wife will review the current retirement accounts and contributions and determine if they are adequate to meet their goal. If the current retirement plans are found to be inadequate, adjustments to retirement investments and contributions will be made within a year.
TOPIC 2: Long-range and Strategic Planning.

Learning Outcome: Students will understand how long-range and strategic planning can help an agribusiness prepare for the future more effectively.

- Just as it is helpful to develop a family financial plan with a set of goals and strategies, it is also helpful for an agribusiness to develop long-range and strategic plans that will help secure financial health.
  - Long-range and strategic planning approaches planning in a slightly different way than the business plan discussed in Lesson 1-3: Preparing a Business Plan, which would be helpful to review.
    - A business plan is usually made for lenders and other interested parties (as well as the owner), and contains detailed information about all important aspects of the business.
  - Long-range and strategic planning are internal processes that help the owners think about how the agribusiness will continue to succeed and meet the goals of the owners, employees and customers.
  - It involves vision and goal setting, and analyses of the company’s strengths, vulnerabilities, opportunities and challenges both now and in the future.
  - It provides an opportunity for the owners to pause from the day-to-day operations of the business and think at a high level about the big picture factors that may affect the business in the future.
  - While financial management is not the only focus of long-range and strategic planning, it is a critical part of any major business analysis or planning.
- The first step in long-range and strategic planning is to develop a vision statement. This statement tells people about the overall values, hopes and aspirations of the company.
  - The vision statement reflects the core values and deeply held beliefs of the company’s owners and employees.
  - Its role is to communicate an overall purpose, direction and/or meaning of the company.
  - The vision statement is important because it provides you, your employees, and your customers with a clear sense of the company’s identity, which will help everyone support the company’s goals.
  - Examples of vision statements may be something like the following:
    - ABC Ranch will produce the highest quality beef products.
In ten years, ABC Farms will be the leader in winter wheat production in Montana.

ABC Agribusiness Company will be recognized as the highest quality farm service provider in the Southwest.

ABC Farm Equipment & Supplies support the livelihood of rural communities through agricultural services and supplies.

Perhaps even more important than the vision statement is the process that the company goes through to develop the statement.

The process starts with every stakeholder in the business (owners, employees, family members and perhaps even longstanding customers). Stakeholders are anyone with a deep interest in the company.

The process should be undertaken during a quiet time for the business where time can be taken for deep thought, reflection and discussion.

Each stakeholder should write down and discuss their expectations of the company for the future, taking care to being specific and not too vague.

• If they want, they can also use statements concerning the core values of the business and/or the beliefs of its stakeholders.

Remember that developing a vision statement is an internal process, and the vision statement will act as an internal sign post that helps steer the company into the future.

Each stakeholder should contribute to the process, and then discussions should focus on developing a statement that includes everyone's input.

The final statement should be brief (about 100 words), clear and something that everyone can agree upon.

A mission statement is similar to a vision statement, but more detailed and more focused on the now, the present. It will support the vision statement by adding more information on how that vision will actually be achieved.

Examples of good mission statements may be as follows:

The mission of ABC Ranch is to be recognized as the top producer of high-quality choice and prime grades of beef to the retail marketplace.
- The mission of ABC Farms is to always be one of the farms with the highest yields of winter wheat in north-central Montana.

- The mission of ABC Agribusiness Company is to maintain the highest score in annual customer satisfaction surveys of farm service providers in the Southwest region.

- The mission of ABC Farm Equipment & Supplies is to maintain a highly profitable business so that it can invest in the development of the rural communities it serves.

  - As with the visioning process, the process of developing a mission statement should be a team effort, including all stakeholders of the business, with the goal of finding a statement that reflects everyone’s input.

  - The final mission statement should be brief (about 100 words), clear and something that everyone can agree upon.

Like any planning effort, the goals will drive the plans. Developing a set of clear goals is the first step in your long-range and strategic planning.

  - Goals provide even more detail than the mission statement, and they work together to accomplish your mission. They provide the directions that your plans will seek to follow.

  - Good goals are realistic, achievable, measurable and directly related to the company’s vision and mission statements.

  - Detailed plans can then be developed that include specific roles and responsibilities, timelines, costs, other necessary resources and measurements that tell you when your goal has been reached.
Unlike the process for developing vision and mission statements, it may be easier to set goals by involving just the company’s management team.

- Once the goals are written, they should be shared with all the stakeholders for their buy-in and any suggested revisions.

The final step in the visioning and goal setting process relates back to financial considerations.

- For each step in the process, ask yourself how the vision, mission, goal and plan affect the financial planning of the agribusiness. In other words, ask specific questions such as:
  - What financial resources will be needed, and by when?
  - What will be the impact on the company’s balance sheet, income statement and other financial measures?
  - What needs to change now financially to accomplish the long-range and strategic goals?
  - Are the business’s financial plans compatible with the family’s financial plan?
TOPIC 3: Whole Farm Planning.

**Learning Outcome:** Students will understand the use of whole farm planning as a holistic planning tool.

- A holistic method of farm, ranch and agribusiness planning is called whole farm planning. Its focus is on the family-run business and it combines and integrates family planning, business planning, and natural resource and land use planning.
  - Some whole farm models emphasize the economic sustainability of the family business, while others may emphasize the environmental sustainability or the social/cultural sustainability.
  - Regardless of the particular model, whole farm planning is a model that seeks to include all the family’s and business’s interests in a way that does not exclude or conflict with any family member’s interests.
  - It brings together many topics that have been discussed in this lesson and others throughout the curriculum.
  - While there are several whole farm planning models available, there are four general steps to the whole farm planning process:
    1. Set goals for the farm business, the family, your role in the community and the environment. Make sure to include goals both now and in the future.
    2. Conduct an honest appraisal of your resources, including human resources (skills, labor, leadership), infrastructure (buildings, equipment, irrigation), environmental resources (soils, water) and economic resources (assets, access to credit, household finances).
    3. Develop the plan and use it for your decision-making.
    4. Monitor your progress with the plan, using measurable indicators.

- One model of whole farm planning (developed by Ohio State University Extension) uses three main areas of analysis: the individual, the family and the business, with the family in the center. This model focuses on financial and economic sustainability.
  - The model suggests that the skills and capabilities, needs, values and goals of each area (individual, family and business) be considered and integrated into a mission statement. See Figure 1 for an illustration of the model.
This model involves the development of five separate but related plans: business, retirement, transition, estate and investment.

The business plan includes the long-range and strategic planning discussed in the previous topic, as well as elements of the standard business plan discussed in Lesson 1-3: Preparing a Business Plan.

- The plan includes consideration of production and operations, marketing, human resources (personnel), finances and risk management.

The retirement plan includes elements of estate planning (discussed in Lessons 3-3: Understanding Insurance, and 5-4: Understanding Indian Land Regulations and Processes), and family financial planning discussed in the first topic in this lesson.
This plan includes considerations of the timing of retirement, the lifestyle after retirement, income needs, income sources and withdrawing from the business’s operations and ownership.

- The transition plan is also known as succession planning. It makes sure that the business ownership and operations will be transferred efficiently.
  - It includes such things as mentoring successors, being fair to all the heirs, strategies for transferring the business and assets, financing the transfer, and tax planning.

- The estate plan lays out the steps and procedures to handle the business and personal estate upon the owner’s death.
  - The plan includes assessing the value of the estate, liquidity needs to handle the death and estate administration, planning of the will, establishing any living powers, and tax planning.

- The investment plan is related both to family financial planning and business planning. It provides direction on the type of investments and levels of risk that the family and business are willing to accept.
  - The plan includes considerations such as how much income goes to investments (disposable), the time horizon (time until payout), investment options, risk management and tax planning.

➤ A whole farm planning model that focuses more on natural resources and land sustainability was developed by the Great Lakes Basin Farm Planning network.

- While this model is focused on a farm business, it can easily be adapted to any agribusiness. Its essential elements include the following:
  - The family’s goals: the plan should include the personal goals of the entire family related to business, lifestyle, quality of life and the environment.
  - The economic viability of the family farm business: the plan’s focus should be on profitability, not just productivity.
  - Water quality: the plan should protect all sources of water.
  - Soil conservation: the plan should control erosion.
  - Nutrient management: the plan should reduce pollution and maximize soil fertility.
  - Water management: the plan should consider water quantity issues related to irrigation and conservation.
  - Pest management: the plan should minimize pest problems while
protecting the environment.

- Soil quality: the plan should build soil quality over time.
- Crop rotations: the plan should maximize the benefits of crop rotations.
- Tillage: the plan should consider tillage practices that improve soil conservation and quality.

  - In this example, environmental sustainability clearly takes on major importance in the planning process.

- The whole farm planning process that you use may be a combination and adaptation of several models. The point is that the planning process be holistic and honest, and take into account everyone’s needs.

**References**


The Business of Indian Agriculture

MODULE 3: Financial Management

LESSON 5: Farm, Ranch and Agribusiness Planning

Family Financial Planning Worksheet

On the next pages, there are blank templates of family financial goal setting tables. As an individual, fill out these tables and then discuss them in small groups.

As you set your financial goals, you may assume the following:

• Your family’s net income is $1,000 per month. That means that, on average, you are making about $1,000 more than you are spending each month.

• Your family’s net worth is $12,000. That means that all your assets and equity are worth $12,000 more than all your debts and liabilities.

• You and your spouse are both 50 years old and want to retire by 65. You have retirement accounts with a combined value of $100,000. If you want to live on about $1,000 a month when you retire, you will need a retirement savings of about $300,000 to $600,000 depending on how much investment risk you are willing to accept.

• You have $4,000 in credit card debt and are being charged 25% interest.

• You have one adult child who is living on his own, and one 17-year old who will be going to college (in-state, public) next year.

• It’s November and your 18-year old furnace is starting to rattle and make strange noises.
First, write down as many financial goals as you can in the three columns (long-term, medium-term and short-term). Then rank them within each column.

<table>
<thead>
<tr>
<th>Long-term goals</th>
<th>Medium-term goals</th>
<th>Short-term goals</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>
Next, re-rank the top 2 or 3 goals from each column across all the columns and record them in the table below under column 1.

<table>
<thead>
<tr>
<th>Goals (ranked)</th>
<th>Explanation/Justification</th>
<th>Plan to achieve goal</th>
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</thead>
<tbody>
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</table>

Next, fill in column 2 with an explanation or justification on why that goal is important and its ranking, and if it depends on other goals being achieved. Finally, fill in column 3 with a detailed plan of how that goal will be achieved.
Discussion questions:

What were your highest priority goals and why?

What was the mix of short-term, medium-term and long-term goals?

What goals relied on other goals to be accomplished first? Why was the order important?

How were your goals similar or different than your peers? If they were different, why (given that you all had the same assumptions)?
The Business of Indian Agriculture

MODULE 3: Financial Management

LESSON 4: Farm, Ranch and Agribusiness Planning

Visioning and Goal Setting Worksheet

On the next pages, there are blank templates of a visioning table and a goal setting table.
As an individual, fill out the tables with your agribusiness in mind or an agribusiness that you are familiar with, or you can make up an agribusiness to use.

Once you’ve completed your tables, discuss the questions with your peers.

<table>
<thead>
<tr>
<th>Questions to Consider</th>
<th>Now (Mission Statement)</th>
<th>Future (Vision Statement)</th>
</tr>
</thead>
<tbody>
<tr>
<td>What business are we in? What products and services do we provide?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What are my primary production techniques? Are they standard or unique?</td>
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<tr>
<td>What do I see as the appropriate size and scope (enterprise mix) of the business?</td>
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<td></td>
</tr>
<tr>
<td>What are my marketing practices? Are they traditional or unique?</td>
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<tr>
<td>How is the business to be managed, owned and organized?</td>
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<td></td>
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<tr>
<td>What are its social and environmental concerns and responsibilities?</td>
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<td></td>
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<tr>
<td>What is its human resource structure and philosophy?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What is its expected financial performance, and how are profits distributed?</td>
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<td></td>
</tr>
<tr>
<td>What family values are expected from the business?</td>
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</tr>
</tbody>
</table>

**Visioning Table.** First, write down as many thoughts as you can about vision and mission statements. It does not have to be perfect. They are just notes to yourself.

Adapted from Jones, Rodney and Sarah L. Fogleman. 2005. *Farm and Ranch Strategic Planning (Visioning and Goal Setting)*. Farm Management Guide MF-2695. Manhattan, KS: Kansas State University Agricultural Experiment Station and Cooperative Extension Service.
Next, using your notes from the Visioning table, try to develop several vision and mission statements that capture your business’s long-range and strategic direction.

**Vision Statements…**
- tell people the overall values, hopes and aspirations of the company
- reflect the core values and deeply held beliefs of the company’s owners and employees
- communicate an overall purpose, direction and/or meaning of the company
- provide you, your employees and your customers with a clear sense of the company’s identity, which helps everyone support the company’s goals
- should be brief (about 100 words), clear and something that everyone can agree upon

Vision Statement:

Vision Statement:

Vision Statement:

**Mission Statements…**
- are more detailed and more focused on the present
- support the vision statement by adding more information on how that vision will actually be achieved
- are a team effort, including all stakeholders of the business, with the goal of finding a statement that reflects everyone’s input
- should be brief (about 100 words), clear and something that everyone can agree upon

Mission Statement:

Mission Statement:

Mission Statement:
**Goal Setting Table.** Next, fill in the table on the next page with one of the mission statements you developed and then identify some goals that support the mission. Then, add notes about the financial considerations related to the goals.

**Goals are...**
- realistic, achievable, measurable and directly related to the company’s vision and mission statements
- the directions with which the plans will seek to follow
- shared with all the stakeholders for their buy-in and any suggested revisions

**Financial Considerations...**
- ask how the vision, mission, goal and plan affect the financial planning of the agribusiness
- include questions such as:
  - What financial resources will be needed, and by when?
  - What will be the impact on the company’s balance sheet, income statement and other financial measures?
  - What needs to change now financially to accomplish the long-range and strategic goals?
  - Are the business’s financial plans compatible with the family’s financial plan?
Mission Statement | Goals | Financial Considerations
--- | --- | ---
1. | | |
2. | | |
3. | | |

**Discussion questions:**

**What was easy and what was difficult in developing vision and mission statements? Why?**

**What types of vision and mission statements might you expect from other stakeholders in the business? How would you work to incorporate their views into final statements?**

**How did your mission statement eventually affect your financial considerations?**

**Could your goals be reasonably met by financial planning, or were they unachievable? If they were unachievable, what needs to change: the goals or the financial plans?**
Module 4: Agribusiness Economics and Marketing
Participant Guide
The Business of Indian Agriculture

MODULE 4: Agribusiness Economics and Marketing

Lessons

This module covers the following lessons:

- Agribusiness Inputs (Supplies and Services).
- Agribusiness Marketing.
- Value-Added Products.
Module 4: Agribusiness Economics and Marketing

LESSON 1: Agribusiness Inputs
(Supplies and Services)
LESSON 1: Agribusiness Inputs (Supplies and Services).

Lesson Topics
This lesson covers the following topics:

- The Importance of Inputs (Supplies and Services) to Agribusiness.
- Supply Inputs.
- Service Inputs.

Learning Objectives
Upon completion of this lesson, participants will:

- Understand agricultural inputs and their importance to an agribusiness.
- Understand supply inputs and their significance to agribusinesses.
- Understand service inputs and their significance to agribusinesses.

Definitions

Service Inputs: Those services that agribusinesses use to produce a product or service for sale. They may include farm contract services, veterinary services, breeding and genetic services, agents and brokers, and accounting services.

Supply Inputs: Those supplies that agribusinesses use to produce a product or service for sale. They may include feed, fertilizer, livestock, pesticides and herbicides, fuel and energy products, and farm equipment and machinery.
TOPIC 1: The Importance of Inputs (Supplies and Services) to Agribusiness.

**Learning Outcome:** Students will understand agricultural inputs and their importance to an agribusiness.

- There are two major categories of inputs for agricultural operations.
  - First, natural inputs such as land, weather and soil microbes, over which the producer has very little control.
  - Second, man-made inputs that include supplies and services, and which are the focus of this topic.
  - Inputs (both natural and man-made) provide the “ingredients” that agricultural processes (such as planting or raising livestock) use to produce outputs (products and services).

- According to the Farm Census in 2012, about $329 billion was spent on agricultural inputs.
  - Animal feed represented about 23% of total farm input expenses.
  - Livestock and poultry purchases accounted for about 13%.
  - Hired labor (8%); repairs and maintenance (6%); cash rent (6%); and seed (6%) all together accounted for about another 26% in input expenses.
  - Fossil fuel-based products, including gasoline, fuels and oils (5%), chemicals (5%), and fertilizer (9%) all together represented about another 20% in input expenses.
  - Other miscellaneous inputs accounted for the rest of total agricultural inputs.

- Understanding agribusiness inputs is important because, first, inputs collectively represent a significant business expense and managing those input costs is essential to a successful operation. Second, the supply of critical inputs must be secure so that operations cannot fail because of a lack of supply.
  - Historically, many agribusiness inputs were generated on farm, such as when animal power was used to cultivate land or seeds were saved. Now, most inputs are purchased and agribusinesses are vulnerable to price increases of inputs (especially those related to fossil fuels).
  - Prices for many agricultural inputs have been on the rise in recent years, and this has resulted in a dilemma for many producers as their input (supply) costs rise, but there is strong market pressure to keep output (sales) prices low. This is sometimes referred to as a “cost-price squeeze.”
The pressure between rising input costs and low sales prices has meant that profit margins for many agribusinesses have been at historical lows.

- Successful operators will constantly be looking to control input costs through better pricing, new suppliers and service providers, and more efficient products and practices.
  - Better pricing strategies might include locking in at lower prices, taking advantage of volume and other discounts, or bundling/packaging a variety of purchases.
  - In a competitive marketplace, new suppliers and service providers will always be looking to win your business by offering lower prices or more attractive terms.
  - Improved technology can result in products that are more efficient and save input costs, particularly in the area of fossil fuels. For example, purchasing a new high-efficiency tractor may be justified by fuel cost savings over time.
  - Alternatively, operators can look for ways to provide some inputs themselves (for example, through business diversification), thereby saving costs and securing supply.
    - Because securing inputs is done at the front-end of the agricultural product life-cycle, short-term credit is often used to purchase inputs, with a plan of repaying the credit when the final product or service is sold.
    - Other considerations of inputs may be important. For example, farm inputs would need to be strictly controlled when producing organic or kosher products.
      - Following sustainable agriculture principles usually includes reducing off-farm inputs. These principles may include alternative farming practices and input products.
      - Sustainable agriculture practices may have environmental or health benefits, as well as cost implications.

- Agribusiness inputs are wide-ranging, and can be classified as major, minor and other inputs.
  - Major inputs include the big four: feed, fertilizers, agricultural chemicals and farm machinery and equipment.
- Minor (but still significant) inputs include fuel and petroleum-based products, seed, soil amendments, veterinary supplies, packing and transportation materials, and building materials.

- Other inputs that are often overlooked might include hardware and tools, utilities (such as power, water, gas, telephone and Internet), credit, insurance, contractors and service providers (government and private).
TOPIC 2: Supply Inputs.

Learning Outcome: Students will understand supply inputs and their significance to agribusinesses.

- Supply inputs (as opposed to service inputs) include those supplies that agribusinesses use to produce a product or service for sale. Because the range and variety of agribusinesses is so great, the variety of possible supply inputs is also great.
  - Each agribusiness will have a few major, mission-critical supply inputs that represent the bulk of their input costs. These major supply inputs should be carefully evaluated for cost and supply management.
  - First focusing your attention on your major supply inputs will provide you with the biggest potential costs savings, as well as ensure that your critical supply chains are secure.

- One of the major supply inputs in many agricultural operations is feed.
  - The feed industry has become highly sophisticated with products that are tailored to particular types of livestock, various stages of their growth, and supplements such as vitamins and minerals.
  - The market structure of the feed industry includes large manufacturers and a network of retail dealers and direct-sales firms. Some cooperatives are also involved in feed supply.
  - Keeping feed costs under control can make a significant impact in your profitability. Feed is typically the greatest expense associated with keeping farm animals and raising livestock.
    - Maintain good feed practices (such as securing it from wildlife/rodents or preventing forage spoilage) can help you get the most benefit out of your feed supply.
    - Also, making sure that your animals are getting just the right amount of feed and nutrients (not too little, not too much) is an important feed practice.
    - On-farm production of feed (such as hay or grain production, or pasture) can save money and reduce the need (and cash flow) for purchasing feed.
    - Shopping around and comparing prices among the many feed dealers may result in better pricing and cost savings.
Looking for more efficient and cost-effective feed mixes can lower your feed costs. For example, shifting to smaller grains when corn prices are high might be a good cost-savings strategy. Using alternatives to standard nutritional supplements may also lower costs.

Another major supply input for many agricultural operations is fertilizers.

- The commercial fertilizer industry is comprised of about 50 major manufacturers and thousands of marketing centers that supply dry and liquid fertilizer mixes and blends.
- Controlling fertilizer costs can make a big impact in an agribusiness’s bottom line. Because fertilizer manufacturing is very energy dependent, fertilizer prices often track with global energy costs, and so are susceptible to rapid price increases.
- There are a number of strategies that may help reduce the costs (and risks) of fertilizer inputs:
  - The first and most straightforward way to save fertilizer costs is to make sure that the right amount (not too much, not too little) of fertilizer is applied. This usually requires getting soil tests and soil fertility recommendations.
  - Optimum fertilizer rates are based on many factors, including soil conditions, crops and climate. You should consult with your local extension specialist for more information on optimal nitrogen and other fertilizer rates.
  - A relatively new method of calculating nitrogen rate recommendations is based on the economics of nitrogen and grain prices, instead of basing the rate recommendations on yield only.
    - When prices are factored in, nitrogen rates may be more cost-effective and economical at lower rates than recommended for optimal yields.
  - The right application methods (such as banding versus broadcast) and timing (especially with nitrogen) are also important ways to get the most out of your fertilizer inputs.
  - Make sure that all soil conditions are optimal for nutrient availability and uptake. For instance, controlling the soil pH is an important factor for soil health and nutrient availability.
• Standard blends (such as 10-10-10) of uniform granular size may be more expensive than mixed fertilizers. Compare prices per acre before deciding what to use.

• If appropriate, alternative and low-input fertilizer strategies such as manure, green manure, cover cropping and compost may be used.

  • However, these alternative inputs and methods should be tested first to determine their nutrient and mineral compositions, as well as recommended application rates and methods.

• Finally, consider all the potential environmental consequences of fertilizer rates and applications, and the potential economic and environmental risks and benefits.

➢ For ranchers, livestock purchases can be a significant input cost. Replacement heifers can be purchased or raised, and the most cost-effective strategy will depend on several factors, including:

  o **Market conditions.** Cycles of high and low prices happen regularly and ranchers should time their livestock replacements accordingly. Studies have found that keeping more heifers when calf prices are low results in the best return on investment.

  o **Herd size.** Typically, producers with large herds find it more economical to raise heifers while smaller producers prefer to buy replacement heifers. There may be exceptions to this rule, so producers should think about their own specific costs.

  o **Management.** Raising heifers requires more management, facilities and feed/pasture. These added costs need to be considered when deciding whether to raise or purchase replacement heifers.

  o **Non-reproductive heifers.** Producers typically raise about 20% more heifers than they will keep because of non-reproductive issues. These added costs need to be counted as well.

  o **Direct and indirect costs.** The costs of raising versus purchasing replacement heifers needs to be calculated and compared. All direct and indirect costs should be considered, including the opportunity costs (lost market value of retained heifers) and labor costs (of raising heifers).

  o **Herd Health.** Raising and keeping heifers reduces the risk of introducing disease from purchased outside heifers.
o **Genetics.** Raising heifers allows the producer to select for favorable genetic characteristics, such as heifers that bear early in the calving season and that have calves with higher weaning weight. On the other hand, cross-breeding provides genetic advantages which may make purchasing heifers a good choice.

➢ There are many other supply inputs to consider, and an agribusiness should carefully study its top mission-critical supply inputs for cost management. Some examples of other major supply inputs follow.

o **Pesticides and herbicides.** This class of agricultural chemicals can represent significant costs to an agribusiness operation.

   ▪ As discussed with fertilizers, applying the appropriate amount of pesticides/herbicides and in the correct manner will ensure that the operator is receiving the maximum benefit at the minimum cost.

   ▪ The costs and benefits to the environment and human health is also an important factor to include in a pesticide/herbicide decision.

   ▪ Alternative low-input strategies, such as integrated pest management, biological control agents and tilling practices should be considered.

      • Integrated Pest Management (IPM) uses a variety of methods of pest controls and monitoring to reduce pesticide use. IPM combines pesticide use with crop management strategies to minimize pests and the negative impacts of pesticide use, while maximizing profitability.

      • Weed management using cultivation and tilling practices is the primary low-input alternative to herbicide use. Mulching, crop rotations, and other practices might also be appropriate.

o **Fuel and other energy products.** These inputs include gasoline and diesel, propane and heating oil. Although fuel and energy prices are determined by the global market, there are some cost management strategies that operators can follow.

   ▪ If fuel/energy prices are expected to rise, a producer may want to “lock in” prices for some period of time. Of course, there is a risk that prices may fall, so the producer should be careful of the lock-in price and the time period.

   ▪ Another option may be to use on-farm storage so that fuel can be purchased when prices on low and then stored on the farm. This also saves the time and cost of refueling in town.
• Fuel conservation practices can be used by comparing the fuel needs and costs of various tractors and tilling practices. A producer may find a more cost-effective cultivation practice that saves fuel costs.

• Likewise, being extra efficient in the number of trips (tillage, spray, seeding) made over the field can save fuel costs.

• Also make sure that your tractors and field equipment are in good operating condition and are appropriate for the field conditions.

  o Farm equipment and machinery. The tractors, farm equipment and machinery needed to operate a farm or ranch represent a significant input cost. While these inputs may not be frequent, they are big-ticket items that require careful planning and budgeting.

    ▪ Module 3, Lesson 2: Understanding Credit; Topic 3: Intermediate Operating Credit or Loans, discusses the considerations in making equipment and machinery purchases.

    ▪ Being smart to forecast your equipment needs, and then buying while prices are low or when a good deal comes along, can save thousands of dollars.

    ▪ Likewise, careful planning will help make sure that equipment will not fail at a critical moment in operations. This includes maintaining your equipment in good condition and knowing the useful lifespan of equipment.

➢ In summary, supply inputs that are important to the agribusiness should be carefully managed to keep costs low, and to secure a steady supply.

  o Generally, each supply input should be assessed regularly for better pricing, cost-savings practices, more reliable supply and any alternative low-input practices.
TOPIC 3: Service Inputs.

Learning Outcome: Students will understand service inputs and their significance to agribusinesses.

- Service inputs (as opposed to supply inputs) include services that agribusinesses use to produce a product or service for sale. Like supply inputs, the range and variety of agribusinesses are great, and so the variety of possible service inputs is also great.

  - Each agribusiness will have some mission-critical service inputs that represent significant costs and/or cannot be missed. These major service inputs should be carefully evaluated for cost management and availability.

  - By first focusing your attention on your major service inputs, you will get the greatest potential costs savings, as well as ensure that services are available when you need them.

- Service inputs can include many types of contracting relationships. Some of these are discussed below, but you should always consider the specific service inputs that are important to your agribusiness.

  - Farm contracting services includes specialized jobs done by contractors with certain skills and specialized equipment.
    - Some of these jobs may include clearing and leveling land, installing irrigation, tilling, planting, spraying, harvesting, packing and transporting.
    - It may be more cost-effective to use farm contract services than to do the tasks yourself. For instance, it may be smarter to pay for someone to harvest your crop than to purchase, operate and maintain a combine for just a few months per year.
    - Contract services can also reduce the need and costs to have farm employees on the payroll.

  - Another class of service inputs is those services that are so specialized that the agricultural producer probably must contract for that service.
    - For example, veterinary services are only provided by very specialized individuals and might only be provided by a few people in the area.
    - Breeding and genetic services are also included in this category of inputs.
    - Soil, water and plant testing laboratory services are another example of specialized service inputs.
Farm machinery and equipment repair and maintenance services may need to be contracted.

Brokers and agents might be needed to buy or sell agricultural products, or to provide financial products used by the agribusiness.

Accounting, bookkeeping and tax preparation services might be needed if the necessary skills and time are not available within the agribusiness.

Developing a cost management strategy for a service input will depend on several factors.

1. First, controlling prices will depend, in large part, on how competitive the marketplace is for that particular service. If there is little or no competition in the local area, then prices are likely to remain high. If there are many competing service providers, then prices will be lower and it may pay to shop around.
2. Second, prices may depend on the relationship that has been built between the service provider and the operator. If there is a long-term and loyal relationship, then pricing might be more favorable.
3. Third, services that could be completed in-house should be carefully studied for their costs and benefits. If a service can indeed be accomplished by the agribusiness at the same quality and at a lower cost, then consider doing that job yourself.
4. Fourth, for those services that must be contracted, consider ways to reduce the number of service calls and/or level of service needed. For example, could some emergency veterinary calls be prevented by reasonable precautions?
5. Finally, consider alternative low-input practices that might eliminate the need for a service. For instance, could no-till practices or raising a breeding bull eliminate the need for some contracted services?

Ensuring reliable access to essential service inputs will also depend on several factors.

1. Annual or long-term contracts can help secure reliable access to the service provider over time (and perhaps at a lower price). Make sure that the contract contains provisions and penalties if services are not provided as needed.
Consider a retainer and balance payment schedule, where some portion of payment is made upfront to retain services, and then the balance is paid throughout the course of the contract, or at the very end. This provides a strong incentive for the service provider to complete the work and fulfill the contract.

Fostering a good working relationship with the service provider will help make sure that you are considered favorably. This includes paying your bills on time and scheduling your service calls well in advance.

Developing relationships with multiple service providers will give you alternatives and back-up options if your primary service provider is unable to deliver.

If possible, developing a backup plan to complete the job yourself will make sure that the job gets done if the service provider can’t do the task.

References

Module 4: Agribusiness Economics and Marketing
LESSON 2: Agribusiness Marketing
The Business of Indian Agriculture

MODULE 4: Agribusiness Economics and Marketing

LESSON 2: Agribusiness Marketing

**Lesson Topics**

This lesson covers the following topics:

- Introduction to Marketing and Marketing Channels.
- Marketing Strategies.
- Marketing Functions.

**Learning Objectives**

Upon completion of this lesson, participants will:

- Understand agricultural marketing and marketing channels.
- Understand marketing strategies and their importance to agribusinesses.
- Understand the basic marketing functions of an agribusiness.

**Definitions**

**Advertising:** ways of communicating information about your product or service to potential customers.

**Public relations:** communicating favorable information about your company, products and services.
TOPIC 1: Introduction to Marketing and Marketing Channels.

**Learning Outcome:** Students will understand agricultural marketing and marketing channels.

- For the agribusiness owner, marketing includes all the tasks and processes that it takes to deliver a product or service into the hands of the customer.
  - Marketing is much more than selling. It is forward-thinking and strategic business planning that maximizes the profits and revenue that come from a product or service.
  - Depending on the type of business, the customer may be an intermediate customer (for example, the grain cooperative) or the final consumer (at the family meal).
  - The type of agribusiness, the type of product or service and the type of customer will lead to the specific marketing strategies to consider.
  - In every case, the first step in developing an effective marketing strategy or plan is to conduct a market study (which ideally should have been done when the agribusinesses was formed, as part of the business plan). For a review of the market analysis in the business plan, see Module 1-3: Preparing a Business Plan.
  - The market study should answer many of these questions:
    - Who are the customers? What are their characteristics?
    - How many are there, and where are they?
    - How much money do they have? What do they like to buy?
    - What is the need and desire for the product/service?
    - What features and prices increase the need and desirability of the product/service?
    - What characteristics (location, times, packaging, delivery services) increase the need and desirability of the product/service?
    - What advertising and promotions increase the need and desirability of the product/service?
    - What is the supply and demand for the product/service in the marketplace, now and in the future?
• What is the competition for the product/service?

 Another helpful way to think of market studies is that they attempt to answer the “four Ps“:
  • Product (what’s the right product?)
  • Price (what’s the right price?)
  • Place (where’s the right place?)
  • Promotion (what’s the right promotion?)

 A market study is conducted by carefully researching the data to answer the questions above.
  • It may involve studying large-scale industry and consumer trends, surveying and interviewing potential customers, researching similar businesses and their products/services, or providing products/services in test markets.
  • Ideally, the results of your market study will feed directly into your business plan so that your products or services will meet (or exceed!) your customer’s needs and desires, and ultimately make your business profitable.

➢ Marketing channels and strategies will be specific to your type of agribusiness and customer, and will support your market plan. Some of the more common agribusiness marketing situations are as follows:
  o Production agriculture. Smart marketing is a must for production agriculture of commodity products. Marketing strategies should include:
    • Identifying types and costs of various markets (for example, retail, wholesale or processors).
    • Considering transportation costs from field to markets.
    • Determining the most profitable delivery product (size, weight, packaging).
    • Knowing seasonal cycles and demand.
    • Eliminating unnecessary steps and agents between you and the customer.
  o Auction Markets. Auction markets are the most popular way of marketing livestock and are especially attractive for small producers.
    • In an auction market, the public bids on animals to purchase them, and an auctioneer conducts the sale.
The auction receives a commission for each sale, and the commission prices vary depending on the animal.

Other types of livestock marketing channels include terminal markets (where livestock are sold by an agent) direct sales (where producers sell directly to a processor), and cooperatives (formed by groups of producers).

- **Grain Markets.** There are several types of markets that are available to gain producers.
  
  - Forward contracting sets a fixed, pre-harvest price where the producer tries to avoid any possible price declines. However, it also locks in the amount of profit that can be made if prices rise.
  
  - Lenders find this market attractive when determining the credit worthiness of a producer.
  
  - Harvest pricing is the more traditional market where grain is harvested, transported to the local elevator, and then sold at the current market price or spot price. The downside to this strategy is that market prices are often at their lowest point during harvest time.
  
  - Post-harvest pricing involves finding a price some months after harvest and holding delivery until that time when prices are higher. This requires the producer to have storage capacity for the needed waiting period.

- **Fruit and Vegetable Markets.** There are a number of marketing options for fruit and vegetable producers.

  - **Direct Consumer Markets.** There are several fruit and vegetable market channels that are direct to consumers and that eliminate intermediate steps and costs.
    
    - Roadside markets are growing in popularity across the country and offer a way to sell produce directly to the consumer with very little overhead costs. Although mostly seasonal, roadside stands operate year-long in some parts of the country.
    
    - Farmers markets are also growing in popularity, catering to an urban consumer who is looking for fresh and local produce. There are overhead costs to selling at farmers markets (such as vendor fees), and the competition can be fierce.
    
    - Pick-your-own marketing lets customers pick their own fresh produce and experience a fun, family activity. A farm needs to be located near an urban/suburban population for this to be successful.
- Food brokers buy and sell fruits and vegetables for retailers, restaurants and institutions. The produce is transferred directly from producer to customer with no intermediate handling.

- Wholesalers buy product and will store it and may package it for sale to retailers, restaurants and institutions.

- Processors will buy product from producers and then process the product into some other form (for example, canned or frozen) for the consumer.

  - Specialty Markets. Finally, there are many specialty markets being discovered every day that represent potential marketing opportunities for the producer.

  - These marketing opportunities are only limited by creativity and profitability. They may include such markets as organic markets/customers, range-fed beef, ethnic foods, wineries, specialty brands (such as Native American-made) and web-based sales.

**Case Study: Mary’s Business Idea: Will It Work?**

Mary had always been an avid gardener and was well-known for growing the best produce in the county. Over the years, as her garden grew in size, and as she planted more vegetables (corn, squash, melons, cucumbers, peppers, tomatoes), she harvested more and more produce. She gave much of her produce away until one day a friend suggested that she sell some produce at the farmers market in town.

Mary had always wanted to run a business, and the idea of selling at the farmers market made her think of other ways to make money doing what she loved. Perhaps she could sell her produce to the local grocery store and the diner in town. Would the local schools or the hospital buy her produce? Maybe she could open a roadside stand.

Mary was a careful person and had many questions, but the basic question was, would her business work? Would it make money? Would people buy her produce? Who would be her customers? What are their characteristics? How many are there, and where are they? How much money do they have? What do they like to buy? What is the need and desire for fresh produce?

Mary started to work on a market plan to answer these questions and decide if her business idea was worth pursuing.
TOPIC 2: Marketing Strategies.

Learning Outcome: Students will understand marketing strategies and their importance to agribusinesses.

➢ There are several important marketing strategies to consider for a successful marketing effort. Every agribusiness should at least think about the following five marketing strategies:

1. Advertising includes ways of communicating information about your product or service to potential customers.

2. Price promotions include setting prices that will lead to increased sales.

3. Merchandise or service promotions include the presentation or delivery of your product or service in an appealing way that increases sales.

4. Public relations include communicating favorable information about your company and its products and services.

5. Coordination combines and integrates the above-mentioned strategies into a single campaign that multiplies the impact of any single strategy.

➢ Advertising distributes messages through various media (TV, radio, the web, newspaper, billboards, etc.) about your products and services to potential customers.

   o Advertising can promote a product and service for sale, or can raise the image of your agribusiness.

   o While advertising tries to influence a customer’s perception and attitude about your product/service, its first goal is simply to let the customer know that your product/service exists. After all, if customers don’t know about your product/service, they can’t buy it.

   o Effective advertising also tries to keep current customers loyal, bring in new customers, and create a lasting image of your product/service in the marketplace.
- Effective advertising will use data from the market study to tailor its messaging to specific customers in a persuasive way.

- However, advertising can never fix or gloss over a serious problem in a company or with its product/service.

- Sophisticated professional advertising can be very expensive (and effective), but there are many advertising tactics that the producer can do themselves at little cost.
  
  - For example, taking out ads in local newspapers or on radio stations are often an inexpensive way to reach local customers. Be sure that any ad is error-free and presents a professional image.
  
  - Placing professional signage at your business location and on your work vehicles can help to advertise your product or service.
  
  - Listing your business in the yellow pages of the phone book or in local business directories may be useful.
  
  - Having one-on-one conversations and using professional-looking business cards is a very effective way of advertising. These conversations (also called messages) can generate other conversations and help your messaging go viral, or in other words, multiply its effects exponentially. Leaving something, like a brochure or pamphlet, about your product/service can also be very effective.
  
  - Web-based advertising through social networking sites (like Facebook or Twitter) or e-mail may be effective, but be careful that your messages do not become perceived as spam, in other words, annoying and unwelcome advertising.
  
  - Other effective ways to advertise depend on your specific product/service, customer set, and your imagination and creativity. New media channels, markets and advertising tactics are being developed all the time.

- An advertising budget should be considered as a business investment and, as such, should be linked closely with your business goals and plans. You should spend just enough to accomplish your goals, not spending any more or less.

- Price promotions assume that you have set a standard pricing strategy that maximizes your profits and revenues, while protecting your share of the market. Of course, this strategy may not apply if your products are commodities where prices are set by the market.
Pricing your product/service too high may generate more profit per unit sold, but it may also lower total sales (and total profit) by pricing yourself out of the market. In this case, you may lose valuable customers and market share, which is very difficult to regain.

Pricing your product/service too low may increase sales and market share, but squeeze your profit margins so that you are not making enough to meet your business goals. This is often called “buying the business” and may be a temporary tactic to build a customer base and increase market share, but is unsustainable in the long run.

Lowering your price below its standard level can be an effective marketing strategy for generating quick sales, increasing customers and growing market share.

- Price promotions can also include rebates, coupons, cash backs, volume or bulk rates, as well as sale prices.

Make sure that any price promotions are counted as a marketing cost in your financial accounts so that you can track their cost effectiveness.

Merchandise or service promotions focus on the point-of-sale experience of the customer.

- Merchandise promotions may include using attractive displays, packaging, signage and demonstrations.
  - This is particularly important when dealing with retail customers or at farmers markets and roadside stands.
  - It is also used quite often to introduce new products to the customer.

- Service promotions may include offers that include a free trial service for a period of time or money-back guarantees.
  - Customers may also be offered a finders reward for referring new customers, such as a discount on their service.

As with price promotions, make sure that any merchandise/service promotions are counted as a marketing cost in your financial accounts.

Public relations include a wide range of activities that try to improve the image of the company and its products and services. The following examples are just a few of the public relations activities that an agribusiness might consider. The possibilities are as many as your creativity will allow.

- Supporting and sponsoring local civic events (such as pow wows, fairs or rodeos) and/or community sports (Little League, softball leagues, high school teams, etc.).
- Supporting public TV or radio, and other charitable activities (school programs, church activities, youth groups or food banks).
- Using media stories (not paid advertising) to share information about the company and its products/services. This would include stories about the company being a good community citizen, and feature stories on customers and employees.
- Hosting company events such as cook outs, receptions or dinners that celebrate achievements and give thanks to the community.

- Coordination combines all your marketing strategies into a single campaign with a specific focus.
  - For example, your agribusiness may be ready to introduce a new product line or service to the market.
    - Through paid advertising and public relations activities, your marketing campaign will try to announce and inform customers and the public about your company and its new product/service.
    - The campaign will also include price or merchandise/service promotions to encourage customers to try your new product/service.
  - Or, your company may begin offering its products/services in a new community and you will need to build a new customer base there.
    - Public relations activities and paid advertising will introduce your company to the community, while promotions will help gain new customers.
  - The key to a successful coordination strategy is to maintain a single goal and focus, and to make sure that all marketing activities work toward that goal.
TOPIC 3: Marketing Functions.

**Learning Outcome:** Students will understand the basic marketing functions of an agribusiness.

- In many cases, marketing is the most important of the many functions of running a business. After all, if there are no customers buying your product or service, then the rest of the business is a wasted effort.
  - Many agribusiness owners are surprised to learn that marketing will take a considerable amount of their time, attention and money.
  - Yet, it is far better to prepare for successful marketing of the business than to be surprised, unprepared and unsuccessful in selling your product/service.
  - Marketing is usually associated with advertising and while this is true, marketing is much more than just advertising. It is any and all activities that involve a customer, including customer inquiries, referrals, service complaints, sales, invoicing and collecting payments.
  - There are at least six major marketing functions to consider: selling, transporting, storing, delivering, financing and collecting market data.
    - Selling involves providing the best product/service at a profitable price to a willing customer. Your product/service must meet a customer need or desire.
    - Transporting and storing are holding and/or moving your product to the customer at the right time at the right place. It can affect your pricing and inventory costs, and can be a key part of customer satisfaction.
    - Delivering means providing the right quality and quantity of a product or service, as promised. A major consideration is maintaining adequate inventories (for products) and capacity (for services). If you fail to deliver as promised, your customer satisfaction and business will suffer. Financing includes the financial terms that you are able to make with your suppliers, which will affect how you structure your product/service pricing terms. Financing can also influence any credit that you provide your customers.
    - Collecting market data means keeping up to date on market and consumer trends through research and customer information. Keeping good records of your customers’ purchasing histories is a key source of market data.
➤ Selling, or sales, is about matching the right products/services with the right customers at the right prices.

  o Developing and providing the right products/services should be a regular “business as usual” activity for the agribusiness.
    ▪ Products/services should have the right features, be of high quality, be current (not obsolete), and meet a customer need or desire.

  o Finding and cultivating the right customer involves understanding your target customer and their needs and desires.
    ▪ Your market study will tell you where your customers are, and how to reach them with your messages.
    ▪ Whoever your customers are (retail consumers, public auctions, cooperatives, elevator operators, processors), it pays to develop a personal relationship with them. The old sales saying still holds true: people buy from people they like.
    ▪ Be persistent, but not a pest. Anticipate customer questions and have your answers ready. Be prepared to provide all relevant information about your company, product and/or service.

  o Setting the right prices means making sure that you earn a profit but are not priced so high that you lose business.
    ▪ Researching the “going rates” or prices for comparable products or services is a good place to start.
    ▪ You will also need to know your total costs to produce the product or service so that you never lose money on your sales. Make sure to factor in overhead and indirect costs into your totals.
    ▪ If competition or other market factors force you to price lower than your costs, then you will need to lower production costs or add perceived value to your product so that you can justify higher pricing.

➤ Transportation and storage functions will depend on the specific nature of the agribusiness, and may involve the following considerations:

  o A careful cost/benefit analysis should be made on whether to do the transportation and storage job yourself, or to contract for those functions.

  o Make sure to factor in all overhead and indirect costs, such as labor costs, inventory carrying costs, insurance, purchase and maintenance of vehicles and storage facilities, and administrative costs.
o If transportation/storage functions are contracted, be sure to understand the chain of responsibility, transfer of ownership and other legal conditions that may apply.

o If anything should damage your product during transportation or storage, you will want to be sure that you are financially protected.

➢ Delivering is the marketing function that presents the customer with a highly satisfying buying experience. It is more than simply selling and placing a product in a customer’s hands – it’s about good customer relations and high satisfaction.

o Delivery first ensures that the right product in the right quantities is provided at the right time. The minimum service level should be to meet the customer’s expectations – nothing less.

o Exceeding customer expectations should be the ultimate goal. That may mean delivering early, adding extra value or service, demonstrating exceptional professionalism or making a personal connection.

o The delivery function should also provide a personal touch that helps build the customer relationship.
  ▪ This could simply be a follow-up phone call (or mailing) to make sure that the customer was pleased with the product/service.
  ▪ It could involve a personal delivery or a simple handshake and thanks for the business.
  ▪ It could also include a customer satisfaction survey, which provides invaluable marketing data.
  ▪ Keeping a file for each customer is a good idea. Aside from business-related data, information about the customer’s likes, dislikes and personal notes is useful in creating a friendly relationship.

➢ Financing your supply chains is a major factor in how you deliver your products, services and lines of credit to your customers.

o For example, if your agribusiness requires large, high-cost supply inputs (such as feed, seed, fertilizer), your credit obligations to purchase these supplies may mean that you can work only with customers who can pay on delivery.

o However, if your supply line financing allows for more flexible repayment terms, you can pass this financing flexibility on to your customers by providing them lines of credit and flexible payment plans.
• By providing flexible payment options, you expand the pool of potential customers for your products or services.

• Customer credit can also spread out your incoming revenue streams so that it is more steady and reliable, and so it becomes easier to forecast budgets.

➢ Collecting marketing data should be a continuous function performed by the agribusiness. Without current and accurate information about your customers, industry and competitors, your agribusiness’s success is based more on hope than on fact.

  o Industry and consumer trends can be found in trade journals or other business reports. A lot of useful information can be picked up in mainstream newspapers and news media.

  o Local information can be collected through word-of-mouth conversations, community networks and local news outlets.

  o The U.S. Census provides demographic (population) data on potential customers down to the neighborhood block level.

  o Consumer database companies can sell you valuable information on your potential customers’ purchasing history and profile.

  o Surveys of both existing and potential customers can provide very useful marketing information.

  o Be sure to work with someone who is experienced in developing surveys so that your questions result in unbiased and accurate information.

  o Studying your competition and watching what they do is also an important part of marketing data collection.

References

Module 4: Agribusiness Economics and Marketing
LESSON 3: Value-Added Products
The Business of Indian Agriculture

MODULE 4: Agribusiness Economics and Marketing

LESSON 3: Value-Added Products

Lesson Topics

This lesson covers the following topics:

• Introduction to Value Added Products and Services.

Learning Objectives

Upon completion of this lesson, participants will:

• Understand value-added products, services and marketing.

 Definitions

Contract farming: A contractual relationship between a producer and a processor. Typically, it refers to the situation where a large corporate processor commands the entire processing chain by contracting with farmers to provide the raw input products.

Value-added products: The situation where value is added to a product through processing and/or distribution enhancements, and the price for that product increases, as well as the opportunity to earn profits. Value can be captured or created. Captured value refers to enhancing the distribution chain between the raw product and the consumer. Created value refers to enhancing the processing chain between the product and consumer (value can be actual or perceived).

Value-added services: Typically refers to additional services provided to the customer at no or minimal charge that are outside the core service.

Vertical integration: The controlling of more of the processing and distribution chain from the raw input to the finished consumer product. The more chains are controlled by the agribusiness, the more profits can be realized.
TOPIC 1: Introduction to Value-Added Products and Services.

**Learning Outcome:** Students will understand value-added products, services and marketing.

- When a “raw” product (such as a food crop or beef cattle) is transformed into a finished product for a consumer (such as a dinner meal), value has been added throughout the chain of processing and distribution that goes from farm (or ranch) to fork.
  - When value is added to a product through processing and/or distribution enhancements, the price for that product increases, and so does the opportunity to earn profits.
  - Added value can be created or captured.
    - Created value refers to adding to the processing chain between the product and consumer (this value can be real or perceived).
    - Captured value refers to enhancing the distribution chain between the raw product and the consumer.
  - Value is created during each processing step by inputting (or adding) things such as labor, ingredients, processing and/or packaging. The costs and profit margins for each of these inputs are then added to the cost of the product.
  - Value can be created in five ways:
    1. Creating new and innovative products.
    2. Enhancing an existing product.
    3. Enhancing services.
    5. Developing unique customer experiences.
  - Value can be created at any point in the journey of the product to the customer. It could involve added service or convenience, or an enhanced experience at the point of sale. Pick-your-own farms (for example, fruit orchards, berry farms, pumpkin patches) and agro-tourism activities (for example, hay rides, corn mazes, petting pens) are included in this category.
  - Value can also be created through using special production practices such as organic, sustainable, free-range, grass-fed or locally produced agriculture. These practices can command a premium price because a customer perceives an added value for the product, environment, the community or the local economy.
Attaching a location to a product can also add value to it. For example, “Made in…” branding may command a higher product price. Many states and agricultural regions use location branding to market their products.

Bundling products can also create value. For example, packaging cheese, crackers and salami together can command a higher price than if those products were sold separately.

Producing a product that saves costs along the processing chain can also add value. For example, a seed producer who markets a new variety of seed that is more resistant to disease can command a higher price.

Another important consideration in value-added products and marketing is risk.

Risk is a factor in any business venture, and the amount of potential reward for a business activity should match the amount of potential risk.

If a value-added opportunity represents great risk but low reward, then it should be reviewed very carefully. On the other hand, a value-added opportunity with high potential reward and low risk is a good one to pursue.

In general, capturing (as opposed to creating) value in a distribution chain is a highly competitive business, and so the risks may be high and the rewards low.

Creating value may be less competitive (depending on the niche or idea), and its risks will depend on the investments needed for new inputs and processes, and the potential profits.

In many ways, entering into a value-added venture should be treated in the same way as entering into a new business or enterprise.

- A business plan should be developed and all the basic start-up questions should be answered.
- A marketing plan should also identify the customer need and desire for the value-added product.

USDA can provide support for entering into a value-added venture. The Value-Added Producer Grants (VAPG) may be used for planning activities and for working capital for marketing value-added agricultural products.

- Eligible applicants include independent producers, farmer and rancher cooperatives, agricultural producer groups, and majority-controlled producer-based business ventures.
- You can contact your State Rural Development Office to get additional information and assistance.
Major profit opportunities can be found by an agribusiness that controls more of the value-added steps, through what is called vertical integration.

- Vertical integration means controlling more of the processing and distribution chain from the raw input to the finished consumer product. The more of these chains that are controlled by the agribusiness, the more profit can be made.

- Vertical integration tries to capture value by streamlining the distribution chain. It tries to create value by owning steps along the processing chain.

- Vertical integration also reduces transaction costs, which is the added management and coordination needed for every transaction between parties in a processing chain. Saving these transaction costs saves money and potentially increases profit.

- While vertical integration can provide many profitable opportunities for an agribusiness, one form of vertical integration called contract farming presents both opportunities and limitations.

  - Contract farming typically refers to the situation where a large corporate processor controls the entire processing chain by contracting with farmers to provide the raw input products.
    - This practice is common in the poultry and hog industries, but is also found in other agricultural industries to some extent.
    - The corporation may provide the animals, feed and most other inputs, and the farmer is contracted to raise the animals (or crops) to a specified age, weight or amount.

  - The advantages of contract farming are that it can lower the risk for both farmer and processor by specifying and locking in advance the terms and prices of the transaction.

  - The disadvantages include the loss of control and flexibility of the farmer to make business decisions in his/her best interests. There also may be a power imbalance where the corporate processor can demand concessions from a contract farmer who has become financially dependent on the processor.

- Other forms of vertical integration include direct marketing (straight to the customer), producer alliances and cooperative activities.

  - Direct marketing can include such activities as roadside stands, selling “on the hoof,” selling homemade products (jams, pickles, soaps), and web-based selling (such as eBay).
Producer alliances are when companies at about the same level of the processing/distribution chain work together to provide and/or market a superior product.

- For example, a number of small beef producers may work together to provide a steady quantity of beef at a specified quality to local restaurants.

Cooperative activities include selling cooperatives where producers combine their outputs for greater bargaining power and better prices.

- Value-added services (as opposed to products) typically refer to additional services provided to the customer at no or minimal charge that are beyond the core service.
  - This business concept is usually associated with the telecommunications industry where services such as voicemail, call forwarding and call waiting features are added to the core telephone service.
  - In an agribusiness setting, an example of a value-added service may be a soil testing company offering a no-charge consultation to review the results and help the producer apply the test results to their particular crop.
  - Another example might include a farm equipment company offering free maintenance for six months after a service call.
  - Many times, the value-added service can simply be sharing the expert knowledge and experiences of the service provider with the customer, so that the customer feels that they have been given something useful and extra.

- Ultimately, agribusinesses use value-added products, services and marketing to try to earn more profits by doing the following:
  - Increasing the customer base by providing new or improved products/services that more people want to buy.
  - Receiving a greater portion of revenue from the finished products by controlling more of the processing and/or distribution chain.
  - Becoming more strategic and influential players in the marketplace by establishing greater presence and competitive advantages.
Case Study: Should I Sell Value Added Beef?

Joe Granger had been running a successful small-scale cow-calf operation for over 20 years, and was looking for a new business idea. In addition to making some extra money, Joe wanted to try something new and challenging. However, he loved his work, knew his beef, and didn't want to go into something completely different. Joe recently attended a workshop on value-added products and started to think about how he might be able to create or capture additional value from his operation. Currently, Joe sells his calves at about six months at the regional auction yard. The auction yard arranges for cattle haulers to transport the calves on a certain date. The action yard charges a 3% commission per head. Transportation costs are added, depending on how many calves are moved. It has been a simple and easy way to sell his cattle.

Joe feeds his Herefords on pasture on a beautiful scenic ranch on Native American land in northwestern Montana. He raises his own replacement cattle and is careful about controlling the quality of his breed and introducing any disease or unfavorable genetic characteristics. His ranch is located about a two-hour drive from a city of about 21,000 people, where a lot of well-off retirees and recent West coast transplants live. There have been a lot of new businesses opening in the city, including coffee shops, organic stores, and arts & crafts galleries. Every summer, tourists flow into the city from all around the country to enjoy mountain fishing, hiking and camping.

Joe is an optimist, and sees many value-added possibilities for business success. One day, he sits down at his desk and starts to put some of his ideas down in writing…

References


The Business of Indian Agriculture

MODULE 5: Land Use and Management

Lessons

This module covers the following lessons:

• Introduction to Native American Land Use and Management.
• Knowing Your Land.
• Understanding Land Transactions and Rights.
Module 5: Land Use and Management

LESSON 1: Introduction to Native American Land Use and Management
LESSON 1: Introduction to Native American Land Use and Management.

Lesson Topics

This lesson covers the following topics:

- Historical and Traditional Examples of Native American Land Use and Management.
- Basic Considerations of Native American Land Use and Management.
- Respecting Cultural and Sacred Sites.

Learning Objectives

Upon completion of this lesson, participants will:

- Understand the history and traditions of land use and management for the local tribal community.
- Understand the basic principles of Native American land use and management.
- Understand the importance and strategies for respecting cultural and sacred sites.

Definitions

Whole farm planning: a process that takes a holistic view of the farm and incorporates the various needs of the agribusiness, farm family, community and environment into a single integrated management plan.
TOPIC 1: Historical and Traditional Examples of Native American Land Use and Management.

Learning Outcome: Students will understand the history and traditions of land use and management for the local tribal community.

- Native Americans have had a long and close relationship with the land. This history and relationship is important to know because it forms the basis of many of the Native American land use and management issues that are faced today.
  - Contrary to some stereotypes of Native Americans who left no mark on the land, tribal communities used sophisticated natural resources, land use, and land management techniques to make best use of their environment.
  - While it is difficult to generalize across all tribes, some basic traditional Native American land use and management principles could be described as:
    - Land use and management practices were developed from experience gained through long periods of careful observation, trial and error.
    - Land use and management practices strive for maximum sustained yield instead of maximum production.
    - Land use and management practices respect the balance and connection between the natural and spiritual worlds.
  - From the nineteenth century to today, rapid changes in how land is used and managed have taken place as a result of human settlement, treaties and other agreements, federal laws and policies, economic factors, technological advances, environmental concerns and many other factors.
  - Each tribe has its own unique history and traditions associated with its land use and management. The particular land use and management issues will depend on the land’s geology; climate; wildlife and plant life; economic opportunities; cultural, social and spiritual considerations; and more.
TOPIC 2: Basic Considerations of Native American Land Use and Management.

Learning Outcome: Students will understand the basic considerations of Native land use and management.

- Whether you already own land, are inheriting land, are purchasing or leasing land, land use and management is a major consideration for your agribusiness.
  - How you use and manage your land will determine, in large ways, the success of your agribusiness.
  - Just because the land has always been used and managed a certain way, does not mean that you shouldn't consider the basic questions about how the land can be best used and managed now.
    - For example, changes over time in agricultural technologies, plant and animal breeding, the economy, land planning and zoning policies, and even the climate can change the way the land can be best used and managed.

- There are many factors that influence how agricultural land is used and managed.
  - The physical and natural properties of the land play an important role in determining how the land is used and managed. The soil types, climate and terrain help determine what agricultural crops and livestock can be supported.
    - For example, one reason that about two-thirds of Montana agricultural land is grazed is that there is not enough rainfall to support crops.
  - The types of crop varieties and/or livestock breeds that are available and suitable for the land also help determine land use and management.
  - The agricultural technologies and production techniques that are available to the land manager are also important. Remember that while some advanced technologies or techniques might exist, they might be too expensive or impractical for your agribusiness.
  - The agricultural marketplace also determines what can be economically sustained by the land. For example, the land might support the growth of a particular crop, but if that crop is not economically valuable, then it is not a good use for an agribusiness. (Of course, they may be other good non-economic reasons for growing particular crops).
Land planning and zoning policies passed by local governments play a role in how land can be used and managed. These policies are often the result of different values and interests in the community.

Finally, remember that farming and ranching is often much more than just raising crops and livestock. Farm and ranch operations may include firewood production, feed manufacturing, agritourism, fruit/vegetable stands, slaughterhouses, retail sales, and other agriculture-related activities. These other potential uses need to be factored into a land use and management plan.

One of your first steps in land use and management planning is to assess the land in terms of its agricultural potential. There are several land assessment tools, and you should consult with your local agricultural experts (such as USDA's Natural Resource Conservation Service NRCS) for the best tool for you.

One popular assessment tool is the Agricultural Land Evaluation and Site Assessment (LESA) system, which helps to determine the quality of land for agricultural uses, and assesses land for its agricultural economic potential.

- The LESA system was developed by USDA's NRCS and can be used by local planners, landholders, developers and government officials to make land use decisions.

The next step is to become familiar with the local land planning and zoning policies that affect your land. There may be laws and regulations associated with city, county, state and tribal governmental entities.

- If your land is Indian trust land or within Indian reservation boundaries, then there may be additional regulatory considerations (see Lesson 4: Understanding Indian Land Regulations for more details). Additionally, there may be cultural and/or spiritual considerations (see next topic).

Another important consideration in land use and management is conservation. Most farmers and ranchers understand and appreciate the need to protect their natural resources so that the land will continue to support their livelihood, as well as support healthy families and communities.

- There are a range of conservation practices and programs that have been developed to assist the farmer and rancher in managing natural resources in a sustainable way.

- Many of these conservation practices and programs have been implemented in local areas to test their effectiveness.
USDA’s NRCS offers several conservation assistance programs, such as:

- The Conservation Technical Assistance (CTA) program provides land users with conservation technology and delivery systems that help reduce soil erosion, improve water quality, protect fish and wildlife habitat and improve the long-term sustainability of the land.

- Conservation Innovation Grants (CIG) is a voluntary program that helps to stimulate the development and adoption of innovative conservation practices and technologies that work with agricultural production.

- The Conservation Stewardship Program (CSP) is a voluntary conservation program that offers payments to producers who maintain a high level of conservation on their land and who agree to adopt higher levels of stewardship. Eligible lands include cropland, pastureland, rangeland and non-industrial forestland.

- The Environmental Quality Incentives Program (EQIP) provides financial and technical assistance to farmers, ranchers and non-industrial private forest land owners who have challenges to soil, water and air quality, wildlife habitat, surface and groundwater conservation, energy conservation, and related natural resources on their land.

- The Conservation of Private Grazing Land (CPGL) initiative provides technical and educational assistance to people who own private grazing lands. The technical assistance supports managing grazing land more effectively, protecting soil from erosion, conserving water, providing habitat for wildlife, and sustaining forage and grazing plants.

USDA’s Farm Service Agency (FSA) also administers the Conservation Reserve Program (CRP), which is a voluntary program for agricultural landowners who can receive annual rental payments and cost-share assistance to establish “long-term, resource conserving covers on eligible farmland.”

- FSA also administers the Conservation Reserve Enhancement Program (CREP), which is a voluntary land retirement program that helps agricultural producers protect environmentally sensitive land, decrease erosion, restore wildlife habitat, and safeguard ground and surface water.
o Tribal conservation districts have been formed to support tribal efforts to provide for the use, protection, conservation and restoration of reservation lands. Tribal conservation districts provide assistance to land owners/users and managers in the conservation and smart use of land and natural resources.

- They also help coordination between tribal governments, tribal natural resource managers, NRCS, and other federal, state, local and private entities.
- As an example, there are three tribal conservation districts working with NRCS in Montana, functioning alongside the 58 conservation districts that are organized under state law.

  • In addition to the tribal conservation districts, the Tribal Conservation Issues Committee in Montana functions as a tribal conservation advisory council to the NRCS State Conservationist. The committee is made up of tribal representatives from each reservation, as well as tribal conservation district representatives.

➤ Whole farm planning is a process that takes a holistic view of the farm and incorporates the various needs of the agribusiness, the farm family, the community, and the environment into a single integrated management plan.

  o While the whole farm planning model is an excellent tool to use in the business planning phase, it is introduced in this lesson as a method for land use planning and management.

  o Whole farm planning was developed, in part, as a response to the limitations of the single-purpose farm plans that often created conflicting priorities for farm families.

    ▪ For example, some farms might have had an aggressive crop management strategy that created problems for its soil conservation goals.

    ▪ Or, a farm might have had an agribusiness plan that demanded longer working hours, which conflicted with its family’s values and priorities of spending more time together.

  o The point is that the agribusiness operator should not view natural resources and land use as separate from the other priorities of the business, family, and community. Lesson 3-4: Financial and Strategic Planning discusses whole farm planning in more detail.
TOPIC 3: Respecting Cultural and Sacred Sites.

Learning Outcome: Students will gain an appreciation and understanding for the need to respect cultural and sacred sites in land use and management.

As mentioned earlier in this lesson, Native Americans have a deep historical relationship to the land in this country that involves a balance between the physical and spiritual worlds.

- Many of the creation stories of Native American tribes tell how the people originated from the earth and the landscape. In some cases, these stories involve specific locations.

- Over time, many sites on the land took on special significance because important historical, cultural and/or spiritual events took place there.

- The spiritual and/or cultural meanings of these Native American sites are just as important as the sites of spiritual significance held by other religions and cultures around the world.

  - In many societies, churches, mosques, synagogues and cemeteries are considered as sacred sites, as should Native American sites.

- Sacred sites can be viewed as part of the guarantee of freedom of religion that is established in the First Amendment to the U.S. Constitution.

- The American Indian Religious Freedom Act (AIRFA) of 1978 states that it is the “policy of the United States to protect and preserve for American Indians their inherent right of freedom to believe, express, and exercise traditional religions including but not limited to access to sites...”

For the agribusiness land owner or lease holder, showing respect for Native American cultural and sacred sites can mean several things from a practical standpoint:

- First, remember that whole farm planning balances family, environmental and community goals with your business productions goals. Your community or social goals should include being a good neighbor and living in harmony with your community’s values. Maintaining good tribal relations is not only the right thing to do, it’s good for business too.

- Next, learn about the potential for sacred and cultural sites on your land. Because the locations of many sacred sites are kept confidential to discourage desecration, this may be a sensitive task. Your first step should be to consult with the local tribes.

  - Many tribes have Cultural Preservation Offices or Tribal Historic Preservation Offices that research, map and manage cultural and sacred sites.
- If the tribe does not have cultural or historic offices, then consult with the tribal lands management department or a similar tribal entity.
  - If there are cultural and/or sacred sites on your land, then consider the following:
    - First, if the site is not already widely known, keep the location of the site confidential. Making its location public will only encourage unwelcome attention for both you and the tribe.
    - Second, learn more about the cultural/spiritual history and meaning of the site. You may be surprised and excited to learn about the importance of the location to the history of the tribe. Gaining knowledge about the site will help you have respect for it, as well as provide a better base for your decisions about the site.
    - Third, do not desecrate the site by removing objects or altering the site. Taking pictures or making drawings may not be acceptable. Check with the local tribal cultural expert if you have any questions.
      - If the site is located within productive agricultural land, then consider changing your farm practices to work around that specific location.
    - Fourth, to the extent possible, do not deny access to those who have spiritual/cultural reasons for visiting the site. Work with visitors to accommodate their spiritual/cultural practices. Often times, visits need to occur during specific times of the year.
    - Finally, work with the tribe to develop a co-management plan for the site that ensures that both your interests and the tribe’s interests are protected, and that there is a set of policies and procedures in place for dealing with issues that may come up.

References


USDA Farm Service Agency, Montana. nd. USDA NRCS Montana.


The Business of Indian Agriculture

MODULE 5: Land Use and Management

LESSON 1: Introduction to Native American Land Use and Management

Whole Farm Planning Resource Assessment Worksheet

Fill in the table on the next page with the strengths and weaknesses of the resources for your farm from the perspective of all members of the farm family. If you do not operate on a farm, think of an agribusiness or farm that you may be familiar with, or use a made-up farm or business. The important point is to learn the process of resource assessment, not the resources of any specific farm or agribusiness.

The table below provides some examples of a farm’s resource assessments:

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Natural Resources</th>
<th>Infrastructure</th>
<th>People</th>
<th>Financial</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Productive arable soil.</td>
<td>• Farm buildings &amp; equipment in good condition.</td>
<td>• Principal operator experienced &amp; highly skilled.</td>
<td>• Positive cash flow.</td>
</tr>
<tr>
<td></td>
<td>• Abundant wildlife.</td>
<td>• Water well, pipes in good condition.</td>
<td>• Hired help good workers, experienced &amp; reliable.</td>
<td>• Steady profit over past 5 years.</td>
</tr>
<tr>
<td>Weaknesses</td>
<td>• Poor annual rainfall.</td>
<td>• Farm house in poor condition - needs new roof &amp; electrical wiring.</td>
<td>• Principal operator close to retirement.</td>
<td>• Good credit standing.</td>
</tr>
<tr>
<td></td>
<td>• High wind area - soil erosion.</td>
<td></td>
<td>• Younger family members not interested in farming careers.</td>
<td>• Low debt.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Low savings for emergencies.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Low savings for retirement.</td>
</tr>
</tbody>
</table>
### Farm Strengths and Weaknesses – Resource Assessment

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Natural Resources</th>
<th>Infrastructure</th>
<th>People</th>
<th>Financial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weaknesses</td>
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</tbody>
</table>

Adapted and reproduced for educational purposes, from Rhonda R Janke, *Whole-Farm Planning for Economic and Environmental Sustainability*, Kansas State University, August 2000.
Module 5: Land Use and Management

LESSON 2: Knowing Your Land
The Business of Indian Agriculture

MODULE 5: Land Use and Management

LESSON 2: Knowing Your Land

Lesson Topics

This lesson covers the following topics:

- Natural Properties and Appropriate Agricultural Uses of Land.
- Land Demarcation, Mapping and Surveying.
- Sustainable Agricultural Management Practices.

Learning Objectives

Upon completion of this lesson, participants will:

- Understand the process of determining the natural properties and appropriate agricultural uses of land.
- Understand the process of land demarcation, mapping and surveying.
- Understand the importance and strategies for sustainable agricultural management practices.

Definitions

Fee simple land ownership: typically the most complete or absolute form of land ownership, which provides the owner full rights to sell or pass land to another by will or inheritance.

Indian trust land ownership: based on the General Allotment Act of 1887, which transferred legal title of Indian lands to the federal government. Indian nations and landowners retain “beneficial use” of the lands, which means they can use and earn income from the land and transfer ownership interests to their heirs.

Macroclimates: weather and long-term patterns that occur on a regional scale and include such things as typical weather fronts and storm patterns, prevailing winds, seasonal temperatures and daylight changes.

Microclimates: weather patterns that are affected by factors in your local land area and include influences such as hillsides, shelter belts, tree shade patterns, frost pockets and water ways.
Organic agriculture: an ecological production management system that promotes and enhances biodiversity, biological cycles and soil biological activity. It is based on minimal use of off-farm inputs and on management practices that restore, maintain or enhance ecological harmony. The primary goal of organic agriculture is to optimize the health and productivity of interdependent communities of soil life, plants, animals and people (from the USDA National Organic Standards Board NOSB).

Public Land Survey System (PLSS): a survey system that subdivides and describes public land in the United States. All public lands are subject to this rectangular system of surveys, which is regulated by the U.S. Department of the Interior, Bureau of Land Management (BLM).

Sustainable agriculture: an integrated system of plant and animal production practices having a site-specific application that will, over the long term: satisfy human food and fiber needs; enhance environmental quality and the natural resource base upon which the agricultural economy depends; make the most efficient use of nonrenewable resources and on-farm resources and integrate, where appropriate, natural biological cycles and controls; sustain the economic viability of farm operations; and enhance the quality of life for farmers and society as a whole (from the 1990 Farm Bill).
TOPIC 1: Natural Properties and Appropriate Agricultural Uses of Land.

Learning Outcome: Students will understand the process of determining the natural properties and appropriate agricultural uses of land.

➢ Agriculture can be thought of as the controlled management of living organisms (primarily plants and animals) to produce food, fiber and other products for human use.

   o The inputs to the agricultural endeavor are physical, chemical, biological and climatic “ingredients” that include such things as:
     ▪ Soils (physical and chemical inputs)
     ▪ Moisture
     ▪ Sun (heat and light)
     ▪ Plants, animals and biological organisms

➢ Land is often loosely defined as some physical territory or property, but in an agricultural sense, land encompasses all the natural elements that interact with land to potentially support an agricultural use.

   o It includes the soils’ chemical and physical properties, terrain and way that climate has an effect on the land.
   
   o It includes the plants, animals and organisms that live on the land.
   
   o Although we don’t focus on this factor in this lesson, it also includes the human dimension that includes population impacts and planning and zoning policies.

➢ The first step in making the best use of your land is to know its basic properties: physical, chemical, biological and climatic.

   o Let’s start with your soil. Think of your soil as the basic building block for your agricultural operation. Before deciding upon your operation (or even acquiring the land), you should consider what the soil will support.

     ▪ Knowing your soil type includes knowing about its structure and texture (for example, sand, loam, clay and organic matter), depth, its drainage characteristics, its slope and suitability for various agricultural or building uses.
Fortunately, most of this information has been gathered throughout the U.S. through soil surveys, is documented in soil survey maps, and is easily accessed.

- There is an excellent web-based resource, the Web Soil Survey (WSS), that provides soil data and information produced by the National Cooperative Soil Survey. It is operated by the USDA NRCS and provides information on the soils and ratings and suitability of various uses.
- If you cannot use the WSS, you can simply contact your local NRCS office and ask for the soil survey description for your land area.

The next step in knowing your soil (assuming that it is suitable for your agricultural plans) is to learn about its specific potential agricultural productivity in terms of its properties such as its pH (relative acidity), fertility (nutrients such as nitrogen, phosphorus, potassium) and water-holding capacity. A soil test is the next important step in this process of learning about your soils.

- Most soil tests will report on the basic properties and nutrients of the soil, but you should tailor your soil test with your specific agricultural plans in mind. For example, some tree crops may require additional soil tests.
- Contact your local extension office or the NRCS office to find out how to have a local soil test conducted.
- Remember that the soil can change in even relatively small land areas, so be sure to take soil samples wherever you think the soils will vary.

Next, it’s time to consider the climate. Climate generally consists of influences from sunlight, temperature, precipitation and wind. There are two scales of climate to consider: macroclimate and microclimate.

- Macroclimates are those weather and long-term patterns that occur on a regional scale and include such things as typical weather fronts and storm patterns, prevailing winds, seasonal temperatures and daylight changes.
- Macroclimate data about your land might include its USDA Plant Hardiness Zone rating, its frost-free days (including first and last frost dates) and annual rainfall. All these data are easily accessible and are based on large sets of historical data.
Microclimates are weather patterns that are affected by factors in your local land area and include influences such as hillsides, shelter belts, tree shade patterns, frost pockets and water ways. These microclimates are also important to know.

- Microclimate data about your land might vary considerably from the macroclimate data that you found. The best way to gather microclimate data is to carefully record weather patterns on your land and build up your own database.
- If possible, you might want to interview a previous landowner, and nearby neighbors to learn about local microclimate weather patterns.

Next, it’s time to consider the biological profile of your land. What plants, animals, insects and microorganisms does the land currently support? Answers to these questions will provide strong signals as to the appropriate use and management strategies for the land.

- What plant life currently exists on your land? If the land is already in agricultural use, the current cropping patterns can provide you with valuable data in terms of productivity (including yield, water use and nutrient uptake), pest and weed concerns, appropriate tillage and soil conservation practices and so forth.
- On the other hand, if the land is not in agricultural production, then the current plant community will show what natural processes have selected.
- While you may be able to alter the landscape to meet some agricultural needs, the greater the alteration from its natural state, the more intensive will be the management effort and the potential challenges.
- For example, if the natural plant community is described as semi-arid shortgrass prairie, then growing rice is not going to be a good fit.
- What animal life is present on the land? Consider how the current animal population can affect agricultural operations, and in turn, how agricultural operations will affect animal life.
  - For example, wildlife can present both opportunities and challenges to the agricultural operation.
  - Some wildlife provides opportunities for recreational activities (and tourism revenue) such as hunting and bird-watching.
• Other wildlife (sometimes called nuisance wildlife) can represent challenges to an agricultural operation (for example, prairie dogs, deer or birds).

• To the extent possible, working with the land’s wildlife, instead of against it, will make agricultural management easier.

- The soil biology is another important consideration. The organisms living in the soil are critical to soil quality, affecting the soil structure, which in turn affects soil erosion and water availability.

  • Soil microorganisms can protect crops from pests and diseases, and they are central to decomposition and nutrient cycling, which influence plant growth.

  • There are three main types of soil biology testing: population analysis, biological activity, and indirect indicators. Check with your extension specialist for details on how to have a test performed.

- Finally, a biological assessment can be conducted that provides general information on the potential presence of endangered species or sensitive habitats on the land. While endangered species or sensitive habitats is often viewed as an unwelcome challenge to agricultural operations, it is better to be forewarned than to be surprised.
TOPIC 2: Land Demarcation, Mapping and Surveying.

Learning Outcome: Students will understand the process of land demarcation, mapping and surveying.

- Perhaps the most fundamental question concerning the ownership of a parcel of land is its demarcation – where exactly is it, and how much land is there? First, you need to know where to look for the legal description of the land.
  - A deed must describe with reasonable certainty the land that is being identified, but the description does not require technical terms to be used. Land boundaries can be identified in property deeds by plat locations, in latitude and longitude degrees, as distances from known locations, or in other ways.
  - Typically if you are a non-Indian landowner or an Indian landowner with fee simple land, your county’s Recorder of Deeds Office will record and maintain for permanent record all documents related to real estate. Your deed will give you the legal description of the land but a surveyor is needed to use this information to precisely locate your property lines, and find or place stakes or other markers.
    - Fee simple land ownership is typically the most complete or absolute form of land ownership, which provides the owner full rights to sell or pass land to another by will or inheritance.
    - Indian trust land ownership is based on the General Allotment Act of 1887, which transferred legal title of Indian lands to the federal government. Indian nations and landowners retain “beneficial use” of the lands, which means they can use and earn income from the land and transfer ownership interests to their heirs.
  - For Indian landowners who own land in trust, the Bureau of Indian Affairs (BIA) and more recently, the Office of the Special Trustee for American Indians (OST) is responsible for recording, storing and providing access to information about how much land you own and where it is located. As mentioned above, a surveyor is needed to physically locate the property boundaries.
    - The BIA and OST use the Public Land Survey System (PLSS) to subdivide and describe public land in the United States. All public lands are subject to this rectangular system of surveys, which is regulated by the U.S. Department of the Interior, Bureau of Land Management (BLM).
- The local tribal land office or department is the first place to contact, as they typically provide information on land issues and services for residential, agricultural and commercial owners of tribal lands.

  - Land demarcation becomes more complicated when dealing with indigenous landholdings that are commonly held by the tribe.

    - For example, under Navajo common law, grazing rights are a land use right held by families, but they are not considered as individual land ownership. Individuals ordinarily confine their use and occupancy to an area of land inhabited by their ancestors, and this area is typically defined by natural markers (such as trees, streams or boulders).

    - Although indigenous land demarcation methods are certainly valid, they may lack the precision to establish U.S. legal property rights, or to access certain farm and conservation assistance programs.

    - If you are a communal tribal land user, your best course of action is to consult with your local tribal land office and the local USDA Service Center.

- Land mapping is a critical tool in knowing and managing your land. Fortunately, detailed maps and mapping systems are available for most areas within the U.S., and accessing these maps and map systems is easier than ever. There are many different types of maps and mapping systems used for many different purposes.

  - First, it is important to remember how points on earth are precisely located. Points on earth are located using a variety of coordinate systems.

    - The most common coordinate system today is latitude and longitude. The Prime Meridian (passing north/south through Greenwich, England) and the Equator are the reference grids used to define latitude and longitude. To locate points, latitude and longitude is measured in degrees, minutes and seconds.

      - For example, the city of Helena, Montana, is located at 46° 35’ 44.9"N  112° 1’ 37.31"W. That means 46 degrees, 35 minutes and 44.9 seconds north of the equator, and 112 degrees, 1 minute and 37.31 seconds west of the prime meridian.

    - Another less common but important coordinate system is the Universal Transverse Mercator (UTM) system. Unlike the latitude and longitude system, the UTM is a true rectangular grid system used specifically for maps. With the UTM system, the entire earth is divided into rectangular-shaped zones identified by a unique column (1-60). UTM points are measured as the grid column, an easting (meters east of the west grid boundary), and a northing (meters north of the equator).
For example, Helena, Montana, is located at 12 42133 5160761. That means it is in zone column 12, and is 42,133 meters east of the zone boundary, and 5,150,761 meters north of the equator.

Note that there is a more precise form of UTM which uses grid row letters to locate points. In this case, the row letter follows the column, as in 12T, and the northing is the meters north of the south grid boundary.

The PLSS, which is used on public lands and Indian reservations, uses a grid of 6-mile-square townships. Townships are divided into 36 one-mile-square sections. Sections can be subdivided into quarter sections or quarter-quarter sections. A marker is usually placed at each section corner.

PLSS surveys all have a starting point, and townships grids are established in all directions from the starting point. The line that runs north/south through the starting point is called the Principal Meridian. There are 37 named Principal Meridians that indicate which PLSS survey is being used. The line running east/west through the starting point is called a base line.

PLSS areas are identified by township, range, and sections. Townships identify the grid location north or south of the baseline, and ranges identify the grid east or west of the Principal Meridian. Sections are the 36 one-mile-square areas.

For example, a township might be identified as Township 5 North, Range 3 West. That means it is in the 5th row of townships north of a baseline, and in the 3rd column of townships west of a Principal Meridian.

A legal land description includes the State, Principal Meridian name, Township and Range designations with directions and section number (and quarter fractions of sections). For example, South Dakota, Black Hills Meridian T7N, R2W, sec5, means the 5th section in township 7 rows north of a baseline and range 2 columns west of a Principal Meridian, of the Black Hills survey in South Dakota.

Quarter sections are designated by the quadrants SW1/4, NW1/4, SE1/4 and NE1/4, and quarter-quarter sections are designated by using two quarter section designations together, as in SW1/4 NE1/4 SEC 5, which means the southwest quarter-quarter of the northeast quarter of section 5.
Mapping is especially useful to farmers and ranchers in planning their operations and managing their land. Boundary maps are good for locating any easements or land-use restrictions. Field maps can help in managing and coordinating crop and livestock operations. Farm maps should include buildings and facilities, water ways, fence lines, and any sensitive ecological areas.

To develop a farm map, you need to create a base map using an existing aerial or topographic or other type of map, and then customize it for your needs.

- Perhaps the most accessible and easily understood mapping system is Google Earth. Simply go to the web, download the latest version, and then enter your address or an address of a nearby location. Then, use the navigation tools to locate your exact area of interest.

- Once you have located your area, there is a customized map feature that can be especially useful for farmers and ranchers. This free mapping service allows you to identify specific areas of your land for particular purposes, and then save it and share it by e-mail or web posting.

- Another easily used mapping system is also from Google. Many people have used Google Maps to help find their way from Point A to Point B, but it also has a customized map feature. You can e-mail your customized maps link to anyone, with instructions for field or range work such as applying fertilizer, spraying for weeds or fixing fences.

- Still another web-based tool is Terra Server, which will allow you to purchase customized aerial and topographic maps for your location.

- There are many other web-based and computer tools that can be purchased that allow the farmer and rancher to create their own custom maps of their land.

Next, add your unique farm features, such as property lines, fence lines, road, water ways, other important natural features (valleys, cliffs), homes, farm buildings and storage facilities.

- You may consider using map layers to separate your features into categories such as boundaries, water ways and natural features, buildings and facilities, cropping or planting, livestock and range and soils.

- Map layers are supported by computer GIS (Geographic Information System) programs, but can easily be created by drawings on transparency film that lay on top of the base map.
Land surveying is a highly skilled profession and should only be needed when precise (and perhaps legally valid) land positions are required. Legally, a person must be licensed as a surveyor to establish a property line.

- Surveying may only need to be done once when the land is initially bought or developed, or it may be needed at times when construction or development projects require surveying.

- Two types of surveying are most commonly used: boundary surveys (establishing property lines) and construction surveys (controlling elevation, position, dimensions and configuration of construction).

- There are other types of surveying, such as land classification surveys and soil surveys. These surveys have usually been done and there's probably no reason to survey again.

- You should only work with a trusted and licensed surveyor to handle your surveying needs. They can guide you through the surveying process and ensure that your land is accurately and legally described.
TOPIC 3: Sustainable Agricultural Management Practices.

**Learning Outcome:** Students will gain an understanding of the importance and strategies for sustainable agricultural management practices.

- An important consideration in land use and management is the sustainability of agricultural practices. Few people would say that preserving the farm and its natural resources for future generations is not a worthwhile effort.
  - Unfortunately, “sustainability” has sometimes become a controversial issue, as the word has been used by a few people as a way to judge others.
  - A more constructive way to discuss sustainability is in terms of the practical benefits (and costs) to an agricultural operation, to the environment, and to future generations of farmers, ranchers and consumers.
  - The term “sustainable agriculture” has been used in various ways, and in this lesson its definition (from the 1990 Farm Bill) is: “an integrated system of plant and animal production practices having a site-specific application that will, over the long term:
    - satisfy human food and fiber needs;
    - enhance environmental quality and the natural resource base upon which the agricultural economy depends;
    - make the most efficient use of nonrenewable resources and on-farm resources and integrate, where appropriate, natural biological cycles and controls;
    - sustain the economic viability of farm operations; and
    - enhance the quality of life for farmers and society as a whole.”
  - In practice, sustainable agriculture means doing things such as:
    - rotating crops to help prevent weeds, disease, insect and other pest problems;
    - using alternative sources of soil nitrogen;
    - reducing soil erosion;
    - reducing water contamination by agricultural chemicals;
    - controlling pests with strategies that are not harmful to natural systems, farmers, their neighbors or consumers;
    - increasing mechanical/biological weed control;
    - using soil and water conservation practices;
• using animal and green manures; and
• using inputs in a way that poses no significant hazard to man, animals or the environment.

  o Of course, there are costs and benefits associated with every agricultural practice, sustainable or not.

  ▪ For example, adopting a low- or no-tillage practice may mean added costs for weed control and new machinery, but also benefits of fuel cost savings and reduced soil erosion.

  ▪ Costs and benefits should be evaluated in both the short-term and the long-term.

    • For example, some no-till short-term costs (such as increased weed control) could produce larger long-term benefits (conserving productive, irreplaceable soil).

    • Likewise, some no-till short-term benefits (such as reducing fuel use) could produce larger long-term costs (ongoing pest and disease problems).

  ➢ A good resource to help you evaluate your opportunities for more sustainable practices is USDA’s Sustainable Agriculture Research & Education program. SARE is organized by regions, with each region providing its own assistance programs.

    o For example, the SARE Western Region offers several assistance programs:

      ▪ **Research and Education Grants**: These grants involve scientists and producers who use interdisciplinary approaches to address sustainable agriculture issues.

      ▪ **Producer Grants**: These are one- to three-year grants that are conducted by agricultural producers with support and guidance from a technical advisor. Producers typically use these grants to conduct on-site experiments that can improve their operations and the environment and can be shared with other producers. Grants may also focus on marketing and organic production.

      ▪ **Professional + Producer Grants**: These grants are similar to the Producer Grants except instead of a producer serving as the project coordinator, an agricultural professional (such as a Cooperative Extension educator or NRCS professional) coordinates the project. The farmer or rancher serves as the project advisor.

      ▪ **The Learning Center**: This website is a one-stop source to find newsletters, books, videos, top project reports, fact sheets and more about sustainable agriculture.
Organic agriculture is often mentioned in the same discussion as sustainable agriculture. Like sustainable agriculture, organic agriculture has its vocal supporters and skeptics. And also like sustainable agriculture, its use and definition are varied.

- In this lesson, organic agriculture is defined (from the USDA National Organic Standards Board - NOSB), as:
  - an ecological production management system that promotes and enhances biodiversity, biological cycles and soil biological activity. It is based on minimal use of off-farm inputs and on management practices that restore, maintain or enhance ecological harmony. The primary goal of organic agriculture is to optimize the health and productivity of interdependent communities of soil life, plants, animals and people.

- “Organic” has also come to mean a marketing label that tells the consumer that products have been produced using certified organic methods. USDA administers a National Organic Program that manages organic certification and labeling.

- Adopting organic agricultural practices should be considered in a similar fashion as adopting sustainable agricultural practices. It should be evaluated for the specific farm or ranch operation based on a careful consideration of costs and benefits, in both the short- and long-term.

- It is important to note that, while sustainable and organic agricultural practices often go hand-in-hand, they are not strictly speaking the same thing. There can be organic practices that are not considered sustainable, and there can be sustainable practices that are not organic.

More recently, the “local food” movement has been a part of the sustainable agriculture discussion. As before, there is no consensus on the definition and use of the term “local foods.”

- Generally speaking, local foods are produced within some relatively close geographic area, and their production is considered as a way to strengthen local food systems that provides local economic benefits, reduce transportation and shipping costs and strengthen a community’s resilience against potential disruptions in the food supply chain. Promoting the consumption of seasonal foods is also considered part of local food principles.

- Similar to organic and sustainable agriculture, local food does not necessarily mean sustainable agriculture, or vice versa.
“Whole farm planning” is another term that is often used along with a discussion on sustainable agriculture.

- Whole farm planning complements sustainable agriculture because it involves a holistic view of the farm and incorporates the perspectives of different stakeholders (for example, family members and the community).
- As such, whole farm planning is a good way with which to evaluate the adoption of sustainable agricultural practices.

To conclude, sustainable agriculture is not a “one size fits all” deal. Each farm and ranch operation is unique, and any sustainable practices will need to be a good fit with the situation.

- Rather than viewing sustainable agriculture as a goal to achieve (like dieting to lose weight), it should be viewed as a way of living and working (like eating more healthy and exercising more often).

References


A map can be a record of important features on the farmstead that can impact water quality. Drawing a farmstead map will make it easier to evaluate potential sources of pollution and to locate wells, septic tanks and absorption fields in the future when they need maintenance.

WHY MAKE A MAP?
While each property has physical features that cannot be changed, there are many practices that can minimize risks. A farmstead map can indicate areas where efforts for improvement should be focused for the best return. Some of the Pennsylvania Farm•A•Syst worksheets will refer to locations and distances between various farmstead items and potential locations where farmstead practices or conditions can affect groundwater or surface water. A farmstead map can be a handy reference when completing these worksheets. The following farmstead map shows common features and can be used as a sample for an actual map.

SAMPLE MAP

Information derived from Pennsylvania Farm•A•Syst worksheets is intended only to provide general information and recommendations to farmers regarding their own farmstead practices. It is not the intent of this educational program to keep records of individual results. However, they may be shared with others who will help you develop a resource management plan.
**MAKING A MAP**

**Step 1:** Begin by looking at the format of the sample map.

**Step 2:** Sketch the farmstead layout on the blank map grid below. If the farmstead is large, try making two maps, one showing details around the home, and the other showing the remaining farmstead. Include all of the following that apply to the farmstead.

- property and field boundaries
- all buildings and other structures
  (home, barns, machine shed)
- active wells and unused wells
- septic system, drainfield
- nearest surface water (streams, ponds, drainageways)
- direction of surface water flow
- livestock barnyards and exercise areas
- manure storage (temporary and permanent)
- pesticide and fertilizer storage and handling areas
- milhouse waste disposal system

**Step 3:** Save this map and refer to it when completing the worksheets and when developing plans for changes after completing the worksheets.

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**FARMSTEAD MAP**

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**Penn State**

College of Agricultural Sciences • Cooperative Extension
Module 5: Land Use and Management

LESSON 3: Understanding Land Transactions and Rights
The Business of Indian Agriculture

MODULE 5: Land Use and Management

LESSON 3: Understanding Land Transactions and Rights

Lesson Topics

This lesson covers the following topics:

- General Considerations of Land Transactions.

Learning Objectives

Upon completion of this lesson, participants will:

- Understand the general considerations of land leasing and renting, purchasing and selling, and estate planning.
- Gain basic knowledge of water rights, mineral rights, easements and rights of ways.

Definitions

**Easement**: the right to use another person’s property for a specific purpose. Easements can be specific to a part of the property or applied generally to the entire property. Easements can be bought and sold.

**Right of Way**: a special type of easement that gives someone the right to travel through a property owned by someone else.
TOPIC 1: General Considerations of Land Transactions.

Learning Outcome: Students will understand the general considerations of land leasing and renting, purchasing and selling, and estate planning.

- Land transactions are a basic part of doing business for many agribusinesses, especially for land-intensive farming and ranching operations. For most of us, land is the largest and most valuable business and personal asset that we will ever manage. There are several common types of land transactions:
  - You lease/rent land to others, or you lease/rent land from others.
  - You buy land, or you sell it.
  - You inherit land from your family, or you bequeath it to your family.

- In each of these situations, you assume a legal role with a set of financial and contractual rights, obligations and responsibilities. It is critical that you understand the legal aspects of land transactions so that you can protect your interests and fulfill your obligations.

  - This lesson will help you understand the general considerations of land transactions. However, this lesson does not represent any legal opinion or advice. You should always consult with a professional legal and/or real estate advisor before conducting any land transactions.

- Leasing or renting land can be an effective strategy for managing your agribusiness.

  - Renting is typically a month-to-month agreement, while leasing is an agreement set for a fixed term, usually in years.
  - Leasing or renting your land can generate steady sources of income from land that is not currently being used by the business.
  - Leasing or renting land from someone else can give your business access to land that it does not currently have, and can avoid large amounts of debt and fixed assets that land ownership usually involves.
  - Leasing or renting land assumes that you have made the careful decision to lease/rent instead of buy or sell land.

    - The decision to buy vs. rent land should include budget projections on the costs, returns and cash flows of both options. Also, market conditions can change, so include best case scenarios vs. worst case scenarios for each option.
- Land prices, whether rental or purchase, should ultimately be based on the agricultural productivity of the land, market supply and demand, and interest rates.

- Long-term planning is necessary to decide if shorter-term leasing/renting of land is the right decision for the business. Leasing land always has the risk that a lease may not be renewed for some reason.

  - In tribal settings, leasing Indian trust land requires special considerations and processes. Contact your local tribal land department for more details.

➢ There are several common types of leases: cash, crop-share, and flexible cash agreements.

  - Cash leases/rents are the simplest and most common arrangement. They set a cash lease/rent price for the use of land, usually in dollars per acre each month or each year.

    - The tenant pays all the production costs (but not property taxes and insurance) and provides the labor.

    - The landlord can place restrictions on how the land is used. For example, they may say that particular crops are not grown, certain herbicides or pesticides are not applied, or that certain soil conservation practices be maintained.

  - Crop-share leases/rents can be structured in a variety of ways and, as the name implies, the costs and profits of crops are shared among the tenant and landlord.

    - Typically, both tenant and landlord share a set percentage of the production costs and the profits.

    - The landlord usually receives a higher percentage of the income because they assume more risk with market prices and yield, and more production costs and capital.

    - The tenant receives less profit because they assume less risk, costs and capital.

    - The actual share percentages are negotiated depending on the levels of risk, cost and capital that the tenant and landlord assume.

  - Flexible cash leases/rents are structured so that landlords and tenants share more risk together.

    - Lease/rent prices are set by a base price and adjustments are made according to rising or falling market prices and yield.
• For example, a base lease/rent price is first set with a base market price and a base yield amount.
• The lease/rent price is then adjusted at the end of the season according to market prices and yields that are above or below the base amounts.
• Higher prices or higher yields raise the lease/rent price, while lower prices or lower yields reduce the lease/rent price.
• A minimum and maximum cap will usually be set on the lease/rent price to protect both parties in case of extreme seasons.
• Some farming areas set leases/rents based on a percentage of gross revenue, which is influenced by both price and yield.

➢ Leasing/renting involves certain rights and liabilities for both the landlord and the tenant.
  o Laws vary from tribe to tribe, and from state to state, so be sure to consult with a legal expert to understand your rights and liabilities in any lease/rental agreement.
  o A written agreement, called a contract, is an essential part of the lease/rental arrangement.
    ▪ It states in writing the terms of the agreement, and the rights and liabilities of the parties involved.
    ▪ In the simplest case, it says that the landlord gives access to land to a tenant, in exchange for a tenant making cash payment to the landlord.
      • Additional conditions will often apply to the contract, including how the land can be used, how and when payments will be made, and what can happen if someone fails to fulfill his/her obligations.
    ▪ Contracts are also important because they encourage the parties to talk and reach a mutual understanding before an agreement is made.
    ▪ If there is a dispute or misunderstanding, the contract’s terms can be reviewed and then enforced.
    ▪ In some states, oral agreements are considered valid, but they do not have the same power and clarity as a written contract. Even if a verbal agreement is made, a contract should still be written.
If someone fails to fulfill his/her obligations, then negligence has occurred and the injured party may hold the other party liable in court and force it to pay damages.

Even though securing a written contract is critical, the most important factor in deciding to enter into a lease/rental agreement is the trustworthiness and reputation of the other party. In other words, can you trust that person’s words and deeds?

There are many reasons why an agribusiness would want to purchase or sell land.

- Strictly speaking from a business perspective, buying or selling land should be a financial decision that is based on the needs of the agribusiness, the land’s productivity, its market value, interest rates and cash flow considerations.
  - Once the business need had been established, the simplest math looks to see if a buyer has enough money for a down payment and enough cash flow to make regular payments. Many of these considerations are similar to the ones needed in a buy vs. rent land decision.

- However, land holds other non-financial characteristics and values for people, including cultural and family connections, environmental interests, and emotional and spiritual ties. These values are important to consider in any decision to buy or sell land.

- Whole farm planning (discussed in Lesson 5-2: Knowing Your Land) includes all family members in the decision-making process, and they may have differing views of the land that should be taken into consideration before buying or selling land.

- Finally, if the land under consideration is Indian Trust Land, then there is a set of administrative and regulatory issues that need to be taken into account, such as appraising the value of the land, applying for the sale of land and retaining mineral rights.

When land values are high (a “seller’s market”) and the saleable agricultural land base is shrinking (for example, because of development or farm policies), buying land can be a difficult challenge. Despite the challenges, there are still many good opportunities on the market.

- Assuming that you have made the financial analysis, weighed all the criteria, and made the decision to purchase land, the first step is usually to secure credit.
The way in which you secure credit and the type of credit needed will depend on many factors, including the land’s purchase price, the financing agreements with the owner (discussed below), any co-signers you may have and collateral.

At this stage, it is best to develop a number of credit options and, when appropriate, get pre-approval from lenders. This places you in a better bargaining position when negotiating a purchase.

If you are unable to secure credit through a traditional lender, USDA’s Farm Service Agency has several options for farmers and ranchers (see Lesson 2-5: Preparing for Credit and Assistance Applications for details).

The next step is to find land.

If you are lucky, you have already found property within your area though local contacts, or have time to wait for a property to go on the local market. Knowing the local area well, you already know the land’s characteristics including its productivity and market value.

For many beginning farmers and ranchers, finding land to purchase is much more work. Good farmland at a reasonable price is hard to find, and the location and characteristics of properties that are on the market are often unfamiliar to the buyer.

- Doing your homework is critical in assessing any land for sale. This includes evaluating the land for its agricultural productivity, the fairness of its sale price, any restrictions to its rights (for example, water rights) or title, or any easements.
- Fortunately, there are organizations that provide referral or “match-making” services between prospective buyers and sellers of farmland.
- In any case, you should consult with trusted advisors who are familiar and skilled in land transactions in your area.

The next step is deciding how the land purchase agreement is to be structured. There are several common ways that land can be purchased.

- Lease-to-own is an attractive option when the buyer does not have the required down payment. There are two common types of lease-to-own agreements:
• Lease with purchase option: the owner and tenant agree to a purchase price and a future date when the purchase will be executed. The tenant pays for this option, and then rent can be applied to a down payment.

• Lease with “right of first refusal”: the owner and tenant agree that the owner cannot sell the land to a third party without the tenant having an opportunity to match the third party offer and buy the land. This protects the tenant from having the land sold without a chance to purchase it, but it also means that the tenant has to have the capability to buy it.

• “Fee Title Purchase with Seller Financing” is another common type of agreement, where the owner finances the purchase and the buyer makes payments directly to the owner. This works well when there is a good relationship between the seller and buyer, and it is especially useful when transferring land between family members. Payments and collateral can be structured by the wishes of the parties, and brokerage fees can be avoided.

• “Fee Title Purchase with Agricultural Conservation Easement” is an agreement when the land owner wants to preserve the land as farmland, and so “donates” or “sells” the development rights to a non-profit or government agency that holds the rights and enforces the easement. This lowers the value of the land, which can make it more affordable to a beginning farmer or rancher looking to purchase land.

• A traditional agricultural mortgage is similar to a traditional home mortgage, but is tailored for farm and rural properties. Agricultural mortgages may offer different options that include more flexible loan terms, loans that are transferable within the family, or repayment options that follow the seasonal cycles of the agribusiness.

  o Executing a contract or note is the final step.

  • Once both parties have agreed to the terms of the purchase, a contract is written and signed. The contract is considered executed when all terms are fulfilled.

  • This is different from the actual transfer of ownership (through a title or deed) which, depending on how the purchase agreement has been structured, can take place soon after the contract is executed, or at some point in the future (for example, if the seller is financing, transfer of ownership will take place when the purchase price is paid in full).

  • Contracts may contain contingencies that protect parties against various situations that would cause someone to withdraw from the contract.
In every case, a contract should be reviewed by a legal and/or real estate expert to make sure that each party’s interests are protected.

- If land values are low (a “buyer’s market”), and more agricultural land is on the market, selling land at a good price can be a challenge.
  - The process of setting a good sale price is similar to determining a good buying price discussed earlier. A sale price should ultimately be based on the land’s market value plus any mark-ups or premiums that you feel are appropriate. It helps if you can be patient and wait for a buyer who can meet or come close to your asking price.
  - However, the sale price is often not the only factor in selling land. Assuming that you have made the decision to sell your land based on all the various considerations described earlier, an added thought is how you want the land to be used.
  - Many farm and ranch owners who have spent their lives establishing the farm or ranch want to keep the land in production agriculture. There are several strategies for preserving farmland.
    - First, as mentioned earlier, an owner can donate or sell their land as a conservation easement to protect the land from development.
    - Second, land linking programs and services can connect sellers with buyers who are interested in maintaining farming or ranching operations on the land.
    - Various farmland protection programs administered by the federal government, states, and municipalities may be available.
      - For example, the USDA NRCS Farm and Ranch Lands Protection Program is a cost-share program that helps with the purchase of development rights on farmland. Landowners apply with a sponsoring entity, which can be a state municipality or land conservation group.
    - Don’t forget about the tax implications of your sale. Tax liabilities can be significant if land values have risen substantially over the years. You can also reduce your tax liabilities if you donated or sold land as a conservation easement.
  - Finding a suitable buyer will depend on market conditions in the local area, the attractiveness of the property, the sale price, how the property is advertised, the flexibility of financing and other factors.
Land linking referral programs and services may be helpful in finding a suitable buyer, as discussed earlier.

Farm and ranch land brokers may be able to provide a network of potential buyers. Be aware that many of these listing networks are nationwide, so if you are not comfortable with "outsiders" or "city folk" buying your land, some brokers may not be a good fit for you.

Spreading the word through local and state agricultural networks may be helpful. For example, a Cattlemen’s Association or a Grain Growers Association might be good networks.

Once you’ve found a good buyer, then the next steps generally follow the flow described earlier: structuring an appropriate purchase agreement, and then writing and executing a contract.

Remember, as stated before: be sure to have experts in legal matters and/or real estate transactions review your plans.

Inheriting land can be a planned transaction (hopefully) or an unplanned event.

There may be serious considerations related to land inheritance such as estate taxes, wills and trusts, and outstanding liens and debts.

For example, there have been unfortunate cases around the country where the beneficiaries of an unplanned land inheritance have had to sell some or all the family land in order to pay the estate tax.

It’s important to remember that land is not the only asset subject to estate taxes – all farm and personal assets may be taxable.

In tribal settings, inheritance matters will probably differ from non-tribal jurisdictions, and they could also change from tribe to tribe.

Estate planning is a critical step in making land inheritance transactions as efficient as possible, with limited financial consequences to the beneficiaries.

A typical strategy involves gradually transferring assets to family members through annual gifts that fall within the tax exemption limit.

Having a will in place is also an important step in estate planning. A will is a legal document that tells a court how your assets should be distributed upon your death. Having a will in place greatly simplifies the probate process (validating the will and distributing assets).

Other strategies for managing assets include establishing trusts, joint ownership of assets, and using certain types of life insurance policies.
Land owners and potential beneficiaries should work with a trusted professional estate advisor to help with their estate planning. This is definitely not a “do it yourself” job.

Case Study: George and Gladys, the Boys, and the Land Across the Road.

George and Gladys’ farming operation in Montana had been in the family for generations. They own about 3,000 acres of farmland, which is mostly in winter wheat. They typically break just about even each year, but with wheat prices up, they have been doing better recently. Their sons, Josh and Brian, and their wives, want to start their own operations and have been looking for land. They currently live with George and Gladys and they all work on the farm together.

The farmer across the road, Frank, is getting ready to retire and recently decided to sell about 800 acres of his land. The land is good for wheat farming, and is next to George and Gladys’ land. It would make for a good start for the boys’ farming operation. Frank has been a good neighbor and has known George and his family for many years. He has offered to give George and Gladys the first opportunity to buy the land, and the price he is asking for is fair.

The idea of buying land for the boys has been mentioned a few times, but no one has done any serious planning. The offer to buy the land from Frank has taken everyone by surprise. Josh and Brian don’t have the assets or credit to even come close to making the purchase. George, Gladys, and the boys and their wives all sit down at the dinner table one evening to talk about buying the land.

George wonders aloud if their operation has the cash flow and credit to afford to purchase the land. Gladys asks if things are moving too fast, and if leasing land might be a better option, especially if wheat prices fall. Josh is talking about what types of purchase agreements would allow him and Brian to build equity and eventually own the land. Brian asks George and Gladys what their succession plans are when they retire and if they’ve thought about transferring some of the farm assets to the boys now. There are times where it seems like everyone is talking at once, and nothing is being solved.

Discussion questions:

**What do you think should be the major considerations for George and Gladys in making a decision to purchase the land?**

**What do you think are some purchase options for the boys to eventually own the land?**

**What kind of estate planning should George and Gladys consider?**

**Learning Outcome:** Students will gain basic knowledge of water rights, mineral rights, and easements and rights of ways.

> Owning land involves various “rights” that are associated with the land. Perhaps the most important of these rights for farming and ranching operations is water rights.

- Not only is access to water critically important for farming and ranching operations, it affects the market value of the land.

- Laws that protect water rights are complicated and can and do change over time. So, you must always keep an eye toward the future when thinking about water rights. Water rights can be a moving target.
  - Special rules and permitting may be in effect (or may be enacted) in areas where surface or groundwater is scarce or water quality is an issue.
  - Tribal lands are subject to federal water claims, which may compete with state and other jurisdictional water claims.
  - Rulings under the Endangered Species Act may affect water rights.

- Competing interests can make water rights a very heated and confrontational issue. The best way to understand and protect your water rights is to consult with a legal expert.

> Water laws in the Western U.S. generally follow the prior appropriation doctrine.

- The prior appropriation doctrine says that no one can own the water in a stream, but everyone has a right to it for beneficial use. Thus, strictly speaking, water rights are not connected to land ownership.

- Water is allocated from its first use from the source and that person is called the “senior appropriator,” who has the first priority permit for water use. The general rule is “first in time, first in line.” “Junior appropriators” are not of those people with water rights established after the senior appropriator.

- Each state has its own system for water administration. For example, in Montana, water rights are administered by the Department of Natural
Resources and Conservation’s Water Right Bureau. The bureau is responsible for administering the Montana Water Use Act, which manages the acquiring of new water rights and the changing of existing water rights.

- Some areas, called “basin closures,” have been closed to new appropriations because they have been highly appropriated. Other areas have been designated as “Controlled Ground Water Areas,” where water supply and/or quality have become issues.

- Native American water rights are determined by a set of principles called Winters rights (named after the precedent-setting case Winters v. United States). They specify that Congress has the right to reserve water for federal lands, including Indian reservations, and when Congress establishes a reservation, it is implied that the reservation has the right to water sources within or bordering the reservation.

  - Additionally, water rights on the reservation are reserved as of the date of the reservation’s creation. Water users with earlier appropriation dates take precedence, but those with later dates are subordinate to the reservation’s water rights.

  - Finally, the amount of water reserved for Indian use is the amount necessary to irrigate all the irrigable land on the reservation. Rights to water are not lost through non-use of the water, and all of these rights apply both to surface water and to groundwater.

  - Special implementations or compacts may exist in some states. For example, in Montana, a special commission, the Reserved Water Rights Compact Commission, represents the state in negotiating compacts with Montana’s Indian tribes regarding the settlement water rights claims.

  - You should consult with your tribal natural resources department for specific questions about water rights within the reservation’s boundaries.

- Mineral rights is another important right associated with land. It is the right to mine or use any of the minerals below the surface of the property. It is important to note that mineral rights are sometimes separated from the ownership of the surface estate.

  - Although mineral rights do not directly affect farming and ranching operations in the way that water rights do, they can have a big effect on the value of the land and its potential use.

  - Mineral rights can be purchased, sold and leased.

    - Be sure you know about the mineral rights of land that you are considering buying. You may be surprised to find that someone other than the seller owns the mineral rights.
• For example, most Montanans actually live on “split estates” where one person owns the surface estate while another person owns the mineral rights.

• Farmers and ranchers who own the surface estate can often be in conflict with mining interests who own the mineral rights and might conduct mining operations on the land without permission or even advance notice.

- For Indian lands, a Bureau of Indian Affairs (BIA) land sale application may not include an option for the seller to retain the mineral rights. If you want to retain your mineral rights, be sure to do so, even if it’s not mentioned in the application.

- If you are not sure whether you want to retain your mineral rights, hire a geologist to survey the land and advise you regarding the potential value of the rights.

- In some parts of the country, oil and gas exploration has dramatically affected the value of mineral rights and surface land. In some cases, oil and gas companies are offering land owners what seems like extravagant prices for their land and mineral rights.

  • Be careful about accepting these offers without first consulting with a financial advisor and legal experts. You may find that the prices being offered are actually much lower than the expected return in oil or gas royalties.

➤ An easement is the right to use another person’s property for a specific purpose. It can be specific to a part of the property or be generally applied to the entire property. Easements can be bought and sold.

  o There are many types of easements and some may affect the value of a property.

    • For example, an easement may give a power or pipeline company a right to build power or pipe lines across a property, which may lower its value.

    • As discussed earlier, donating or selling a conservation easement (the right to development) can also lower the value of the land, but it is usually used as a strategy to preserve farmland.

  o An easement can apply to a property, or to an individual or a business.

    • In the case of a property, the easement becomes part of the deed and is transferred when sold.
With individuals or businesses, the easement remains in effect until an expiration date or event or death of the beneficiary.

- Just because an easement is not currently being used, does not mean that it will not be in the future. Be aware of the potential for an easement to be used and what that will mean to your land and agribusiness.

- A right of way is a special type of easement that gives someone the right to travel through a property owned by someone else.
  - As with all easements, right of ways can affect the value of the land and, for that portion of the property, its agricultural use. You should carefully study the current and potential future use of any rights of ways on your property.
  - Rights of ways are typically applied, and granted, for access roads (or trails) that must cross through private (or state) property to reach some desired destination.
  - In some cases, the use of eminent domain by states or municipalities to acquire rights of way across private property has been exercised, and can be extremely controversial.
    - However, the use of eminent domain is not available on Indian Trust lands (except in rare instances and through a Federal court), and so negotiations and settlements must be made with tribes and individuals holding an interest in the trust land.
    - Tribal governments have the right to consent to rights of ways when deemed necessary for the public good.

References

Iowa State University Outreach and Extension. nd. Whole Farm Decisions & Succession. Ag Decision Maker.


