This module on owning and operating a fertilizer and pesticide service is one of 36 in a series on entrepreneurship. The introduction tells the student what topics will be covered and suggests other modules to read in related occupations. Each unit includes student goals, a case study, and a discussion of the unit subject matter. Learning activities are divided into individual activities, discussion questions, and a group activity. Units (and subject matter) in this module are planning your business (personal qualities; services, customers, and competition; special services; legal requirements); choosing a location (picking an area; picking a spot); getting money to start (description of your business; statement of financial need); being in charge (dividing the work); organizing the work (planning the work; doing the work; checking the work); setting prices (materials, labor); advertising and selling (designing an ad; promotion); keeping financial records (types of sales; daily cash sheet); and keeping your business successful (profit and loss statement; profit ratio and expense ratio; increasing net profits). A summary and quiz complete the document. (A teacher's guide is available for this module.) (CT)
GETTING DOWN TO BUSINESS:

Fertilizer and Pesticide Service

Module 5
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INTRODUCTION

How are you going to use your job skills after you finish school?

Have you ever thought about starting your own fertilizer and pesticide service?

This module describes people who have started and managed this kind of service. It gives you an idea of what they do and some of the special skills they need.

You will read about
  planning a fertilizer and pesticide service
  choosing a location
  getting money to start
  being in charge
  organizing the work
  setting prices
  advertising and selling
  keeping financial records
  keeping your business successful
You will also have a chance to practice some of the things that owners of fertilizer and pesticide services do.

Then you will have a better idea of whether a career as an owner of that kind of business is for you.

Before you read this module, you might want to study Module 1, Getting Down to Business: What’s It All About?

When you finish this module, you might want to read
  Module 3: Getting Down to Business: Tree Service;
  Module 4: Getting Down to Business: Garden Center;

These modules are related to other businesses in agriculture.
UNIT 1

Planning a Fertilizer and Pesticide Service

Goal: To help you plan a fertilizer and pesticide service.

Objective 1: List three or more personal qualities an owner of this business might have.

Objective 2: Describe the services, customers, and competition of this business.

Objective 3: List two ways to help your business "stand out" from its competition.

Objective 4: List two legal requirements for running this business.
CARL THINKS ABOUT OPENING HIS OWN BUSINESS

Carl Eaglehorse works for a large farm-service company. He has worked there for 18 years. He is a pest control advisor. He helps farmers figure out which fertilizer and chemicals they need. He is very good at his job.

Carl has been thinking about opening his own business. He has been taking business courses in night school. He would like to start his own fertilizer and pesticide service.

"I know I could do it," Carl thinks. "I know a lot about fertilizer and pesticides. I'm very careful, because I know those chemicals can be dangerous. I've learned a lot about business. Also, the farmers like me and know they can count on me. They know I'll work overtime and weekends to help them when they need it. Most of all, I'd like to be my own boss. I'd like to make the decisions about my work. I know that if I make bad decisions, I'll have no one to blame but myself. But I'd like to try it."

The area where Carl lives has mostly very large farms. There are two large farm service companies that do almost all the fertilizer and pesticide work. Carl wonders how he can compete with these large companies.

"I don't think this area is a good one for my service," he decides. "I need to be in an area with more small farms. To compete, well I'd like to offer some special service. I will offer help in figuring out what fertilizer and pesticide is needed. I could offer free help with integrated pest management. Maybe I'll hire an employee who specializes in that."

Carl will talk to a lawyer to learn about the best legal form for his business. He will talk to an insurance agent to find out what coverage he needs. He will talk to federal, state, and local agricultural agents to find out what laws he must follow.
Planning a Fertilizer and Pesticide Service

There are many, many small businesses in America. Small businesses can have as few as one worker (the owner) or as many as four workers. A small business owner is "self-employed." Often a whole family works together in a small business.

Carl thought about four main things in planning his fertilizer and pesticide service. First, he decided his personal qualities are right for the business. Second, he thought about his services, customers, and competition. Third, he decided what he can do to compete well. Finally, he thought about legal requirements for running his business.

Personal Qualities

Carl thought about whether he "has what it takes" to run a fertilizer and pesticide service.

- He has training and skills in fertilizer and pesticide use and in running a business.
- He knows fertilizer and pesticides can be dangerous chemicals, so he is very careful to use them correctly.
- He is willing to work hard.
- He gets along well with people.
- He wants to be his own boss.

During the growing season, farmers sometimes need to have help with fertilizer or pesticides in a hurry. Owners of a fertilizer and pesticide service should be willing to work hard to help farmers.
Services, Customers, and Competition

Services. Fertilizer and pesticide service workers serve large and small farmers. They decide what fertilizers to use on certain crops. They study the soil to find out what crops were planted in the field last year. Often they send plant samples to a laboratory to be sure the right fertilizer is being used.

Some workers, called pest control advisors, help farmers identify insects, plants, and soil pests that hurt crops or animals. Other workers are called pest control operators. They mix pesticides at the right strength and then apply them using a truck or tractor, and spreader or sprayer. These workers are usually the ones who apply fertilizer, too. Sometimes one person does both jobs.

Customers. Farmers are the customers of this business. In areas with only very large farms, farmers may own their own spraying and spreading equipment. In areas with small farms, many farmers cannot afford their own equipment. Small farmers are more likely customers for a small fertilizer and pesticide service.

Sometimes people call a fertilizer and pesticide service because their buildings have termites or other pests they want destroyed. The equipment for controlling agricultural pests is very different from equipment for destroying structural pests in buildings. Fertilizer and pesticide services can't help these people.

Competition. Your competition will be other businesses that do what you do. Established farm service companies offer fertilizer and pesticide services and probably are well known to farmers.

Small fertilizer and pesticide services can compete with established companies by giving especially good service. They can also offer special services.
You can find fertilizer and pesticide services listed in the Yellow Pages of the phone book. You can also ask farmers in your area. If there are a lot of companies already operating, your service will have a smaller chance of succeeding than if there are only a few.

Special Services

Carl knows he will have to compete with other fertilizer and pesticide services. He has thought about what special services he could offer to get customers. One special service he could offer is free advice on the new field of integrated pest management. People in this field help farmers control pests in many ways. They show farmers how to use fewer chemical pesticides so there are fewer chemicals released in the environment.

Other special services might be:
- help on deciding what fertilizer or pesticides are needed;
- discounts for large orders or quick payment; or
- guarantees that results will be good or the job will be done again.

Carl decides to offer help in deciding what's needed. He will also offer free advice on integrated pest management. He is not a specialist in this himself, but he will look for an employee who is.

Legal Requirements

You should contact your county agricultural agent and your state business licensing agency to learn about the laws for a fertilizer and pesticide service.

There are other important legal requirements for opening a business. You have to choose the legal form of your business. A lawyer can advise you on the different forms of business.
Every business needs insurance to be protected against certain kinds of losses. An insurance agent can help you decide on the kinds and amounts of insurance you need.

Most states have special laws for pesticide application. Your business may have to meet as many as four legal requirements to apply pesticides: (1) a pest control dealer’s license to sell pesticides to farmers; (2) registration with the state department of agriculture to apply pesticides; (3) a pest control advisor’s license for every worker who advises farmers on pesticide use; and (4) a pest control operator’s license for every worker who applies pesticides.

If you move to a new state, getting these licenses may take some time. You may have to work for a fertilizer and pesticide service and also to take some tests. Most states do not now regulate fertilizer use, though in the future they may. Every state also requires a business operator’s license to open almost any business.

Summary

It is important to plan ahead before starting your business. Now you know four things to think about in planning a fertilizer and pesticide service.
Individual Activities

1. List two legal requirements for starting a fertilizer and pesticide service. Call or write your county agricultural agent and your state business licensing agency to find out if your state has any other requirements.

2. Would you like running a fertilizer and pesticide service? Check each statement below that fits you.
   - I'm willing to work hard.
   - I'm very careful in situations in which I or others could be in danger.
   - I really like doing things on my own.
   - I get along well with people.
   - I'm interested in how a business is run.

3. Find out what fertilizer and pesticide services are in your area. Are any of them small (no more than four full-time workers)?

4. Can you think of any other special services a fertilizer and pesticide service could offer? Make a list of them.

5. Describe the services you would offer if you opened a fertilizer and pesticide service in your area. Who would your customers be? Who would your competition be?
Discussion Questions

1. Why do you think an area with many small farms might be a better location for a small fertilizer and pesticide service? Is your area like this?

2. Why do you think Carl wants to be his own boss?

3. What problems could Carl face if his business fails?

Group Activity

Ask the owner of a small fertilizer and pesticide service to come and talk to the class. If there are no small services, ask the manager of a large service. Ask the person to talk about running this kind of business.

Plan what questions you will ask the service owner or manager. You might ask these questions, and others:

- What kinds of equipment does your service use?
- What is your day like? What do you do? How many hours do you usually work?
- What experience and training do you have for your job?
- What are the good and bad parts of your job?
- Do you think this is a good area for a small service to open? What areas might be better?

If the person is the owner of the business, you could ask these questions:

- Why did you want to open your own service?
- How long did you plan before you opened?
- How much money did it take to get started? Where did you get the money?
UNIT 2

Choosing a Location

Goal: To help you choose a location for a fertilizer and pesticide service.

Objective 1: List three things to think about in deciding where to locate this business.

Objective 2: Pick the best location for this business from three choices and explain your choice.
CARL DECIDES WHERE TO LOCATE

Carl knows his area is not a good one for a small fertilizer and pesticide service. He wants to open his business in an area with mostly small farms. So he talks to farmers, county agents, and others. He visits two states to see if he should open his business in one of them.

He decides to open his service in a state with many small apple and cherry orchards. The area also has small farms that grow many kinds of row crops. Carl talks to several farmers in the area. All but two say they would like to have his service available.

He will need an office, space to store supplies, and space to park his equipment. He talks to a real estate agent, Ms. Carlton, about what he needs. She tells him there are two places he could choose. One place is in town. It used to be an auto repair shop. It has a small office and equipment for repairs, such as a hydraulic lift. It leases for $1,800 a month.

The repair equipment would be handy for doing maintenance work on the trucks. But the place doesn't have any storage space, or much space outside. Also, there's a pesticide service just three blocks away.

The second place is out on a highway. It's bigger and has lots of storage space. It was used for storage by a small trucking firm. It has a gas storage tank and pump. It also has two buildings. One is a large storage building. The other is a small temporary structure that could be used for an office. The lease is $2,000 a month for this space.

Carl decides to take the place on the highway. It is closer to many farms. He thinks people will notice his business better there, too.

Ms. Carlton helps him work out a three-year lease with the owner. Before he signs it, he will be sure he has enough money to get started.
Choosing a Location

Choosing a location is important. You have to be sure that the area has enough customers for your services. For a fertilizer and pesticide service, you might even have to move to a different state to get enough customers.

To find out how many customers might come to see you, you have to ask questions. You can get answers from:
- people who might be customers;
- people who have worked in the business; and
- city or county agencies, such as the county agricultural agent or the planning department.

Once you are sure the area has enough customers, you have to pick the spot for your business. These are five things to think about.
- The space has to be large enough for your needs.
- It has to be where it will attract customers.
- It has to have the right equipment, or else be easy to add equipment to.
- It has to be in good shape.
- The price has to be one you can pay.

Picking an Area

Carl talked to several farmers about his service. This is a good way to find out whether people will use your service.
But sometimes you can't talk directly to customers. So you have to ask others. People who have worked in the business can tell you if they have lots of customers or just a few. The county agricultural agent may be able to tell you this, too.

The city or county planning department can tell you a lot about the area. It can also tell you if changes are planned that might affect your business. For example, a new highway or change in the zoning laws might be important to you.

Picking a Spot

Location. Carl has decided that the highway location is better for his business. He has two reasons for this. He wants to stay away from competition. He doesn't want to be very close to another pesticide service.

Also, he wants his business to be noticed. He can get to many of his customers more easily than he could from town.

Size. Carl needed three kinds of space. He needed space to store and care for his trucks and spraying equipment.

He needed space to store fertilizers and pesticides. These supplies need to be handled carefully and stored safely. This is important because they can be dangerous and also because they are a big expense for Carl's business. Careless storage can cause damage to supplies and cost money.

Carl also needed office space to store business forms and to talk to customers. All fertilizer and pesticide services need these three kinds of space.
Equipment. The place on the highway already has some of the equipment Carl needs. It has a gas tank and pump for fueling the trucks.

The shape it's in. When you look for a place for a business, you can't always find one "all ready to go." But a good location is worth choosing. Remember to include the cost of changes in figuring out how much money you need.

Carl's place didn't need any repairs. His building were fairly strong and secure. Heating, plumbing, and wiring all worked well. The roofs did not leak. Be sure to check all these things before you sign a lease or buy a place.

Most customers also like to do business in a clean, well-kept place. A coat of paint is a good idea.

What it costs. The place on the highway cost a little more than the one in town. But it had the necessary storage and office buildings. And Carl thought he could afford it. He had done a lot of thinking and planning about money. In the next section you will read about his plans.

Summary

Choosing a location is important. First, you have to pick a good area with enough customers. To be sure you do that, you have to get as much information as you can. Second, you have to pick a good spot for your shop. Now you know some things to think about in picking a location.
Learning Activities

Individual Activities

1. List two things Carl didn't do when he was picking an area for his business.

2. Find out where fertilizer and pesticide services are in your area. Are they all close together or far apart?

3. List the three kinds of space a fertilizer and pesticide service needs.

4. Figure out how much Carl will pay to lease the place on the highway for three years.

5. List the three reasons Carl picked the spot on the highway.

Discussion Questions

1. Is it always good to be far away from your competition? Could it be good to be close to your competitors?

2. Carl didn't talk to the county planning department. What problems could he have because he didn't?

3. How can you figure out the price you can afford to pay for a place?
Group Activity

Invite one or more fertilizer and pesticide service owners to visit your class. When you invite them, ask where their businesses are located. Visit each location, alone or with a classmate, before their visit. Write down what the area is like, the building's condition, and other things that describe the location. Or draw a picture of the spot. Report on the locations to the class before the owners visit.

When the owners visit, ask them why they picked the locations they did. Ask questions such as these.

- Are your customers nearby? If not, how far away are they?
- Is fuel a big part of your monthly expenses?
- How much space do you have in your building? How is it divided up?
- Is rent a big part of your monthly expenses?
- How often do customers visit your office? Can you tell what they think of the location?
UNIT 3

Getting Money to Start

Goal: To help you plan how to get money to start a fertilizer and pesticide service.

Objective 1: Write a business description for this business.

Objective 2: Fill out a form showing how much money you need to start this business.
CARL APPLIES FOR A LOAN

Carl has been thinking about how much money he needs to start his business. He has listed these expenses.

- Lease of building, six months ($2,000/mo.) $12,000
- Office painting and remodeling 2,000
- Two truck spray rigs ($10,000 each) 20,000
- Tractor spray rig 35,000
- Fertilizers and supplies 30,000
- Pesticides and supplies 80,000
- Office furniture 1,000
- Office supplies 500
- Insurance 1,000
- Advertising 1,000
- Salaries: Two employees: $1,000/month each, six months 12,000
- Owner's income: $1,000/month, six months 6,000
- TOTAL $150,500

This was his "money on hand" for the business.

- Savings $15,000
- Loan from parents 15,000
- TOTAL $30,000

Carl can see that he needs a loan of $120,500 to start his business. He plans to visit a bank in town to borrow the money. To show the banker that he should get a loan, he writes a description of the business. He tells what the business will do and whom it will serve. He also tells about its special services. He tries to show why his idea for a business is a good one.

Carl also writes about himself. He explains his past training and experience. He lists people and businesses back home whom the banker can call. They can tell the banker that Carl was reliable and paid his bills. Carl wants to show the banker that he is a "good risk" who will repay the bank's money.
Getting Money to Start

Starting a small business takes money. There are many one-time costs at first (start-up costs). Starting a fertilizer and pesticide service takes more money than many other businesses, because equipment costs a lot. Usually you need a loan from a bank or a government agency. To get a loan, you need to give the bank three kinds of information in writing:

- personal information on yourself;
- a description of your business; and
- a statement of your starting expenses, cash on hand, and loan needed, called a "statement of financial need."

Personal information is often written in the form of a resume. A resume shows your education and experience and gives names of references. This module won’t give any more information about resumes. Instead, it will deal with the description of your business and the statement of financial need.

Description of Your Business

A business description should tell the banker everything important about the business. A business description has five parts.

Kind of business and services provided. Carl writes that his business will choose the right fertilizers and pesticides and then apply them to crops. He lists the equipment he needs.

Location. He describes the place he has picked and why he thinks it is a good location.
Competition. Carl writes about the other farm service businesses in the area. There is a small pesticide service in town, but it specializes in row crops. A large farm service business also serves the area.

Customers. He writes about the needs of smaller farmers in the area. He explains that these farmers often don't have their own fertilizer and pesticide application equipment. Small farmers need to have this work done for them on a timely basis.

Plans for success. Finally, Carl describes how he will help farmers. His business will offer free advice on integrated pest management. This will help farmers prevent crop damage and use fewer chemicals. Carl will also be able to make his prices competitive with those of the large farm service business.

A business description should show the banker that you have a good idea. It should contain facts that prove your business has a good chance to succeed. It should also show that you are enthusiastic about your idea. If you feel your idea is good but the banker doesn't, don't give up. Check with other banks in the area. If you still get turned down, the Small Business Administration makes some loans. So does the Farmers Home Administration. Call the nearest office of this agency.

Statement of Financial Need

Carl asked the banker if she had any special forms for him to fill out. The banker said "yes" and gave him a statement of financial need. After they filled it out together it looked like this.
# Statement of Financial Need

<table>
<thead>
<tr>
<th>Starting Expenses</th>
<th>Money on Hand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salaries</td>
<td>Cash on Hand</td>
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<tr>
<td>Building Expenses</td>
<td>Gifts or Personal Loans</td>
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<tr>
<td>Repairs and Renovations</td>
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<tr>
<td>Equipment and Furniture</td>
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<tr>
<td>Fertilizers and Pesticides</td>
<td>TOTAL STARTING EXPENSES</td>
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<td>Office Supplies</td>
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<td>Advertising</td>
<td>TOTAL LOAN MONEY NEEDED</td>
</tr>
<tr>
<td>Other</td>
<td>$15,000</td>
</tr>
</tbody>
</table>

|                                             | $15,000                          |
|                                             | $30,000                          |

## Starting Expenses

Carl first listed expenses. He thought it would take him about six months to get going. He took a realistic salary, just enough to get by on. Carl knew what fertilizers, pesticides, and office supplies he needed and their costs. Under "Building Expenses" he put the lease. "Equipment and Furniture" includes the truck and tractor spray rigs and office furniture. "Other" is the insurance.

## Money on hand

Carl has been saving money for many years. It comes to $15,000. Carl knows the bank will want him to put up more money. His parents are willing to lend him $15,000.

A bank will want you to use your own money as well as its loan to start your business. It may take years of saving to get enough. Sometimes your family can lend you money. It is important to think carefully about how much money you need. If you ask for too much, you may not get the loan. If you ask for too little, your business may go broke.
Summary

You need money to start a business. You will probably have to borrow from a bank or government agency. Now you know the kinds of information to give the lending agency when you ask for a loan.
Learning Activities

Individual Activities

1. List three places that may lend money to start a small fertilizer and pesticide service.

2. In your own words, write a description of Carl's business. Try to show why his idea is a good one. Don't forget to include all the parts of a business description.

3. What are the three main parts of a statement of financial need?

4. Suppose you wanted to start a fertilizer and pesticide service. You will have these start-up expenses.

   - Lease for three months at $2,000 per month: $6,000
   - Build extra storage space onto building: $10,000
   - Tractor spray rig: $35,000
   - Truck spray rig: $15,000
   - Fertilizer and pesticides: $58,000
   - Office supplies: $500
   - Insurance: $500
   - Furniture: $300
   - Newspaper ads: $200
   - Employee's salary - 3 months at $1,000 per month: $3,000
   - Owner's salary - 3 months at $1,000 per month: $3,000

You have $10,000 in savings and a loan of $10,000 from family members. Fill out the statement of financial need on the next page.
### STATEMENT OF FINANCIAL NEED

<table>
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<tbody>
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<tr>
<td>Building Expenses</td>
<td>Gifts or Personal Loans</td>
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<td>Repairs and Renovations</td>
<td>Investment by Others</td>
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<td>Office Supplies</td>
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<tr>
<td>Advertising</td>
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<tr>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>TOTAL $</td>
<td>TOTAL STARTING EXPENSES $</td>
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<td></td>
<td>TOTAL MONEY ON HAND</td>
</tr>
<tr>
<td></td>
<td>TOTAL LOAN MONEY NEEDED $</td>
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</tbody>
</table>

#### Discussion Questions

1. Suppose you are a banker. A man comes to borrow money to start a fertilizer and pesticide service. He has talked to farmers and other dealers and thinks the business will do well. He has been a pest control advisor and operator for 30 years and has managed a farm service business. But he has only $5,000 and asks to borrow $90,000. What would you tell him?

2. Again, suppose you are a banker. A woman comes to borrow money to start a fertilizer and pesticide service. She studied agriculture in school but has never worked for a fertilizer and pesticide service. She has not talked to farmers, but she thinks having her own business would be great. She has $82,000 and wants to borrow only $8,000. What would you tell her? Why?
Group Activity

As a class, write a list of starting expenses for a fertilizer and pesticide service in your area. The class could also break into teams, with each team doing some research on costs. For example, one team could talk to an insurance agent to find the cost of insurance. Another could talk to a fertilizer and pesticide supplier, and so on.
UNIT 4

Being in Charge

Goal: To help you learn how to plan work for the employees of a fertilizer and pesticide service.

Objective 1: Decide how to divide the work of the business among the workers.

Objective 2: Pick the best person to hire for a job in this business.

Objective 3: Describe one kind of training you might give your employees.
CARL HIRES EMPLOYEES

Carl is planning to hire two employees. He lists the work he wants done:
- find out what fertilizers and pesticides are needed for each job;
- apply needed fertilizers and pesticides;
- keep records of work to be done, work finished, bills sent, and payments received; and
- give farmers advice and help on integrated pest management.

Carl doesn't have the training to advise farmers about integrated pest management. So he decides to hire someone who does. He will look for a person who can also choose the right fertilizers and pesticides for regular jobs. He also decided to hire a secretary to keep track of jobs and payments. At first Carl will do the spraying himself, as well as oversee the business. As the business grows, he plans to hire a spraying crew and a regular supervisor.

Carl writes down a description of the jobs he wants filled. This helps him write "Help Wanted" ads. He puts the ads in the newspaper. Three people apply for the advisor position. Darcy has a college degree in entomology. She has worked for a large farm service business for two years. She has taken extension courses in integrated pest management. Allen has the same training. He has held four jobs in three years. William has worked for a farm service business for seven years. He knows a lot about pest control but not much about fertilizing. All of them have pest control advisor licenses.

Carl talks to Darcy and Allen. Then he calls the people they listed as references. Darcy's boss says she is a good worker who gets things done on time. Two of Allen's bosses say he was late a lot and often called in sick. Carl decides to hire Darcy. She takes the job and comes to work for him.
Most small businesses hire employees at some time. To get good work done, you have to decide exactly what your worker should do. Then you have to find a good worker. A good worker knows how to do the job and is also reliable.

Another important part of good work is how well people get along together. Both owners and employees need to think about this.

Dividing the Work

Carl decided to divide the work so that each of the three workers has a different kind of job. Another way of dividing the work is to have each worker do a little of everything.

Different kinds of tasks. This is what Carl did. Each worker will be doing different things. Darcy will be advising farmers on fertilizers, pesticides, and integrated pest management.

Carl will be doing the spraying at first and also running the business. Running the business will include organizing the work, setting prices, and advertising the business.

Carl has also hired a secretary named Tina. Tina uses a wheelchair, but her last boss says Tina is the best secretary she ever had. Tina's job will be arranging jobs, sending bills, and keeping track of payments.

Each of these workers needs special training for one kind of job. Each worker can be very good at this one job but doesn't need to know much about the other jobs. This is important to Carl when he decides
what qualifications his employees need. For example, Darcy doesn't need a pest control operator's license, just an advisor's license.

A mixture of tasks. Carl might have decided to hire two employees who could do everything: advise, apply sprays, and keep track of jobs and payments. If he had done this, each worker would need to know how to do many different tasks. Each worker would need both licenses, too.

The work could also be divided in a mixture of these two ways. Carl could hire a secretary to take care of records and payments. Then, the other two workers would do everything else. The two workers would still need both licenses.

The kind of workers you hire depends on what kind of work you want them to do. You should be sure of this before you hire them. To be sure, it helps to write down a job description for each worker. The owner's jobs should have job descriptions just like the employee's jobs.

Hiring a worker. A job description should list all the kinds of things a worker does. Even the owner's jobs should have a description. That way, everybody knows who does what.

After he wrote the job descriptions for the advisor position, Carl put an ad in the newspaper. The ad said, "Wanted: Licensed pest control advisor. Should also have knowledge of fertilizers and plant nutrients. Should have experience with integrated pest management. Should have at least one year of employment in the field. Salary $1200/month. Call 555-2575."

Using the newspaper is a good way to get workers. But not everyone who answers the ad will be a good worker. You should ask each person about his or her training and experience. Then you can talk to the best ones in person. Carl decided William didn't know enough about fertilizers. He talked only to Darcy and Allen.
When you talk to people about the job, you should learn as much as you can about their work. Carl asked what kinds of fertilizers and pesticides Darcy and Allen had worked with. He asked if Darcy and Allen would be willing to work overtime.

Carl liked both Darcy and Allen. But he knew he should find out about their work from others, too. He got references from both Darcy and Allen. References are people who know your work. Usually references include employers you have worked for.

Allen's employers thought his work had been good. But they said he hadn't been very reliable. Carl wouldn't have known this just by talking to Allen. He was glad he had taken the time to call.

Carl went through five steps in choosing Darcy to work for him:
- writing a job description;
- advertising the job to people who might want to take it;
- looking at the training and experience of people who applied;
- talking to applicants about their work and about what the job would be like; and
- checking references from employers.

After you have hired your employee, you should help her or him learn about the job. You may need to do some extra training if the person hasn't done every kind of job you do. For example, your employee might not have used the type of spraying equipment you use.

Your employee needs to know how to do things like record work hours, too. You should show your employee where things are and how you do things. If the employee will deal with customers, you need to explain how to do that as well.

Finally, you and your employee should talk about how to keep things going well. Maybe you'll want to talk once a week for a while about how
the job is going. Maybe you'll want to set up a "trial period" and then talk. Both the owner and the employee have to be satisfied for things to work out right.

Summary

- Being a boss takes some effort. Now you know some things to think about in dividing the work. You also know some steps to follow in hiring an employee.
Learning Activities

Individual Activities

1. Look through newspaper want ads to see if you can find ads for fertilizer and pesticide workers. What kind of workers do they ask for? What kinds of information do the ads include? (Job title, description of work, experience needed, salary offered, phone number, anything else?)

2. Write a job description for Carl's job. List as many things as you can that you think he might do. You can look ahead in this module if you want to.

3. Suppose Carl has wanted a worker who could do any kind of fertilizing and pest control work. Write a newspaper ad to hire someone for that job.

4. List the five steps in hiring a worker. Why is each step important?

5. Call the nearest office of the Internal Revenue Service and ask for the "Small Business Tax Kit." List all the different kinds of forms a business owner must fill out for a hired employee.

6. List one kind of training your employee might need.

Discussion Questions

1. What are the two main ways work can be divided? What is good about each way? What is bad?
2. Why is it important to write a job description for an employee's job? For an owner's job? Could doing this prevent any problems later?

3. Can you think of any other places you could put an ad to hire an employee?

Group Activity

Suppose that Carl has been in business for almost two years. One day Carl and Ed, a spray crew member, are arguing. Ed says, "But I thought you were going to let me work as an advisor after a while."

Carl says, "Your job description doesn't say anything except spray equipment operator. That's what I told you from the beginning."

Ed says, "But I really want to learn to do both. And I could be so much more help to you if I could do all kinds of jobs."

Carl says, "We've already got too much work for the spray crew. And besides, your work in the crew hasn't been too good lately."

Discuss the problems Carl and Ed are having. Is there just one kind of problem, or are there more than one? Can you think of other examples of the kind of problem(s)? What ways are there to solve the problem(s)? How could the problem(s) have been prevented?
UNIT 5

Organizing the Work.

Goal: To help you learn how to keep track of the work of a fertilizer and pesticide service.

Objective 1: On a work order form, show how to write a job order for a customer.

Objective 2: Write a one-day work schedule for workers in this business.
"Northwest Fertilizer and Pesticide Service" has opened and seems to be doing well. The farmers really like having advice on integrated pest management. They also like having Carl's good service and fair prices.

Sometimes it's hard to get all the jobs done. Several farmers may want spraying jobs done on the same day. But the business doesn't have enough money yet to buy more equipment.

Carl tries to get all the jobs done by carefully scheduling the work. He tries to go to several farms in one area at the same time. Then he goes to another area.

One day Darcy tells Carl that three farmers need pesticide spraying right away. Two fields have tree crops and need truck spraying. The other field contains squash. The tractor spraying is needed for this field.

The three farms are close together. Carl takes the truck spray rig out in the morning and sprays both tree crops. The part-time pest control operator he has hired, Tony, meets him at the third farm after lunch. Tony has brought the tractor spray rig. Carl helps him mix the pesticide and supervises the spraying. They get all the jobs done by the end of the day.

Later in the week Darcy visits each farm. She inspects the crop and asks if everything seems okay. She asks if the farmers need anything else. Each farmer says the crops look okay. One farmer asks Darcy to help him plan an integrated pest management program.
Organizing the Work

A fertilizer and pesticide service owner has to be sure that all jobs get done. There are four steps: planning the work; organizing it; doing it; and checking it. To do these, the owner must keep track of jobs that farmers request. First, the advisor must visit the farmer and write down the work needed. Then the owner must schedule the jobs. An easy way to do this is to fill out a work order for each job. By looking at all the work orders, the owner can plan a work schedule.

Planning the Work

Each time a farmer calls in for help, Darcy visits the farm and decides what fertilizer or pesticide is needed. She writes it on this work needed form.

```
WORK NEEDED

Job For: ____________________ Date: ____________

______________________________ Advisor: __________

Kind of Crop: ________________ Acreage: __________

Kind of Problem: ______________

Fertilizer or Pesticide Needed: _______________________

Amount Needed Per Acre: _______________________

Cost Estimate: _______________________
```

Darcy leaves a copy for the farmer and takes a copy back to the office. She asks the farmer to call Carl and set up a time for spraying.
Organizing the Work

Carl uses this work order form.

<table>
<thead>
<tr>
<th>WORK ORDER</th>
<th>Date: ________</th>
</tr>
</thead>
<tbody>
<tr>
<td>FROM:</td>
<td>WORK ORDER NUMBER: ________</td>
</tr>
<tr>
<td>WORK ORDER NUMBER: ________</td>
<td>ORDER TAKEN BY: ________</td>
</tr>
<tr>
<td>ORDER TAKEN BY: ________</td>
<td>START WORK ON: ________</td>
</tr>
<tr>
<td>JOB FOR:</td>
<td>TERMS OF PAYMENT: ________</td>
</tr>
<tr>
<td>JOB FOR:</td>
<td>TOTAL MATERIALS ________</td>
</tr>
<tr>
<td>TOTAL LABOR ________</td>
<td>TAX ________</td>
</tr>
<tr>
<td>TOTAL COST ________</td>
<td>TOTAL COST ________</td>
</tr>
<tr>
<td>Person Doing Work</td>
<td>Description of Work</td>
</tr>
<tr>
<td>WORK STARTED: ________</td>
<td>TOTAL MATERIALS ________</td>
</tr>
<tr>
<td>WORK FINISHED: ________</td>
<td>TOTAL LABOR ________</td>
</tr>
<tr>
<td>BY: ________</td>
<td>TAX ________</td>
</tr>
<tr>
<td>________</td>
<td>TOTAL COST ________</td>
</tr>
</tbody>
</table>

When a farmer calls in, Carl gets out the work needed form that Darcy filled out. Carl fills out parts of the work order by talking with the farmer and using information on the work needed form. He files the form by the date the work will start.
Each day Carl looks at the work orders for the whole week ahead. He plans when to do the new jobs as well as finish the old ones. He tries to schedule jobs on the day the farmer has asked for. If he can't, he calls the farmer back to decide on another day. He also schedules a time for the job to start.

Doing the Work

When he goes to do a job, Carl takes the work order form with him. The form tells him where to go and what to do. He finishes filling out the form at the job.

Under "Materials," he writes the cost of the spray. This is measured by the quantity of insecticide or fungicide used. Under "Labor," he writes the cost for the time the job takes. The cost of labor depends on how many hours he works. He has to keep careful records of this. At the bottom of the form, by "Work Started," he writes the date and time he starts. When the work is finished, he writes the date and time under "Work Finished."

When the job is done, he can figure out the total costs. He adds up the cost of all spray materials to get "Total Materials." He adds up the cost of all labor to get "Total Labor." He figures the tax on the spray and puts it by "Tax." Tax is not charged on labor, only on materials. He adds up the total figures and tax to get "Total Cost." He leaves a copy of the work order with the farmer. He also takes a copy back to Tina so she can keep the farmer's account up to date.

Work orders are a big help to a fertilizer and pesticide service. They help the owners keep track of jobs that need to be done. They help the owners plan a work schedule. And they help the owners keep track of how much farmers should pay them.
Checking the Work

Carl knows it is very important that farmers like his work. If farmers don't think the job was done well, they won't call him for other jobs. They may also tell other farmers not to call. So Darcy checks on every job after it's done. If there are problems, Carl goes back to the farm to settle them. When Darcy checks on the work, she asks if there is anything else the farmers need to have done. This is a good way to get more jobs.

Summary

It is important for a fertilizer and pesticide service to organize its work. You now know things that can help.
Individual Activities

1. One day the Flanagans needed to have 10 acres of squash sprayed for mildew. Carl fills out the form.

<table>
<thead>
<tr>
<th>Person Doing Work</th>
<th>Description of Work</th>
<th>Materials</th>
<th>Labor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carl</td>
<td>Squash - Mildew, 10 acres</td>
<td>Benlate, 1/2 lb. per acre</td>
<td>Phalton 500, 2 lbs. per acre</td>
</tr>
</tbody>
</table>

| WORK STARTED:       | TOTAL MATERIALS           |            |
| WORK FINISHED:      | TOTAL LABOR              |            |
| BY:                | TAX                      |            |
|                    | TOTAL COST               |            |
Carl goes out to the farm on the 12th. He starts work at 9:15 a.m. He does the job in two hours at $30 per hour. The charge for the Benlate is $200 total, and for the Phalton 500 is $600 total. Tax is 5% of the charge for materials only (not labor). Complete the work order for this job.

2. What are three reasons that work orders are a help to a fertilizer and pesticide service?

3. Here are the jobs for one day.
   - Tree crop pest spraying, Leggett Farm, 20 miles east of shop, four hours estimated.
   - Row crop fertilizing, Wong Farm, 18 miles east of shop, one hour estimated.
   - Row crop fertilizing, Amos Farm, 26 miles west of shop, one hour estimated.
   - Row crop pest spraying, Irving Farm, 15 miles east of shop, two hours estimated.
   - Tree crop fertilizing, Winslow Farm, 28 miles west of shop, two hours estimated.
   - Row crop pest spraying, Winslow Farm, 28 miles west of shop, two hours estimated.

Write out a schedule for each of two workers. Keep each worker's jobs as close together as you can. Use the points of a compass if you need help.

4. Why is it important for Darcy to call later to check on the work?
Discussion Questions

1. McBee's fertilizer and pesticide service opened in an area of small farms. When people called, Joe McBee wrote down appointments for advising and spraying on little slips of paper. He stuck them in a drawer and did the jobs when he could. He didn't write down how long he worked at each job until he got back to the shop at night. Why do you think McBee's fertilizer and pesticide service went out of business?

2. Do you think it is always easy for Carl to make up work schedules for himself and the other workers? Why not? What could make it easier?

3. When Darcy calls to check on work and asks if there are any other jobs, this is a form of "selling." Why is this?

Group Activity

Collect work order and work schedule forms from fertilizer and pesticide services in your community. Also ask for any other types of forms the owner uses. These may include estimates, purchase orders for materials and supplies, job files, additional work authorizations, and others.

As a class, talk about how these forms would be used. Decide if each one would be used before or after a work needed report, a work order, or a work schedule. List the order of use of the forms.
UNIT 6

Setting Prices

Goal: To help you decide how to set prices for a fertilizer and pesticide service.

Objective 1: Pick the best price for one of the services of this business.
CARL DECIDES HOW MUCH TO CHARGE

Carl is thinking about how much to charge his customers. First, he lists his monthly expenses. Fertilizers cost $5,000, and pesticides $7,500. These are his monthly "operating expenses."

<table>
<thead>
<tr>
<th>Expense</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lease</td>
<td>$2,000</td>
</tr>
<tr>
<td>Employees' salaries</td>
<td>2,000</td>
</tr>
<tr>
<td>Utilities (phone, electricity, water)</td>
<td>100</td>
</tr>
<tr>
<td>Advertising</td>
<td>100</td>
</tr>
<tr>
<td>Insurance</td>
<td>150</td>
</tr>
<tr>
<td>Payments to accountant</td>
<td>150</td>
</tr>
<tr>
<td>Payment on loan debt</td>
<td>1,500</td>
</tr>
<tr>
<td>Repairs on equipment</td>
<td>250</td>
</tr>
<tr>
<td>Spraying supplies</td>
<td>100</td>
</tr>
<tr>
<td>Office supplies</td>
<td>60</td>
</tr>
<tr>
<td>Gas and oil</td>
<td>600</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$7,010</strong></td>
</tr>
</tbody>
</table>

He also needs $1,000 a month to live on, for his salary.

He knows that customers pay directly for fertilizers and pesticides, charged as "Materials." The rest of his expenses have to be met by the cost of "Labor." He needs to figure out how much to charge per hour for labor. Carl adds operating expenses and his own salary. This comes to $8,010.

Carl can work about 160 hours every month. Darcy can work the same number of hours, but the business doesn't charge to help farmers on integrated pest management. He thinks Darcy will spend about 40 hours a month on this. So he can expect about 280 hours of labor to bring in money. Established farm service businesses in the area charge $35 an hour for labor. Carl knows he must be competitive in setting his price. The question is, how much should he charge?
Setting Prices

Prices for fertilizer and pesticide application can't be set wherever the owner would like. There are two main things to think about when setting prices:

- materials; and
- labor.

Materials

Carl will be charging his customers directly for materials—the fertilizers and pesticides he uses on their crops. These charges will go right on the bill. He doesn't need to figure these costs into his charge for "Labor." "Labor" charges cover all the other expenses, those the customer doesn't pay for directly.

Labor

In deciding how much to charge for "Labor," Carl considers the following:

- operating expenses of the business;
- profit needed or wanted;
- demand for fertilizer and pesticide services; and
- competition.

Carl adds up the amounts he expects to spend each month on the first two items:
He knows that this is the lowest amount of income he must get every month. If he makes less than this, the business may fail after a while.

Then he thinks about the last two items (demand for services and competition). These help him decide the highest price he can charge. The right price for his services lies somewhere between the lowest and highest prices.

If people didn’t need or want his services very much, then demand would be low. If demand is low, high prices might make people stop buying completely. But Carl is sure people will want his services. He did a lot of checking to find that out before he even started the business.

He can’t charge more than the established farm service business rates, $35 an hour, or nobody will use his service. The established businesses are his competition.

If he charges $28.60 an hour, he will meet his expenses exactly ($28.60 x 280 = $8,008). If he charges $30 an hour, the business will make $8,400. This will pay expenses and leave him $392 extra every month. That will let him meet any unexpected expenses. Carl decides to charge $30 an hour.

Operating expenses of the business. Operating expenses are the costs a business must pay just to keep its doors open, whether or not it gets any customers. For Carl’s business, operating expenses include:

- employee salaries;
- lease of the building and grounds;
- insurance;
- advertising;
- utilities;
supplies;
- payments for accounting services;
- payment on his loan debt; and
- repairs on equipment.

Darcy's and Tina's salaries and the cost of the lease are the big parts of Carl's operating expenses. To lower the lease cost, he would have to move, and he doesn't want to do that. He might be able to get employees for lower salaries. But to get good workers, he pays Darcy and Tina fair salaries.

Carl knows that his monthly income must be enough to pay these operating expenses.

**Profit needed or wanted.** If Carl can charge $7,010 a month for "Labor" to pay the cost of operating expenses, why does he need more? He needs profit because he has to pay himself too. Usually the owner of a business gets paid out of the profit. If the profit is very small, the owner won't have enough to live on. Carl hopes to make at least $1,000 a month in profit to pay his own salary.

But Carl knows he needs even more than $8,010. He can pay his operating expenses and have a realistic salary for himself with $8,010. But what if one of the spray rigs should break down, resulting in a need for replacement equipment? The extra $390 a month will help him be ready for expenses he hadn't planned on.

Also, he does have some other expenses to pay out of profit. Besides his salary, the profit is used to pay taxes. Costs of expanding the business would also come out of profits (for instance, if he bought a second tractor spray rig).

**Demand for service.** Carl thinks that farmers will like his service and want to use it. That is, he thinks demand will be high. But he also has to consider the price of the competition: the other farm service businesses.
Competition. Carl knows that the established farm service businesses offer many kinds of services. They can charge more because they are well known in the area. Carl knows that to compete, his rates must be competitive, especially when the business is new. So in the beginning, he sets his price for labor at $30, $5 less than his competition charges. Later, Carl can raise his hourly-labor rate. He may even be able to charge more than his competition, if he gives better service.

Summary

Setting prices takes some thinking. You have to know what your expenses are, how much profit you need, and what your competition is charging before you set prices.
Individual Activities

1. Make two lists, one headed "Materials" and one headed "Labor." List the kinds of items Carl will charge directly to customers under "Materials." List all his other kinds of expenses under "Labor." Explain why charges for "Labor" don't have to cover expenses for "Materials."

2. Check with a fertilizer and pesticide service to get a list of charges for labor. Also ask an established farm service business what its labor charges are. How do the two compare?

3. List the three things profit is spent on.

4. List the two items that add up to the lowest price you can charge. List the two items that help you decide the highest price you can charge. Where does the right price lie?

5. A new fertilizer and pesticide service can make enough money one month but too little the next. How would you feel owning a small fertilizer and pesticide service? Would you rather be the boss and take the chance of having no salary? Or be the employee and be sure of having a steady salary?

Discussion Questions

1. If established farm services are charging only $30 an hour, what should Carl do? What if the established services are charging only $25 an hour?
2. Do fertilizer and pesticide services always charge for labor by the hour? How else could they charge? How could that be better than the "by-the-hour" way? How could it be worse?

Group Activity

Divide the class into two or more groups. Each group should write down this list of things to think about when setting prices:

1. Cost of materials
2. Demand for services
3. Competition
4. Operating expenses
5. Profit

Read the case study below about "Ordway's Fertilizer and Pesticide Service." Which of the five things do you think will be most important to Joan Ordway, the owner, when she sets prices? Which will be least important? When all groups have finished, report to each other what you decide. Did all the groups decide the same? If not, talk about why you decided what you did.

Ordway's Fertilizer and Pesticide Service

Joan Ordway is starting her fertilizer and pesticide service in a location where the farmers are mainly row crop growers. She has talked with many farmers who want fertilizer and pesticide services. There are no established farm service businesses nearby. Joan wants top quality advisors and spray crews, so she plans to pay higher salaries than other services. Her office rent and equipment insurance are higher than she planned. Joan plans to pay her staff and other expenses before she takes a salary for herself.
UNIT 7

Advertising and Selling

Goal: To help you learn ways to advertise and sell the services of a fertilizer and pesticide service.

Objective 1: Pick one way to advertise this business.

Objective 2: Design a printed ad for this business.
"NORTHWEST FERTILIZER AND PESTICIDE SERVICE" ADVERTISES

When Carl opened, he had to decide how to let people know about his business.

When he applied for the bank loan, he asked for money to paint signs on the building and his truck. He also asked for money to mail announcements to farmers. He thinks these are both good ways to let the farmers know about his service. Now he must plan what the announcements will say.

Carl decided on the following ad for the announcement:

GRAND OPENING!!

Fertilizer and Pesticide Spraying

Tree Crops and Row Crops

Analysis of Fertilizer and Pesticide Needs

Modern Equipment

Free Advice on Integrated Pest Management

Northwest Fertilizer and Pesticide Service
1600 County Road,
Farmtown
555-8360
Advertising and Selling

Advertising and selling are the major ways that businesses get customers. Selling is done person to person. Advertising includes all the nonpersonal ways of letting customers know about your business. These can include:

- signs on the business and its trucks;
- newspaper ads;
- magazine ads;
- Yellow Pages ads;
- direct mailings;
- radio announcements;
- billboards;
- fliers posted around town (such as those on bulletin boards);
- business cards; and
- special items like matchbooks and pens.

Service businesses—like fertilizer and pesticide services don't do too much selling. Customers usually call or come in only when they are already sure of what they want. But service businesses can do all the different kinds of advertising.

Any small business should be listed in the Yellow Pages. Its name, address, and phone number should be include with other businesses of the same kind. But not all businesses have ads in the Yellow Pages. Ads cost extra money. Business owners have to decide if the Yellow Pages are the best place for their ads.
Advertising

When you plan an advertising campaign, it's important to think about several things.

- Who are the people you want to reach?
- What do you want them to know?
- When should they know it?
- How can you best reach them?
- Why are you trying to reach them (are you having a sale, opening a new business, offering new services, etc.)?
- How much will it cost?

Carl thought about several kinds of advertising. He decided that there should be a sign on the building and on his truck, of course. After all, once he has paid for the signs, this kind of advertising is free from then on. And people can find the business more easily if a sign is on it.

He also decided to mail an announcement of the business opening to all the farmers in the area. In deciding this, he thought about all the points above.

Who was very important. Carl knew that his customers would be farmers. By talking to farmers and others, he was able to find out the names of all the farmers in the area. He sent an announcement to every farmer on the list.

What he wanted farmers to know was what his business is, what services it offers, and how to find it. He listed his services in the ad. He also used pictures of healthy trees and row crops. Pictures get the message across quickly and make the ad more interesting.

When he wanted farmers to know about the business was the day it opened. So he had to plan backwards to be sure that it worked out. He allowed two weeks for designing, printing, and mailing the ad before the
business opened. It's important to leave plenty of time so your advertising is put out when you want it to be.

Carl had several choices of how to reach the farmers. He could have put an ad in the newspaper or a farm journal. But a lot of the people who would see the ad in those places might not be possible customers. And some possible customers might not see the ad, or might not notice it.

He decided to mail an announcement to each farmer. A mailed announcement fit his purpose very well. It isn't "easy to miss," like a newspaper ad, and it goes to exactly the people you want it to.

Sometimes you know the kind of person you want to mail announcements to, but you don't know all their names and addresses. In this case you have to search for names. The phone book, the county tax records, or a commercial mailing service may be of help.

Why was easy. Carl wanted possible customers to know that a new fertilizer and pesticide service was opening. So he added "GRAND OPENING!!" to the ad.

How much he had figured out. He wanted to send notices to about 100 farmers. The printing cost was $15 for 100 copies. The postage was $15.00, so the total cost was $30.00.

If two ways of advertising are just as good, then choose the one that costs less. If an ad is cheap, but it doesn't reach the right people in the right way, then it's a waste of money.

**Designing an Ad**

A good ad is simple, truthful, and attractive, and it tells the important things about your service. There are several things to work on in planning an ad.
Headline. The headline should attract attention to your ad. It should be short and give some important information about your business. Carl used "GRAND OPENING!!" at the top of his ad to attract attention.

Illustration. Pictures make your ad more interesting. They can also get your message across quickly and simply. The tree and row crop pictures in Carl's ad quickly tell people what the business works on.

Copy. Copy is what you write under the headline. It tells people the details of your business and any special services you offer. Carl lists his special services: analysis of fertilizer and pesticide needs, and free advice on integrated pest management.

Layout. The way the ad is laid out should be pleasing. It shouldn't look "busy" or crowded with too many words. Carl left plenty of "white space" in his ad. That way, readers can quickly see what's important.

Identification. The identification of the business is very important. The ad should give at least the name, address, and phone number of your business. Carl wants people to know how to find the business easily and quickly.

Remember that sometimes people think that a fertilizer and pesticide service will spray for pests in buildings. Your ad should clearly say that you work on farm products.

Selling

At the beginning of this unit, we said that most service businesses don't do too much selling. But they do some. In the unit "Organizing the Work," Darcy made calls to the farmers after the jobs were done. She asked them if everything seemed okay and if they had any other jobs that needed to be done. This is a kind of selling.
In fact, everything Carl, Darcy, Tina, and other workers do to make farmers call them again is a form of selling. When they get jobs done on time, their customers are pleased. When they are friendly and fair, customers like to call on them again. When they keep accurate records of work and payments, customers know the business is run well.

All these are ways that service businesses sell their services. And, if people in service businesses aren't reliable, friendly, and organized, customers won't want to come back. That's a form of bad selling for the business.

Promotion

Businesses do other things to make themselves known and liked. A business may exhibit at a 4-H show, help out the FFA, or give to good causes. It may give discounts or gifts to special customers. This is called promotion.

Summary

You can have the best fertilizer and pesticide service in the world. But if people don't know it, your business may fail. Advertising and selling are the ways you let people know what you do. Now you know how fertilizer and pesticide businesses can advertise and sell their services.
Learning Activities

Individual Activities

1. Carl thinks he should run a regular ad after the business gets started. He doesn't know whether a newspaper ad or a Yellow Pages ad would be best.

He gets these figures from the phone company and the newspaper.

<table>
<thead>
<tr>
<th>Yellow Pages Ad</th>
<th>Newspaper Ad</th>
</tr>
</thead>
<tbody>
<tr>
<td>Readers: 45,000 people</td>
<td>40,000 people</td>
</tr>
<tr>
<td>Costs: $200/month, large ad</td>
<td>$200/month, large ad (once a week)</td>
</tr>
<tr>
<td>$75/month, medium ad</td>
<td>$100/month, medium ad</td>
</tr>
<tr>
<td>$30/month, small ad</td>
<td>$50/month, small ad</td>
</tr>
</tbody>
</table>

Go through the six steps of planning an ad campaign. Which place would you put your ad? What size ad would you choose? Why?

2. Call your local newspaper and phone company. Ask for information on readers and costs for your area. Also call a local radio station and ask for audience size and for its advertising costs.

3. Design a printed ad for the following fertilizer and pesticide service.

Carter's Fertilizer and Pesticide Service has a shop in town. It has three advisors and two spraying crews. It also has a helicopter spraying service. The advisors charge a small amount for helping farmers decide what fertilizers and pesticides they need. But if Carter's does the work, the money is refunded. Carter's wants to put a medium-sized ad in the Yellow Pages.
In planning your ad, think about the headline, illustration, copy, layout, and identification.

4. Ask a small business owner how he or she sells and promotes the business. Make a list of the ways.

5. Look in newspapers, magazines, and the Yellow Pages for a printed ad you like. Listen for a radio ad you like. Write down why you liked the ads.

Discussion Questions

1. How do small businesses sell and promote their products or services? Talk about all the different ways students found in activity 4 above.

2. What makes a good printed ad? Bring in and compare all the ads students liked in activity 5 above. What makes a bad ad? Why can some ads make customers not want to use a business? Think about radio ads as well as printed ads.

3. Think about the last time someone working in a store gave you good service. What did he or she do? Now think about a worker who gave you bad service. What did this person do differently from the first one?

Group Activity

Ask a person who designs ads (a graphic artist) to speak to the class. Ask the person to talk about how ads are designed and printed. Be sure he or she talks about the costs of designing and printing too.
UNIT 8

Keeping Financial Records

Goal: To help you learn how to keep financial records for a fertilizer and pesticide service.

Objective 1: Fill out a customer account form for a customer.

Objective 2: Fill out a daily cash sheet for money received and paid out in one day.
CARL KEEPS TRACK OF FINANCES

One day Carl goes out to the Johnson farm. The Johnsons are good customers and like to use Carl's services. They usually use credit instead of paying cash for fertilizers and pesticide spraying.

Today the Johnson's apple orchard needs to be fertilized. This job takes Carl about four hours. The labor costs are $120; materials cost $900. Carl uses a work order form to add up these costs. He leaves a copy with the Johnsons and takes a copy back to the office.

Carl has a customer billing form for each credit customer. Tina puts the information from the work order on the Johnson's form. This lets her keep track of what the Johnsons have charged and how much they have paid.

On the same day, Darcy visits the Arness farm to analyze the farm's fertilizer and pesticide needs. Mr. Arness pays her for her two-hour visit in cash. Darcy gives him a sales slip and brings the $60 back for Tina to record.

In the mail are some payments from customers on their accounts. The Orrs sent in a check for $100. Alice Stanton paid $50 on her account.

Tina has to pay some of the business' bills, too. She sends a check for $800 to Radburn Chemicals for pesticides. She also pays $30 to the phone company for Northwest's Yellow Pages ad.

At the end of the day, Tina puts all the records in order. Then she takes all the money received that day to deposit it in the business bank account.
Keeping Financial Records

One of the most important things a small business owner must do is keep good financial records. You have to know how much money you receive and pay out. You have to report income and expenses to the government to pay taxes. Good records also help you decide if you should expand your business or cut it back.

Types of Sales

Cash sales. Cash sales are paid in full by cash or check at the time services are provided. When Mr. Arness paid for Darcy's help, he gave her $60 in cash. Darcy gave him this sales slip for a receipt.

<table>
<thead>
<tr>
<th>SALES SLIP</th>
</tr>
</thead>
<tbody>
<tr>
<td>DATE</td>
</tr>
<tr>
<td>CUSTOMER</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description of Sale</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analysis of fertilizer and pesticide needs, 2 hrs, $30/hr</td>
<td>$60.00</td>
</tr>
</tbody>
</table>

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>X</td>
</tr>
<tr>
<td>Charge</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Subtotal</td>
<td>$60.00</td>
</tr>
<tr>
<td>Sales Tax</td>
<td>---</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$60.00</td>
</tr>
</tbody>
</table>


Mr. Arness needed this receipt for his own records. Customers should always get receipts to prove they have paid for services. (Note that in most states there is no sales tax on services. If Mr. Arness had bought fertilizers, he would have paid sales tax.)

Credit sales. Customer billing forms help Tina keep track of how much each credit customer owes and has paid.

The Johnsons have had two jobs charged before this one. One was for fertilizing their lettuce field and the other for pest spraying in the apple orchard. They have made regular payments. Their billing form looks like this.

<table>
<thead>
<tr>
<th>Date</th>
<th>Description of Sale</th>
<th>Amount Charged</th>
<th>Payment Received</th>
<th>Balance Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 30</td>
<td>Fertilize lettuce field</td>
<td>$240</td>
<td></td>
<td>$240</td>
</tr>
<tr>
<td>May 15</td>
<td>Payment</td>
<td></td>
<td>$150</td>
<td>$90</td>
</tr>
<tr>
<td>May 27</td>
<td>Spray apple orchard</td>
<td>$500</td>
<td></td>
<td>$590</td>
</tr>
<tr>
<td>June 15</td>
<td>Payment</td>
<td></td>
<td>$300</td>
<td>$290</td>
</tr>
<tr>
<td>July 15</td>
<td>Payment</td>
<td></td>
<td>$290</td>
<td>---</td>
</tr>
</tbody>
</table>

At the end of each month, Tina looks at the "Balance Due" on each account. Then she mails a bill to each customer showing how much the customer still owes.

Some small businesses also accept major charge cards like VISA and MasterCard. Many customers like to use these charge cards. The owner doesn't have to keep customer account forms on customers who pay this way. The credit card companies pay the business owner the amount the customer owes and then bill the customer. This can save the owner some problems, like customers who pay slowly or not at all. But the business must pay a fee to the credit card service.
At the end of each day, Tina fills out a daily cash sheet. It helps her keep track of the money that comes in (called revenues or income) and the money that goes out (expenses). The form looks like this.

### Daily Cash Sheet

<table>
<thead>
<tr>
<th>Cash Receipts</th>
<th>Cash Payments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash Sales</td>
<td>Salaries</td>
</tr>
<tr>
<td></td>
<td>Building Expenses</td>
</tr>
<tr>
<td>$60</td>
<td>Equipment and Furniture</td>
</tr>
<tr>
<td>Credit Sales</td>
<td>Pesticides</td>
</tr>
<tr>
<td>150</td>
<td>$800</td>
</tr>
<tr>
<td>TOTAL CASH RECEIPTS</td>
<td>Advertising</td>
</tr>
<tr>
<td>$210</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Other</td>
</tr>
<tr>
<td></td>
<td>TOTAL CASH PAYMENTS</td>
</tr>
<tr>
<td></td>
<td>$830</td>
</tr>
</tbody>
</table>

Tina writes in two kinds of cash receipts. One is cash or checks from the cash register. Today's total is $60 from Mr. Arness. The other is money paid on credit accounts. Today's total is $100 from the Orrs and $50 from Alice Stanton, or a total of $150. Tina records this separately from cash register receipts. This will help her if she ever needs to go back and check what happened that day.

Tina also records the money she paid out that day. She lists the $800 paid to Radburn Chemicals under "Pesticides." The $30 check to the phone company is listed under "Advertising." Tina also records these checks and what they are for in her checkbook. Finally, Tina figures the totals. "Total Cash Receipts" are $210. "Total Cash Payments" are $830.
Summary

Financial records help you keep track of your business income and expenses. Now you know about three of the financial record forms you can use to do this. There are the sales slip, the customer billing form, and the daily cash sheet. These records are periodically summarized and organized into a form that shows how the business is doing, such as a balance sheet and a profit/loss statement. You will learn about profit/loss statements in the next unit. If you do go into business for yourself, get the advice of a bookkeeper or accountant about how to complete a balance sheet.
Learning Activities

Individual Activities

1. List three reasons for keeping good financial records.


<table>
<thead>
<tr>
<th>Date</th>
<th>Description of Sale</th>
<th>Amount Charged</th>
<th>Payment Received</th>
<th>Balance Due</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Customer Billing Form

Customer: ____________________________
3. Fill in Tina's daily cash sheet for November 25. She received $100 on account from the Websters, and $80 on account from Andy Johnson. Cash sales were $120. Tina paid Darcy $300 for her week's pay. She paid $50 for business insurance and $150 for fertilizer (insurance goes under "Other").

<table>
<thead>
<tr>
<th>DAILY CASH SHEET</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cash Receipts</strong></td>
<td><strong>Cash Payments</strong></td>
</tr>
<tr>
<td>Cash Sales</td>
<td>Salaries</td>
</tr>
<tr>
<td>Credit Sales</td>
<td>Building Expenses</td>
</tr>
<tr>
<td></td>
<td>Equipment and Furniture,</td>
</tr>
<tr>
<td></td>
<td>Fertilizer</td>
</tr>
<tr>
<td></td>
<td>Advertising</td>
</tr>
<tr>
<td>TOTAL CASH RECEIPTS $100</td>
<td>TOTAL CASH PAYMENTS $330</td>
</tr>
</tbody>
</table>

Discussion Questions

1. Sometimes the "Cash Payments" for one day are larger than the "Cash Receipts." Does this mean the business is in trouble?

2. What can owners do about customers who pay slowly or not at all?

3. Could you complete records once a week instead of daily?

Group Activity

Ask an accountant to speak to the class about uses of financial records and problems small businesses have in keeping financial records. Other topics could include the schedule of tax payments and other reports to the government, the procedures and penalties of the IRS, and the use of records in financial planning.
UNIT 9

Keeping Your Business Successful

Goal: To help you learn how to keep a fertilizer and pesticide service successful.

Objective 1: Figure out the net profit, profit ratio, and expense ratio for this business.

Objective 2: State one way this business could increase its profits.

Objective 3: State one way this business could change its services to increase sales.
CARL CHECKS HIS COMPANY'S HEALTH

Northwest Fertilizer and Pesticide Service has been in business for almost three years now. Carl has hired two spray crew supervisors. The business has plenty of work during growing season. In the winter everyone keeps pretty busy with dormant spraying and advice on fertilizer and pesticide needs.

Even so, Carl wonders if the business could make more money. A couple of times he's had trouble paying his bills. Last month he took only $800 in salary because he had to buy new equipment.

Carl decides to talk to his accountant, Essie Jones. She has kept all his records of business income and expenses. On the phone he tells her he wants to talk about how the business is doing.

When he arrives at her office, Essie tells him, "I have figured some totals for you. In your first year, your profit ratio was 8%. Although you made more dollars of profit in your second year, your expenses increased even faster. I think you should try to get your profits higher."

Carl wonders what he should do. He has already raised his charges for labor once, to $35 an hour. He could raise them again. Or he could try to find a way to get more work for the business in the winter.

Perhaps he could try to spend less money on expenses. Maybe he could cut back on his employees' hours of work in the winter. That would save some expenses in salaries. But that could make his employees unhappy.

Carl decides to have a meeting of everyone in the business. Maybe if all the workers put their heads together, they can find the best answer.
Keeping Your Business Successful

If a small business is successful for more than two years, it has a good chance of making it. Half of all small businesses go out of business before they've lasted two years. Carl's business had made it for almost three years, so he felt pretty good.

But a fertilizer and pesticide service owner can never sit back and say, "I've made it." Things are changing all the time, or, as business people say, "The market changes." New kinds of spraying materials and equipment may come out, and workers must know how to use them. Farmers have bad years and may put off services that aren't too important. Competition may change as other fertilizer and pesticide services open or close.

Owners have to keep careful track of changes like these. They also have to know exactly how their business is doing so they can make changes to keep up to date.

Profit and Loss Statement

A profit and loss statement shows income and expenses over a period of time, usually a year. Remember the daily cash sheets in the last unit? For a service business, a profit and loss statement is just all the daily cash sheets added together for the whole year.

Often a profit and loss statement shows figures for the last two years so that changes can be seen. A two-year profit and loss statement for Carl's business looks like this.
## Two-Year Profit/Loss Statement

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenues</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash Sales</td>
<td>$105,000</td>
<td>$150,000</td>
</tr>
<tr>
<td>Credit Sales</td>
<td>$165,000</td>
<td>$220,000</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>$270,000</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Cost of Goods Sold</strong></td>
<td>$160,000</td>
<td>59%</td>
</tr>
<tr>
<td><strong>Gross Profit</strong></td>
<td>$110,000</td>
<td></td>
</tr>
<tr>
<td><strong>Expenses</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salaries</td>
<td>$24,000</td>
<td>$47,000</td>
</tr>
<tr>
<td>Building Expenses</td>
<td>$26,000</td>
<td>$29,000</td>
</tr>
<tr>
<td>Office and Other</td>
<td>$2,000</td>
<td>$3,000</td>
</tr>
<tr>
<td>Supplies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advertising</td>
<td>$1,200</td>
<td>$2,500</td>
</tr>
<tr>
<td>Gas and Oil</td>
<td>$7,200</td>
<td>$9,200</td>
</tr>
<tr>
<td>Equipment-Repairs</td>
<td>$3,000</td>
<td>$5,000</td>
</tr>
<tr>
<td>Other</td>
<td>$25,100</td>
<td>$30,100</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>$88,500</td>
<td>33%</td>
</tr>
<tr>
<td><strong>Net Profit</strong></td>
<td>$21,500</td>
<td>8%</td>
</tr>
</tbody>
</table>

Essie has filled in the dollar figures for Year 1 and Year 2 on this statement. At the top for each year is the total of "Revenues" or income. Next comes "Cost of Goods Sold." This refers to the fertilizers and pesticides used on the customers' crops. "Gross Profit" equals revenues minus cost of goods sold. Below that is the total of "Operating Expenses" for the year. "Salaries" includes the money paid each year to all workers except Carl. Carl's salary doesn't go under "Salaries." Remember that the owner's salary comes out of profit after expenses are paid. "Other" includes insurance, accountant fees, interest on loan, and depreciation of equipment. Depreciation refers to the amount that equipment reduces in value each year due to wear and tear.
Net profit is the difference between gross profit and total expenses in a year. Net profit is used to pay the owner's salary, taxes, and improvements on the business. For example, Carl bought a second tractor spray rig in Year 2. He used part of the net profits to make the down payment.

You can see that the business made more dollars of net profit in Year 2 than in Year 1. But the dollars alone don't tell the whole story.

**Profit Ratio and Expense Ratio**

The reason the dollars of profit don't tell us enough is that changes in expenses are important, too. An easy way to see the whole picture is to figure the profit ratio and the expense ratio for each year.

The profit ratio for any year is the net profit divided by the revenues. For Year 1 it's $21,500 divided by $270,000 or .08 (8%). This shows what percentage of income the business got to keep after paying expenses.

The expense ratio is the expenses divided by the revenues. For Year 1, it's $88,500 divided by $270,000 or .33 (33%).

Now it's clear that even though dollars of profit went up in Year 2, the profit ratio or percentage of profit went down. The expense ratio, or percentage of expenses, went up. In a healthy small business, the profit ratio should go up or stay the same, but not go down.

**Increasing Net Profits**

To increase net profits, a business must do one of two things:
- reduce expenses; or
- increase revenues.
Reducing expenses can be done in several ways. Carl could look for suppliers who have lower prices. The business could cut back employee hours or lay off workers. It could sell the new spray rig. It could buy cheaper ads or stop advertising completely. Or it could even move to a cheaper building. Sometimes it costs more to do that than it saves!

The profit and loss statement can help you see where your expenses increased. If you look at the Year 1 and Year 2 expenses above, you can see that expenses for salaries and building expenses went up a lot.

In trying to cut expenses, business owners have to be careful. Sometimes cutting services can lose customers for the business. Hiring new crew supervisors and buying a new spray rig helped Carl's business grow. He could get more jobs done sooner, and the farmers were pleased.

Increasing the profits can also be done in several ways. The business could raise its prices again. It could begin to offer new services. It could try to reach more customers by serving a bigger area. It could even start charging customers who use credit.

Again, business owners have to be careful. If Carl wants to raise prices, he has to think again about everything in Unit 6 of this module. If he starts charging for credit, customers may start going to other services that don't.

Carl and all the other workers have a meeting to talk about what can be done. Darly and the new supervisors don't want to be cut back or laid off. But Tina says she has some savings. She would like to work part-time so she can go to school, too.

The meeting was a good one. All the workers are satisfied. Carl is pleased that the business can save money. Next year will be a better year for the business.
Summary

Keeping a small business successful isn't easy. The owner has to know how the market for his or her services is changing. The owner has to know how the business is doing. Finally, the owner has to plan the best way to change the business's services to keep the business healthy.
Learning Activities

Individual Activities

1. Figure out the net profit, profit ratio, and expense ratio for this business for each year.

<table>
<thead>
<tr>
<th>TWO-YEAR PROFIT/LOSS STATEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Year 1</strong></td>
</tr>
<tr>
<td><strong>$</strong></td>
</tr>
<tr>
<td><strong>Revenues</strong></td>
</tr>
<tr>
<td>Cash Sales</td>
</tr>
<tr>
<td>Credit Sales</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
</tr>
<tr>
<td><strong>Expenses</strong></td>
</tr>
<tr>
<td>Salaries</td>
</tr>
<tr>
<td>Building Expenses</td>
</tr>
<tr>
<td>Supplies</td>
</tr>
<tr>
<td>Advertising</td>
</tr>
<tr>
<td>Other</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
</tr>
</tbody>
</table>

2. Which was a better year for the business?

3. List three ways to increase revenues. List three ways to reduce expenses. Which of these ways would increase net profits?
Discussion Questions

1. Carl did not make a lot of money from his business in some months. What other reasons could he have had to want to keep it open?

2. Suppose that for Carl's business, Year 2 was a better year than Year 1. What do you think he might have done?

3. Suppose that even though Carl cut expenses, his profit ratio got worse and worse. What should he do next?

4. Are there any dangers in buying materials at the cheapest places? What are they?

Group Activity

Using everything you've learned, plan a small fertilizer and pesticide service. The class can work in six teams, each on one topic:

Planning the Business (Unit 1)
Choosing a Location (Unit 2)
Getting Money to Start (Unit 3)
Being in Charge (Unit 4)
Setting Prices (Unit 6)
Advertising and Selling (Unit 7)

The class will also have to work together as a whole, since each team needs to know something about what the others are doing.
SUMMARY

This module has been about owning a small fertilizer and pesticide service. People with training in agricultural supplies and services and the proper licenses can start small fertilizer and pesticide services. They can apply fertilizers and pesticides in several ways to tree crops and row crops.

To start a small business, you need to do lots of planning. First, you have to be sure that owning a small business is right for you. Then you have to decide what services to offer, how to compete, and what legal requirements to meet.

To pick a good location, you have to find out if customers would use your business. Then you have to get money to start. That means showing a banker that your idea is a good one.

Being in charge means dividing the work and hiring good workers. Then you must keep track of jobs to be done and who will do them.

Setting prices means figuring out the lowest price you can charge to meet your expenses and also the highest price you can charge and still be competitive. To do this you need information on your expenses and on your competition's prices.
Advertising and selling are the ways you get customers. The good things your business does in your area are called promotion. These are all important ways to help your business succeed.

You should keep good financial records so you will know how the business is doing. Then you can decide if you can expand your business or if you need to cut it back.

In order to own and operate a successful fertilizer and pesticide service, you need training in agricultural supplies and services, experience, and the special business management skills covered in this module. If you have not had courses in agricultural supplies and services you should take one before deciding to own a fertilizer and pesticide service. You can learn business management skills through business classes, experience, or by using the advice and example of an expert.

You might not make a lot of money by owning a fertilizer and pesticide service. However, you would have the personal satisfaction of being responsible for your business and making your own decisions. Think about how important these things are to you in considering whether you should start your own fertilizer and pesticide service.
QUIZ

1. List three personal qualities the owner of this business might have.
   a. 
   b. 
   c. 

2. Customers for a small fertilizer and pesticide service would probably be:
   ___a. small farmers.
   ___b. large farmers.
   ___c. established farm service companies.

3. Write one way a small fertilizer and pesticide service can stand out from its competitors.

4. List two legal requirements for running this business.
   a. 
   b. 

5. List three things to think about in deciding where to locate a fertilizer and pesticide service.
   a. 
   b. 
   c.
6. Pick the best location for a small fertilizer and pesticide service.
   ____ a. An area with small farms and lots of established farm service businesses
   ____ b. An area where you have talked to farmers and know they need your services
   ____ c. A spot with plenty of space that costs $10,000/month to lease

7. List at least four of the five parts of a business description.
   a. ____________________________
   b. ____________________________
   c. ____________________________
   d. ____________________________

8. What are the three main parts of a statement of financial need?
   a. ____________________________
   b. ____________________________
   c. ____________________________

9. The Geiger family owns a small fertilizer and pesticide service. Mr. Geiger has been in the business for 25 years. His daughter Joan has just finished high school; she studied agricultural supplies and services. Mrs. Geiger takes care of the books and the billing. They have lots of work and need to hire a fourth full-time person. What should they do?
   ____ a. Hire an assistant to Mr. Geiger and have Joan assist her mother
   ____ b. Hire an experienced spray crew supervisor and have Joan assist both that person and her father
   ____ c. Hire an assistant, bookkeeper
10. You decide to hire a bookkeeper for your business. Which person would you choose?
   ____ a. Joe, who studied bookkeeping in high school but has not worked at it in 12 years
   ____ b. Annie, who worked as a bookkeeper for three years, wants a very high salary, and has good references
   ____ c. Jim, who worked as a bookkeeper for one year, has good references, and is studying business at night.

11. Describe one kind of training an employee of a fertilizer and pesticide service might need.

12. Fill out a work order form with the following information:

   Henry starts working on a spray job at 9 a.m. on July 15. He finishes at 1 p.m. The rate for labor is $30 an hour. The materials cost $400. Tax on the materials only is 5%.
WORK ORDER

Date: July 12

FROM: Henry's Fertilizer & Pesticide Service
2803 Canyon Highway
Felton

JOBS FOR: Adams Farm
Route 30, Box 12
Felton

WORK ORDER NUMBER: 00453
ORDER TAKEN BY: Ben
START WORK ON: July 15
TERMS OF PAYMENT: Cash

<table>
<thead>
<tr>
<th>Person Doing Work</th>
<th>Description of Work</th>
<th>Materials</th>
<th>Labor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Henry</td>
<td>Fertilize strawberry crop</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>40 acres</td>
<td>Calcium nitrate, 17%</td>
<td></td>
</tr>
</tbody>
</table>

WORK STARTED: ________________ TOTAL MATERIALS ________________
WORK FINISHED: ________________ TOTAL LABOR ________________
BY: ________________________ TAX ________________

TOTAL COST ________________

13. Chuck and Gail work for Max's Fertilizer and Pesticide Service as pest control operators. The business has two truck spray rigs. One day the orders are:
- Lemon grove, 20 miles west of office, four hours estimated
- Lemon grove, 35 miles south of office, four hours estimated
- Orange grove, 25 miles west of office, three hours estimated
- Lemon grove checkup, 2 miles east of office, three hours estimated

Write a schedule for each worker.
14. You have just started a fertilizer and pesticide service. You have added up all your expenses and the profit you need to make. You have to make at least $29 an hour. One dealer near you charges $35 an hour. Another charges $33. What should you charge?
   a. $29 an hour
   b. $31 an hour
   c. $33 an hour

15. Your fertilizer and pesticide service has been open for two months. You want to run a weekly ad. Which would be best for you?
   a. Newspaper—reaches 50,000 people (2,000 are farmers) and costs $15 a week
   b. Farm journal—reaches 3,000 people (all farmers) and costs $20 a week

16. List at least four of the five parts of a printed ad.
   a.
   b.
   c.
   d.

17. Fill out a customer billing form with the following information. Be sure to show each balance due.

   The Nakamura Farm has charged these jobs and made these payments.

<table>
<thead>
<tr>
<th>Date</th>
<th>Service Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 30</td>
<td>Fertilize spinach field</td>
<td>$100</td>
</tr>
<tr>
<td>May 15</td>
<td>Payment</td>
<td>50</td>
</tr>
<tr>
<td>May 20</td>
<td>Spray spinach field for pests</td>
<td>200</td>
</tr>
<tr>
<td>June 15</td>
<td>Payment</td>
<td>50</td>
</tr>
<tr>
<td>July 14</td>
<td>Payment</td>
<td>100</td>
</tr>
</tbody>
</table>
# CUSTOMER BILLING FORM

<table>
<thead>
<tr>
<th>Date</th>
<th>Description of Sale</th>
<th>Amount Charged</th>
<th>Payment Received</th>
<th>Balance Due</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

18. Fill out a daily cash sheet with the following information:

- Cash (bills and coins) $27
- Checks 33
- Payments on accounts 800
- Paid for pesticides 200
- Paid on lease 500
- Paid for ad 40

## DAILY CASH SHEET

<table>
<thead>
<tr>
<th>Cash Receipts</th>
<th>Cash Payments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash Sales</td>
<td>Salaries</td>
</tr>
<tr>
<td>Credit Sales</td>
<td>Building Expenses</td>
</tr>
<tr>
<td></td>
<td>Equipment and Furniture</td>
</tr>
<tr>
<td></td>
<td>Pesticides</td>
</tr>
<tr>
<td></td>
<td>Advertising</td>
</tr>
<tr>
<td></td>
<td>Other</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TOTAL CASH RECEIPTS $</th>
<th>TOTAL CASH PAYMENTS $</th>
</tr>
</thead>
<tbody>
<tr>
<td>98</td>
<td>92</td>
</tr>
</tbody>
</table>
19. Look at the profit and loss statement below. Figure out the net profit. Then figure out the expense ratio and profit ratio. Put the percentage of expense in the percentage column next to TOTAL EXPENSES. Put the percent of profit next to NET PROFIT.

**PROFIT/LOSS STATEMENT**

<table>
<thead>
<tr>
<th></th>
<th>$</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenues</td>
<td>$150,000</td>
<td>100%</td>
</tr>
<tr>
<td>Cost of Goods Sold</td>
<td>$75,000</td>
<td></td>
</tr>
<tr>
<td>Gross Profit</td>
<td>$75,000</td>
<td></td>
</tr>
<tr>
<td>Expenses</td>
<td>$57,000</td>
<td></td>
</tr>
<tr>
<td>Net Profit</td>
<td>$</td>
<td></td>
</tr>
</tbody>
</table>

20. How can a fertilizer and pesticide service increase its net profits?
   - a. Buy a new truck spray rig
   - b. Move to a larger shop
   - c. Lower its prices
   - d. Advertise to more people who might use its services

21. A fertilizer and pesticide service is having trouble. The building is in town, two blocks from another fertilizer and pesticide service. The service charges for deciding what fertilizer and pesticides are needed. The owner doesn’t like to send his crews on jobs that are more than 25 miles away.

List one thing this service could try to increase its business.
## PROJECT PRODUCTS

### Entrepreneurship Training Components

<table>
<thead>
<tr>
<th>Vocational Discipline</th>
<th>Module Number and Title</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General</strong></td>
<td>Module 1 - Getting Down to Business: What's It All About?</td>
</tr>
<tr>
<td></td>
<td>Module 2 - Farm Equipment Repair</td>
</tr>
<tr>
<td></td>
<td>Module 3 - Tree Service</td>
</tr>
<tr>
<td></td>
<td>Module 4 - Garden Center</td>
</tr>
<tr>
<td></td>
<td>Module 5 - Fertilizer and Pesticide Service</td>
</tr>
<tr>
<td></td>
<td>Module 6 - Dairy Farming</td>
</tr>
<tr>
<td><strong>Marketing and Distribution</strong></td>
<td>Module 7 - Apparel Store</td>
</tr>
<tr>
<td></td>
<td>Module 8 - Specialty Food Store</td>
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<td>Module 9 - Travel Agency</td>
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<td>Module 10 - Bicycle Store</td>
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<td>Module 11 - Flower and Plant Store</td>
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<td></td>
<td>Module 12 - Business and Personal Service</td>
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<td></td>
<td>Module 13 - Innkeeping</td>
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<tr>
<td><strong>Health</strong></td>
<td>Module 14 - Nursing Service</td>
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<td></td>
<td>Module 15 - Wheelchair Transportation Service</td>
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<td>Module 16 - Health Spa</td>
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<tr>
<td><strong>Business and Office</strong></td>
<td>Module 17 - Answering Service</td>
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<td>Module 18 - Secretarial Service</td>
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<td>Module 19 - Bookkeeping Service</td>
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<tr>
<td></td>
<td>Module 20 - Software Design Company</td>
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<tr>
<td></td>
<td>Module 21 - Word Processing Service</td>
</tr>
<tr>
<td><strong>Occupational</strong></td>
<td>Module 22 - Restaurant Business</td>
</tr>
<tr>
<td></td>
<td>Module 23 - Day Care Center</td>
</tr>
<tr>
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<td>Module 24 - Housecleaning Service</td>
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<td></td>
<td>Module 25 - Sewing Service</td>
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<tr>
<td></td>
<td>Module 26 - Home Attendant Service</td>
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<tr>
<td><strong>Home Economics</strong></td>
<td>Module 27 - Guard Service</td>
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<tr>
<td></td>
<td>Module 28 - Pest Control Service</td>
</tr>
<tr>
<td></td>
<td>Module 29 - Energy Specialist Service</td>
</tr>
<tr>
<td><strong>Technical</strong></td>
<td>Module 30 - Hair Styling Shop</td>
</tr>
<tr>
<td></td>
<td>Module 31 - Auto Repair Shop</td>
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<tr>
<td></td>
<td>Module 32 - Welding Business</td>
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<td>Module 33 - Construction Electrician Business</td>
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<td>Module 34 - Carpentry Business</td>
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<td>Module 35 - Plumbing Business</td>
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<td></td>
<td>Module 36 - Air Conditioning and Heating Service</td>
</tr>
</tbody>
</table>

### Related Resources

- Resource Guide of Existing Entrepreneurship Materials
- Handbook on Utilization of the Entrepreneurship Training Components