



The Four Key Management Areas:

- Marketing

Operations

- Human Resources
- Finance

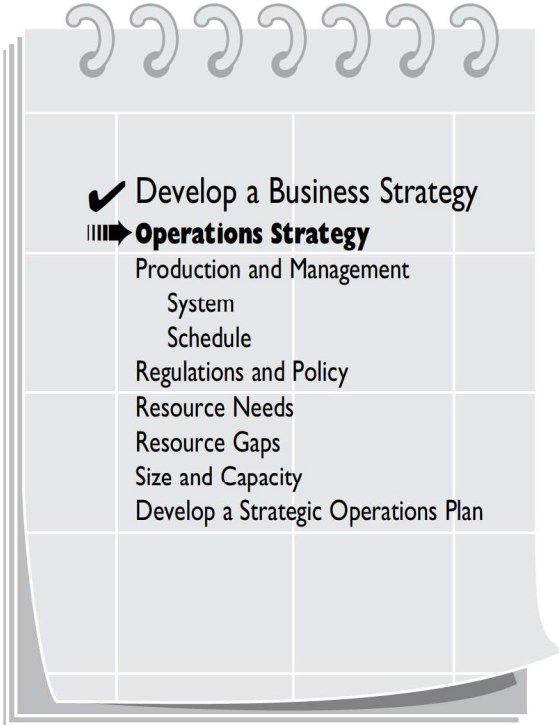
Operations Strategy

With a clear idea of who will buy your product and why, the next planning question you must answer is: How will we produce it? A detailed operations strategy—one that is clear to all involved in the operation—is necessary for sound management and is sometimes an institutional necessity. Organic producers, for example, are required to submit a detailed farm management plan when seeking certification each year. According to certification guidelines, the plan must describe all resource management strategies directed at improving soil fertility; controlling weeds, pests and disease; managing manure; and limiting erosion.³⁷

In this section you will have the chance to develop a production management and operations strategy by answering questions about:

- Production Management: What production/management alternatives will we consider? How will we produce?
- Regulation and Policy: What institutional requirements exist?
- Resource Needs: What are our future physical resource needs?
- Gaps: How will we fill physical resource gaps?
- Size and capacity: How much can we produce?
- Storage and Inventory Management: How will we store inventory and maintain product quality?

TASK 4



Production and Management: How will we produce?

All operations strategies begin with a detailed description of the business' production (management) system and a production schedule. As a current producer, you may have very clear ideas about how you would like to produce, what management system to use and resource requirements. If so, this portion of the planning process may be a welcome break from the research that was necessary to learn about your customers and competition in the previous section. If you are a beginning farmer, however, you may find that this component of the planning process is just as research-intensive. Take your time, and, most importantly, talk with other experienced farmers when fleshing out the details of your production system and production schedule.

³⁷ *Organic Certification of Crop Production in Minnesota*, Gulbranson, 2001 (revised).

Worksheet 4.10 Production System and Schedule

Use the space below to describe the production management system(s) that you use for each enterprise. You may have more than one enterprise for each product that you plan to produce. Be sure to detail your management plans for all enterprises. If you plan to gradually transition into a new management system, complete this Worksheet for each year or season during the transition period. You might find it helpful to use a map or calendar to describe any seasonal or transition-related management plans.

Enterprise _____
Year _____
System _____

At Cedar Summit Farm we will continue to graze our dairy herd and use all milk from the herd for on-farm processing by 2005. Milk will be hauled to the Creamery with a bulk tank trailer and pumped into a raw milk storage tank. The milk will then move to a pasteurizer and be pasteurized. Next it will be separated into skim milk and cream, and then some cream will be added back to make the assorted milk products. The rest of the cream will be made into ice cream, butter, and other products.

Each batch of milk brought from the dairy barn to the plant will be tested at an on-site lab for traces of antibiotics and butterfat content. Once milk is pasteurized, each batch will be further tested for proper pasteurization. The Minnesota Department of Agriculture will periodically test the milk for bacteria. Finally, all bottled milk and products (except ice cream) will be moved to a 39-degree cooler for storage.

Production system.

Before making their decision to process, the Minars traveled thousands of miles to Maryland, Virginia and West Virginia to visit four other farmer-owned milk processing plants. Each of the plants was similar in size to the Minars' proposed operation. They processed with "Mini-Dairy" equipment from an Israeli-based company called Pladot. By visiting the plants, observing production, and talking first-hand with plant owners, Dave and Florence feel they gained invaluable insights that helped them with decisions about plant construction, equipment purchases and marketing.

Your choice of production system will be heavily influenced by your social, environmental and community values. This might be a good time to revisit your values and goals, and to recall your objectives for the whole farm. Each production system carries with it different resource requirements, production outcomes, labor demands and natural resource implications.

As you define one or more production system strategies, try to be specific about how the system will work on your farm. If your vision includes a major change in production, think about the resource requirements and the trade-offs between labor, productivity, conservation and profitability that may be associated with different production management systems. Use the space in **Worksheet 4.10: Production System and Schedule** to describe your production system strategies for each farm enterprise. If you plan to produce crops or livestock, for instance, detail your plans for:

- Weed, pest and disease control
- Soil fertility
- Rotation
- Tillage
- Irrigation
- Water quality
- Seed selection
- Breed selection
- Fencing
- Feed
- Housing
- Stocking
- Waste and quality control



Figure 59.
Excerpt from Cedar Summit Farm's Worksheet 4.10: Production System and Schedule

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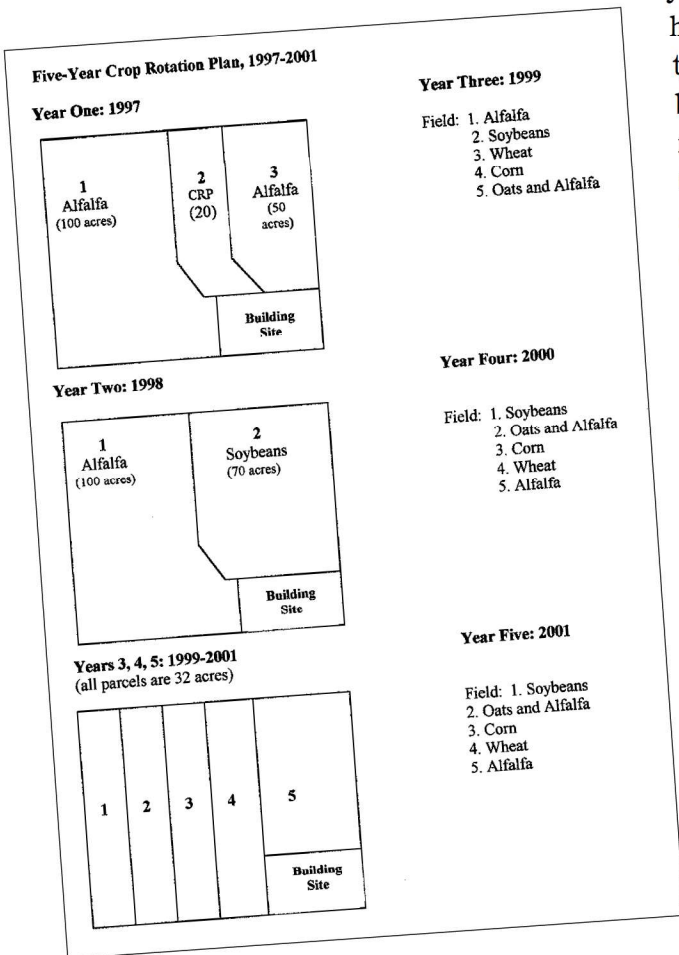


Similarly, if you plan to process or offer a service, the systems component of your plan might address your business' strategy for workshops or on-farm consultations. Northwind Nursery and Orchard owner Frank Foltz, for instance, took time to describe his operation management plans for farm tours and pruning demonstrations.

There are many resources that describe traditional and, increasingly, alternative production systems. Most universities have published research studies on reduced input, organic and livestock grazing systems. Two excellent publications are the *Grazing Systems Planning Guide* and *Making the Transition to Sustainable Farming* (see "Resources"). Most importantly, talk with other farmers—learn from their mistakes and their successes.

Production schedule. Once you have identified one or more production system strategies, think about how management within each system may change over time (e.g., from season to season or from year to year. For instance, how might your livestock management change as you transition from a system of confined farrowing to pasture farrowing for hogs, or from summer grazing to winter feeding for cattle if you plan to seasonally graze? Similarly, think about

Figure 60.
Mabel Brelje's Five-Year Crop Rotation Plan



your annual crop rotation schedule, weekly vegetable harvesting schedule, or daily farm tour schedule. This type of detailed operations planning is critical for any business—it can help you estimate physical and labor resource needs and production potential, as well as cash flow projections. And in many cases, detailed production schedules may be necessary for institutional compliance. Crop producer Mabel Brelje, for example, is required to submit a crop rotation plan annually in order to obtain organic certification. For this reason, she included a rotation map in her final business plan (Figure 60).

Similarly, Dave and Florence Minar included a proposed processing schedule in their final business plan to communicate financial needs and performance to their lender:

"We plan to process and sell 30 percent of the milk produced on our farm the first year. Processing will then be increased by five percent each month until May 2004 when all of our milk will be processed." The Minars also developed a detailed product processing

schedule for each batch of bottled milk, yogurt, sour cream, butter and ice cream that was not included in their business plan. It served as an internal guide for operations.

Use **Worksheet 4.10: Production System and Schedule** to describe your operations schedule. If you plan to make a gradual transition over time, either from one system to another or through the addition of new enterprises, use Worksheet 4.10 to map out a short-term production plan and descriptions for each phase of the transition. Use a map, a calendar or the space provided. Discuss your schedule with experienced farmers, planning team members, and consultants to determine if your production system and overall schedule are realistic.



Regulations and Policy: What institutional requirements exist?

Like it or not, if you are going to operate a retail business, process on your farm, or greatly expand livestock production, you will run into local zoning, permitting, licensing and regulatory issues. Regulations can have a major impact on your production and operations plans as well as on start-up costs. Dave and Florence Minar, for example, had to obtain seven permits to build a plant and process their own milk (Figure 61).

The type of permits or licenses required for your business will depend on where you are in the business life-cycle (whether you are just starting up or growing your business), where you live, what type of product you offer, and the overall size of your operation. Therefore, before going too far with your operations research, it's a good idea to check with your state's Small Business Association as well as your local or county regulators to learn about environmental, construction, finance, bonding and product safety regulations. In Minnesota, *A Guide to Starting a Business in Minnesota*³⁸ lists all necessary state permits and licenses as well as informational contacts. Some examples of the agriculture-related licenses and permits required by the State of Minnesota are listed in Figure 62.

Figure 61. Permits Required by Cedar Summit Farm to Build Plant and Process

1. Conditional Use Permit from Scott County Planning and Zoning
2. Septic Tank Permit from Scott County Environmental Health
3. Health and Safety Plan Approval from the Minnesota Department of Health
4. Building Permit and Inspection from the Scott County Building and Inspections Division
5. Environmental Operating Permit from the Minnesota Pollution Control Agency
6. Food Handlers' License from the Minnesota Department of Agriculture
7. Dairy Plant License from the Minnesota Department of Agriculture

Figure 62. Some Agricultural Licenses and Permits Required by the State of Minnesota

- Aquaculture License
- Apiary Certificate of Inspection
- Farmstead Cheese Permit
- Dairy Plant License
- Grade A Milk Production Permit
- Feedlot Permit
- Retail and Wholesale Food Handler License
- Livestock Meat Processing and Packing License

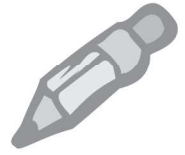
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³⁸ *A Guide to Starting a Business in Minnesota*, Minnesota Small Business Assistance Office, updated annually.



Moreover, if you plan to produce, process or market organic crops, you will need to conduct thorough research about national and international certification requirements. You should contact your state Department of Agriculture for information about the new federal organic certification program.

Use **Worksheet 4.11: Regulations and Policies** to begin your research, listing required permits and licenses, filing requirements, and fees. Next, determine whether or not you will be able to meet legal requirements. Discuss your ideas with planning team members and outside consultants, such as an attorney, when appropriate.



Resource Needs: What are our physical resource needs?

Traditional resource management plans address land, labor and capital. Here you will identify needs in all of these areas, but limit your strategy development to land, buildings, breeding livestock, equipment and variable inputs or supplies. Labor-related strategies are discussed separately in the Human Resources Strategy section.

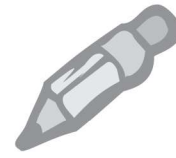
Take stock of your operation's future resource needs for each enterprise and ultimately, the whole farm. Think about how much land you will need, what type of equipment you will use, and any other physical inputs necessary to produce your product. The choices that you make regarding resource use, acquisition and ownership can have a big impact on the overall profitability of your business. The costs of owning and operating farm machinery in Minnesota, for example, account for 20 to 30 percent of the annual per acre production costs for corn and soybeans.³⁹

If you are new to the business or industry and uncertain about resource requirements, try talking with experienced producers or your local Extension educator to begin brainstorming a realistic list of land, livestock, machinery, equipment, labor and other input needs. If you plan to produce a specialty commodity or use an alternative management system, accurate production input records may not be readily available. In this case, your research may take you to the Internet or some of the alternative experiment stations located at universities across the country. Your regional SARE office (see "Resources") may be able to help you locate information sources in your area.

Dave and Florence Minar developed a list of processing resource needs by visiting other on-farm dairy processing plants and from business plans shared by these same business operators. Using this information, the Minars were able to generate a fairly detailed list of needed machinery, equipment and start-up inputs (Figure 63).

³⁹ *Sharing Farm Machinery*, Weness, 2001.

Referring to your completed Worksheets 2.5 and 2.6, use **Worksheet 4.12: Describing Potential Crop Production Systems** and **Worksheet 4.13: Describing Potential Livestock Production Systems** to record future resource needs for crop and livestock enterprises, respectively. Think about how your operating schedule and corresponding resource needs will change as you transition into a new management system over a period of seasons or years.



Resource Gaps: How will we fill physical resource gaps?

Another critical component of your operations strategy involves your plan for filling resource gaps. Return to your crop and livestock production schedules (Worksheets 2.5 and 2.6) from Planning Task Two in which you described current crop and livestock input needs and equipment use. Compare these lists to those that you completed for future operations (Worksheets 4.12 and 4.13). Are there any gaps? Or perhaps you now have underutilized resources?

Consider some of your strategy alternatives for filling or eliminating gaps between current land, building, machinery and equipment availability and future physical resource needs. Will you:

- Make better use of existing machinery and equipment?
- Acquire additional (new or used) resources?
- Gain access to additional resources through business arrangements (formal and informal)?

Making changes in your current resource use may mean making “better” use of underutilized resources. Based on your evaluation of current resource availability and future needs, are there any resources that are underutilized or that will become underutilized as you move toward your future vision? If so, one of your resource management strategies might be to “make better use of underutilized resources.” How you define “better” will depend on your values and goals. For example, it may mean sharing or renting out equipment with another family member or neighbor.

If the gap between current resource availability and future resource needs is significant, you may need to look at acquiring additional physical resources. This can be a financially risky alternative. You will need to carefully evaluate cash flow in the next section before implementing your plans. For now, however, consider the following acquisition options if you think additional capital will be needed to meet future operating needs.

Enterprise Processing Milk

Resource Needs:

Land 1.5 acres for processing plant/building site

Buildings 4,800 square-foot concrete block building with infrastructure

Machinery and equipment Full line of Pladot Mini-Dairy processing equipment (or equivalent) plus:

1. Standby generator
2. Walk-in freezer and cooler
3. Bottle washer
4. Boiler
5. Transport tank
6. Raw milk storage (2,000+ gallons)
7. Bottle conveyer
8. Computer and accounting software
9. Office furnishings and phone
10. Hand sinks
11. Washing machine and softener
12. Refrigerated delivery truck

Breeding livestock

Supplies

1. Milk
2. Cups
3. Bottles
4. Delivery crates
5. Labels

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Figure 63.
Excerpt from Cedar Summit Farm’s Worksheet 4.14: Resource Needs and Acquisition



Land and buildings. Land and buildings can be purchased, rented or leased (Figure 64). Each of these acquisition options has financial advantages and disadvantages, which will be discussed further later, when you address finance strategies. For now, though, you should realize that land acquisition options should be weighed carefully. Land purchase decisions can make or break your business. They often require a large amount of capital and a long-term commitment. In a video presentation, Gayle Willett says “Purchasing real estate is one of the most important decisions a business may make . . . It is important not to let emotion overrule sound business judgment . . . Consider both what the land is worth to the business and what you can pay for the land and still have cash flow.”⁴⁰ If purchasing land is a part of your operations strategy, you’ll evaluate the feasibility of that strategy carefully in the finance sections. You’ll need to discuss cash flow, tax and equity implications with an accountant.

Machinery and equipment. If additional machinery and equipment will be needed—either to replace old equipment or to meet new resource requirements—you have several acquisition options, such as purchasing, renting, leasing, custom hiring, or exchanging labor for access to equipment (Figure 64).

If you plan to purchase additional equipment, you should also consider the advantages of buying new versus used equipment. The financial, labor, and production-related advantages and disadvantages of new versus used equipment are outlined in Figure 65. Think about these issues as well as your ability or willingness to perform equipment repairs and to finance large capital purchases.

As you brainstorm machinery and equipment acquisition options, it’s a good idea to talk with other farmers, equipment dealers and competitors about their experiences. The Minars conducted research about equipment alternatives by visiting with other farmers in person and on the phone. They traveled around the state of Minnesota and as far as West Virginia to visit other on-farm dairy processing operations.

Based on their conversations with other on-farm processors, the Minars decided to pursue the use of new equipment from Pladot, an equipment manufacturer located in Israel. The Pladot Mini-Dairy system can be sized according to the Minar’s milk production capacity. Moreover, Pladot provides training, technical support and product recipes as part of the Mini-Dairy equipment package. They felt that by purchasing the turn-key processing system from Pladot, they would be able to produce a range of quality products from their first batch of processed milk. They were concerned that their other alternative, purchasing used equipment, would risk difficulties in locating and fitting equipment, in getting the system up and running efficiently, and in developing their own recipes.

⁴⁰ *Analyzing Land Investments, Business Management in Agriculture* videotape series, Willett, 1988.

Figure 64. Machinery Acquisition Options⁴¹

Full ownership. Ownership is the most common method of acquiring long-term control of farm machinery. Ownership advantages include control over the machine's use and scheduling. The disadvantages of full ownership include responsibility for machine operation, repairs, maintenance, liquidation and obsolescence, and capital investments.

Joint ownership. Joint ownership is becoming more and more common as a way to distribute responsibility for investment costs, repairs, and labor among two or more businesses. However, cooperation is essential. Equipment use must be coordinated and capital payments made in a timely manner. Problems can arise when the parties involved do not share a similar work and finance ethic. Written agreements are highly recommended.

Exchange work. Machinery exchange among neighbors is one of the oldest forms of farm machinery acquisition on a short-term basis. Two or more farmers working together to share labor and equipment can reduce their individual investments in machinery while giving each access to a complete system. Exchange work is still a common method of machinery acquisition among young or beginning farmers who need machinery and an older neighbor who requires labor. As with joint ownership, a working agreement is very important to determine whose farm is serviced first and who pays for repair costs.

Custom hire. Under traditional custom hire arrangements, the farm operator or landowner hires a custom operator to do one or more field operations. The custom operator provides the machinery, labor and fuel and agrees to perform specified duties at predetermined costs. Today, however, custom farming (the landowner hires a custom operator to perform most or all field operations) is gaining more interest. Under this arrangement, the landowner usually pays all cash costs, including seed and fertilizer. If you are considering a custom farming arrangement, you will need to specify the following in a written agreement: location and acreage involved, custom services required, landowner obligations, provisions for default, and a schedule of custom rates and a payment plan.

Rental. Rental usually takes place for a short, specified period. In this case, the farm owner rents a particular piece of machinery and performs all required work. The renter is responsible for daily maintenance of the machinery. Generally, there are two rental options—pure rental and rental purchase. If you are considering a rental arrangement, be sure to review the terms of each option.

Leasing. Unlike rental, leasing allows the farm business owner to gain access to machinery over a long period of time, such as 5-7 years. The advantage of the lease arrangement, from a cash flow perspective, is that payments are typically less than payments on borrowed money to own the machine. Leasing also carries its disadvantages. Often the lease payment schedule extends beyond a debt payment schedule and therefore the total amount paid for the machine usually exceeds the full ownership cost. Moreover, by leasing, it is often more difficult to enforce warranty claims against the lessor or dealer.

Figure 65. New Versus Used Machinery and Equipment⁴²

Used machinery and equipment. Purchasing used equipment requires relatively low up-front investment costs. However, used equipment is generally less dependable than new equipment, hence labor, repair, lubrication and fuel costs are usually higher than for new machinery and equipment. Ultimately, this means that buying used equipment results in higher variable costs for the business.

New machinery and equipment. New equipment is typically more efficient and convenient and may include training or technical assistance. As a trade-off, however, new equipment can be more expensive up front, requiring larger capital investments, insurance, interest costs and depreciation.

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⁴¹ *Acquiring and Managing Resources for the Farm Business*, Thomas, 2001.

⁴² *Ibid.*

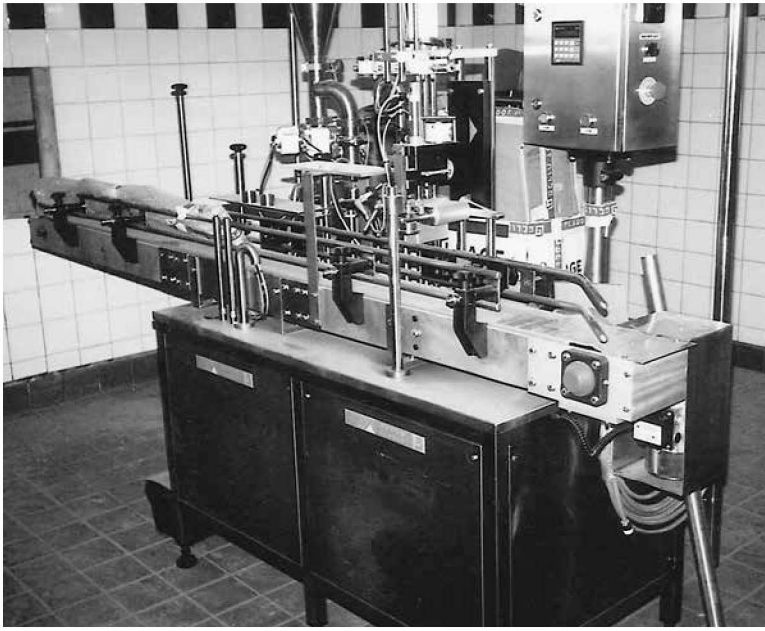


Figure 66.
Pladot bottle filler used
by Valley Fresh Dairy,
West Virginia

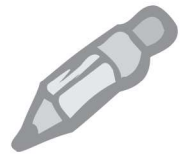
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“Without recipes we would have to experiment one product at a time in order to develop quality milk, cheese, sour cream and yogurt,” explains Florence Minar. “With the Pladot recipes, we wouldn’t waste any time or money developing our product line, which means that we could begin marketing a wide range of products almost immediately.”

Return to Worksheets 2.5 and 2.6 where you described current crop and livestock resource use. Combine this information with the list of current tangible working assets (Worksheet 2.3) to identify any gaps between current and future resource needs. Look at the status of current buildings and equipment to realistically determine what can be used. Ask yourself whether there will be any overlapping demand for building space,

equipment and machinery or whether replacements may be needed.

Then return to **Worksheet 4.14: Resource Needs and Acquisition** to begin brainstorming resource acquisition options. Be creative as you think about how to fill your machinery and equipment needs. Mabel Brelje, for example, settled on a resource management strategy that included both crop sharing and cash rental agreements. *“Under these agreements,”* Mabel writes in her business plan, *“much needed labor and equipment is contributed by the contracting parties. I am continuing to conduct portions of the fieldwork for which I have equipment, as well as most of the planning, decision making and soil analysis.”* Look for opportunities to meet your land, labor and equipment needs through strategic alliances, formal partnerships, or crop sharing arrangements.





Size and Capacity: How much can we produce?

Your goals for growing or contracting the business as well as upper and lower limits on size will affect your choice of business organization (discussed next in the Finance Operation Strategy section) and your operations schedule. Farm size refers to the amount of land in production (number of acres), the number of animals you raise, and the value of gross income from the business. Someone who is planning to convert from a traditional cattle finishing operation to management-intensive grazing, for instance, may be limited in size during the transition period while pastures are developed and management techniques fine-tuned.

How will you size the business and plan for any growth? Begin your research with a little number crunching to determine realistic production estimates for each future enterprise and production schedule. Use information about the future carrying capacity of your land, the processing capacity of your equipment, boarding capacity of your Bed and Breakfast, or harvesting capacity of your family and staff to develop output projections. Use **Worksheet 4.15: Institutional Considerations** to help you think through any legal or regulatory agreements or policies that will affect the use and management of physical resources under your new operations strategies.



Historical information about yield performance and productivity are available for traditional enterprises from a number of resources. Check with your local Extension office or your state Department of Agriculture. In the Upper Midwest, check out FINBIN⁴³ and Farm Business Management’s Annual Report.⁴⁴ Again, alternative production system information might be a little harder to find, but your local Extension office or state Department of Agriculture should be able to give you some ideas of who to contact in your area if they don’t have that information. Check also with sustainable agriculture organizations in your area or your regional SARE office. One of your most useful resources may be other farmers—those who are on the cutting edge—using a new production system or technology.

As you develop output/production estimates, particularly for alternative enterprises with little recorded performance history, you may want to estimate “best” and “worst” case production scenarios, or high and low output projections. Organic crop producer, Mabel Brelje chose to develop high and low yield projections for her oilseed and grain crops as shown in Figure 67. She used these projections in her financial analysis to evaluate profitability and risk.

Dave and Florence Minar developed an upper limit for bottled milk production based on pasture acreage, herd productivity, and equipment capacity. At current productivity levels and herd size, the Minars’ cows produce 166,913 pounds of

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Figure 67.
Excerpt from Mabel Brelje’s
Business Plan—Crop Yield
Projections

Crop Yield Projections

Crop	Yield/Acre	
	High	Low
Alfalfa	Six Tons	Three Tons
Soybeans	55 bushels	30 bushels
Wheat	50 bushels	30 bushels
Corn	150 bushels	100 bushels

⁴³ FINBIN database (online), Center for Farm Financial Management, 2002.

⁴⁴ *Farm Business Management Annual Reports, Crop Information*, 2002.

Worksheet 4.16 Estimating Output and Capacity

Complete this worksheet for each major enterprise and during each year in your business plan (long run and transition period). Begin by recording historic yield or production estimates from your farm or from available data (e.g., if this is a new enterprise for your farm) in the "Typical Output" rows. Next, record expected output (based on published research, conversations with other farmers, etc.). Finally, add in your best- and worst-case scenario production estimates in the "high output" and "low output" rows, respectively. Conclude by noting any production capacity limits (based on equipment, land, labor) throughout the transition and long term. These estimates will help you estimate profitability and explore risks as you further develop strategies for expanding, maintaining or contracting the business. For more information and examples, review pages 143-144.

Enterprise: Bottled milk

	Long Run (Expected)	Transition Period		
		Year 1	Year 2	Year 3
Typical output				
Expected output	<u>166,916 pounds milk/month</u> <u>(34,993 half-gallon bottles)</u>	<u>50,075 pounds</u> <u>milk/month</u>	<u>110,000 pounds</u> <u>milk/month</u>	<u>166,916 pounds</u> <u>milk/month</u>
High output				
Low output				
Production capacity	<u>207,666 pounds milk/month</u> <u>(43,536 half-gallon bottles)</u>			

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Enterprise: _____

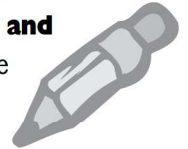
	Long Run (Expected)	Transition Period		
		Year 1	Year 2	Year 3
Typical output				
Expected output				
High output				
Low output				
Production capacity				

At the whole-farm level, we plan to (grow/maintain/contract) our business:

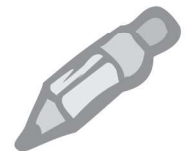
We will not grow the herd beyond the maximum carrying capacity of our current land holdings. We will grow the processing portion of our business gradually from 50,075 pounds of milk/month in November 2001 to 166,916 pounds per month by May 2004. Approximately 40 percent of all raw milk will be processed as skim, two-percent, and whole bottled milk (flavored and unflavored).

milk per month. The Pladot Mini-Dairy equipment can process between 148,333—207,667 pounds of milk per month. Should market demand increase for their products, the Minars could increase their herd (and output) to 187 cows and process at the plant's full capacity. They have the acreage to support more cows. However, this would necessitate converting some of their hay fields to pasture or acquiring access to additional land resources. These are issues that the Minars will need to evaluate in their contingency plan should future opportunities arise.

Use **Worksheet 4.16: Estimating Output and Capacity** to estimate



production/output potential and begin shaping a size-related strategy for the business. If appropriate, describe your growth or contraction strategy for the whole farm and for each future enterprise.



Develop a Strategic Operations Plan

You're ready to develop a whole farm operations plan! Use **Worksheet 4.17: Operations Strategy Summary** to briefly describe the management system you intend to implement for each enterprise. Detail crop rotations, pasture layout and rotation, milking schedules, etc. Think about how these might change throughout your start-up or transition period. Next, list new resource needs and your strategy for acquiring them. Then record all operating expenses associated with each enterprise or the whole farm (if appropriate). Finally, you're ready to pull your enterprise-specific operations strategies together into one, whole-farm production and operations strategy.

Figure 68.
Example from Cedar Summit Farm—Worksheet 4.16: Estimating Output and Capacity

The Minars summarized their operations strategy on Worksheet 4.17, as shown in Figure 69.

As you draft a whole-farm operations summary, be sure to include supporting research and note the strengths, weaknesses, opportunities and threats (SWOT) associated with each strategy alternative.

You will use this information in the next section to evaluate the feasibility of each strategy alternative and to settle on a final course of action for the business. It's also a good idea to have each planning team member summarize a whole farm operations strategy and work through a SWOT analysis on their own. Then you can compare notes and brainstorm about internal and external threats, and make sure everyone agrees on which overall operations plan you will pursue.

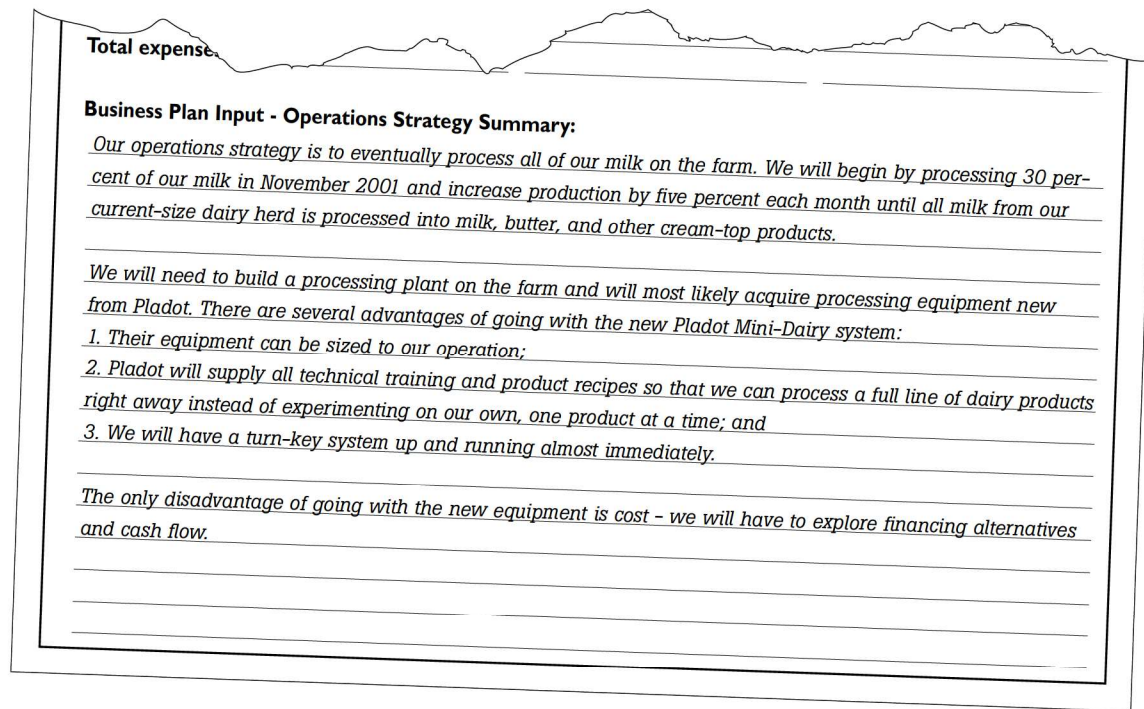


Figure 69.
Excerpt from Cedar Summit Farm's Worksheet 4.17: Operations Strategy Summary

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Human Resources Strategy

Labor and management are important to the success of any business—particularly family farm businesses. Working together, managing each other, making key decisions collectively all can be challenging when you not only work together but live together. These challenges grow when a major change in business strategy is involved—when the roles of managers, family members, and employees can shift from production management to marketing management for instance.

In this section, you and your planning team will begin to build a human resources strategy to address your changing management and work force needs. This strategy should embrace your family goals while meeting new business needs.

You will begin your strategic planning by answering questions about:

- Labor needs: What are our future workforce needs?
- Skills: What skills will be required to fill workforce needs?
- Gaps: How will we fill workforce gaps?
- Compensation: How will we pay family and members of our workforce?
- Management and communication: Who will manage the business and how?



The Four Key Management Areas:

- Marketing
- Operations
- ▶ **Human Resources**
- Finance



You'll work through this Human Resources section of Developing a Business Strategy by working through the following aspects of Human Resources in the order shown below.

✓	Develop a Business Strategy
▶▶▶▶	Human Resources Strategy
	Labor Needs
	Tasks
	Workload
	Skills
	Labor Gaps
	Compensation
	Management and Communications
	Develop a Strategic Human Resources Plan

You will begin your research by determining projected labor needs for each enterprise (product). Next, you will compare your projected labor needs against current labor resources to identify any gaps, as you did in the operations section for physical resources. You and your planning team will then need to consider how to fill those gaps and to identify one or more strategies for doing so. Finally, you will develop a strategy for managing labor and the business. This is perhaps one of the most critical components of your business strategy. Without an effective management plan or business manager, even the best of business plans can fall apart. Take your time developing a human resources management strategy—it will be one of your keys to success.

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Labor Needs: What are our future workforce needs?

Begin building your human resources strategy with some critical thinking about the type of work and accompanying workloads that will be necessary to reach your future vision and to carry out the marketing-, operations- and finance-related work within the business.

Tasks. What new marketing-, operations- and finance-related tasks will be required to produce and market a new product or to implement and manage a new production system? Be realistic about your labor needs and consider the not-so-obvious elements of business ownership and management, such as time required to communicate with staff, make equipment repairs, and handle administrative needs. For example, if you are considering organic production, be sure to plan ample time for record keeping. The paperwork necessary to track inputs, harvest and storage in an organic system can be tedious and time consuming.

“Many organic producers consider the organic premium to be primarily a payment for the extra administrative efforts required by credible certification agencies,” notes certification specialist Lisa Gulbranson. “The audit trail for a certified organic product must be maintained with great detail.”⁴⁵

⁴⁵ *Organic Certification of Crop Production in Minnesota*, Gulbranson, 2001 (revised).

Workload. Once you and your planning team have brainstormed a list of new tasks, try to estimate how much time each task will require and note any seasonal bottlenecks. This will help you to visualize the peaks and valleys of work demands, which in turn will help determine how to fill workforce needs or reduce workloads. Be sure to include work involved in producing and marketing products, maintaining equipment and facilities, and in managing the business when calculating your labor needs. If you are uncertain about how much time will be needed for each task, talk with other farmers, like the Minars did, or consult Appendix E for a list of traditional enterprise-related labor requirements. If you haven't already done so, return to Worksheets 2.8 and 2.9, in which you described the labor

requirements for current tasks. You could also begin this research by tracking your own current hours (if you are already in business) to get a sense of just how much time is involved in seemingly routine tasks. You may be surprised by the results. Then use these actual recorded hours as a basis for developing realistic projections for your future labor and staff needs.

In Worksheet 4.18, shown in Figure 70, the Minars summarized their labor needs for processed products. Dave and Florence anticipated some seasonal bursts of marketing activity during winter and spring holidays. Preceding each

Worksheet 4.18 Tasks and Workload

Use the space below to describe the marketing, operations, human resources and finance tasks associated with each new enterprise. Refer to Worksheets 4.12–4.13 (Describing Potential Crop and Livestock Systems) for operations workload estimates. Then estimate the workload (hours) associated with each task. If your business tends to be seasonal, distribute the total hours for each activity by periods of the year. Use a separate sheet of paper if more space is needed or make copies of this Worksheet to detail workload changes for each year in your transition period, as appropriate.

Enterprise *Processed dairy products*

Timeframe *January-June 2002*

Tasks	Hours/Month											
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
Marketing:												
<i>Customer service (orders)</i>	56	56	56	56	56	56						
<i>Deliveries, loading</i>	120	120	120	120	120	120						
<i>Promotion</i>	20	20	20	20	20	20						
Operations												
<i>Order supplies</i>	20	20	20	20	20	20						
<i>Transport milk, test</i>	40	40	40	40	40	40						
<i>Pasteurize, process and package milk</i>	320	320	320	320	320	320						
Management:												
<i>Oversee plant operations</i>	40	40	40	40	40	40						
<i>Manage staff</i>	20	20	20	20	20	20						
<i>Oversee training, meet with Pladot representative</i>	40	40	40	40	40	40						
Finances:												
<i>Bookkeeping</i>	10	10	10	10	10	10						
<i>Payroll</i>	4	4	4	4	4	4						
<i>Tax preparation</i>	1	1	1	5	5	1						
<i>Financial analysts</i>	10	4	2	2	2	2						
Total Hrs/Month	701	695	693	697	697	693						

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Figure 70.
Example from Cedar Summit Farm—Worksheet 4.18: Tasks and Workload



Figure 71.
Florence Minar (left)
working on the Minnesota
Organic Milk (MOM's)
processing line.

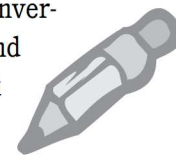
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holiday season, the Minars budgeted extra staff time to handle on-farm customer sales. Similarly, their financial staff needs are expected to increase at year-end and prior to tax reporting. Product promotion and delivery workloads are expected to remain fairly constant throughout the year, as will time needed to process products. Staff needs may increase as the Minars reach full processing capacity in 2004. Labor estimates for plant staff are based on conversations with other on-farm processors and a Pladot equipment representative. Look at the Minars' completed **Worksheet**

4.18: Tasks and Workload for Cedar

Summit Creamery's processing enterprise and begin to develop your own labor and staff estimates.



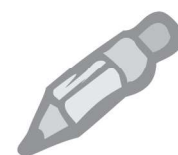
Skills: What skills will be required to fill workforce needs?

Before you begin to develop a strategy for filling workforce needs, you should get a good feel for the type of skills required for each new task or position. This information, combined with workload estimates, should help you better decide how to fill your human resources needs.

Begin your research by learning more about any new work that you and others will be required to do. Ohio State University economist Chris Zoller recommends developing "well thought-out job descriptions" that are compatible with the business' mission and goals for each new position that will be created.⁴⁶ Job descriptions—even for those positions that will be filled internally with family labor—can help make your human resources strategy a positive one by clearly identifying desired skills, expectations, responsibilities and compensation. A sample job description form is included in Appendix C to help you with this task.

As part of their "skills" research, Dave and Florence Minar pitched in at Minnesota Organic Milk (MOM's)—an on-farm processing plant located in Gibbon, Minnesota (Figure 71). They worked on the MOM's processing line one afternoon to help with butter production and packaging. Based on this experience and their visits to other on-farm dairy processing plants around the country, the Minars developed a good feel for future workloads and tasks. Consequently, they felt confident developing a realistic strategy for meeting some of their future labor needs. Explore similar opportunities as you begin identifying tasks. Try to get a feel for skills that may be required for each task.

Use **Worksheet 4.19: Filling Workforce Needs** to begin describing the skills that are required for each new task or position.



⁴⁶ *Filling a Position in the Farm Business*, Zoller, 1997.

Gaps: How will we fill workforce gaps?

Next, think about how you will fill current and future workforce gaps. In other words, begin building your human resources strategy. You could:

- Redefine tasks for the current workforce.
- Add new labor to the workforce.
- Access additional labor through work-trade, contracting, or new business arrangements.
- Substitute capital for labor.

Will you shift responsibilities or reassign tasks among your current workforce? Will you hire family or community members to fill new jobs? Will you reorganize the business to reduce your own workload? Any one of these strategies may be appropriate for your business depending on the values and goals identified by your planning team, your financial picture, and the skills of your current workforce.

The labor strategy that you choose will depend on how much of a gap exists between your current workforce and your projected workforce needs. For instance, if most of your projected labor needs can be met through your current workforce, you may decide to hire part-time workers or custom operators to meet seasonal bottlenecks or remaining needs. On the other hand, if you anticipate major gaps between current and future labor needs, you may want to consider hiring additional permanent or temporary staff, substituting capital for labor, or reorganizing the business into a partnership so that labor (and equipment) can be shared.

If you've decided to reassign current tasks or jobs, refer to the skills assessment that you developed in Planning Task Two (Worksheet 2.7), along with each team member's personal workload goals (Worksheet 3.3) to determine who will fill projected work force needs. Be realistic! On the other hand, if you plan to add labor, consider the range of acquisition options such as contract labor, custom operators, employees, family labor, interns and volunteers. The advantages and disadvantages of some of these alternatives are described in Figure 72. Some of these strategy alternatives may have significant tax, equity and cash flow implications.⁴⁷ You will have an opportunity to evaluate workforce plans from a financial perspective later, before finalizing

Figure 72. Filling Workforce Needs⁴⁸

Contract service providers. Contract workers may be self-employed or an employee of the contract provider. Crop harvesting is one of the most common contract services provided. If you plan to contract for services, be sure to consult your tax accountant regarding tax withholding and employer liabilities.

Custom operators. Custom operators are usually the cheapest source of temporary labor. Custom operators often are well trained and supply their own equipment. They require no tax withholding or benefit packages. The primary advantage of custom operators is that they free up family labor and employees for other specialized tasks.

Employees. Hiring full- and part-time employees requires time (searching, hiring, training, managing) and raises new issues to deal with, including compensation, benefits packages, discipline and sometimes firing. They can make a business more profitable only if they are truly needed and are a good match.

Family labor. Farm operators and other “unpaid” family members account for two-thirds of the production workforce in agriculture. They offer the advantage of knowing your business well, but can also carry family conflict into the business.

Seasonal hired labor. Hired labor is typically used to fill seasonal workforce shortages when operators and family members are unable to supply the necessary labor. Hired labor is usually paid less than other workers or employees. There are many laws and regulations that govern seasonal or migrant labor.

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⁴⁷ *Labor Laws and Regulations*, Miller, 1997.

⁴⁸ *Economic and Business Principles in Farm Planning and Production*, James and Eberle, 2000.

Worksheet 4.19 Filling Workforce Needs

Use the space below to flesh out new position titles and task descriptions for each new enterprise or existing enterprise that is short on labor. Next, if adding labor, describe the type of position that will be created—full-time or part-time, temporary or permanent, seasonal or year-round—as well as the skills desired for each position. Lastly, describe your strategy for addressing workforce gaps and acquiring and training labor. Workforce strategies may include: reassigning current labor; adding new labor (family, employees, volunteers, interns); hiring out work to custom operators or consultants; or developing work trade arrangements with neighbors or relatives. You might also consider reducing some of your labor needs through the use of additional equipment and machinery or through new business arrangements.

Position/Task (title)	Type of Position (full time/part time, temporary/permanent)	Skills/Experience Desired	Acquisition Strategy
<i>Office Manager (bookkeeping, payroll, tax preparation)</i>	<i>One part-time, permanent</i>	<i>Accounting background; good with numbers; accurate</i>	<i>Fill internally with family labor: Merrisue Minar</i>
<i>Marketing Manager (communicate with customers, wholesale buyers, take orders, promote products)</i>	<i>One full-time, permanent</i>	<i>Marketing experience; personable; articulate; creative; excellent knowledge of products and grazing philosophy</i>	<i>Fill internally with family labor: Dan Minar</i>
<i>Distribution Manager (load, unload truck, deliver products)</i>	<i>One full-time, permanent</i>	<i>Driver's license; personable; physically able to haul products</i>	<i>Fill internally with family labor: Laura Ganske</i>
<i>Processing Plant Manager (oversee processing, monitor quality, fine-tune processing schedule, haul milk to plant, back-up plant staff)</i>	<i>One full-time, permanent</i>	<i>Management experience; mechanical skills; good communication skills</i>	<i>Fill internally with family labor: Mike Minar</i>
<i>Processing Plant Staff (operate equipment, test milk and products)</i>	<i>Two full-time, permanent</i>	<i>Willingness to operate equipment; mechanical skills; friendly, cleanliness</i>	<i>Fill internally with family: Reassign Dave and Florence Minar from current farm management and marketing roles</i>
<i>Computer Technician (set up computers, software programs, maintenance, staff training)</i>	<i>One part-time, permanent</i>	<i>Software and hardware training and experience</i>	<i>Fill internally with family labor: Eric Ganske</i>
<i>Farm manager (manage hay crop production, pastures, livestock production, monitor herd health, relief milker)</i>	<i>One full-time, permanent</i>	<i>Knowledge of forages, pasture rotation; field work/equipment operating experience; comfortable around animals; milking experience</i>	<i>Fill internally: Reassign current CSF partner, Paul Kajer, from milking staff position to management position</i>

CONTINUED

Figure 73.
Example from Cedar Summit Farm—Worksheet 4.19: Filling Workforce Needs (both sides)

the labor component of your whole farm business strategy.

According to their workforce strategy in Worksheet 4.17, the Minars could fill nearly all of their workforce needs through the creation of permanent jobs for several family members. Their daughter, Laura Ganske, would become the business' new distribution manager. She would coordinate and staff home deliveries and on-farm sales. Mike Minar and his wife, Merrisue, would also both join the business as permanent employees. Mike would become the processing plant manager. He would oversee production, testing, and packaging. Merrisue would work part-time as the business' office manager. She would handle bookkeeping and payroll. The Minars' youngest child, Dan Minar, also will join the business full-time as a marketing manager once he has completed his university degree. Dave, Florence, and their current partner, Paul Kajer, would be reassigned to new tasks. Dave and Florence would work full-time in the plant while Paul would take over Dave's current work as livestock manager, performing all pasture and dairy production-related management tasks. This shift would create a new gap—the need for a full-time milker—that the Minars planed to fill with external hired labor.

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Worksheet 4.19 Filling Workforce Needs

Position/Task (title)	Type of Position (full time/part time, temporary/permanent)	Skills/Experience Desired	CONTINUED Acquisition Strategy
<i>Farm staff (new milker)</i>	<i>One full-time, permanent position</i>	<i>Milking experience; comfortable around animals; reliable</i>	<i>Fill externally: hire CSF employee</i>
<i>Designer/Artist (New logo)</i>	<i>One part-time, temporary position</i>	<i>Experience with logo design; graphic art skills; creativity</i>	<i>Fill internally with family labor: Bob White</i>

1. Describe training that may be required for new positions or new members of the workforce:
All processing plant staff will need to be trained in equipment use, product safety/quality testing, and packaging procedures. Our current partner, Paul, will need to be trained in pasture management. Our other workforce members bring the necessary skills to the operation so there should not be very much training.

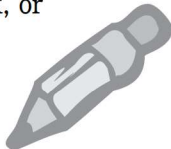
2. How will training be accomplished?
Pladot [equipment manufacturer] will provide all training on-site at our plant once it is built - they will help us learn how to operate equipment, select recipes, and package our products. They provide several weeks of initial training and additional technical support as needed. Dave [Minar] will be responsible for working with Paul Kajer on pasture management.

Ultimately, your labor strategy—your decision to hire workers, purchase equipment or reorganize the business—will depend on your financial goals and personal values. For instance, there is clearly more than one way for the Minars to staff their processing plant and to fill distribution and production positions. In addition to family labor, they could have considered hired labor and employees for processing and crop production. However, because their values and planning purpose are rooted in the idea of creating jobs and income for family members, they limited their strategy options to hiring family members and redefining family member roles as a way to fill most new jobs/tasks. As you develop a workforce strategy, revisit your values and goals for human resources. Think about your willingness to

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perform fieldwork, communicate with customers, work with livestock, or maintain financial records, among other things.

Use **Worksheet 4.19: Filling Workforce Needs** to describe your strategy for addressing workforce gaps or acquiring and training labor.





Compensation: How will we pay family and members of our workforce?

Wages and other benefits that you offer family, employees, hired labor, interns and contracted labor will vary with industry rates and standards as well as the type of work involved and, of course, your values. You and your planning team will need to consider all of these factors when developing a labor compensation package as part of your overall human resources strategy.

A good place to begin developing your benefits strategy is by looking at industry standards. Find out what salary and other benefits are typical for your business (check with your state Department of Agriculture or talk to other farmers) and adjust them according to your own values and goals. The Minars, for instance, decided to pay their son a salary that was comparable to what he earned as a production supervisor at a high-tech medical supply manufacturer. Although this salary may be well above dairy industry standards, Dave and Florence agreed to offer their son a comparable salary because of his commitment to the business, family needs, and their own vision of a “fair” wage. Of course, the Minars’ plan to pay an above-average salary must be balanced against their financial objectives for cash flow, profitability, and net equity growth—something they had to consider when evaluating their strategic plan.

In addition to a cash wage or salary, common forms of labor compensation include housing (room and board), products (milk, meat, nursery stock, cheese), automobile, insurance (health, accident), stocks or shares of the business, and retirement investments, such as a Simplified Employee Pension (SEP) Plan or 401K.⁴⁹ You may want to review business organization alternative strategies (addressed as you develop a Finance Strategy in the next section) to explore tax and other institutional requirements before settling on a labor compensation strategy. An accountant or attorney will be able to help you work out the details of human resources compensation.



Use **Worksheet 4.20: Compensation** to research and draft a compensation plan for each new position or worker. Then use this information to develop monthly and hourly labor input expense estimates for each position in **Worksheet 4.21: Human Resources Expense Estimates**. These will be used as you evaluate the profitability and cash flow of your alternative strategies.

Management and Communication: Who will manage the business and how?

Good management and communication are pivotal and often intangible qualities of a successful business. No matter how well a business strategy has been researched and evaluated, it will not help accomplish your goals unless there is an effective manager behind it—one who knows how to communicate. Therefore, spend a little time fleshing out a management and communication

⁴⁹ *Acquiring and Managing Resources for the Farm Business*, Thomas, 2001.

plan for the business.

Management. Farm business managers, like most independent small business owners, are responsible for a range of tasks that include planning, organization, decision-making and control of resources.⁵⁰ They are responsible for the long-term development and success of the business—implementing the business plan, monitoring performance, and facilitating change.

Based on your skills assessment in Planning Task Two (Worksheet 2.9), think about your ability and desire to manage the farm business—to plan, organize, make decisions and communicate with your workforce. Taking on management responsibilities yourself is only one of several strategic options. You might consider other strategic alternatives such as:

- Hiring out management.
- Partnering with someone else to share management duties.
- Transferring the management duties to someone else within the business.

Dave and Florence Minar planned to retain overall management responsibility for Cedar Summit Farm and their new business Cedar Summit Creamery. However, they planned to share specific marketing, operations, and finance-related management duties with their children and current business partner, Paul Kajer. This management strategy required constant communication and a clear understanding of the business' objectives by all members of the Minar's management team. Dave and Florence explained that they feel well prepared to manage as a team. They have been planning and visioning together with their children on a regular basis for more than ten years.

Communication. Regardless of whether you plan to manage as a team, with a partner, or on your own, effective communication will be important. As Ohio State University specialist Bernard Erven notes, “Although communication does not guarantee success of a farm business, its absence usually assures problems. A communication problem may soon become a crisis or it may linger on for years.”⁵¹ See Figure 74 for tips on how to become an effective communicator—particularly if you plan to play any role in managing the business. *Making It Work*⁵², a one-hour video on family communication and conflict resolution for business planning is an excellent communication resource.

Use **Worksheet 4.22: Management Strategy** to identify your management strategy for the business. Think hard about your willingness to perform the duties of an effective communicator. Your management strategy

Figure 74. Barriers to Effective Communication⁵³

- **Muddled Messages**—be clear when communicating ideas or details.
- **Stereotyping**—don't assume that you know how the other person feels.
- **Wrong channel**—use appropriate forms of communication (written communication for transactions, work agreements, etc. versus verbal agreements).
- **Language**—make sure that you speak the same “language,” that terminology is clear to those involved.
- **Lack of feedback**—prompt detailed feedback by checking in regularly.
- **Poor listening skills**—always be prepared to listen; tune out other thoughts. Search for the meaning in what is being said.
- **Interruptions**—try to anticipate and limit interruptions or other distractions.
- **Physical distractions**—make sure there are no physical distractions (noise, extreme temperatures) when communicating.

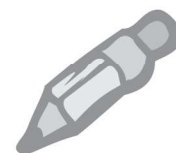
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⁵⁰ *Economic and Business Planning Principles in Farm Planning and Production*, James and Eberle, 2000.

⁵¹ *Overcoming Barriers to Communication*, Erven, 2001 (reviewed).

⁵² *Making It Work*, Passing on the Farm Center, 1999.

⁵³ *Overcoming Barriers to Communication*, Erven, 2001 (reviewed).



Business Plan Input - Human Resources Strategy Summary:

Our business strategy includes the creation of seven new jobs to market and process our milk: two full-time processing plant staff positions, one full-time plant manager position, one full-time marketing management position, one full-time delivery management/staff position, one part-time book keeping position, and one quarter-time technician staff position. Salaries and wages will be competitive with industry standards. Eventually, we plan to offer health care and vacation benefits for full-time staff.

We have children with many abilities and envision this business as a future for them and their families. We plan to fill most of our labor needs - including management positions - internally with family labor. We feel that the use of family labor is a great strength - our kids know the business well and are familiar with one another's skills and work style. Our children have participated in all of our visioning sessions and have a long-term, vested interest in seeing the processing business succeed. Of course, one disadvantage of hiring family members is that family or personal conflicts have the potential to affect the business.

Each family member will be trained in at least two positions so that we have backup for vacation or illness and injury. We will communicate daily as needed and through quarterly meetings with our Board of Advisors.

should include a short- and long-term back-up plan to arrange for management in the case of an emergency due to illness or shift in goals on the part of management team members. A written management plan can be particularly useful, and may become a final part of your business plan if you decide to manage as a team. Management teams and boards often

use written management plans to clearly

specify management responsibilities, check-in meeting dates, and a description of grievance procedures.

Figure 75.
Excerpt from
Cedar Summit
Farm's Worksheet
4.23: Human Resources
Strategy
Summary



Develop a Strategic Human Resources Plan

Briefly summarize your human resources strategy for each enterprise or the whole farm (if appropriate) using the space in **Worksheet 4.23: Human Resources Strategy Summary**. Carefully review your research, and describe workforce needs and plans for filling them. Note the strengths, weaknesses, opportunities and threats (SWOT) associated with each strategy. This also is a good time to list human resources expense estimates for each enterprise. You will use this information when you evaluate the feasibility of each strategy alternative.

Financial Strategy

Financially successful businesses are usually built around strategies that incorporate risk management, tax-efficient organization, and careful use of financing.

In this section you will build a financial strategy by looking at:

- Risk: What does our future business environment look like and how will we manage for risk?
- Organization: How will we legally organize and structure the business?
- Financing: How will we finance capital requirements?

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The Four Key Management Areas:

- Marketing
- Operations
- Human Resources

Finance