

# AG Alternatives

## Agriculture Business Alternatives

Revised April 2003

Agdex 811-4

### ***Production Requirements***

#### **Do You Have the Resources?**

*Ag-Alternatives is a series of factsheets designed to help you evaluate the feasibility of a new agricultural or rural based business. Worksheets in each factsheet help you personalize the information.*

**Y**ou have an idea for a new enterprise or product that you want to develop on your farm or acreage. Your family is encouraging, you're enthusiastic and you've explored some marketing options. Now you need more information on production related requirements. With new, unusual or nontraditional enterprises, you may find there are production requirements that you hadn't thought of. Some problems may be overcome by a sufficient input of labor, capital or ingenuity, but other problems may require resources or present challenges that are more than you want to tackle. Some potential challenges include:

- production management research and information on the new enterprise is unavailable
- the cost to extend the growing or grazing season is high
- breeding stock or seed is unavailable
- cash flow problems due to the time lag before the produce, stock or service is sold
- availability of full-time and seasonal labor
- cost of meeting environmental requirements
- cost and time to acquire services such as electricity, natural gas, telephone, water and waste disposal
- cost of liability insurance

Included in this factsheet are production-related worksheets that are designed to help you judge the feasibility of producing a product or providing a service. The worksheets help you identify potential problems and challenges related to the following requirements:

- climate
- soil
- water
- buildings and facilities
- machinery and equipment
- management and labor
- quality and production rates
- business size
- legal, regulatory and liability factors
- environmental checks

#### **Source of Production Information**

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Depending on your experience and the enterprise, product or service you're exploring, some of these worksheets may be more relevant than others. You may need to do some research to complete the worksheets. Production information for new enterprises can be obtained from Alberta Agriculture, Food and Rural Development (AAFRD).

Alberta Agriculture, Food and Rural Development's specialists have access to many resources that can help you complete the exercises in this factsheet. Even if your enterprise is nontraditional or unusual, specialists can use their extensive networks to obtain information from colleagues in other regions. They may also recommend useful resources and refer you to producers with similar enterprises.

## Production Budgets

Production or enterprise budgets describe the production requirements and costs of producing crops or livestock. Published by Alberta Agriculture, Food and Rural Development, universities and some trade organizations, current budgets are available for most traditional commodities.

Production budgets may include a list of assumed production practices, average production rates (yields), yield ranges, input costs and capital investment costs. Choose production budgets from cropping areas with a climate similar to your own. Information included with the budgets usually describes the length of growing season and other climatological factors. Check to see which variety or breed was in the production budget and make sure the yields apply to your region. The greater the variation from your situation, the less useful the production information. Remember, production budgets are estimates constructed from either producer averages or experimental results. Check the production budget with producers, AAFRD specialists and others who will recognize reasonable figures.

## Trade Organizations and Producers

Trade organizations and producers who offer the product or service you are considering can be good sources of information. To contact trade organizations or producers talk to an AAFRD specialist.

Try to arrange a farm visit with a current producer during the growing season. Producers who can show you their operation and talk in detail about production techniques and costs are invaluable. Ask the producer about production, average yields, necessary equipment and facilities. Be wary of producers who are too eager to sell you supplies, equipment or breeding stock.

## Publications

Books and magazines are comprehensive sources of information, but they can be difficult to find and the information can be out of date. An exhaustive list of books and magazine references can be generated

through a computer database search. Ask AAFRD specialists, members of trade organizations or successful producers to recommend the best titles.

## Government Offices

Federal, provincial and local agencies can provide information about regulations that apply to your new enterprise. Contact your natural resource and environmental agencies, economic development offices, municipal development offices and other relevant agencies. These offices may produce reports on an agricultural or service industry that is similar to yours. Provincial and local tourism and recreation agencies can help sort out regulations and liability issues affecting farm-based bed and breakfasts, tours and festivals.

## Worksheets for Evaluating Production Resources

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The remainder of this factsheet consists of worksheets designed to help you evaluate your production resources. If you've worked through *Agdex 811-2, Identifying Alternatives – What are the Possibilities?*, the second factsheet in this series, you'll have completed an inventory of your resources. This inventory will be useful as you evaluate production requirements.

## Climate Requirements

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Some animals require protection from the cold. It's difficult to raise free range chickens for example, in areas where pastures are inaccessible in winter. Where summers are hot, animals confined in poorly ventilated housing may suffer and produce poorly. An aquaculture operation must maintain proper water temperatures as fish differ in their temperature tolerance.

For crop production, the local climate must be evaluated. AAFRD can usually provide average dates for first and last frosts, expected winter and summer temperatures, average precipitation and other climatic data for your municipality. However, your site may differ from average figures for many reasons:

- topography
- elevation
- frost pockets
- south facing slopes

Take this into consideration in your planning.

Make sure the growing season is long enough for the crop(s) you plan to grow. A rough estimate can be made by counting the number of frost-free days between the average dates of the last frost in the spring and the first frost in autumn. Compare the length of your growing season to the days-to-harvest – the number of days required by the crop to grow to maturity – of your intended crops(s).

The days-to-harvest calculation works well for crop varieties that are well-established in an area where growers and researchers have performed years of field trials to evaluate the number of days required for maturation. Make sure the days-to-harvest data you use is compatible with your climate. You can acquire this data in seed catalogues or from an AAFRD specialist.

Consider the tolerance to temperature extremes of your proposed crop. For any perennial crops, such as large and small fruits, nursery and ornamental perennial crops, and some herbs, the tolerance to winter low temperatures can be critical. Plants sensitive to extreme winter cold are called “tender” or “not winter hardy.” Some perennials are hardy only if they are under snow cover. Protecting crops from extreme temperatures can add to your costs.

Spring low temperatures may be critical. Some early blooming fruit trees are more susceptible to late spring frosts than to very cold February temperatures. Summer high temperatures can be devastating to crops that have limited heat tolerance during certain stages of development.

For example, certain mustard, brassica and spinach varieties will bolt (premature flowering that makes the crop unmarketable) in hot weather.

Service enterprises can also be affected by climate and weather. Enterprises such as small engine repair and farm sitting may not be affected, but recreational services such as on-farm fishing are. If your proposed business brings people to the farm, customers will appreciate protection from inclement weather.

On your copy of *Worksheet 1: Climate Requirements* (page 8), compare the climatic requirements of your crop(s) with the climate of your site. Note anticipated problems, such as potential frost kill, winter kill, and heat or wind damage. If you plan to overcome these problems with irrigation, greenhouse production or season extension techniques, note the proposed solution and cost estimate on the worksheet. If your enterprise involves livestock or is service-oriented, note any requirements due to climatic factors.

## Soil Requirements

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Enter the key soil needs of any cash crop, pasture, or forage you are considering on *Worksheet 2: Soil Requirements* (page 9). Include pH, electrical conductivity, moisture or drainage requirements, and fertility requirements on the worksheet.

Consider special requirements you may have such as:

- topographic requirements for a business such as turf grass sod which requires level ground
- crop types and varieties which may be sensitive to certain pesticides
- the need for a crop rotation program to reduce disease and insect problems
- the desire to receive organic certification for crops grown on your land

Compare the needs of the crop with the soil characteristics and make a note of potential problems. In some cases poor conditions such as low pH or wet soil may be just right for an alternative crop. For example, blueberries require a low pH and some herbs grow well in soil with low fertility.

Consider how your soil supports non-crop businesses, on-farm processing and service enterprises. Can it support structures such as ponds, barns, roadside stands, septic systems and parking lots? Consider topographic features, such as steep slopes, as they make cross country skiing or hay rides dangerous or unpleasant. Note the problems on your copy of *Worksheet 2: Soil Requirements*. List possible solutions and estimate the costs.

## Water Requirements

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The quality of water is becoming a critical area of concern. New water legislation was announced in January 1999. Be sure you are aware of how it affects you.

Livestock, including waterfowl, need plenty of high quality water.

Some crops require irrigation. The available water volume and pumping rate, distance from the field, availability of water licenses and permits, and water quality all affect the cost and feasibility of irrigation systems. You should test the water you plan to use for irrigation, particularly for greenhouse operations. Microbial contamination of your water source from a livestock operation is a concern.

Processing facilities and service enterprises need water for production, cleanup and waste disposal. Treatment of waste water may be required. The water used by the general public at a service enterprise must comply with health codes.

List your water use requirements on your copy of *Worksheet 3: Water Requirements* (page 10). Describe the location such as buildings or in a field, for each use. Evaluate your current water supply and list any limitations in distributing the water required. Consider the total volume available and the rate at which it can be supplied. For irrigation, the rate must be great enough to meet the water requirements of the crop during the hottest, driest part of the growing season. Come up with solutions for each limitation and estimate the cost.

## Building and Facility Requirements

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Your new enterprise may require facilities for storage, housing, processing and handling, and retail selling. Livestock businesses also need to plan for manure management. U-pick operations must consider access to transportation corridors and the weight restrictions on the roads used. List all the facilities required by the new enterprise in the first section of *Worksheet 4: Building and Facility Requirements* (page 11).

If you can't meet all the needs of the new enterprise with existing buildings, you should consider renovations. Decide which building can be renovated and the changes needed. Get estimates from contractors if you aren't an experienced builder or carpenter. Enter your renovation information in the second section of the worksheet.

If you must construct a new building, describe its size and necessary features, and obtain professional cost estimates. Enter the information in the third section of the worksheet.

## Machinery and Equipment Requirements

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What are the machinery and equipment requirements of the new enterprise? Can you use or adapt equipment you already own? Must you purchase, lease, or rent additional equipment? Does the necessary equipment exist or will you have to invent something to perform a certain task? Fill out your copy of *Worksheet 5: Machinery and Equipment Requirements* (page 12).

## Management and Labor Requirements

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Available time is often the most limiting factor in starting a new enterprise. Learn as much as you can about the labor and management requirements of your new business before you complete *Worksheet 6: Management and Labor Requirements* (page 13).

## Additional Production Requirements

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Consider the other resources your business needs that haven't yet been mentioned. If your product or service is unusual, it may be a challenge to get basic production inputs such as breeding stock, seed or nursery stock, veterinary care or feed.

This is a good time to review your supply or access to utilities such as electricity and natural gas.

List these critical resources on *Worksheet 7: Additional Production Requirements* (page 14).

## Quality and Production Rate

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Many factors can affect the quality and production rate of your product or service. Consider these factors as you estimate the quality and production rate you expect to achieve. Use the information to complete *Worksheet 8: Quality and Production Rate* (page 15).

### Quality

Compare your quality goals with the quality of products or services available from competitors. Producing a consistent, high quality product is an important factor in success. Low quality is never acceptable. If your product doesn't meet buyers needs they will shop elsewhere. For service enterprises, balance the benefits and features you expect to provide with the needs of your target market.

### Example:

Your market research shows the target market for your landscaping business is homeowners with annual household incomes of over \$80,000. You decide to offer more complex designs and installations. If the target market were small businesses on a commercial strip you may decide to offer basic, lower cost, low maintenance landscaping designs.

Some enterprises have their quality defined by the standards and grades of the buyers. Pharmaceutical companies often buy herbs according to their level of specific volatile oils or a certain particle size of powdered herb products.

## Production Rate

For meat animals, find out the average slaughter and carcass weights, and the rate of conversion of feed to body weight. For laying hens, honey bees, milk goats and other non meat animal enterprises, find out the average production rate per animal or animal unit.

For crops, estimate yields on a per acre basis, or on whatever basis applies to the enterprise.

For a service enterprise, the production rate may be measured by the number of clients that can be served per hour, per weekend, or per year. For processing enterprises, try to estimate the average production rate per hour of labor or machine use.

### Example:

A strawberry jam operator plans to crush 45 kg of strawberries/hour and fill six strawberry jam jars per minute in their business.

To calculate your production rate refer to publications and production budgets or ask AAFRD specialists for advice. The goal is to set a range of production rates for your new enterprise. Remember to check the sample size of businesses interviewed for production budgets. A small number of businesses may mean the data doesn't suit your new enterprise.

Enter your results on *Worksheet 8: Quality and Production Rate* (page 15). Set realistic goals for your enterprise.

## Business Size

It's best when your production rate matches the expected sales volume calculated through market research. To find the ideal size of your enterprise, take the expected sales volume and divide it by the production rate calculated in worksheet 8. Enter your expected sales volume and average production rate in *Worksheet 9: Business Size* (page 16). Depending upon your type of enterprise, the size may be defined in terms of acres, rooms in an inn, stalls in a barn, etc. Once you know the maximum size of your new enterprise, check if the level of resources available is adequate. Review your figures for the optimum level of resources you could devote to the new enterprise. If

these resources don't achieve the target sales volume, look to see if you can shift resources from your current enterprise to the new enterprise. If not, consider renting or purchasing land or equipment. The profitability analysis and the cash flow analysis helps you decide if such decisions are profitable and affordable.

### Example:

Jill figured she could sell up to 800 bunches of flowers per week for 10 weeks. From her research, Jill thought she could probably produce 160 bunches of mixed flowers per acre per week. Using the business size calculation, Jill realized she would need five acres of tillable land to produce her maximum sales volume.

800 bunches per week = 160 bunches/acre/week  
Maximum business size = 5 acres

## Legal, Regulatory and Liability Factors

Most enterprises have some legal restrictions on the federal, provincial or municipal levels. For example, there are many restrictions regarding owning and raising native wild species such as game birds or foxes. Other laws regulate the importation or exportation of exotic or non-native species. These include milking sheep from Europe, fallow and red deer, and certain breeds of working dogs. There is often a quarantine period for imported livestock.

If you plan to raise chickens or turkeys, or produce fluid milk in Alberta, you need to understand the marketing legislation. Each commodity sets limits on how much you can produce before you need to purchase quota. Quota is a license issued by a commodity association which gives you the right to produce a certain amount of product.

If you plan to sell red meat, fish, organic food, dairy products or processed foods directly to consumers, they must be inspected to ensure they are safe. All levels of government, from local to provincial to federal, are involved in the inspection of foods.

Certain sectors have developed marketing acts to guide producers. Before you decide to grow potatoes or organic carrots you need to understand the guidelines each producer must operate under.

Consumers want to be informed about the products they are buying. Grading and labeling standards inform consumers about the quality, nutritional content, safety and the ingredients in the product. Detailed regulations have been developed for grading and labeling.

If your primary enterprise is an agricultural operation, agricultural labour laws will probably apply. Regulations are changing and increasing in number, so become familiar with laws regarding minimum wages, special taxes, employee use of toxic substances and other subjects as applicable. Labor regulations exist mainly at federal and provincial levels.

Liability means responsibility. You are responsible for keeping other people safe, delivering what you promise and many other legal “duties”. Because farming is considered one of the most dangerous occupations, the safety issue is of particular concern. Farmers must reduce hazards by creating safe environments and protect themselves from the high costs of lawsuits by purchasing appropriate insurance. Consult a lawyer and your insurance company with questions before you start a new enterprise.

Producers of raw and processed farm products may benefit from a kind of financial protection called product liability insurance. For example, if you carry product liability insurance and are sued for marketing herbal lip salve that allegedly caused an allergic reaction, insurance would help pay the costs of a lawsuit or settlement. Some buyers request or require the farmer to have product liability insurance.

*Worksheet 10: Legal, Regulatory and Liability Factors* (page 17), identifies the legal, regulatory or liability factors that could affect your new business. Note the costs of required permits, licenses or additional insurance coverage. If special equipment or construction is required to comply with regulations, estimate the costs. *Farm Direct Sales: Know the Regulations* (Agdex 845-7) is a comprehensive factsheet outlining rules and regulations.

## Environmental Checks

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The evaluation of the environmental factors relating to a new venture is sound management and due diligence. Bankers, insurance agents and government agencies often require that environmental risks be identified and considered in business planning. If remedial actions or processes are needed, costs can then be included in production figures. There are three basic environmental areas to consider. They are a pre-acquisition site assessment, impact assessment and an operation audit.

### Pre-acquisition Site Assessment

This is used to check a site for any environmental liability or necessary clean up of environmental hazards before you purchase a property. You want to know if

there are any buried fuel tanks, oil dump sites or salt spills on or near the property. If you are growing plants, a site assessment should include a check for herbicide residue. Is there a particular soil condition that affects the suitability of the site? Rocks and root crops don't mix, organic soils mean late springs, heavy clays and solonetz limit irrigation. Are there neighbouring activities that could impact your venture such as odours, dust, views, noise, insects and disease? Site assessments range from a visual inspection for apparent hazards to a detailed sampling and testing for critical hazards.

### Environmental Impact Assessment

This is used to identify and estimate the effects the new venture will have on soil, water air or the public, both on and off-site. Waste such as water, solids, dust, odor and noise could have an impact. How will these wastes be treated? Are the off-site impacts serious in terms of degree or amount? Are they long term or reversible? Are the effects a public concern? Are modifications and integration possible, and at what cost? Will the site require a clean up if the business is terminated and the property sold? Keep in mind that not all environmental impacts are negative.

### Environmental Audit

An environmental audit is a process to evaluate how well a business is adhering to all environmental regulations and to your own environmental policy practices. For example, oil goes for recycling, not down the drain. An audit points out areas of an operation that could be at risk, and outlines modifications or improvements. An environmental audit is usually confidential and is best done by an outside party. It can be used to show due diligence in case of environmental accidents. It provides supporting evidence for lending institutions. If an environmental audit identifies an environmental hazard or environmentally hazardous practice, you, as management, must act to remedy the situation. If you don't, you aren't practicing due diligence.

Environmental evaluations are important to the long term sustainability of a business. Agriculture ventures, whether production or processing, have close association with the environment and with people. Because of the growing awareness, concern and importance of the environment to society, environmental assessment is now essential early on in your business development. More information on environmental checks can be obtained from an AAFRD specialist, or by checking the Alberta Environmental website at <http://www.gov.ab.ca/env/>

## Evaluation

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Review your set of completed worksheets and note major production obstacles and the costs to overcome them. Ask yourself the following questions:

- Can I implement the changes I plan to make?
- Will the costs to implement the changes create profits?
- Do my changes affect other areas of the business?
- Can I afford to make the changes?

### Green Light – Go

If there are no major obstacles to production, and all the resources required for the new enterprise are available, you are fortunate.

### Yellow Light – Caution

If you have identified some production problems, decide if operating costs or capital purchases need to increase. Operating costs are recurring expenses that are a regular part of the production cycle. Capital purchases are relatively major purchases or improvements made once or infrequently. Increased operating costs can put you at a competitive disadvantage and capital purchases expose you to greater financial risk. Consider both carefully.

Examples of problems that may be solved through capital purchase include:

- renovating of a barn to permit adequate ventilation for livestock
- construction of parking lot and picnic shelter for pick-your-own/farm tour operations
- installation of drainage tile on wet soils
- purchase of an irrigation system to protect strawberry blossoms from spring frost
- purchase of special harvesting or planting equipment
- construction of ramps to permit access by the handicapped

### Red Light – Stop

If problems such as climate, soil conditions, legal requirements, or other factors beyond your control exist, it may be impossible to produce the product or service.

## Summary

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In this factsheet you gained an understanding of production practice, required resources and production constraints.

Legal, liability and environmental considerations of a new enterprise are an important part of your evaluation.

If your available resources can't adequately support the enterprise, development may not be feasible. However, many production problems can be overcome by the infusion of labor, capital or ingenuity.

### Reference

The Ag-Alternatives factsheets have been adapted with permission from: *Farming Alternatives – A Guide to Evaluating the Feasibility of new Farm-Based Enterprises* (NRAES-32, October 1988, ISBN 0-935817-14-X). This publication was a project of the Farming Alternatives Program, Cornell University, Warren Hall, Ithaca, NY 14853 (607) 255-9832; and Natural Resource, Agriculture and Engineering Service (NRAES), Cornell University, 152 Riley-Robb Hall, Ithaca, New York (607) 255-7654.

### For More Information

#### Ag-Alternatives Series:

*Personal and Family Considerations: Where do You Want to Be?* (Agdex 1834-10)

*Identifying Alternatives: What are the Possibilities?* (Agdex 811-2)

*Marketing: Will it Sell?* (Agdex 848-5)

*Production Requirements: Do You Have the Resources?* (Agdex 811-4)

*Financial Feasibility: Can You Afford to Do It?* (Agdex 811-3)

*Profitability: Will it Make Money?* (Agdex 811-6)

*Decision Making: Will You Start a New Enterprise?* (Agdex 811-5)

For these factsheets and other publications, call Alberta Agriculture, Food and Rural Development's Publications Office at 1-800-292-5697.

#### Websites:

Alberta Agriculture, Food and Rural Development's website at <http://www.agric.gov.ab.ca>

Diversification information at <http://www.agric.gov.ab.ca/diversify>

#### Phone:

To access specialists, information and services within Alberta Agriculture, Food and Rural Development, contact the Alberta Ag-Info Centre at 1-866-882-7677.

# Worksheet 1: Climate Requirements

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## Required by your new enterprise

Days to harvest (if applicable): \_\_\_\_\_

Lowest temperatures tolerated: \_\_\_\_\_

Highest temperatures tolerated: \_\_\_\_\_

Average annual precipitation: \_\_\_\_\_

Other requirements: \_\_\_\_\_  
\_\_\_\_\_

List any anticipated climate problems:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## Provided by your site

Avg. date of last spring frost: \_\_\_\_\_

Avg. date of first fall frost: \_\_\_\_\_

Days in growing season: \_\_\_\_\_

Expected winter temp.: \_\_\_\_\_

Expected summer high temp.: \_\_\_\_\_

Average annual precipitation: \_\_\_\_\_

## Worksheet 2: Soil Requirements

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Soil Requirements  
of New Enterprise

Soil Characteristics  
of Your Land

pH: \_\_\_\_\_

\_\_\_\_\_

Electrical conductivity: \_\_\_\_\_

\_\_\_\_\_

Moisture/drainage: \_\_\_\_\_

\_\_\_\_\_

Fertility: \_\_\_\_\_

\_\_\_\_\_

Texture: \_\_\_\_\_

\_\_\_\_\_

Topography: \_\_\_\_\_

\_\_\_\_\_

Other: \_\_\_\_\_

\_\_\_\_\_

Organic matter: \_\_\_\_\_

\_\_\_\_\_

Acreage: \_\_\_\_\_

\_\_\_\_\_

List any anticipated soil problems: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

List any possible solutions and estimated costs: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

# Worksheet 3: Water Requirements

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Requirements of new enterprise

Purpose	Quality	Flow Rate	Volume	Location

List any limitations of the existing water supply and distribution systems in regard to the requirements of the proposed enterprise:

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List any possible solutions and estimated costs:

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## Worksheet 4: Building and Facility Requirements

### Facilities required by the new enterprise

Purpose	Square Feet	Required Features	Access to Utilities	Location

### Required renovations to existing buildings

Purpose	Modification Required	Estimated Cost

Total cost of renovations: \_\_\_\_\_

### New construction required

Purpose	Square Feet	Construction Features	Estimated Cost

Total cost of construction: \_\_\_\_\_

## Worksheet 5: Machinery and Equipment Requirements

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Machinery and equipment required for the new enterprise

Check One

Machinery Equipment	Size Capacity	Already Own	Must Purchase	Must Lease/Rent	Estimated Cost

Total Cost:

# Worksheet 6: Management and Labor Requirements

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## Management Requirements

Average number of hours per week: \_\_\_\_\_

Seasonal pattern: \_\_\_\_\_

Level of skill and knowledge required: \_\_\_\_\_

\_\_\_\_\_

(ie. labor skills and management skills)

## Labor Requirements

Average # hours per week required in each month:

January	_____	May	_____	September	_____
February	_____	June	_____	October	_____
March	_____	July	_____	November	_____
April	_____	August	_____	December	_____

List any anticipated problems (labor crunches, slack periods, time or skills not available, availability):

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

How would you overcome these problems? If additional labor has to be hired, determine the amount required and estimate the cost:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# Worksheet 7: Additional Production Requirements

Requirement	Suppliers/Sources	Estimated Cost

## Worksheet 8: Quality and Production Rate

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### Quality

What is the level of quality or range of quality you expect to achieve with your production resources? How would your quality compare with your competitor's quality? What is the quality needed by the buyers?

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### Production Rate

What is the average rate of production (bushels per acre, gallons per minute, people per day, etc.)

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What rate of production do you think you can achieve?

Minimum: \_\_\_\_\_

Maximum: \_\_\_\_\_

Most likely: \_\_\_\_\_

If your most likely rate of production is different from the average of other producers, explain why:

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## Worksheet 9: Business Size

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Enter your expected sales volume:\*

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Enter your average production rate, determined in Worksheet 8:

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(put your own data, and enter the result below:)

$$\frac{\text{Expected Sales Volume}}{\text{Average Production Rate}} = \text{Maximum Business Size}$$

### Your Maximum Business Size

What resources, if any, are limited in availability and may cause a reduction in the maximum business size? What is your most likely business size?

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Insert your most likely business size into the equation above and calculate a new value for expected sales volume. Account for any changes in the average production rate caused by changes in business size.

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Revised sales volume:

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\* If you've worked through *Ag Alternatives – Marketing: Will it sell?* (Agdex 848-5), use the expected sales volume you estimated in worksheet 8. Otherwise, estimate an expected sales volume now.

# Worksheet 10: Legal, Regulatory, and Liability Factors

Factor	Added Cost
Federal laws, regulations, permits:	
_____	_____
_____	_____
_____	_____
_____	_____
Provincial laws, regulations, permits:	
_____	_____
_____	_____
_____	_____
_____	_____
Municipal laws, regulations, permits:	
_____	_____
_____	_____
_____	_____
_____	_____
Liability factors:	
_____	_____
_____	_____
_____	_____
_____	_____

What sources of information did you use in completing this worksheet? (List agency names and addresses, persons spoken to, dates of conversations, or other relevant information.)

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\_\_\_\_\_