AGRI-FACTS
Practical Information for Alberta's Agriculture Industry

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Setting Up a Mixed Fruit and Vegetable Operation

Is a farm-direct mixed fruit and vegetable operation in Alberta right for you?

For someone interested in getting into farming in Alberta, several questions come up very quickly:

- What type of farming do you want to get into?
- What type of product do you want to grow?
- What are the resources you will need?

In some Alberta farm sectors, barriers to entry for new participants can be substantial. You may need a lot of land, expensive equipment, production quota or specialized technology.

> *New entrants may want to start with a farm-direct mixed fruit and vegetable operation*

Getting into mixed fruit and vegetables

One of the most accessible farm sectors in Alberta for new entrants is farm-direct mixed fruit and vegetable operations. This type of operation can be put together with a relatively limited land base and a reasonable portfolio of equipment. That is why many people who are new to the industry choose this sector to begin their farming enterprise.

Having said that, there are many variables that go into the success – or failure – of a farm-direct mixed fruit and vegetable operation. These factors include production, pricing, marketing, transportation, labour, regulations, insurance and more.

The purpose of this factsheet is to provide an overview of the economics, market factors and business processes behind a farm-direct mixed fruit and vegetable operation in Alberta. Armed with this information, you can decide if this type of enterprise is right for you.

What are the opportunities?

Direct market sales have been steadily increasing in the fruit and vegetable sectors for the past several years, with many new operations and expansions across the province. One of the most popular channels of distribution is the farmers' market.

The fresh vegetable sector consists of a diverse range of crops, with operations ranging from very small (under 1 acre) to larger operations (over 50 acres). The value of the industry is difficult to capture; however it is estimated to contribute millions of dollars to the economy each year.

Alberta's fruit industry is estimated to be worth about $5 million annually, but growth in this sector has been increasing, with new crops and reasonably strong demand for product.

The vast majority of fruit produced in Alberta is marketed directly to consumers. The market for strawberries is perhaps the strongest, with roughly 300 acres in Alberta and even more acres needed to meet a very strong demand for this fruit.

Raspberry acres in Alberta are about 200 to 250 acres. Although they bring good returns, raspberries can be slightly more challenging to market outside of farmers' markets.

Saskatoon berries are a large and well established industry, with about 1,650 acres in Alberta. This crop is marketed in a number of ways, but sales are fairly stable, with new market opportunities opening up.

Economic feasibility of this type of operation

Making money in the farm-direct fruit and vegetable sector depends on many factors including crop prices, what you pay for inputs and expenses, transportation and more.

The size of your operation will depend on what your expectations are, how you plan to market your crops and what is economically feasible for your enterprise. Starting small is fine, but the expected revenue that comes from a small-scale operation may be limited.

As you scale up, you will add more costs, but as you spread these costs over more acres, the result will likely be higher profits.

Consider the following advantages and disadvantages when deciding on a mixed operation over a vegetable-only or fruit-only operation:

Advantages of a mixed operation:

- multiple crops allow you to spread out risk
- many crop types provide a diverse offering for your customers and may attract a wider audience
- the selling season can be extended
- different harvest times can result in more manageable labour needs
- workers can be employed for longer stretches of time
- bundling different products can help increase sales
- equipment costs can be spread over more enterprises
- you may be able to change your product offering year-to-year, resulting in a more flexible business

Disadvantages of a mixed operation:

- more crops to juggle throughout the season
- different agronomic requirements can make it challenging to manage pests, fertilizer, etc.
- understanding production and marketing requirements for multiple crops can add to the complexity of your business
- multiple crops may require a wider variety of equipment
- you may need a larger land base to allow you to rotate crops properly or produce enough crop to meet the demand

What is best for *your* operation will be an individual decision. While Alberta data shows that healthy profits in the farm-direct mixed fruit and vegetable sector *are* possible, pricing and costs can also be such that you can put in a lot of effort without adequate returns.

The Farm Summary table below illustrates revenue and expenses for a mixed fruit and vegetable farm direct marketing operation. This information is an example only, and the data does not represent all situations. It is important that you use your own numbers when determining your Cost of Production.

Total Farm Summary - example only
Fruit and Vegetable Farm Direct Marketing Analysis (Alberta Agriculture)

Revenue	Vegetables	Fruits	Total
Revenue	$76,616.19	$7,779.23	$84,395.42
Total Revenue	$76,616.19	$7,779.23	$84,395.42

Variable Expenses	Vegetables	Fruits	Total
Production Expenses			
Seed	$2,291.51	$704.00	$2,995.51
Chemical	$13.17	$0.00	$13.17
Fertilizer	$402.65	$36.49	$439.14
Packaging	$790.43	$292.64	$1,083.07
Custom Work	$119.92	$0.00	$119.92
Irrigation	$315.16	$74.19	$389.35
Other	$2,471.96	$168.99	$2,640.95
Total Production Expenses	$6,404.80	$1,276.31	$7,681.11

Total Farm Summary (continued)

Variable Expenses	Vegetables	Fruits	Total
Operating Expenses			
Trucking	$872.40	$31.04	$903.44
R&M Buildings	$475.14	$48.81	$523.95
R&M Machinery	$1,200.01	$241.49	$1,441.50
Fuel, Oil, & Lube	$1,311.89	$137.72	$1,449.61
Advertising	$529.20	$50.35	$579.55
Travel	$223.13	$60.14	$283.27
Farmers Market Booth Fees	$6,489.03	$23.44	$6,512.47
Total Operating Expenses	$11,100.80	$592.99	$11,693.79
Labour Expenses			
Paid Labour	$16,689.82	$3,791.49	$20,481.31
UnPaid Labour	$10,659.41	$2,190.29	$12,849.70
Total Labour Expenses	$27,349.23	$5,981.78	$33,331.01
Total Variable Expenses	$44,854.83	$7,851.08	$52,705.91
Contribution Margin	$31,761.36	$71.85	$31,689.51

Fixed Expenses	Vegetables	Fruits	Total
Operating Interest	$1,756.70	$205.32	$1,962.02
Depreciation - Buildings	$4,138.96	$90.93	$4,229.89
Depreciation - Machinery	$3,022.03	$112.81	$3,134.84
Small Tools	$1,212.45	$209.74	$1,422.19
Land Taxes	$245.67	$64.31	$309.98
Insurance	$1,272.40	$127.00	$1,399.40
Office Supplies	$568.44	$97.59	$666.03
Utilities - Heating	$658.66	$78.35	$737.01
Utilities - Power	$666.23	$40.52	$706.75
Utilities - Phone	$599.92	$70.24	$670.16
Professional Fees	$506.77	$84.28	$591.05
Total Fixed Expenses	$14,648.23	$1,181.09	$15,829.32
Gross Margin	$40,664.07	$1,913.12	$42,577.19

Planning for success: what will I need to start?

Creating a successful farm-direct mixed fruit and vegetable operation will require research and planning to anticipate the many factors that could affect your enterprise. These factors include your personal resources, site selection, crop and variety selection, access to water, pest management, your potential market and your management capabilities.

This overview explains these key considerations, with links to more detailed information.

Resources

Reviewing your resources – such as land, equipment, labour and capital – is a great place to start when deciding on the right enterprise for you. The Alberta Agriculture and Forestry factsheet, Assess Your Resources: Examining Production Requirements, Agdex 811-11, can help you evaluate the different resources you may need when setting up a farm enterprise.

Site selection

Determining the best site for your operation requires assessing your production needs and how close you are to your potential markets. Some examples of production requirements are soil type, the micro-climate (frost-free days, sun exposure, moisture), access to irrigation and more. Market requirements include your location's proximity to urban centers (customers), proximity to transportation corridors for distribution and ease of access to your location if customers are coming to your farm.

Crop and variety selection

Deciding which crop(s) to grow will be based on market research and your production capabilities. Crops and varieties can be selected based on your previous experience, recommendations from seed companies or other producers as well as variety trials research. Annual and perennial crops will have different requirements for rotations, maintenance and management decisions.

Access to quality water

Every fruit and vegetable operation needs access to a consistent supply of quality water. Water is used in production, but also for washing and preparing the produce for sale. Even with an ideal farm location, inconsistent water throughout the growing season can jeopardize the consistency of yields and the quality of your product. Access to irrigation is likely required for a successful horticulture operation.

Pest management

One of the biggest challenges of running any fruit and vegetable operation is the management of diseases, insect pests and weeds – both before you plant and as the crop grows. Successful management of these challenges will be key. A guide to pesticides and pest management can be found on the Agriculture and Agri-Food Canada website – search for the title "Pesticides and Pest Management."

Market channels

Knowing who will buy your product is another important consideration of the planning process. There are several ways to sell your products directly to the consumer, including farmers' markets, u-picks, community shared agriculture (CSA) and more. See the section *Closing the loop: final steps in business planning* for more information on this important topic, or visit the Alberta Agriculture Explore Local website for ideas.

Management skills

Business owners and operators in the mixed fruit and vegetable sector need a certain set of skills to be successful. Whether you manage the operation yourself or hire someone else to do it for you, here are some management requirements that will set you up for success:

- time to monitor crop performance daily
- ability to juggle several activities at once
- comfort with working intensely busy periods
- skills to train and manage labour
- aptitude for sales and customer service
- financial awareness to oversee business and production operations
- understanding of markets to determine best ways to meet consumer demand

Economic planning and forecasting for your operation

Now that you have a broad picture of the mixed fruit and vegetable industry in Alberta, it is time to crunch some numbers. Here are three important areas to review:

- cost of production
- price setting
- estimating sales

Cost of production (COP)

Costs are incurred by a business when producing a product and include a variety of expenses such as labour, raw materials, input costs, general overhead and more. Knowing your exact COP is perhaps the single most important factor that will influence your business's profitability. When you understand your COP in detail, you can make more informed decisions.

It is critical that your COP calculations include *all* the costs to produce your product. The more detail you provide, the better. If you are missing certain costs in your calculations, it can directly affect your management decisions because you are not basing these decisions on the full picture.

Some commonly overlooked costs you will want to include in COP:

- depreciation or wear and tear on assets
- fuel to drive to a farmers' market to sell your product
- tire and vehicle wear to drive to the market
- vehicle insurance
- meals when working the market
- home office expenses
- owners' salaries (or a value for time they have committed to the business)
- spoilage losses or costs for storage as a safeguard against spoilage

The link to the "Example of Mixed Farm Cost of Production" at the end of this factsheet goes to a spreadsheet that provides a detailed example of the cost of production for a mixed fruit and vegetable operation. There is also a link to a fillable spreadsheet, called "Fruit and Vegetable Analysis Tool," that you can download and save for your own use.

Price setting

Setting a price for your products can be one of the most challenging parts of running a horticulture business. The price should be low enough to be of value to your customers, but high enough for you to earn a profit.

If you set the price lower than what consumers are willing to pay, you could be leaving valuable revenue on the table. If the price is too high, you may struggle to sell your product.

Setting a price that works for you can require some research. The good news is you have a lot of flexibility in how you set your price, and your price can accommodate the factors that that are most important to your business.

The Alberta Agriculture factsheet, The Essentials of Pricing, Agdex 845-1, reviews the different ways to determine your price. The factsheet, Pricing Horticulture Products, Agdex 845-4, explores issues to consider when pricing your fresh fruit and vegetable products and includes several horticulture product scenarios.

For market prices on a variety of fruit and vegetable crops, refer to the Alberta Agriculture survey of prices based on actual farms in Alberta: go to the website agriculture.alberta.ca and search the title “Alberta Direct Market Average Fruit and Vegetable Prices”. Use these prices as a guide only – consider your own specific costs of production, as well as your target customers and market channels, when setting your product prices.

Estimating sales

Sales projections are an important part of planning for any business. Financial forecasts will help you determine the income your business will produce and will also help you develop operational and staffing plans to enable your business’s success.

Sales projections should be completed when you are setting up your business but also before each selling season. Answer the following questions to help identify your sales volume:

- What minimum volume of product (number of units) could you sell in a poor year?
- What production and market conditions would create this situation?
- What maximum volume of product (number of units) could you sell in a good year?
- What production and market conditions would create this situation?
- What is the expected sales volume you are most likely to sell in an average future year?

Closing the loop: final steps in business planning

Now that you may have decided to proceed with a mixed fruit and vegetable operation in Alberta, here are your next steps:

- choosing your market channel/s
- getting to know your target audience
- tracking your progress

You may need to conduct informal or formal research to understand your target audiences and the best channels to reach them, as outlined in the factsheet Identify Your Market: Right Buyer, Right Price, Agdex 811-10.

Market channels

A market channel is the place where, or through which, you will sell or distribute your product. Here are some market-direct options for fruit and vegetable products in Alberta:

- selling at a local farmers’ market
- harvesting and selling through a u-pick business
- selling weekly produce boxes or shares through a community shared/supported agriculture (CSA) operation
- selling at special events, such as fairs and festivals
- operating a roadside farm stand or retail shop
- selling directly to a restaurant or institution
- joining or forming a marketing co-operative
- selling through an online website or catalogue

Target audiences

Your target audience is the people or businesses you wish to attract. Research can help you identify specific audiences by demographics (age, income), lifestyle patterns (interests, beliefs, hobbies) and buyer expectations (quality, price).

Tracking your progress

Tracking your costs and evaluating the effectiveness of your production processes and marketing efforts are not things that are only done once. Establishing tracking methods to capture calculations related to your business income and expenses is a critical part of your business planning.

Maintaining accurate and up-to-date financial documents – and reviewing them regularly – will give you the information you need to make sound decisions about the future of your business.

Other Resources

Farm Direct Marketing for Rural Producers - http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/agdex3482

Commercial Vegetable Production on the Prairies - http://www1.agric.gov.ab.ca/$Department/deptdocs.nsf/all/agdex15123/$FILE/250_13-1_web.pdf

Beginning Berry Production - http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/agdex4506

Fresh Vegetable Market Gardening Industry - http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/agdex1152

Example of Mixed Farm Cost of Production – PDF file

Fruit and Vegetable Analysis Tool (downloadable and fillable PDF form) - https://cfr.forms.gov.ab.ca/Form/LDME11619.pdf

Prepared by

Alberta Agriculture and Forestry

More information

Alberta Ag-Info Centre
Call toll free: 310-FARM (3276)

Website: agriculture.alberta.ca

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Fruit and Vegetable Analysis Tool

Fruit and Vegetable Farm Direct Marketing Analysis (Alberta Agriculture)

			Vegetables									Fruits		
			Beans	Cabbage	Carrots	Cucumbers	Lettuce	Onions	Peas	Potato	Total	Strawberries	Total	Total Farm P/L
Acreage (1/10ths)			0.2	0.5	0.5	0.5	0.1	0.2	0.2	1.5	3.7	1	1	
%Acreageby Crop		% Crop Acreage	5%	14%	14%	14%	3%	5%	5%	41%		100%		
Total Revenue	Units	$/Acre Revenue	$ 8,063.39	$ 5,507.85	$ 21,378.98	$ 6,153.13	$ 16,800.22	$ 3,212.27	$ 5,952.46	$ 9,547.89		7779.23		
	Total		$ 8,063.39	$ 5,507.85	$ 21,378.98	$ 6,153.13	$ 16,800.22	$ 3,212.27	$ 5,952.46	$ 9,547.89	$ 76,616.19	$ 7,779.23	$ 7,779.23	$ 84,395.42
Variable Expenses														
Production Expenses	Seed		293.09	112.43	44.53	144.53	624.62	129.79	248.16	694.36	$ 2,291.51	704.00	$ 704.00	
	Chemical		0.00	11.76	1.41	0.00	0.00	0.00	0.00	0.00	$ 13.17	0.00	$ -	
	Fertilizer		30.07	123.29	3.45	88.06	64.84	15.19	21.97	55.78	$ 402.65	36.49	$ 36.49	
	Packaging		131.68	0.00	127.19	120.80	115.09	19.07	171.68	104.92	$ 790.43	292.64	$ 292.64	
	Custom Work		11.76	0.00	1.28	0.00	58.45	0.00	29.95	18.48	$ 119.92	0.00	$ -	
	Irrigation		55.64	9.20	4.30	20.70	75.88	18.34	36.03	95.07	$ 315.16	74.19	$ 74.19	
	Land Rental		214.31	268.02	24.58	256.88	0.00	358.39	441.32	908.46	$ 2,471.96	168.99	$ 168.99	
	Production Expenses		$ 736.55	$ 524.70	$ 206.74	$ 630.97	$ 938.88	$ 540.78	$ 949.11	$ 1,877.07	$ 6,404.80	$ 1,276.31	$ 1,276.31	$ 7,681.11
	Production Margin		$ 7,326.84	$ 4,983.15	$ 21,172.24	$ 5,522.16	$ 15,861.34	$ 2,671.49	$ 5,003.35	$ 7,670.82	$ 70,211.39	$ 6,502.92	$ 6,502.92	$ 76,714.31
Operating Expenses														
	Trucking		$ 147.72	$ 33.66	$ 11.51	$ 64.03	$ 190.69	$ 60.28	$ 99.56	$ 264.95	$ 872.40	$ 31.04	$ 31.04	
	R&M Buildings		$ 39.96	$ 28.21	$ 100.87	$ 40.82	$ 56.37	$ 38.63	$ 50.00	$ 120.28	$ 475.14	$ 48.81	$ 48.81	
	R&M Machinery		$ 160.19	$ 46.98	$ 126.23	$ 68.42	$ 280.42	$ 71.45	$ 162.82	$ 283.50	$ 1,200.01	$ 241.49	$ 241.49	
	Fuel, Oil, & Lube		$ 107.45	$ 79.12	$ 324.27	$ 110.26	$ 139.02	$ 104.47	$ 128.78	$ 318.52	$ 1,311.89	$ 137.72	$ 137.72	
	Advertising		$ 48.60	$ 18.50	$ 109.34	$ 28.53	$ 114.02	$ 26.50	$ 72.77	$ 110.94	$ 529.20	$ 50.35	$ 50.35	
	Travel		$ 32.82	$ 13.41	$ 9.53	$ 19.82	$ 38.12	$ 17.44	$ 23.94	$ 68.05	$ 223.13	$ 60.14	$ 60.14	
	Farmers Market Booth Fees		$ 24.34	$ 24.58	$ 6,172.98	$ 33.10	$ 55.32	$ 31.37	$ 52.15	$ 95.19	$ 6,489.03	$ 23.44	$ 23.44	
	Total Operating Expenses		$ 561.08	$ 244.46	$ 6,854.73	$ 364.98	$ 873.96	$ 350.14	$ 590.02	$ 1,261.43	$ 11,100.80	$ 592.99	$ 592.99	$ 11,693.79
	Net Operating Profit/Loss (Per Crop)		$ 6,765.76	$ 4,738.69	$ 14,317.51	$ 5,157.18	$ 14,987.38	$ 2,321.35	$ 4,413.33	$ 6,409.39	$ 59,110.59	$ 5,909.93	$ 5,909.93	$ 65,020.52
Labour Expenses			5%	14%	14%	14%	3%	5%	5%	41%		100%		
	Paid Labour		$ 1,428.12	$ 1,232.18	$ 3,338.97	$ 1,809.87	$ 884.51	$ 1,750.73	$ 1,454.17	$ 4,791.27	$ 16,689.82	$ 3,791.49	$ 3,791.49	$ 20,481.31
	UnPaid Labour		$ 1,453.86	$ 184.05	$ 1,054.06	$ 413.94	$ 3,175.04	$ 366.83	$ 1,592.59	$ 2,419.04	$ 10,659.41	$ 2,190.29	$ 2,190.29	$ 12,849.70
	Total Labour Expenses		$ 2,881.98	$ 1,416.23	$ 4,393.03	$ 2,223.81	$ 4,059.55	$ 2,117.56	$ 3,046.76	$ 7,210.31	$ 27,349.23	$ 5,981.78	$ 5,981.78	$ 33,331.01
	Profit/Loss after Paid Labour		$ 5,337.64	$ 3,506.51	$ 10,978.54	$ 3,347.31	$ 14,102.87	$ 570.62	$ 2,959.16	$ 1,618.12	$ 42,420.77	$ 2,118.44	$ 2,118.44	$ 44,539.21
	Profit/Loss after Total Labour		$ 3,883.78	$ 3,322.46	$ 9,924.48	$ 2,933.37	$ 10,927.83	$ 203.79	$ 1,366.57	-$ 800.92	$ 31,761.36	-$ 71.85	-$ 71.85	$ 31,689.51
	Contribution Margin		$ 3,883.78	$ 3,322.46	$ 9,924.48	$ 2,933.37	$ 10,927.83	$ 203.79	$ 1,366.57	-$ 800.92	$ 31,761.36	-$ 71.85	-$ 71.85	$ 31,689.51
Fixed Expenses														
		Depreciation %	5%	14%	14%	14%	3%	5%	5%	41%		100%		
	Operating Interest		$ 223.70	$ 19.17	$ 20.72	$ 43.12	$ 689.01	$ 38.21	$ 357.61	$ 365.16	$ 1,756.70	$ 205.32	$ 205.32	
	Depreciation - Buildings	Total $ Invested	$ 154.52	$ 22.79	$ 2,682.11	$ 38.18	$ 573.74	$ 35.40	$ 338.90	$ 293.32	$ 4,138.96	$ 90.93	$ 90.93	
	Depreciation - Machinery	Total $ Invested	$ 196.40	$ 130.44	$ 972.27	$ 188.72	$ 444.01	$ 179.55	$ 302.24	$ 608.40	$ 3,022.03	$ 112.81	$ 112.81	
	Small Tools		$ 160.09	$ 14.04	$ 36.00	$ 42.03	$ 431.00	$ 29.42	$ 213.00	$ 286.87	$ 1,212.45	$ 209.74	$ 209.74	
	Land Taxes		$ 38.57	$ 5.50	$ 4.52	$ 12.09	$ 73.40	$ 10.95	$ 35.88	$ 64.76	$ 245.67	$ 64.31	$ 64.31	
	Vehicle Registration		$ 56.51	$ 38.97	$ 27.17	$ 57.33	$ 68.01	$ 55.18	$ 67.79	$ 166.01	$ 536.97	$ 73.68	$ 73.68	
	Insurance		$ 63.73	$ 31.21	$ 119.08	$ 46.51	$ 156.55	$ 44.27	$ 107.59	$ 166.49	$ 735.43	$ 53.32	$ 53.32	
	Office Supplies		$ 64.58	$ 44.04	$ 17.16	$ 64.75	$ 65.24	$ 60.71	$ 64.68	$ 187.28	$ 568.44	$ 97.59	$ 97.59	
	Utilities - Heating		$ 57.17	$ 44.61	$ 125.08	$ 65.70	$ 55.83	$ 62.56	$ 64.35	$ 183.36	$ 658.66	$ 78.35	$ 78.35	
	Utilities - Power		$ 44.64	$ 3.45	$ 310.73	$ 7.62	$ 145.87	$ 6.86	$ 75.10	$ 71.96	$ 666.23	$ 40.52	$ 40.52	
	Utilities - Phone		$ 69.35	$ 6.14	$ 65.04	$ 13.11	$ 213.25	$ 12.15	$ 109.10	$ 111.78	$ 599.92	$ 70.24	$ 70.24	
	Professional Fees		$ 54.80	$ 27.24	$ 82.07	$ 42.16	$ 70.71	$ 40.55	$ 54.09	$ 135.15	$ 506.77	$ 84.28	$ 84.28	
	Total Fixed Expenses		$ 1,184.06	$ 387.60	$ 4,461.95	$ 621.32	$ 2,986.62	$ 575.81	$ 1,790.33	$ 2,640.54	$ 14,648.23	$ 1,181.09	$ 1,181.09	$ 15,829.32
	Gross Margin		$ 3,050.64	$ 3,088.09	$ 9,116.91	$ 2,538.95	$ 8,958.96	-$ 157.07	$ 217.38	-$ 2,539.74	$ 24,274.12	-$ 1,049.20	-$ 1,049.20	$ 23,224.92

Fruit and Vegetable Direct Market Cost of Production Definitions

Yearly Revenue

- Revenue is broken down by each Vegetable or Fruit crop grown. In each instance, the total quantity and price received should be used to calculate the total revenue for each Vegetable or Fruit crop.
- In addition, quantity and price are also used for calculating the Farm Gate, Farmers Market and Wholesale revenue.
- When analyzing Revenue numbers, keep in mind any production/environmental issues and price changes as these impact (increase or decrease) farm profitability.
- The summary page can mask crops which are not profitable, therefore each crop should be analyzed separately.

Production Expenses

- A breakdown of Production Expenses specific to each crop is best for accurate analysis.
- Lumping production costs together masks crop profitability and minimizes the amount of analysis that can be completed.
- Seed, Chemical and Fertilizer are specific to each crop and the cost for each can easily be calculated. Packaging cost are usually crop specific due to crop variance in packaging requirements.
- Custom work, Insurance, Irrigation and other costs can be calculated based on the percentage of each crop grown. Reviewing production costs on a yearly basis can provide insight into changing profitability and aid managing production costs for each crop.

Production Margin

- Production Margin is calculated in the following manner: Production Margin = Yearly Revenue – Production Expenses.
- Review Production Margin for each crop to ensure that each crop is producing a profit at this stage. If a crop is not profitable and extenuating circumstances do not exist, consider why that crop is being grown. Crops with a higher Production Margin are essential for overall farm profitability.

Operating Expenses

- These are expenditures that the farm incurs throughout the production year; however, they are not directly associated with the production of the crop.
- The total cost for each category collected should be determined for each crop based on the acreage percentage of each crop grown. This is then rolled into the Total Operating Expense for each crop. Carefully look at the change in Operating Expenses for each year. Analysing Operating Expenses for differences between years can help explain why farm profitability has increased or decreased. For example, an increase in fuel or major repair to a piece of equipment could have a major impact on perating expenses. Understanding these changes can be very important, particularly if asked by a financial institution.

Labour Expenses

- Labour Expenses are divided into two categories; paid (actual salaries paid to employees) and unpaid (an estimate of dollars invested by owners for which they are not paid).
- Paid labour is based on the actual total wages paid and then divided among the crops based on acreage percentage, unless a higher percentage of labour than other crops.
- Unpaid labour is based on hours estimated to complete various tasks on the farm. An average cost of $15.00 per hour to calculate the cost for unpaid labour was used, and this cost was then divided amongst the crops based on acreage percentage, unless a crop requires a higher percentage of labour than other crops. The unpaid labour was factored into the calculations as there is value for this management.

Total Variable Expenses

- Total Variable Expenses = Production Expenses + Operating Expenses + Labour (Paid and Unpaid) Expenses.
- All these expenses are what it costs throughout the year to grow and sell the produce. These expenses should be monitored for fluctuations and analysed to determine why changes occurred. Critical monitoring of Variable Expenses will aid in profitability if production/marketing issues arise.

Fruit and Vegetable Direct Market Cost of Production Definitions (continued)

Contribution Margin

- Contribution Margin = Total Revenue – Variable Expenses (Total Production Expenses – Total Operating Expenses – Total Labour (Paid and Unpaid)).
- This calculation will determine how much the farm is able to contribute toward Fixed Expenses. If the Contribution Margin in a given year is negative, then either Revenue needs to increase or expenses need to decrease for farm profitability to be maintained. Monitoring specific crop revenue for each year provides a picture on which crop(s) are positively and negatively affecting Contribution Margin. Crops returning a negative Contribution Margin should be carefully assessed to determine if continued production of that specific crop is financially wise. Without analysis of Contribution Margin, production of a non-profitable crop could continue.

Fixed Expenses

- There are three categories of Fixed Expenses; they are Operating Interest, Depreciation of Machinery and Depreciation of Buildings.
- Operating Interest includes all interest paid to Financial Institutions for production of goods for sale. This total expense is then divided between crops based on an acreage percentage. Depreciation for Machinery and Buildings is based on values collected for each year and then a 10% straight line depreciation is utilized and divided amongst each crop based on an acreage percentage. These expenses are totalled to determine the Total Fixed Expenses for the operation.

Gross Margin

- Gross Margin is calculated for a farm to determine revenue remaining after all out-of-pocket expenses are deducted.
- The calculation is as follows: Gross Margin = Total Revenue – Variable Expenses – Fixed Expenses (not including Building and Machinery depreciation).
- A positive Gross Margin means there is money left over to pay management and also for future capital expenditures. If this value is negative then the farm is not able to cover the production, operating and labour expense needed for production of the produce to be sold. If Gross Margin is increasing it is important for producers to analyze the numbers to determine why so the farm can continue to improve. Likewise if Gross Margin is declining it is equally important to analyze the numbers so corrective actions can be taken. Disregarding changes in Gross Margin could be detrimental to the overall farming operation.