



# The Busine\$\$ of Sheep



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### The Busine\$\$ of Sheep

Alberta Lamb Traceability / Precision Flock  
Management Projects



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# Introduction

The Busine\$\$ of Sheep is a business module for sheep producers. It was created for experienced producers as well as for people who are just thinking about getting into sheep production. This module is based on the Sheep: Build Your Business 101 and Build a Better Sheep Business 201 workshops developed in 2012 by the Alberta Lamb Producers, Alberta Agriculture, and Olds College.

The first part of this module is organized following six areas of management and includes strategy, operations, marketing, labour, information technology, and finances. The second section of the module looks at collecting the information you need to manage, and how to use the Flock Snapshot to analyze your data and set production targets. This section also discusses how to create effective action plans and how to implement your plans so that the job gets done.

The module follows a simple, common sense format and makes use of quite a few questionnaires and interactive activities. At the end of the module students will

- understand the skills and training they need to run a sheep production business;
- understand how to manage their sheep business;
- have the training and tools they need to complete a business plan to apply for financing;
- know what data they need to collect in order to manage their operation;
- understand what the data means by learning how to use the Flock Snapshot, a cost of production analytical tool (available through the Alberta Lamb Producers);
- model their farm to identify the key performance targets needed for it to become profitable;
- analyze their sheep operation to identify areas which need to be addressed;
- learn how to figure out what to do and how to develop an Action Plan;
- learn how to get the job done by creating an Implementation Plan.

We hope you find The Busine\$\$ of Sheep informative, useful, and fun to work through and that the material in the module allows you to build on your current business skills and knowledge.

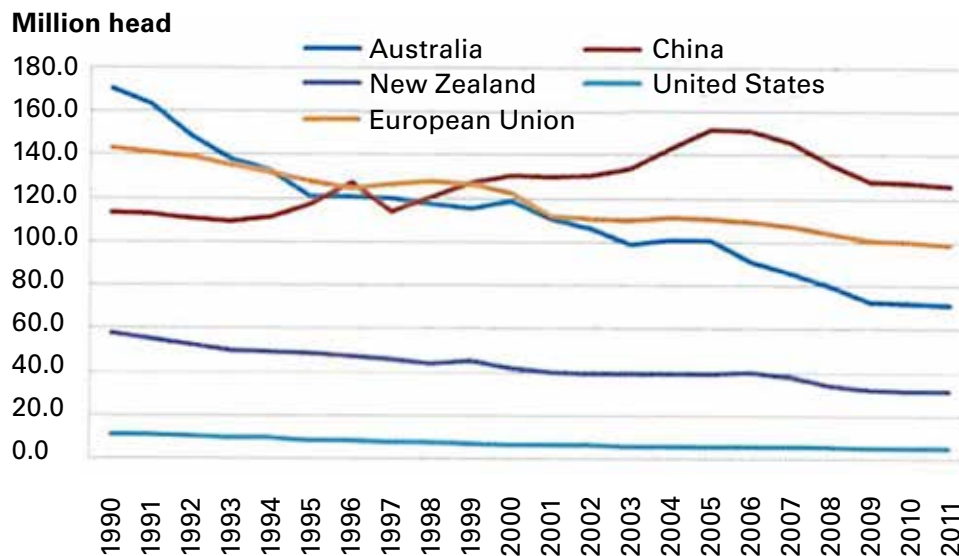


# Background

## The Global Sheep Industry 2012

Globally there are approximately 1.1 billion sheep in the world. China, at 122 million, and the European Union (EU), at 100 million, are the largest producers. The reason you don't hear too much about China and the EU is that they do not export many sheep. Australia (with about 66 million sheep) and New Zealand (with about 36 million) account for around 90% of the world's lamb and mutton exports. Canada has about 0.94 million sheep.

As the graph shows, there has been a slight overall decline in the number of sheep world-wide; however, meat production is actually up since flocks have become more productive.



## The Canadian Sheep Industry

The top three sheep producing provinces in Canada are Ontario (279,000), Quebec (249,750), and Alberta (158,000), based on Statistics Canada 2011 average sheep inventory.

The Canadian sheep industry has many stakeholders. These include primary producers, feedlot operators, lamb buyers/truckers, processors, retailers/distributors, consumers (including restaurants), plus many supporting organizations such as the Alberta Lamb Producers and Alberta Agriculture and Rural Development.

The profile of the average sheep farm in Alberta is very small. All farms in Alberta require a Premises ID, from this we estimate there are 1,776 farms with sheep. This means the average flock has about 89 sheep, including ewes, rams and lambs.

Micro flocks, with only about 16 animals, make up the majority of sheep farms. While there are a large number of these micro-flocks, most lamb production actually happens on medium and



larger operations. In fact, these medium to very large producers (which make up about 13% of all producers) are responsible for raising 68% of Alberta's lamb.

Flock Size	Micro 16 animals	Small 92 animals	Medium 298 animals	Large 755 animals	Very Large 1,738 animals
Number of Flocks	1,104	438	157	53	21
Total Sheep	17,416	40,209	46,791	39,856	36,728

*Number of estimated flocks in Alberta 2010 (derived from the 2006 census)*

Canadians' lamb consumption reached a high in 2007 at 1.08 kg/capita, with most lamb being consumed by ethnic consumers living in Quebec and Ontario. Canada relies on imported lamb, mainly from New Zealand, to meet market demand, with imports currently filling about 58% of total Canadian demand.

## Industry Trends

Global lamb consumption is on the rise even though, since 2009, global sheep prices have nearly doubled. Based on a Statistics Division of the United Nations 2011 report, rising incomes, populations, and growing demand are being seen in key markets and this will drive future demand. One of these markets is China. Although China is the world's largest producer, it is a net importer of lamb. In the past ten years imports to China have increased 500%. This type of demand is predicted to grow.

Growing consumption is being seen in Canada as well. With ethnic consumers estimated to reach 21% of Canada's population by 2010, lamb consumption will grow by as much as 40% between 2003 and 2020.

Whether or not the world or Canada will be able to meet this growing demand is another question. Environmental issues due to climate change are predicted to affect Australia and New Zealand. Australia will need to address issues such as soil salinity, soil degradation, and vegetation management. New Zealand is predicted to face increasingly severe weather events which will challenge the sustainability of their industry. These environmental issues may already be affecting these countries as Australia and New Zealand inventories dropped 17% between 2006 and 2011.



Here in Canada sheep inventories have also dropped over the past 10 years due to drought and the effects on the lamb markets due to BSE in cattle. While the retail price of lamb recently reached record levels, consumers are starting to back off buying lamb. In fact, lamb consumption dropped 11% in 2011 due to short supplies, high prices, and lower spending due to the economy. Other Canadian challenges and issues

include seasonal lamb production and the stress processors are feeling because of high prices and limited supply.

Worldwide, Canada is seen as a land of opportunity, with greater availability of fertile arable land relative to human and animal requirements. Our perceived advantages include clean water, abundant energy resources (sun, wind, natural gas, oil, uranium, etc.), plus good animal health, a winter which limits disease, and adaptable and educated producers. While the sheep business has some challenges, the Canadian sheep industry appears to be positioned to grow and to succeed and many consider this to be a good time to consider entering and/or expanding this business.

## Choosing a Sheep Business

People choose to enter a business for a variety of reasons. This includes making money or a lifestyle choice, or some combination of the two. With lamb prices recently reaching record highs and with the relatively low investment needed to enter the lamb business, many farm entrepreneurs have become very interested in the lamb industry. Lifestyle and overall situational advantages also play a role. Sheep are small animals, allowing all family members to be involved. In addition, a relatively small amount of land is needed to raise sheep, compared with other animals, and the perception, at least, is that sheep are easy to care for and maintain.



Not all is rosy however. Based on Statistics Canada data, only 36% of any small businesses earning less than \$30,000 survive for five years. This applies equally well to sheep farms. Raising animals is not easy. High death losses, market fluctuations and high costs can make sheep production unprofitable. Furthermore, managing a business is much more difficult than having a job. Unless good management systems are in place the workload of a sheep operation can become overwhelming. Also, life situations can change, kids can leave home, partners can drop out of the business, and both local and global markets may change.

Deciding whether or not you should enter a business is not easy. Research shows that entrepreneurs who succeed in their businesses have a few things in common, including:

- They know the business they are entering. This includes having the technical skills, experience, training, and knowledge specific to that business.
- They are passionate about the business. Loving what you do is arguably the most important factor, as when you are passionate about your business it doesn't even feel like work.
- They have enough money to get the business going. It takes time and money to get a business up and running. Very few businesses make money before their third year, and most will need five or more years to become profitable.
- The time is right in their lives. Starting a business is stressful. A good supportive social network is very helpful, as is having a stable personal life.

- They know how to manage a business. Formal training in how to manage a business has been shown to greatly improve chances of success.



If you are curious to see if you have what it takes to succeed in a sheep business, try the self-assessment below. (Scoring is on the following page.) This exercise is a little tongue in cheek but the message is serious – have fun!

What Does It Take to Succeed? – Self-Assessment			Your Score
<b>1. Do you have experience in the sheep production business?</b>			
	No – I have never worked in a business like this.	Score 1	
	No – I have never worked in a business like this but I have training.	Score 2	
	Yes – I have worked in a business like this.	Score 3	
	Yes – I have worked in a business like this and I have training.	Score 4	
<b>2. What's going on in your life?</b>			
	Life is great, relationship is great, kids are out of the house, mortgage is paid off, I'm looking for a challenge.	Score 4	
	Life is good, relationship is good, job is a hassle, I spend my weekend running kids around.	Score 3	
	I wish I had more time, less debt, and more energy.	Score 2	
	Life sucks, relationship is a mess, financial worries are dragging me down, I'm struggling with addictions, and my health is bad.	Score 0	
<b>3. Can you afford to start a business? (Note: just use rough guesses for this exercise)</b>			
	i. How much is all of your stuff worth?	\$	
	ii. How much do you owe?	\$	
	iii. Calculate your net worth (i - ii).	\$	
	iv. Calculate your debt/equity ratio (ii / iii X 100).	\$	
	My debt/equity ratio is more than 50%.	Score 0	
	My debt/equity ratio is less than 50%.	Score 2	
<b>4. Do you have experience managing businesses?</b>			
	No – I have never managed a business.	Score 1	
	No – I have never managed a business but I have some training.	Score 2	
	Yes – I have managed a business.	Score 3	
	Yes – I have managed a business and I have some training.	Score 4	
<b>5. Do you really want to do this?</b>			
	Not really – I'm just doing this because my spouse wants me to.	Score 1	
	Maybe – but I'm expecting this to be worth my while!	Score 2	
	Yes – this is a lifestyle choice as much as a business choice for me. I love the idea of living in the country and having animals.	Score 4	
			<b>Total Score</b>

## Your Score

**Score 7 or less** – Keep your day job. Running a sheep enterprise is probably not going to work out for you.

**Score 8-13** – Running a sheep enterprise may be a little risky for you right now. Look at the questions where you scored lowest and think about strategies to improve your score.

**Score 14-18** – Running a sheep enterprise is definitely worth exploring for you!

## The Business Lifecycle

Before setting up a business you should be aware that businesses go through stages in their lifecycle. The stages include:

- **Start-up Phase** – When the basic vision and planning for the operation are completed.
- **Growth Phase** – When infrastructure is set up and animal inventories are brought up to target levels.
- **Maturity Phase** – When the operation is functioning as intended. This stage is also known as the surviving stage.
- **Expansion** – Some businesses will go through an expansion phase after being in existence for a few years and reaching maturity. This phase has many of the same challenges as the initial growth phase.
- **Exit** – When the operation is sold as a functioning business or its assets are sold.

Being aware of where you are at in the business lifecycle and being aware of when you will reach each of these stages are especially important when planning. For example, all business owners eventually will exit their businesses. The exit plan will be either to sell the business as a going concern or to sell the bits and pieces that make up the business. Either way, having a plan in place and a date in mind for when this will happen is extremely important. This is true even when you are just in the start-up phase, since many decisions have long-term consequences.

## Strategy

Strategy is the approach you take to your business. Thinking about strategy is not just for new businesses. It is a good idea to review your basic strategy every few years since the world changes and so does your own situation. Think of strategy as the foundation of your business. Having this foundation in place will give your business a solid structure. If you do not have your strategy figured out you run the risk of putting your business on a shaky footing.



We will look at developing strategy by addressing four main components:

1. Identifying what business you are in and your values. This is often thought of as your business's mission.

2. Identifying the external factors that impact your business. This means developing an understanding about what is happening in the industry as a whole. These are also called opportunities and threats.
3. Identifying the internal factors that impact your business. This is really about understanding yourself, your staff team, and your situation. These are also called your strengths and weaknesses.
4. Analyzing your operation. Analysis is about combining, chunking, and integrating the facts or the raw data to make interpretations. The job of analysis is to combine the facts to give greater meaning to the information. When you come up with your farm's strategy you are pulling together the facts about your operation and what is happening in the industry.

This work is called a "SWOT analysis." To do a SWOT analysis properly you start by gathering the facts. Facts are quantifiable pieces of information. For example, a fact would be that lamb markets were 15% higher in 2011 versus 2010. Facts can also be valid observations. For example, SunGold lamb buyers report they would buy more lamb if it were available. Facts are not "chunked" information. Chunked information is analysis. Once you have gathered your facts, you then list them into the four SWOT categories of Strengths, Weaknesses, Opportunities and Threats. The idea is to first get the facts organized into the SWOT format, and then write a summary analysis based on these facts.

Here is a process that you can use:

- Gather the facts about the industry and your situation. If you are using the SWOT solely to help identify your strategy, focus on only data points that are important to strategy. This includes:
  - State of the industry information.
  - State of the competition (this is not too important for the sheep industry at the moment since there is so much room for the industry to grow).
  - State of your company, including capabilities and company culture and vision.
- Organize the facts into categories of strengths, weaknesses, opportunities, and threats.
- Analyze the data. This involves identifying the most important factors.
  - What are your operation's key strengths and weaknesses?
  - What are the industry's key opportunities and threats?
  - Are there any compounding factors? These are factors that build upon each other so they become even more important.
- Identify your preferred strategy based on your analysis.

## Your Business Model

If you were in a coffee shop and someone asked you about your sheep business you would basically describe your business model. A business model is the vision or big picture of the business, including the key features that make it special and unique. When we have trouble describ-

ing our business model it can mean that we are unclear on what we are doing, why we are doing it, or what is important in our business.

Putting your business model together is easy. Your description should be about a paragraph or two long, and made up of a few sentences on each of the following points:

1. The basic concept of the business, including what you are selling and whom you are selling to. You want to provide enough detail so that you are being clear on who your target market is, how big an operation yours is, whether it is full time or part-time, and so on.
  - Type of operation
    - Will you be a commercial producer selling meat animals? If so, will you sell market ready lambs or feeder lambs? If selling market ready lambs, will you be targeting the heavy western lamb market, or the light lamb niche and/or eastern markets?
    - If you are going to sell seed-stock, will you target maternal genetic lines or terminal genetic lines?
  - Target market
    - If you are a commercial producer, will you be selling to a processor, lamb buyer, selling at auction, or selling directly to a producer?
    - If selling feeders, which feedlot do you have in mind?
    - If selling seed-stock, what type of producer are you targeting—extensive, intensive, confinement, organic? What breeds or breed crosses will you focus on as a result? Why?
  - Time of year
    - Is there a specific time of year that you will focus on? Why?
2. What makes your operation special? Include the type of operation it is, such as:
  - Direct to consumer/restaurant sales
  - The type of production system that you use
    - Full confinement system where ewes and lambs are in barns and/or corrals most of the year
    - Extensive production with the sheep spending most of their time on grass
    - Semi-confinement (somewhere in between)
    - Organic and/or “natural” production systems
3. Key cost and/or income drivers, including:
  - Access to free or inexpensive grazing
  - Proximity to a key market
  - Ewe productivity
  - Low-cost (extensive – i.e. If low cost land is available) versus high-cost (intensive)
  - Focus on high value breeding stock sales versus low-cost feeder-lamb sales
4. Stage of the business cycle, including:
  - When you started your operation
  - Growth plans, target size, and timeline

- Where will get your initial breeding stock and genetics?
- What are your major planned purchases and when will they happen?
- Retirement plan



### Example

*My wife and I have a high productivity and high-health status sheep operation near Olds, Alberta. The operation is a part-time venture with 200 cross-bred ewes and about 450 lambs per year. The focus of the business is on selling quality maternal genetics to commercial producers, but we sell most of our lamb into the wholesale Alberta market at about 110 lb. live-weight. Being close to SunGold in Innisfail allows us to market finished lambs reasonably efficiently. We focus on being a low-cost operation in general, since we have access to low-cost grazing in the spring plus a quarter section of hay land that we can graze in the fall. We also focus on low labour inputs through extremely efficient feeding and lambing systems. The business was started in 2008 and is now up to size, but we are still building some of the infrastructure that we need to lower our labour costs further. We hope to run the business for the next 20 years, first as an income supplement to our off-farm jobs, then as a "retirement" business.*

Having a clear understanding of your business model is really quite important as it helps guide you in making day to day management decisions. Developing a business model is one of the first steps to take when writing a business plan (for which developing strategy is the first step). Having a clear vision not only makes writing your business plan easier, it makes writing the plan **possible**.

## Operations

### Management

Operations include the day to day activities and tasks of running a business. In order to develop an appropriate operational plan (or plans) it is important to understand what is meant by "management." We need to understand the keys to successful management; these include:

- Planning to succeed
- Managing bite-size pieces
- Knowing what matters
- Tracking what matters
- Having targets for what matters
- Knowing when to manage

### Planning to Succeed

No one would build a house without drafting a set of house plans. If you think about it, a business is even more complex than a house. For this reason, successful entrepreneurs and managers use a variety of plans to help them set up and operate their businesses. If you think about

it, everything we do in life benefits from planning. We even make a plan when we do our weekly grocery shopping—we make a list. The difference is often just the size and scope of the plan.

## Managing Bite-size Pieces

Business planning is a big job. The key to doing any big job is to break it down into manageable pieces. This is one of the most important lessons to learn when managing. It is like climbing a mountain. Climbing a mountain may seem to be an impossible task when you are at the bottom, but no job is too hard when all you need to do is take one step at a time.

## Knowing What Matters

Some things matter more than others. It helps to make these things your priority. In sheep production, most operators find the things that matter most (in order of importance) are ewe productivity, feed/grazing, labour, investment, and sales in all items related to the business (animals, buildings, infrastructure, etc.).

## Tracking What Matters

You can't manage what you do not have information on. In the case of a sheep operation, good managers will collect information on all areas of their operation. Ewe productivity, feed, labour, investment, sales, and other expenses will be high priority areas of the operation to track.

## Having Targets for What Matters

When you go on a road trip, you need to know where you are going. When you're running a sheep business, targets give you a destination and help you to figure out how you are going to get there. For example, your ewe flock may have a lambing rate of 160%, but you may decide that a better target rate is 180% for your operation to be profitable.

## When Do We Manage?

Taking training courses is part of managing. Working out the business's incomes and expenses and tracking flock performance are part of managing. Developing business and operational plans is also part of managing. Managing, however, is not just done in classrooms or in front of a computer. Successful managers are always thinking about how to make their operations easier and more profitable.

## Storyboarding

Most producers find there are times when they get mad or frustrated with their sheep. They also find there are times when things simply do not get done due to lack of time. While there are only so many hours in a day and sheep certainly can be challenging, there is a good chance that time and frustration issues are the result of one or more management problems.

These problems can often be solved by doing some planning. A good way to develop an operational plan(s) is to start with a storyboard.



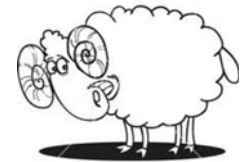


A storyboard is a visual map of what you do in your business. The idea is to identify the bite size pieces that make up your operation so that the whole is easier to understand.



Once you have mapped out the main tasks that make up your sheep operation, the next step is to develop individual plans for each of the pieces.

The idea behind any of these bite size operational plans is that you want everything to flow smoothly. For example, if we wanted to develop a lambing barn plan, we would start by making a list of what needs to be done. In other words, we break down the task of lambing into even smaller bite size pieces.



In the case of the lambing barn plan, a good way to make this list may be to imagine yourself in the place of a lamb being born, and then follow it through your system. As you follow the lamb through the system, you write down each step while considering how well the lamb “flows” between these steps. The flow between the steps is really important. If animals do not flow well, they can get hurt, the process will cause extra work, and the process will be frustrating.



Drawing a map of the process is also a very good idea. Process maps can benefit plans such as the lambing barn plan and the weighing and sorting plan.

The final step needed to complete the plans is to ensure that the sheep are able to flow smoothly **between** each of the storyboard/activity plans. For example, the sheep need to be able to move easily from the lambing barn to the hardening off area. They then need to be able to move easily from the hardening off area to the pasture (or wherever you put them next). When you draw up your plans, therefore, take time to consider the transitions from one step to the next.



While this sounds like a lot of work, the result is actually the opposite. Proper planning makes businesses operate much more efficiently. The idea is to work smart—not hard—so that there is no need to work from sun-up to sun-down!



The best run businesses do exactly this kind of planning and thinking. Good examples include IKEA, UPS, and Toyota (or other car companies).



It is good to note that the way you segment your operation, or the categories you choose, is really up to you. There are no hard and fast rules. The point is to create categories that make sense to you and categories that are small enough to be manageable.



# Marketing

Marketing is about communicating, and delivering your products to your customers. In the Strategy section we talked about how to identify what you wanted to produce and whom you intend to sell to. In this section we will now look more closely at this to help you create a marketing plan.

For most sheep enterprises, the marketing plan will be pretty straightforward. Nevertheless, having a clear marketing plan is very important. Some of the things you may want to consider when developing your marketing plan include:

- Who your consumer is.
- What your customer's wants and needs are.
- What the products you sell are.
- How you raise your lambs.
- What pricing you expect to receive.
- How you will distribute your products.
- How you will let people know you have lambs to sell (promotion).
- Who your competitors are.



## Consumers

Lamb producers are the first link in the lamb supply chain. Because of this, we are tempted to focus only on the stakeholder at the next link—usually the lamb buyer. It is sometimes hard to remember that the most important stakeholder is the one at the other end of the chain who we hardly ever see—the consumer.

Producers have a lot of control over lamb quality. From the genetics we choose to the way we raise and feed our lambs. The bottom line is, if consumers like what they get they will come back for more and it is up to us, as producers, to make a product that consumers want.

While individual consumers and markets ask for slightly different things, most consumers want well-muscled, lean, and consistent lamb that has been raised in a healthy and safe way.

Here are some interesting facts about Canadian lamb consumers:

- 13% of Canadian households buy lamb.
- Fresh lamb makes up 75% of sales.
- 51% of consumers earn \$60,000 +.
- Most consumers come from a lamb eating heritage.
- 58% of lamb is sold through traditional retailers.

## Customers

Our customers are the people we, as lamb producers, sell directly to, including:

- Lamb buyers



- Auctions (See list of auctions, dealers and buyers on <http://www.ablamb.ca/links/contacts.html>)
- Consumers (farm-direct - usually cut, wrapped and frozen)
- Other sheep farms (seed-stock producers)

## What Customers Want and Need

If we were to ask our customers what they look for in a lamb, what do you think they would say? This is an interesting question that is really easy to answer, because we can ask them. This is what we typically hear:

- Lamb buyers – Healthy, lean, consistent, safe, clean, year-round supply.
- Feedlots – All of the above, plus fast-growing lambs that can compete in a feedlot environment.
- Consumers – Lean, consistent, safe, good value, good packaging, inspected lamb.
- Other farms – Healthy, productive animals that fit their management system.

One of the most important things to do as a producer is to **talk to the people who will be buying your lambs and ask them what they want—and what they are willing to pay for.**

## Price

The tables below show lamb income for both the Ontario and Alberta markets. These are the returns you would have received on a 110 lb. lamb in each market by month over the past four years. The colour coding indicates which are the highest quarters (dark green, then light green, then yellow, and then red).

Ontario Market Average (OLEX - OSI - Embrum - Business)												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2008	\$142	\$154	\$160	\$156	\$142	\$161	\$150	\$154	\$156	\$142	\$138	\$141
2009	\$161	\$163	\$171	\$151	\$163	\$149	\$154	\$145	\$159	\$146	\$151	\$155
2010	\$170	\$171	\$176	\$183	\$158	\$159	\$155	\$149	\$160	\$160	\$175	\$193
2011	\$201	\$198	\$195	\$194	\$200	\$188	\$186	\$185	\$196	\$205	\$211	\$216
4 Yr Ave	\$169	\$171	\$176	\$171	\$166	\$154	\$161	\$158	\$168	\$163	\$169	\$176

*Ontario Sheep Marketing Agency - Monthly Market Summary 2008-2011*

Alberta Market Average (Sunterra/SunGold Estimates)												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2008	\$126	\$133	\$125	\$127	\$132	\$137	\$131	\$127	\$126	\$134	\$136	\$135
2009	\$136	\$136	\$144	\$147	\$145	\$144	\$142	\$134	\$131	\$128	\$128	\$130
2010	\$131	\$136	\$140	\$152	\$156	\$152	\$148	\$145	\$140	\$140	\$144	\$149
2011	\$157	\$163	\$186	\$185	\$190	\$183	\$175	\$174	\$179	\$181	\$180	\$182
4 Yr Ave	\$138	\$142	\$148	\$153	\$156	\$154	\$149	\$145	\$144	\$146	\$147	\$149

*Sunterra/SunGold - Monthly Market Summary 2008-2011*

The wholesale price of lamb is seasonal. Due to high demand in the past two years this seasonality is less evident, but the long-term trend is still clearly there.

As you can see, the Ontario market shows a greater seasonal fluctuation, with best prices between February and April. The Alberta market has been more stable in its returns, although slightly lower on average. Considering the cost to ship to Ontario is about \$30 plus the cost of shrink and animal mortality, the Alberta market has provided better returns to producers over the past four years.

If you wanted to project income targets based on these numbers you would estimate between \$150 and \$170 returns on a 110 lb. Alberta lamb. \$150 is about the four-year average and \$170 dollars is closer to the most recent market price.

Most producers breed their sheep to lamb “in season,” meaning they lamb between January and June. This means they in turn market their lambs about four months later, between May and October. The Ontario table shows how this seasonal nature of lambing and lamb supply is reflected in the market.

Sheep can breed out of season, but at a price. Lambing out of season ewes have fewer lambs per lambing and more will be open—meaning they will not be pregnant. Examples of accelerated lambing include lambing every eight months (three times in two years) or the STAR system (five times in three years). A very high level of skill is needed to be successful in accelerated lambing.

## Increasing Price/Returns

As we saw in the lamb tables on the previous page, lamb pricing varies by about \$20/lamb over the season. Based on Cost of Production research, lamb returns also vary between top performing sheep farms and bottom performing farms by about \$20/lamb, regardless of season. Here are some of the things that affect price and returns and what top producing flocks do differently.

## Selling Wholesale and/or Feeder Lambs

### Weight

- Selling bigger, highly muscled, lean lambs. Lambs are usually sold by the pound so lambs that finish at a higher weight are simply worth more. Using terminal sires for your market lambs will ensure they have the genetics they need to maximize returns.
- Weighing lambs regularly to ensure they are sold at the correct finish/weight.
  - Overweight lambs are discounted since it costs money to cut fat off of the carcass and consumers do not like fatty cuts of meat. Since feed is also wasted, selling over-fat lambs costs producers and the industry a lot of money.



- Underweight lambs return less per lamb since lamb is sold by the pound. In addition they are also discounted since processing costs are higher. The time to process all lambs is about the same, but since there is less meat on an underweight lamb, it is worth less. Also, consumers want to see some meat on the cuts they are buying.

### **Health**

- Lamb condemnations are a significant cost to the industry.
  - Worming your dogs to prevent *C. ovis* (sheep measles or cysticercosis) is one example of how producers can increase returns.
  - Injection sites – Inject lambs either in low-quality muscles (such as the neck) or subcutaneously.
- Clean lambs – Processors and lamb buyers want clean lambs to avoid contamination of the meat. This means ensuring lambs have good bedding, docking tails, and ensuring lambs are fed so that they are not too loose.
- Taking lambs off feed for 24 hours before selling them. If lambs are processed while full of feed they will make a mess of the kill floor. Processors and lamb buyers may pay a premium to producers for lambs that are taken off feed.

### **Service**

- Showing up at the right time and delivering the number of lambs agreed upon will ensure lamb buyers give you the best price possible.

### **Develop Relationships with Buyers**

- It is important to support your local lamb buyers and local stakeholders. Nevertheless it is a good idea to sell lambs to a variety of competitive buyers so that you can develop a relationship with these people.

### **Quality**

- Give customers what they want as well as what they need (recipes, customer service, a “story” about your farm).

### **Price**

- Ask for more money if you do the things suggested above.

## **Selling Direct to Consumer**

- Charge your customers for higher than average industry quality if that is what you are delivering.
- Build a relationship with your processor to provide the cuts and level of trim your customers want.
- Charge the customer for any niche features you think they may want including Quality Assurance, Halal, grass fed, etc.

- Deliver a visually appealing product. Consumers are used to professional meat cutting, wrapping, and packaging. If you sell direct to consumers you will want to make sure you meet their expectations for all of these things.

## Selling Genetics

- Buyers are interested in buying quality genetics and will pay more if you can set yourself apart from the average seller. Things you can do to increase your returns on genetics sales include:
  - Quality assurance – Being on the Food Safe Farm Practices program offers your buyers a higher degree of certainty that you have healthy animals.
  - Flock health – Being on a flock health program also offers your buyers a higher degree of certainty that you have healthy animals.
  - Individual performance records – Keep performance records on your ewes and rams so that you know which animals are your best, and which are your worst. You can charge more for the best.
  - Flock records – Having flock records gives buyers a chance to see how your flock performs overall.

## Distribution and Delivery

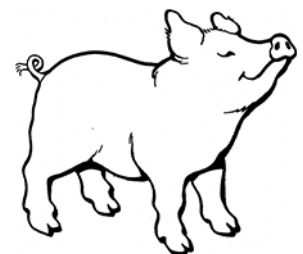
Even if you live only 100 km from your markets your cost per lamb for delivery will likely range between \$3.50 - \$6.00 per lamb. The further you drive the more important it is to sell larger groups of lambs to keep costs down. Fortunately there is a tool available in the Flock Snapshot (a cost of production tool available attached to this document) that helps you to figure this out.



The tool is called the Marketing Cost Calculator, and it was designed to compare delivery options when selling. This tool will help you figure out your delivery costs, whether you are selling wholesale or even direct to consumer. (See the Alberta Lamb Producers website for more information.)

## Competition

In today's market there is a lot of room for Alberta producers to grow, so competition isn't really considered a big issue at the moment. Whether you are looking at selling market lambs wholesale, feeder lambs, or selling direct to consumers, demand currently far outstrips supply. This seems to hold true for most seed-stock producers as well.



Canada is not self-sufficient in lamb. At this point in time, we actually need our competitors in other countries to fill the gap in supply. Also, due to the seasonal nature of Canada's current lamb supply, we need other countries even more for their ability to meet supply gaps in the off season. It is "other meats" that are generally regarded by the lamb industry to be the main competition for lamb.

# Labour

Labour is the second highest cost in sheep operations next to feed. Many farms do not value their labour, however, so it is often overlooked. Unless the business is a hobby, labour must be taken into account. This section will help you to identify the skills you need in your operation and suggest ways to meet your labour needs.



Most business owners do not do everything themselves. Most business owners recognize that they do not have the skills (or desire) to do it all so they hire out some tasks. It helps to use the following process to figure out your labour needs:

- List all of the labour skills and tasks that your business needs.
- List the skills you have and the tasks that you want to do yourself.
- List the skills and tasks you need to buy.
- Rate your skill level in each of these areas.
- Rate whether or not you would need additional training to perform these tasks.
- Calculate the time you need to complete the skills and tasks that you will do.

**Note:** To help with this task there is an active Labour Needs form in the Business of Sheep Tools – Labour, Excel document. [Click the paper clip in the upper left corner of this document screen and open the attachment. Navigate to the Labour worksheet.](#)

As you develop your list you will quickly realize that the skills and tasks needed to run a sheep operation are very large and diverse. Here are just some of the skills that most sheep operations need: business management, feed ration formulation, lambing, veterinary, predation control, shearing, pasture management, mechanical repair, carpentry, fencing, electrical, plumbing, computer, data-gathering, bookkeeping and driving.

Identifying the skills you have and tasks that you will do yourself is quite easy. All we need to do is ask ourselves which tasks are we good at, which ones do we want to do, and which ones do we need training to do?

There is a temptation for many business owners to want to do everything themselves. This, however, is not the best strategy since you will discover that some tasks can be handled much more efficiently by trained contractors, once you start to consider the value of your own time. My favourite example is bookkeeping. An accurate set of books is absolutely vital to help business owners manage their business. Most business owners do not like to do books and are not trained in bookkeeping; nevertheless many insist upon doing this job themselves. Unfortunately, they often do an inadequate, and sometimes terrible job as a result. Since bookkeepers can be hired at a very reasonable cost, this is one task that most business owners should consider hiring out. Another similar example would be shearing.

Once you have your skill and task list finalized and know which skills and tasks you will do yourself and which you will hire out, it is useful to rate yourself on your skill level in each area. This in turn will help you to identify and develop a training plan.

The last step, once you have figured out your skills and training needs, is to figure out how much labour is needed. You need to know how many person/hours will be needed, as well as when you need the labour.

A person/hour is the time it takes for one person to do one hour of work. For example, two people working for five hours would equal 10 person/hours of work. Calculating labour needs is something that few managers like to do. Fortunately we have an excellent labour calculating tool to help us do this work, within the Flock Snapshot (see the Flock Snapshot attachment).

The labour calculator in the Flock Snapshot allows you to figure out your labour based on task, or by month. We generally recommend doing both.

**Note:** A full time job working for someone else at 7.5 h/day over 52 weeks would be 1,950 hours. (37.5 h/week). Most jobs now give 15 days of holidays (112.5 hours), and there are 12 statutory holidays (90 hours). This would yield a full time equivalent of 1,747.5 hours for a full time job. |

## Information Technology

Earlier in this module we talked about how planning is a key to management. We also mentioned that when planning it is important to:

- Know what matters most in regard to your sheep operation;
- Track the things that matter most; and
- Have targets for these things that matter most.

The things that matter most in a sheep operation can be different depending on the operation, but for the most part, the top three are ewe productivity, feed, and labour. It is up to you as manager to determine the most important things to track in your operation.

The first step in tracking the information that we need is having the right tools. This section will discuss the tools that you can use to manage information on your sheep operation.

### Data Collection Tools

The tools available to manage sheep operations have changed quite a bit over the years. Financial and flock records all used to be paper-based. When computers became popular in the 1990s computer software programs started to become available to help producers manage their operations. Today there are computer programs designed for





RFID traceability and flock management that make use of electronic readers and RFID tags. This makes managing large and/or data intensive operations much easier.

The type of tools you decide to use will be based on your flock size and how much information you want to track. Here are some guidelines.

## Paper Based Management

- Flock size - Micro to medium sized flocks (Up to 300 ewes, rams, and lambs)
- Financial records - Paper-based general ledger
- Animal records - Barn sheets, ewe journals, treatment journals, etc.

**Pros** – Inexpensive (cost of a General Ledger books/journals), easy to set up and intuitive to use.

**Cons** – Slow, easy to make mistakes, almost impossible to analyze information. It is much more difficult to make meaningful reports from paper based records

## Computer Based Management

- Flock size - Small to medium sized flocks (100 to 300 ewes rams and lambs)
- Financial records – Accounting software such as AgExpert, QuickBooks, or Simply Accounting. Computer spreadsheets are also used by some producers although this is not recommended.
- Animal records - Flock management software programs including basic versions of FarmWorks, Select SheepWare, and SheepBytes. Computer spreadsheets are also used by some producers although this is not recommended (see below).

### Financial Records

Farm specific accounting software such as Agexpert:

**Pros** – Designed for Canadian farms, provides the ability to assess each farm enterprise quickly and easily, and to make reports for things like GST and Agri-stability.

**Cons** – Cost starts from \$400.00, which is a little more than general business accounting software.

General business accounting software such as Quick Books:

**Pros** – Cost from \$80.00, provides the ability to assess each farm enterprise and to make reports.

**Cons** – Need to enter your own chart of accounts, more difficult to set up than farm specific software, and you may need to adjust your inventories manually.

### Animal Records

Basic sheep management software such as FarmWorks:

**Pros** – Gives producers the ability to quickly make reports on the flock as well as on individual animals (easy data analysis). Lower cost than full RFID/computer management software. Entry level software can be upgraded in the future to make use of RFID technology (some software

companies). If/when upgrading to full RFID systems you will already have learned how to use the software.

**Cons** – Slow data entry compared to RFID systems. Requires learning new software. Good sheep software choices are very limited on the marketplace and it is difficult to determine which systems to choose as they all look very similar (buyer beware!).

Spreadsheets Such as Excel or Open Office:

**Pros** – Free

**Cons** – Difficult to use, slow to set up, difficult to assess separate farm enterprises, prone to errors, ability to make reports is limited by the skill of the user to do his or her own programming.

## RFID Management

- Flock Size - Appropriate for medium to large flocks (over 300 ewes, rams, and lambs)
- Animal Records – RFID flock management software programs, including RFID versions of FarmWorks, Select SheepWare, EweBytes, etc.

**Pros** – Fast data entry and retrieval, rapid animal processing, accurate records, easy tracking of animals. Some programs meet the requirements for animal traceability (FarmWorks). Potential to lower labour costs by faster animal processing. Potential to increase profitability through better flock management (e.g., ability to quickly make reports on the flock as well as on individual animals).

**Cons** – Expensive to purchase. Requires learning a new software program as well as learning how to use new RFID tools. Often requires changes to farm infrastructure and management processes to realize the benefits of these systems.

## Other Considerations

Bookkeepers and accountants – Maintaining information about your business is a very important and highly specialized job. Not everyone has the skills or desire to do this kind of work. Considering how little bookkeepers charge and the value of a good accountant, many producers choose to out-source this task to professionals (Recommended).

## About RFID / Computer Based Management and Traceability Systems

There are very few RFID management systems available for sheep producers that work well for both management and traceability. The LTP project researched available RFID management systems between 2008 and 2010. The best systems were the Shearwell Data Farmworks system and TGM Select SheepWare due to their reliability, ease of use, ability to create meaningful reports on individual and flock performance, and their ability to meet traceability standards.



These two systems were in fact the only two systems approved under the Alberta Sheep RFID Technology Assistance Program in 2012. The Shearwell system is the most popular and proven system in Alberta (and arguably the world) for sheep management and traceability. Shearwell also offers local support. This system was also rated as a “top performer” on the Alberta Lamb Traceability Project.

Both of these two programs include a computer software program that works well for flock management as well as for traceability. Both systems also make use of a field computer/tag reader called a PSION. The PSION gives producers access to individual animal information in the field or barn, and allows producers to enter data to the software program.

RFID systems make it easy to manage the things that matter, including:

- Ewe productivity – Offers ability to gather data and measure individual ewe performance to identify the best and worst ewes;
- Feed costs – Offers ability to use accurate inventories to calculate feed needs, create feed groups for each stage of production, and even to determine lamb rate of gain;
- Labour costs – Increases speed and accuracy of data gathering, speed of animal processing, and speed of analysis.

RFID systems make it easy to:

- Collect and recall information accurately, e.g., animal tag number, birth date, sex, breed, deaths, lambing data, lamb weights, dates, health history, drugs used on-farm, dosages, etc.
  - Record key management events such as breeding, animal movements, treatments, buying, selling, etc.
  - Make reports including:
    - Individual animal reports
    - Group reports
    - Time frame or event reports
  - Draft animals automatically
    - Larger operations can also benefit from automatic sorting systems. The Shearwell automatic drafter for example is able to sort, weigh, and record information right to the PSION. The Shearwell system is also able to sort animals based on management group as set by the user. This allows producers to sort by any criteria they want. Examples include sorting by breed, by sex, by weight, by sire, etc.
    - These systems can lower labour costs by eliminating the need for as many people when handling sheep.
- Benefits include:
- Speeding up processing times (such as weighing and sorting)



Quickly recording information (such as weights, treatments, and/or comments you would like to enter)

Humane handling

Lowering user frustration level

- Chute/handling systems must be able to feed animals into the sorter quickly to realize these benefits.



- Reports and Analysis

The picture below shows a Farmworks Lambing Summary Report. This is an example of one of the many reports producers can use to help them manage their flocks.



Paper records require producers to sift through stacks of paper records and to do analysis manually. With RFID management systems like FarmWorks, producers are able to generate reports instantly and analyse data much more quickly. For example, producers are able to identify and select replacement ewe lambs from above average ewes (the ones that twin or do even better without causing management issues) and cull below average ewes (the ones that have no lambs or singles and/or cause management issues). This gives producers who use this technology the potential to more easily improve their flocks' genetics and overall profitability.

**RFID Tags** – The Shearwell Data Set Tag and the All-Flex button tag are both approved under the Canadian Sheep Identification Program. The Shearwell tag is the most popular due to its low cost and excellent performance.



**Stick Readers** – Stick readers are able to read and store a set of RFID tag numbers. Since it is difficult to associate other information with these numbers, their use for most producers is limited at best. Stick readers can however be linked by Bluetooth to send RFID numbers to a PSION. Some producers have reported they like to use stick readers so they can keep their PSIONs out of harm's way when working their sheep. Also, shippers and custom grazing operators have reported that they like to use stick readers since they are only interested in monitoring lists of sheep IDs.

**Panel Readers** – Panel readers can free up labour by automatically reading tag numbers. These readers are installed in chutes and/or handling systems and read tags as the animal moves through the race. Tag numbers are then typically relayed to a PSION or computer.



## Finances

### Cost of Production

Sheep farming is like manufacturing in that lamb producers make something they hope to sell, in this case lambs. Manufacturers need to know what it costs to produce what they are selling. For example, a widget manufacturer would want to know the cost per widget sold. Likewise lamb producers are interested in knowing their cost per lamb sold. Cost per lamb sold is also known as cost of production.

Knowing cost of production gives producers a benchmark for how efficient their operation is. Knowing this also helps producers make year to year comparisons for their farm, and it gives them the ability to compare their operation's cost of production against the industry average cost of production.

Earlier in the module we discussed how, for most operations, ewe productivity, feed, and labour were the top three things affecting profitability. In the next section we will discuss ewe productivity and how it affects cost of production.

## Ewe Productivity

The example below shows the simple math of cost of production. In this example total costs were \$50,000 and the operation sold 250 lambs. If we divide our total costs (\$50,000) by the number of lambs sold (250) we find that our COP is \$200 per lamb sold.

Example

- COP – costs divided by lambs sold
- Total costs – \$50,000
- Lambs sold – 250
- COP – \$200 per lamb sold

Based on this simple math we can see that to lower COP we must do one of two things (or both). We can lower our costs, and/or we can increase our productivity.



The next section looks at examples of COP in the context of how ewe productivity affects feed costs. We talked earlier about how feed costs make up the largest part of a sheep operation's expenses. Feed costs, in fact, typically are about 40% of a sheep operation's total costs (LTP 2009-2010). This means feed is the biggest factor in most operations' total cost of production.

## COP – Feed Cost of Singles

Assumptions

- Lamb – Feed, pasture, plus salt/minerals cost is \$35 to raise and finish a lamb.
- Ewe – Feed, pasture, plus salt/mineral costs is \$60 to keep a ewe raising a single for a year.
- **Note:** *This would be pretty typical for operations in Alberta using 2010 feed prices, provided the operation does not waste too much feed. (Hay \$80/ton, barley \$160/ton, protein \$300/ton, plus mineral, and grazing at industry rates of about \$25/acre).*

The cost to feed the ewe is \$60 and the cost to feed the lamb \$35, for a total feed cost of \$95. The number of lambs sold in this example is one, so the feed cost per lamb sold equals \$95 divided by one lamb. In this example the feed portion of the cost of production is \$95/lamb sold.

Example – If a ewe produces one marketable lamb/year

- Lamb feed cost – \$35
- Ewe feed cost – \$60
- Total feed cost – \$95
- Lambs sold – 1
- **Feed cost/lamb sold – \$95**

## COP – Feed Cost of Twins

Assumptions

- Lambs – Feed, pasture, plus salt/minerals cost is \$70.00 (since there are now two lambs).

- Ewe – Feed, pasture, plus salt/minerals cost is \$65 (feed is higher now since the ewe will eat more in the late gestation and lactation stages of the feeding cycle).

The cost to feed the ewe is \$65 and the cost to feed the two lambs is \$70 (\$35 X 2), for a total feed cost of \$135. The number of lambs sold in this example is now two, so the feed cost per lamb sold is \$135 divided by two lambs. In this example the feed portion of cost of production is \$67.50. This is a total savings in feed of \$27.50 over ewes that only produce singles!

If the ewe produces two marketable lambs/year:

- Lamb feed costs – \$70 (2 X \$35)
- Ewe feed cost – \$65
- Total feed cost – \$135
- Lambs sold – 2
- **Feed cost/lamb sold – \$67.50**

The effect of productivity on cost of production works the same way in other areas of the operation as well. We find that as productivity goes up cost of production goes down. There is a limit to this, of course. The reality is that feed,



labour, death, and other costs go up as ewes become more productive. There is a point at which the extra feed, labour, and death loss start to balance out the effect of increasing productivity. We will look at one more feed example.

## COP – Feed Cost of Triplets

Assumptions

- Lambs – Feed, pasture, plus salt/minerals cost is \$105 (\$35 X 3 lambs).
- Ewe – Feed, pasture, plus salt/minerals cost is \$70 (feed is higher now since the ewe will eat even more in the late gestation and lactation stages of the feeding cycle).
- Milk replacer cost is \$42 (for this example we will assume one lamb is raised as an orphan).

The cost to feed the ewe is \$70 and the cost to feed the two lambs is \$105 (\$35 X 3). In this case we will raise one of the lambs as an orphan, so we need to buy half a large bag of milk replacer at a cost of \$42. This brings the total feed cost for this family to \$216. The number of lambs sold in this example is now three, so the feed cost per lamb sold is \$217 divided by three lambs. In this example the feed portion of cost of production is \$72.33. This is a total savings in feed of \$22.50 over ewes that only produce singles and just \$5 more than ewes that fed twins!

If the ewe produces three marketable lambs and one is raised as an orphan lamb:

- Lamb feed costs – \$105 (2 X \$35)
- Ewe feed cost – \$70
- Milk replacer cost – \$42
- Total feed cost – \$217

- Lambs sold – 3
- **Feed cost / lamb sold – \$72.33**

It is important to note that we have not counted the extra labour cost of feeding the orphan lamb yet. Depending on how efficient you are at feeding orphans this cost can be quite substantial. If you feed by bottle your labour costs can be very high. If you feed by bucket, or even better, use an automatic system, your costs can be very low.

The key message that we hope is clear from these examples is that ewe productivity matters a lot. Ewes that produce one lamb per year are simply not economically profitable.



## COP – Labour and Productivity

Understanding cost of production is so important that it is worth working through an example of how productivity affects labour.

### Assumptions

- Lambs – Total time spent per lamb per year (all work including lambing time) is two hours.
- Ewe – Total time spent on each ewe per year (all work except lambing) is two hours.
- Orphan lambs – Total time spent per orphan lamb is one extra hour (wean at 23 days off milk replacer using an efficient bucket feeding system).
- Farm labour at \$15/h

**Note:** *Most operations use slightly less labour than outlined in this example.*

### Labour costs based on assumptions

- Ewe labour cost – \$30/year (two hours)
- Lamb labour cost – \$30/year (two hours)
- Orphan labour/lamb -- \$15/year (one hour)
- Ewe raising a single
  - Ewe labour cost – \$30
  - Lamb labour cost – \$30
  - Total labour cost – \$60
  - Lambs sold – 1
  - **Labour cost/lamb sold – \$60**
- Ewe raising twins
  - Ewe labour cost – \$30
  - Lamb labour cost – \$60 (\$30 X 2)
  - Total labour cost – \$90
  - Lambs sold – 2
  - **Labour cost/lamb sold – \$45**



- Ewe raising triplets (one as an orphan)
  - Ewe labour cost – \$30
  - Lamb labour cost -- \$90 (\$30 X 3)
  - Orphan lamb extra – \$15
  - Total labour cost – \$135
  - Lambs sold – 3
  - **Labour cost/lamb sold – \$45**



## Industry Productivity

One of the things the Alberta Lamb Traceability Pilot Project (LTP) did in 2009 and 2010 was collect cost of production data from cooperating farms. They then used this data to create average farm financial models. They were then able to figure out what the average costs were for participating sheep operations as well as where the money was going—the expenses for these flocks.

Family unit	Feed	Labour	Total Cost
Ewe with a single	\$95.00	\$60.00	\$155.00
Ewe with twins	\$67.50	\$45.00	<b>\$112.50</b>
Ewe with triplets - ewe raised all three	\$58.33	\$40.00	\$98.33
Ewe with triplets - one raised as orphan	\$72.33	\$45.00	\$117.33
Ewe with triplets - orphan lamb dies	\$108.50	\$67.50	\$176.00

Other average flock models were also created, based on the top performing flocks in the group as well as the bottom performing flocks. The next few sections of this module will discuss the key differences between top and bottom performing flocks.

The table below shows the differences in ewe productivity between top performing, average, and bottom performing flocks on the Lamb Traceability Pilot project for 2010. As you can see, ewe productivity was clearly a factor in which farms were profitable.

LTP – 2010 averages	Top	Average	Bottom
Lambing %	182%	161%	154%
Weaning %	157%	138%	129%

## Financial Records and Statements

The key thing to remember about financial records and statements is that they are really very simple when you look at what they are trying to do.

Financial statements are about:

- Money in
- Money out
- Money left over

- An accounting of the “stuff” that makes up your business
- The business loans you have for the “stuff”
- How much of the “stuff” is yours (your equity)

The bottom line for any business is that to increase your profit, you have to make more money and/or you have to spend less.

## Expenses

The table below shows the main costs per lamb sold that Alberta LTP cooperating farms had in 2010. (Total Costs were \$99,114 with 378 ewes.)

Expenses	LTP – 2010 Alberta Flock Average General Ledger Expenses			
	Ave Percent	Top	Average	Bottom
Feed	38.7%	\$66	\$88	\$111
Labour	27.3%	\$52	\$58	\$59
Depreciation	7.14%	\$11	\$16	\$19
Supplies	4.53%	\$5	\$10	\$17
Fuel	3.33%	\$8	\$8	\$8
Utilities	3.16%	\$3	\$7	\$13
Veterinary	2.4%	\$4	\$5	\$6
Other	13.44%	\$11	\$35	\$65
<b>Total COP</b>	<b>100%</b>	<b>\$160</b>	<b>\$227</b>	<b>\$298</b>



*(LTP 2010 - Costs per animal sold)*

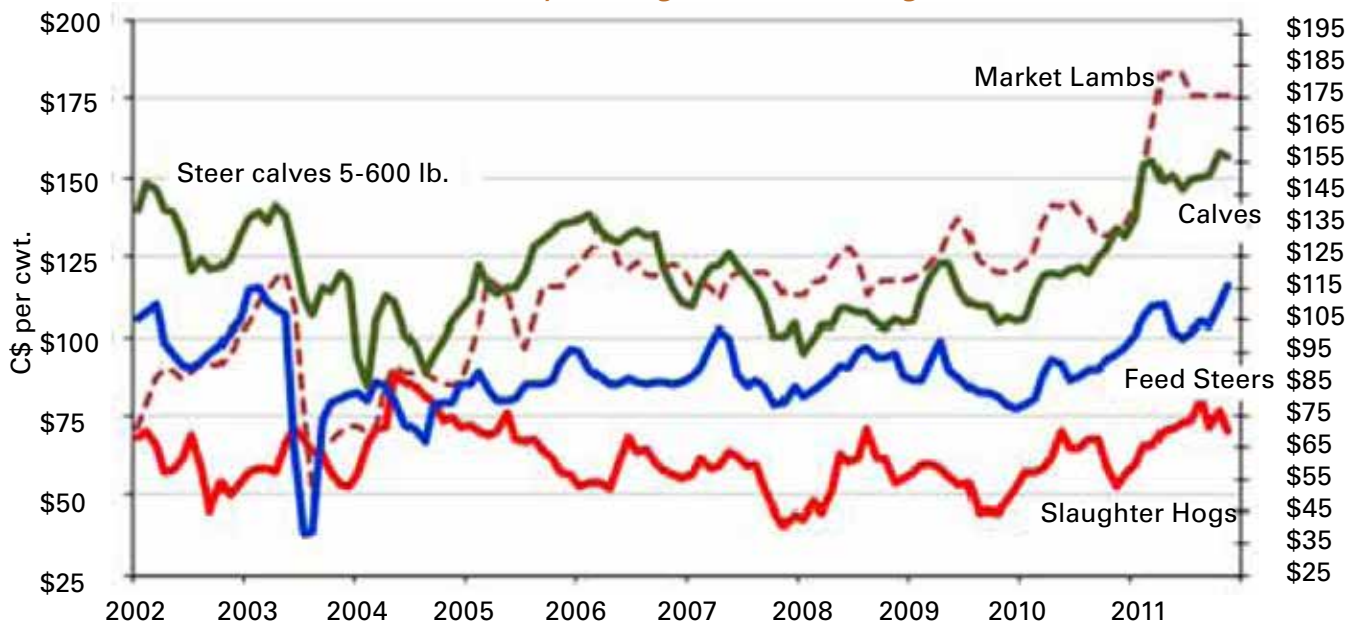
One interesting thing about the table above is that when we calculate the differences between top, average, and bottom flocks, we find that most of the differences can be attributed to productivity. For example, the COP of top flocks was 27% lower than average flocks. But average flocks were 19% less productive than these top flocks. This means that roughly 19% of the cost difference between flocks can be attributed to productivity. The remaining 8% can be attributed to differences in cost.

**Note re “Other” category:** *The largest single difference between top, average, and bottom flocks in this category appeared to be that average and bottom flocks bought more breeding ewes as opposed to producing them internally. Average flock animal purchases were \$13/lamb sold. This was not a big cost for top flocks at all since these flocks kept back their own breeding stock for replacements. Bottom flock animal purchases were \$33/lamb sold. Additional significant Other category items included tool purchases, equipment and building repair, and debt servicing.*

## Income

The dotted brown line on the graph (next page) shows the average Alberta Livestock Market price of lamb over the past 10 years. As you can see, the average price for lamb has gradually increased to the recent record high of \$175 - \$185 per 100 lb. for a market lamb.

## **Alberta Livestock Markets** Monthly Average Price (liveweight)



*Source: Canfax; SunGold Meats; Economics and Competitiveness Division ARD*

If we were to consider the past five year average of these prices, it would be very roughly \$135 per 100 lb. This means a market lamb weighing 110 lb. would sell for about \$150. Likewise, a feeder lamb weighing 80 lb. would sell for about \$110. (Also see SunGold and Ontario lamb tables in the Business of Sheep Tools – Excel document which is attached).

The tables below and on the next page show the income and percentage of sales in each category for the top, average, and bottom flocks on the Alberta Lamb Traceability Project in 2010. As you would expect, finished lambs made up the majority of sales but selling feeder lambs was also very important for many flocks.

Total Income = \$51,794.91 (LTP average flock income)

Income as % total	LTP – 2010 Alberta Flock Average Income %		
	Top	Ave Percent	Bottom
Market lambs	75.39 %	69.6 %	71.66 %
Feeder lambs	10.17 %	12.65 %	15.82 %
Replacement lambs	3.69 %	4.55 %	1.65 %
Cull animals	5.48 %	5.56 %	5.90 %
Breeding ewes/rams	2.78 %	4.03 %	2.22 %
Wool & other	0.68 %	2.01 %	1.11 %
Direct to consumer	1.82 %	1.57 %	1.64 %

Income – amount received / animal	LTP – 2010 Alberta Flock Average Prices Received		
	Top	Average	Bottom
Market lambs	\$160.80	\$149.66	\$143.31
Feeder lambs	\$125.87	\$114.93	\$122.02
Replacement lambs	\$174.91	\$162.56	\$155.81
Cull animals	\$104.05	\$87.96	\$69.70
Breeding ewes/rams	\$526.82	\$440.18	\$130.10
Wool & other per ewe	\$1.45	\$1.66	\$1.99
Direct to consumer	\$172.61	\$203.84	\$154.56
<b>Income per lamb sold</b>	<b>\$172.04</b>	<b>\$163.91</b>	<b>\$153.64</b>
<b>Average price / lamb</b>	<b>\$156.67</b>	<b>\$144.91</b>	<b>\$139.45</b>
<b>Income of Production</b>	<b>\$185.90</b>	<b>\$185.75</b>	<b>\$176.85</b>

Income per lamb sold (total sheep income/lambs sold) was \$8.00 more for top flocks over average flocks and \$18.00 more than bottom flocks. The average price received for lambs was \$11.00 more for top flocks compared to average flocks, and \$16.00 more than bottom flocks. Income of Production (IOP) was the same for average and top flocks but was about \$11.00 lower for bottom flocks. Income of production takes into account total sheep enterprise income plus any changes to the value of the operation from the start of the year to the end of the year, divided by the number of lambs sold.

It is interesting to note that the differences in income per lamb sold is just \$18.00 between top and bottom flocks but the differences in expenses per lamb sold was \$133.00! Approximately 50% of the difference can be accounted for by productivity differences, 17% by income, and other 33% by cost controls between the top and bottom flocks.

## Investment

Investment is the third biggest single cost for most sheep operations. It makes up about 7% of the average farm's expenses. When you are setting up it really helps to have some guidelines on what you can spend. This table below shows investment differences between top performing flocks compared to average and bottom performing flocks on the LTP program in 2010.

Investment – amount per animal	LTP – 2010 Alberta Flock Average Investment		
	Top	Average	Bottom
Rams	\$478	\$362	\$322
Ewes	\$216	\$218	\$233
Equipment Investment*	\$93	\$107	\$123
Buildings and Infrastructure*	\$61	\$181	\$164

\* *Investment per lamb sold*

As you can see, the producers with top performing flocks valued their rams at over \$150 more than bottom flocks. This means top producers spent significantly more on their rams. Clearly, buying good rams is something producers may want to consider as a best practice.

Interestingly, the same top producers valued their ewes slightly lower than bottom producing flocks. This difference in ewe values, however, was quite small and may not even be statistically significant.

The producers with top performing flocks spent significantly less on equipment and buildings per lamb sold compared to those with average and bottom flocks. In the table above a top flock producer who sells 1,000 lambs would spend \$93/lamb sold on equipment for a total equipment investment of \$93,000. A bottom flock producer who sells 1,000 lambs would spend \$164/lamb sold on equipment for a total equipment investment of \$164,000. This higher investment results in higher costs from depreciation for the bottom flocks.

Equipment costs for top flocks were \$30/lamb sold less than bottom flocks and building and infrastructure costs for top flocks were about \$100/lamb sold less than bottom flocks.

**Please note:** *This does not mean that you should not invest in your operation. What this suggests is that it is important to spend in proportion to how many lambs you sell. It is also worthwhile to note that while top performing farms spent relatively little, there was quite a range in money spent between different farms.*

The flock models created under the LTP project over a two year period suggest an appropriate limit on how much to spend would be approximately \$100/lamb sold for equipment plus \$100 for buildings and infrastructure. Spending more on buildings and infrastructure is safer since the depreciation and upkeep is generally lower on these items compared to equipment. Investment can be higher if your farm model will earn a higher income than the average sheep farm and/or you have a way of lowering some of your other costs.

## Financial Projections

Developing financial projections is required when you are applying for business loans. They are also great tools when you are expanding your business, and for general management. The key to developing financial projections, as in other areas of management, is to break the job down into manageably sized pieces.

The next sections of the module will refer to tables contained in the Business of Sheep Tools – Excel document which is attached.

### Investment: Buildings and Equipment

The easiest way to project your sheep enterprise investment is to make a list of the “stuff” that will make up your operation. You will need to make one list for each year of your projection. Banks generally require a three year projection.

In this example, we have a list of tools and equipment. The projection includes the item, its market value, the percent used for the sheep enterprise, and the total amount.

Equipment	Market Value	Percent Sheep	Total
Tractor	\$10,000	50%	\$5,000
Truck (pickup)	\$20,000	25%	\$5,000
Stock Trailer	\$7,000	100%	\$7,000
Feed Mixer	\$8,000	75%	\$6,000
Auto-sorter/scale	\$20,000	100%	\$20,000
Small tools	\$12,000	25%	\$3,000
Other sheep equipment	\$4,000	100%	\$4,000
<b>Total Cost</b>	NA	NA	<b>\$50,000</b>

**Note:** If you are developing a financial projection for your entire farm or for a bank loan then you would not use the “percent sheep” section of this table. The percent sheep is used when you are developing sheep enterprise specific financial statements.

Market value is simply the fair market value for the item you are listing, i.e., what it would sell for if auctioned. If you just bought the item you can use the actual amount you paid for it.

It is a good idea to categorize your lists based on groups of items that have similar depreciation rates. For example, you can group together tools and equipment, buildings and infrastructure, and electronic/office equipment.

## Investment: Animals

The table below helps you calculate your flock growth, income, and expenses.

Sheep Flow Chart			
Year 1	Ewes	Rams	Lambs
<b>Inventory</b>	400	18	0
Purchases	0	4	20
Births	NA	NA	720
Transfers	80	2	82
Deaths	20	4	86
Sales	60	2	552
<b>Closing Inventory</b>	400	18	0

**Note:** There is an active chart in the *Business of Sheep Tools – Sheep Flow*, Excel document. Click the paper clip in the upper left corner of this document screen and open the attachment. Navigate to the *Sheep Flow* worksheet.

Opening inventory lists the number of ewes, rams, and lambs that you owned on January 1. Purchases are what you intend to purchase this year, births are how many lambs you expect will be born, and transfers are the number of lambs taken from births that you intend to put back into your flock as breeding stock. Deaths are how many animals you expect will die, and sales will be how many animals you expect to sell.

To help you make these projections, use the guidelines given earlier in this Module for the top, average, and bottom performing flocks and/or your knowledge and/or experience with the particular breed and management system you are considering. You will need one table for each year of your projection.

## Balance Sheet

Once you have listed the “stuff” that makes up the operation, including your animals, you will be able to project your balance sheet. This will help you to figure out how much money you will need to invest for each year of the projection, and/or how much of a bank loan you will need.

<b>Sheep Enterprise Balance Sheet - December 31</b>	
<b>Assets</b>	Year 1 Amount
Cash & receivables	\$12,000
Animals (sheep & guardians)	\$109,000
Sheep equipment	\$53,000
Barns & Infrastructure	\$50,000
Other	\$6,000
<b>Total Assets</b>	<b>\$230,000</b>
<b>Liabilities</b>	Year 1 Amount
Operating Loan	\$7,500
Equipment Loan	50,000
Other long-term loan	\$40,000
Accounts payable	\$2,500
<b>Total Liabilities</b>	<b>\$100,000</b>
Owners Equity	\$130,000
<b>Total Liabilities + Equity</b>	<b>\$230,000</b>

**Note:** *There is an active chart in the Business of Sheep Tools – Balance, Excel document. Click the paper clip in the upper left corner of this document screen and open the attachment. Navigate to the Balance worksheet.*

In this example:

- Cash and Receivables is what you have on-hand at the start of the year. In this example we had \$12,000 in cash and receivables on December 31.
- Animals is the value of your flock and guard dogs. The Sheep Flow Chart will tell you how many animals you will have for each year.
- Sheep Equipment and Barns and Infrastructure should be the value to the sheep enterprise you calculated earlier.
- Operating Loans are used to balance the day to day cash flow of the business.
- Equipment and Other Loans will be used if necessary to help buy animals, equipment, infrastructure, and/or computers/electronic equipment.
- Accounts Payable is short-term debt owed to creditors (e.g., utility companies).
- Owner’s Equity is your own investment into the operation.

## Income Projection

This table lists all the categories of your sales. You can use your sheep flow chart projection to figure out how many animals you have to sell. You can then use the income averages we talked about earlier to estimate how much you will get for your lambs.

Sheep Enterprise Income			
Description	Number Sold	Amount/head	Total
Market lamb sales	472	\$160.00	\$75,520.00
Feeder lamb sales	52	\$110.00	\$5,720.00
Direct to consumer lamb sales	10	\$200.00	\$2,000.00
Replacement ram-lamb sales	0	\$0.00	\$0.00
Replacement ewe-lamb sales	18	\$250.00	\$4,500.00
Breeding ewe sales	0	\$0.00	\$0.00
Breeding ram sales	2	\$450.00	\$900.00
Cull ewe sales	60	\$90.00	\$5,400.00
Cull ram sales	2	\$80.00	\$160.00
Wool sales			\$1,600.00
Other sheep revenue			\$0.00
<b>Total Income</b>			<b>\$95,800.00</b>

**Note:** There is an active chart in the *Business of Sheep Tools – Income, Excel document*. Click the paper clip in the upper left corner of this document screen and open the attachment. Navigate to the *Income worksheet*.

For example:

- Market lambs – 110 lb. would sell for about \$150 to \$160.
- Feeder lambs – 80 lb. lambs would sell for about \$110.
- Direct to consumer (variable) – Consider \$200 plus cost of processing and any delivery changes as needed.
- Replacements (variable) – Consider at least \$250/lamb.
- Breeding ewes and rams (variable) – Consider at least \$250/ewe. We used \$450 in this example.
- Cull ewes and rams (variable) – Recent prices suggest \$80 to \$90/each.
- Wool (negligible) – Estimate \$4.00/ewe based on today's market.
- Other – When projecting your cash flow you would include bank loans and owner's equity investments here. If you are figuring out cost of production you would just leave bank loans and owner's equity on the balance sheet.



## Cash-flow Projection

Completing a cash-flow projection will now be a relatively easy task because we have the background information we need.

Sheep Enterprise Cash Flow					
Month	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Total
Market lamb sales	\$0	\$0	\$15,520	\$60,000	\$75,520
Feeder lamb sales	\$0	\$0	\$0	\$5,720	\$5,720
Direct to consumer sales	\$0	\$0	\$1,000	\$1,000	\$2,000
Breeding lamb sales	\$0	\$0	\$3,000	\$1,500	\$4,500
Breeding ewe/ram sales	\$0	\$0	\$0	\$900	\$900
Cull Sales	\$2,000	\$3,560	\$0	\$0	\$5,560
Other sheep income	\$0	\$1,600	\$0	\$0	\$1,600
Loan(s) & equity investment	\$0	\$0	\$0	\$0	\$0
<b>Total Income (1)</b>	<b>\$2,000</b>	<b>\$5,160</b>	<b>\$19,520</b>	<b>\$69,120</b>	<b>\$95,800</b>
Feed & mineral	\$0	\$0	\$0	\$20,000	\$20,000
Grazing	\$0	\$0	\$7,700	\$7,700	\$15,400
Veterinary & health	\$188	\$1,000	\$500	\$200	\$1,888
Sheep supplies	\$500	\$1,000	\$1,000	\$332	\$2,832
Small tools & shop	\$0	\$416	\$1,000	\$0	\$1,416
Repairs & Main. Bldg.	\$0	\$0	\$1,133	\$0	\$1,133
Repairs & Main. Equip.	\$699	\$0	\$0	\$1,000	\$1,699
Fuel & oil	\$526	\$250	\$500	\$2,500	\$3,776
Loan payments	\$0	\$0	\$0	\$0	\$0
Owners salary	\$0	\$0	\$5,000	\$25,000	\$30,000
Other labour	\$1,200	\$2,400	\$0	\$0	\$3,600
Animal purchases	\$0	\$0	\$2,000	\$2,000	\$4,000
Utilities & insurance	\$400	\$400	\$216	\$400	\$1,416
Marketing costs	\$0	\$0	\$0	\$0	\$0
Office expenses	\$200	\$100	\$100	\$100	\$500
Other	\$0	\$0	\$0	\$0	\$0
Depreciation	\$0	\$0	\$0	\$7,080	\$7,080
Start-up costs	\$0	\$0	\$0	\$0	\$0
<b>Total Expenses (2)</b>	<b>\$3,713</b>	<b>\$5,566</b>	<b>\$19,149</b>	<b>\$66,312</b>	<b>\$94,740</b>
<b>CASH FLOW (1-2)</b>	<b>-\$1,713</b>	<b>-\$406</b>	<b>\$371</b>	<b>\$2,808</b>	<b>\$1,060</b>

**Note:** There is an active chart in the Business of Sheep Tools – Cash Flow, Excel document. Click the paper clip in the upper left corner of this document screen and open the attachment. Navigate to the Cash Flow worksheet.

Here are the steps:

1. Complete the Sheep Flow Chart and Income Statement.
2. Next, figure out which quarters the money will be received and enter accordingly. The spread sheet will automatically add up the total.
3. To figure out expenses, producers with established flocks can use information from their previous year's set of books as a guide. Otherwise, you can use information from the expenses per lamb sold tables discussed earlier in the module. When you calculate your projection, you can decide if you will be able to keep the budget targets you choose, based on your experience and history, and using the top, average and bottom performance guidelines.
4. Equipment depreciation – A good estimate would be total sheep value of equipment times 8%.
5. Barns and infrastructure depreciation – Estimate total sheep value times 3%.

**Note:** Revenue Canada depreciation rates are not recommended when you are doing COP. You want your depreciation rate to be as close as possible to reality.

# Financing Your Operation

## How to Get Money

There are three ways to get money for your business:

- Debt financing – This is otherwise known as a loan.
- Equity financing – This is when you sell part of your business to someone who becomes a part-owner.
- Grants – These are sometimes made available by the Alberta or Canadian governments to encourage specific things. The 2010 Alberta Sheep Electronic Tag Incentive Program and the RFID Technology Assistance Program are examples of this.

The worst mistake that business owners commonly make is to spend all of their own money first, and then go looking for a loan or a grant once they run out.

In order to get a loan you need to have some of your own money to contribute – usually at least 25%. The same goes for grants, but typically you need 50% of your own money for grants.

**Tip:** *Plan your operation's growth and your financial needs sooner rather than later so that you are not caught short.*

## What Lenders Want

Banks want the same things that you would want if you were to lend someone your own money. These things fall in to five categories called the “Five Cs of Lending,” The **red flag** examples are some of the things that lenders will look out for in loan applications.

**Character** is your combination of credit history, training, work and business experience, and your business management team. **Red flags**—you have a trail of unpaid bills, have moved around a lot, and don't have any experience or training in the business you want to get into.

**Capacity** is your ability to repay based on the cash flow of your business and/or household income. **Red flag**—your business and/or household income is not enough to make the loan payments.

**Conditions** refer to the kind of industry that you are in and the market conditions of that industry. **Red flags**—your business is in a declining industry due to issues around technological change, changing consumer habits, regulatory or health and safety issues, competition from other countries, or issues around supply, transportation, etc.

**Capital** is your personal and corporate net worth. **Red flag**—you have no savings or money of your own to put into the business.

**Collateral** means the security (land, buildings, or equipment) that you are willing to give to the lender if you cannot repay your loan. Lenders usually want to see at least a 1.25:1 ratio of the value of the security compared to the value of the loan. **Red flag**—you have no assets to put up as security.

## Where to Go for a Loan

Two farm lenders that you will probably be dealing with are especially important:

### 1. Agriculture Financial Services Corporation (AFSC)

AFSC is a provincial crown corporation with a private sector Board of Directors that provides farmers, agribusinesses and other small businesses with loans, crop insurance and farm income disaster assistance.

AFSC has provided Alberta farmers with hail insurance for over 60 years, and has grown into a diverse Corporation with several core businesses: crop insurance, farm loans, commercial loans and farm income disaster assistance. Services include:

- Loans for land, equipment, buildings, improvements, livestock, etc.
- Crop insurance
- Income disaster assistance (AgriStability)

#### Application Requirements

The things that AFSC will want are listed below. All forms and applications are on the internet at the address provided.

It will be much easier to complete the AFSC forms if you have completed your business plan and financial projections beforehand. Please see the Sample Business Plan and financial projection forms in the Business of Sheep Tools - both of which are attached to this document.

- Loan Application form
- Farm Land Appendix
- Personal Resume
- Statement of Assets and Liabilities
- Farm Operating Statement
- Last three years' tax returns (or accountant prepared financial statements)
- Birth certificates (proof of citizenship)
- <http://www.afsc.ca>

### 2. Farm Credit Canada (FCC)

FCC is a Canadian crown corporation, and is Canada's biggest agriculture lender, with an investment portfolio of more than \$22 billion dollars. It provides:

- Financing, insurance, software, learning programs and other business services to producers, agribusinesses and agri-food operations.
- Loans for land, equipment, buildings, improvements, livestock, etc.

#### Application Requirements

Getting a loan through FCC is fairly easy. Agri-dealers work with FCC directly, so if you want a piece of equipment, the loan that you get through your agri-dealer will likely be through FCC.

FCC also has a very simple on-line application process for loans. The application starts with a simple pre-screening tool that takes only a few minutes to complete.

**Note:** *FCC will request detailed information similar to what AFSC requires as the application progresses, so doing your business plan and financial projections will still be a very good idea.*

- Agri-dealers (equipment)
- Simple on-line application pre-screening includes:
  - Contact information
  - Balance Sheet
  - Sources of income
  - Description and request for financing
- <http://www.fcc-fac.ca/en/>

## Data Collection

It is impossible to manage a sheep operation without good data. When you stop to think about what is involved in data collection or what is needed to create an effective Data Collection Action Plan, the result would look fairly similar to our grocery list. We would likely ask ourselves:

- What data do we need to collect?
- What tools will we use to collect the data? (Discussed earlier.)
- What will our process be to collect the data, including figuring out the when, where, and how we will collect it?
- And last, what infrastructure do we need to do the job? This would include thinking about whether or not the pens, chutes, alleyways, and so on, we have are suitable. Are they good enough for our planned process so that we have the physical infrastructure we need to collect the data?

### What Data to Collect?

As far as what data to collect, there are two types of information we need—financial and animal.

The first step is to figure out what information we want to collect. We do not want to waste our time collecting too much information. Everything we do in business should add value to the business. The data we collect will depend on how we will use the data.

One way to figure this out is to back-cast. Back-casting is a simple idea. You think about what you want to do (the end result), then you work back to figure out what this means. What are the activities you need to do and what information do you need to do what you want to do?

For example, maybe one of the things you want to do is identify your best ewes and worst ewes. This would allow you to cull your poor ewes and use the best ones to make replacement ewe lambs.



The first step would be to define what you mean by your best and worst ewes. For example, you may decide that your best ewes give you two or more lambs without causing you any management issues, and perhaps your worst ewes give you fewer than 1.5 lambs over a two year period and/or cause management issues.

The next step would then be to figure out what information you would need to determine this. We would make a list of the information we need to collect, and we would start to figure out where and when we need to collect the information.

So what information do we need?

## Financial Information

Most farms have more than one farming enterprise. Examples of farming enterprises include raising sheep, raising cattle, putting up hay (even if it is just for your own animals), and grain. Each of these activities are separate farming enterprises and should be coded individually in the farm books. This makes it possible to assess how much each enterprise is contributing to the overall farm financial picture.

Historically, most farms kept just one general set of financial records for the farm because it was too difficult to keep separate records for each farming enterprise. Modern computerized book-keeping software, however, now makes it easy to track each farming enterprise separately. As has been mentioned earlier, this is one area that you may want to contract out to a professional, since it is cheap to hire a bookkeeper, it will ensure the job gets done, and it will ensure the job gets done right. Here are the financial and related items that you may want to keep track of.

### General Ledger Information

- Income
  - Lamb sales (market lambs, feeder lambs, breeding ewe and ram lambs)
  - Cull sales (ewes and rams)
  - Breeding ewes and ram sales
  - Wool and other income
- Expenses
  - Feed (forage, grains, supplements, minerals, straw)
  - Veterinary/health supplies
  - Other sheep supplies
  - Small tools
  - Building repair
  - Equipment repair
  - Fuel and oil
  - Short-term interest
  - Owner's drawings
  - Hired labour
  - Contract labour

- Animal purchases (lambs, ewes, rams, other)
- Utilities and insurance
- Long-term interest
- Marketing costs
- Office expenses
- Other expenses

### Balance Sheet Items

- Assets (this is the “stuff” that makes up your sheep operation)
  - Equipment
  - Buildings and Infrastructure
  - Office equipment
- Liabilities (what you owe on the “stuff”)
  - Equipment loans
  - Building and Infrastructure loans
  - Lines of credit
  - Shareholders loans
- Owner’s equity (the difference between the value of your assets and what you owe)

### Labour

Tracking your time, or at the very least estimating your time, yearly is highly recommended. This is the only way to know what your labour costs are and whether or not any of your labour saving strategies are working.

**Note:** *Determining which financial categories to track is really up to you as a producer. The categories outlined above will work well for most operations and are designed to work with the Flock Snapshot to identify your Cost of Production.*

### Flock Information

As has been mentioned earlier, the types of flock and individual animal information that you collect will depend on what you want to do with the data. That said, many operations are interested in collecting information on the following:

- Lambing Barn Information - (Ewes that lambed, how many lambs they had, lamb weight, their sex, ewe lambing difficulty, ewe milking ability, mothering, udder, ID numbers, etc.)
- Weaning Information – Lambs that survived until weaning, their weaning weights, weaning date
- Breeding Information – Ewes bred, to which ram (recommended), ram in/ram out, teaser rams if used, etc.
- Purchase Information – Where animals came from, when they arrived, ID numbers



- Sales Information – Where animals went, when they left the farm, their weight, amount received, ID numbers
- Flock Health – Treatments, vaccinations, injuries, (flock and individual)
- Flock feeding rations, consumption, feed groups, lamb weight gain
- Grazing Data – Number of days / paddock, rate of gain, worming notes, etc.
- Condition score and ewe body weight

## Data Collection Process

Now that we have figured out what information we want to collect and the tools we will use (discussed earlier in the module), the next step is to figure out how we will gather the information. What are the actions, or steps, needed to collect the information?

These actions or steps form the basis of our data collection plan. Your data collection plan will basically be a list of steps, in other words, a “to-do” list. The idea is to choreograph the job so everything runs smoothly. Big companies do this as well (i.e. IKEA, Walmart, UPS).

The action plan should also take into consideration when, where, and how we will collect the data. What data will we collect? How will we work the animals when collecting the data? What pens, chutes, and other infrastructure will be used? We can also include how many people will be needed plus anything else that may be relevant.

Having a written data collection plan really saves time since we know exactly what to do. Another benefit of having these types of plans is that we now have a document that helps a hired person to do the job the way we want it done.

## Infrastructure

Finally, we have to consider if we have the infrastructure we need to do the job. The infrastructure we will use and/or need becomes more clear with experience and when we write out the action steps involved in data collection.

Here is an example of how to look at collecting data when selling market lambs.



## Vision

Sorting market lambs will occur every two weeks starting in September (June lambing) to sort into shipping groups and to identify when lambs will be ready.

## Data Needed

Lamb ID, weight, sale date, destination

## Tools

Farmworks - PSION

## Process

- Move lambs from feeding pen to sorting area.
- Sort lambs. Data collected will include:
  - Health/injury information as needed
  - Weight (so that we can calculate rate of gain to estimate the dates they will be ready)
- Sort out poor-doers (lambs that are gaining less than .25 lb/day):
  - Assess these lambs for health issues;
  - Place in a poor-doer pen;
  - Sell chronic poor-doers into the light lamb market.
- Place other lambs in pens based on anticipated shipping date or period.
- Weigh/sort heavy lamb group 24 hours prior to shipping to confirm shipping group:
  - Place shipping group into a shipping pen;
  - Create a management sales group to track animal class (e.g., market lambs), weight, ID, and enter destination for this group;
  - Remove feed and water from shipping group;
  - Print off shipping record and attach to a completed livestock manifest;
  - Load and ship the lambs.

## Infrastructure

- Lamb feeding pens - three market lamb groups, one poor doer group, one shipping pen
- Weigh/sort handling system (Data collection point)
  - Assembly pen
  - Chute, anti-backup, scale/crate, three way sort
  - Three pens to sort into (ready, light, problem pen)
- Sales pen
- Alleyways – runs to move lambs from feeding pens to handling system to loading area (needed so that animals can be moved to data-collection area)
- Loading chute

In this example our data collection point is the chute/scale system. The necessary infrastructure needed to collect the data will include all infrastructure elements identified. If any of the elements are missing, then the job will most likely not get done because it is too hard. For example, if there are no alleyways connecting the lamb feeding pens to the sorting area it will be too difficult to sort the lambs, so the job will not get done.

To assist you in the decision making process, a full infrastructure module in this series will be available in early 2013.



# Flock Snapshot

The Flock Snapshot is a Cost of Production (COP) tool that was developed under the Alberta Lamb Traceability Pilot Project and was also used in the National RFID project.

The Flock Snapshot is about three years old and has been improved each year by lamb industry stakeholders across Canada. The goal is to develop the Flock Snapshot to be the industry standard COP tool, by collaborating with industry stakeholders across Canada and by making it available as a free downloadable program by late 2012.

The Flock Snapshot is a sheep enterprise specific COP tool. This means that it was designed to tell us only if our sheep enterprise is making money. It cannot tell us if our whole farm is making money. It also cannot tell us if we are making enough to pay our bills. We would need to do a personal cash flow to figure that out.

The idea behind the Flock Snapshot is to combine our sheep enterprise's financial information and our flock information to make sense of this data. It analyzes the information into performance measures such as cost per lamb sold, income per lamb sold, labour cost/lamb, feed cost/lamb, etc.

The Flock Snapshot also creates summary reports to make it easy to compare the operation year to year or against industry benchmarks.

The Flock Snapshot can be opened in either Open Office, which is available on the internet as a free download, or Microsoft Excel. The Flock Snapshot is also currently being programmed to be a free internet-based program (see [www.ablamb.ca](http://www.ablamb.ca) for current status).

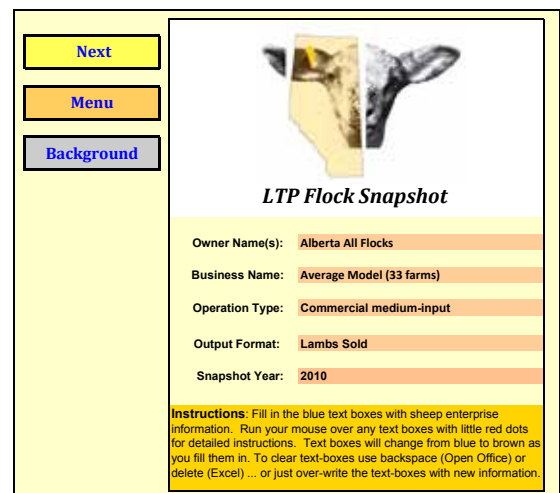
All screens on the Flock Snapshot have drop-down menus that explain how to fill in the required field. For the Flock Snapshot to work correctly, all fields should be filled in to the best of your ability.

## Data Entry

### Welcome Screen (LTP Flock Snapshot)

The opening screen of the Flock Snapshot is the Welcome tab. To enter data, simply select a data-entry field (blue) and type. The field will change from blue to brown once it has been completed. If you make a mistake, just re-enter the information.

**Note:** *There is an active beta version of LTP Flock Snapshot attached to this document. Click the paper clip in the upper left corner of the document screen to open. If you wish to use this model, we suggest that you save it to another location on your computer.*



Next
Menu
Background

**LTP Flock Snapshot**

Owner Name(s): Alberta All Flocks

Business Name: Average Model (33 farms)

Operation Type: Commercial medium-input

Output Format: Lambs Sold

Snapshot Year: 2010

**Instructions:** Fill in the blue text boxes with sheep enterprise information. Run your mouse over any text boxes with little red dots for detailed instructions. Text boxes will change from blue to brown as you fill them in. To clear text-boxes use backspace (Open Office) or delete (Excel) ... or just over-write the text-boxes with new information.

**Owner and Business Names** - Start by entering your name and the name you use for your business. This information is then used in report headings that are created by the Flock Snapshot. If you do not have or use a business name you can simply make one up so that the reports look better.


**Operation Type** - Select the Operation Type field and click your mouse on the arrow that appears on the right to see the drop-down menu. There are six choices. A commercial low input operation would focus on selling lambs for meat, would have lower productivity and lower costs. A seed-stock high input operation would focus on selling breeding stock and would likely have higher productivity and higher costs. Select the operation type that best describes your operation. (Your selection affects the industry benchmarks that the Flock Snapshot suggests for your type of operation.)

**Output Format** - To change this field, select the Output Format field and click your mouse on the right drop-down menu. The options are "lambs sold" or "marketable lambs." The Flock Snapshot has been designed to calculate cost of production and other performance measures, based on cost per lamb sold or cost per marketable lamb. Cost per lamb sold is most useful when comparing mature operations while cost per marketable lamb (lambs born less death loss) is most useful when comparing growing operations.

**Snapshot Year** - To change this field, select the Snapshot Year field and type in the year that is appropriate for the data that you will be entering.

## Farm Data Screen

The Farm Data screen asks for information about the flock and other animals used in the operation. It also asks for the labour hours required to run the operation, and has suggested financial rates for land rental and depreciation. The Flock Snapshot uses the information entered to calculate flock performance and to make summary reports.

<b>Farm Data</b>		<b>2010</b>																																																																																																		
 Next Back Menu	<b>Animals</b>	<table border="1"> <tr> <td><b>Ewes</b></td> <td>Number of ewes at the start of the year</td> <td>278</td> </tr> <tr> <td></td> <td>Ewes that died</td> <td>20</td> </tr> <tr> <td></td> <td>Average value of ewes</td> <td>\$217.76</td> </tr> <tr> <td></td> <td>Number of ewes that should have lambed</td> <td>278</td> </tr> <tr> <td></td> <td>Number of ewes that actually lambed</td> <td>278</td> </tr> <tr> <td></td> <td>Size of mature ewes (lbs)</td> <td>170</td> </tr> <tr> <td><b>Rams</b></td> <td>Number of rams at the start of the year</td> <td>10</td> </tr> <tr> <td></td> <td>Rams that died</td> <td>1</td> </tr> <tr> <td></td> <td>Average value of rams</td> <td>\$362.12</td> </tr> <tr> <td><b>Lambs</b></td> <td>Number of lambs at the start of the year</td> <td>358</td> </tr> <tr> <td></td> <td>Number of lambs born</td> <td>448</td> </tr> <tr> <td></td> <td>Ewe lambs transferred to breeding flock</td> <td>78</td> </tr> <tr> <td></td> <td>Ram lambs transferred to breeding flock</td> <td>2</td> </tr> <tr> <td></td> <td>Lambs that died</td> <td>63</td> </tr> <tr> <td></td> <td>Average value of lambs</td> <td>\$142.28</td> </tr> <tr> <td><b>Guardians</b></td> <td>Number of guardian dogs</td> <td>2</td> </tr> <tr> <td></td> <td>Average value of dogs</td> <td>\$446.84</td> </tr> <tr> <td></td> <td>Number of "other" guardians</td> <td>0</td> </tr> <tr> <td></td> <td>Average value of "other" guardians</td> <td>\$0.00</td> </tr> <tr> <td><b>Other</b></td> <td></td> <td>0 \$0.00</td> </tr> <tr> <td></td> <td></td> <td>0 \$0.00</td> </tr> <tr> <td rowspan="3">           Calculators             Next         </td> <td><b>Labour</b></td> <td> <table border="1"> <tr> <td><b>Number of hours</b></td> <td>Total hours spent doing general farm labour</td> <td>1,132</td> </tr> <tr> <td></td> <td>Total hours spent managing the operation</td> <td>100</td> </tr> <tr> <td><b>Labour rate</b></td> <td>Value of general farm labour per hour</td> <td>\$15.00</td> </tr> <tr> <td></td> <td>Value of management labour per hour</td> <td>\$15.00</td> </tr> </table> </td> </tr> <tr> <td><b>Other data</b></td> <td> <table border="1"> <tr> <td><b>Other rates</b></td> <td>Land rental rate (grazing/acre)</td> <td>\$25.00</td> </tr> <tr> <td></td> <td>Land rental rate (building site/other) per acre</td> <td>\$25.00</td> </tr> <tr> <td></td> <td>Depreciation rate - Farm Equipment (8% base)</td> <td>8%</td> </tr> <tr> <td></td> <td>Depreciation rate - Buildings &amp; Infrastructure (3% base)</td> <td>3%</td> </tr> <tr> <td></td> <td>Depreciation rate - Office &amp; Electronic (30% base)</td> <td>30%</td> </tr> </table> </td> </tr> <tr> <td colspan="3"> <small>Instructions: Fill in the blue text boxes. 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## Animals

### Ewes

**Number of ewes at the start of the year** - This is the number of ewes and ewe lambs on-farm on January 1st. If you had these animals on January 1 you probably kept them to as breeding stock to lamb in the year of the Flock Snapshot. If you are using management software a flock report or a breeding report should give you this number.

**Ewes that died** - This is the number of ewes that died in the year of the Flock Snapshot.

**Average value of ewes** - This is your best estimate of the average value of your breeding ewes and breeding ewe-lambs.

**Number of ewes that should have lambed** - This is the number of ewes that were exposed to a ram and that should have lambed in the year of this Snapshot. (This number is used to calculate lambing percentage.)

**Note:** *Accelerated flocks—count ewes just once, even if they gave birth twice. That way the Flock Snapshot will generate the total productivity of the ewe flock for the year.*

**Number of ewes that actually lambed** - This is the number of ewes that gave birth, whether or not the lambs survived. **Note:** *Accelerated flocks—count ewes just once if they gave birth twice in the year.*

**Size of mature ewes** - This is the average weight of your ewes and breeding ewe-lambs.

### Rams

**Number of rams** - This is the number of rams and ram lambs on-farm on January 1st.

**Rams that died** - This is the number of rams that died in the year of the Flock Snapshot.

**Average value of rams** - This is your best estimate of the average value of your breeding rams and breeding ram-lambs.

### Lambs

**Number of lambs** - This is the number of lambs in inventory on January 1. **Note:** *Breeding ewe lambs (ewe lambs that were kept that were expected to lamb in the calendar year of the Flock Snapshot) should be counted as ewes in the number of ewes at the start of the year.*

**Lambs born** - This is the number of lambs born between January 1 and December 31.

**Ewe lambs transferred** - These are ewe lambs that were just born (Number of lambs born field) that were transferred to the flock as breeding stock to lamb next year.

**Ram lambs transferred** - These are ram lambs that were just born (Number of lambs born field) that were transferred to the flock as breeding stock to breed next year.

**Lambs that died** - This number includes all lambs that died including still-born lambs.

**Average value of lambs** - This is the average value of lambs that remained on-farm at the end of the year. Please fill this in even if you didn't have any lambs left at the end of the year.

## Guardians and Other

**Number and value of guardian dogs** - The value entered should consider the purchase price of the animals, any vaccinations, neutering costs, plus the feed to get animals to working size/age. This estimate should also consider the market price for mature animals.

**Number and value of other guardians** - This is the market value for any other types of guardian animals you may have for your sheep enterprise.

Other animals - This is the value of any other animals used in the sheep enterprise, including herding dogs.

## Labour

**Number of hours** - Labour is the second highest cost in sheep operations next to feed. Many farms do not value their labour, however, so it is often overlooked. Unless the business is a hobby, labour must be taken into account, as it is in all other businesses. We need to know how many **person/hours** go into the operation. The Flock Snapshot allows users to enter two classes of labour, including farm labour, and management labour. Farm labour is for general day to day work such as lambing, feeding, sorting, shipping, etc. Management labour is for management work including training, strategy work, analysis, etc.

A person/hour is the time it takes for one person to do one hour of work. For example, two people working for five hours would equal ten person/hours of work. Calculating labour is something that few managers like to do. Fortunately there is a labour calculating tool in the Flock Snapshot in the "Calculators" tab to help.

The labour calculator in the Flock Snapshot allows you to figure out your labour based on task or by month.

**Note:** *A full time job working 7.5 hours/day 52 weeks/year would be 1,950 hours (37.5 hours/week). Most jobs now give 15 days of holidays (112.5 hours) and there are 12 statutory holidays (90 hours). This would yield a full time equivalent of 1,747.5 hours for a full time job.*

**Labour rate** - The rate per hour worked can be set in the Flock Snapshot. Farm labour should be set at the going rate for general farm work in your region. The pre-set is \$15.00/hour. The value of management should be set at a fair rate for farm management work. The pre-set is \$25.00/hour.

## Other Data





**Rental rates** - The rental rate for grazing and for the building site should reflect the fair market value in your area for this. The preset for both is \$25.00/acre.

**Depreciation rates** - Depreciation rates should reflect the actual average depreciation of equipment and buildings. The presets are 8% for equipment, 3% for infrastructure, and 30% for computer and office equipment.

**Note:** *Revenue Canada rates are not recommended as they are generally higher than actual rates.*

## Equipment & Infrastructure Screen

The Equipment and Infrastructure screen is like a balance sheet in that it lists the “stuff” that is used in the operation. Doing valuation is one of the hardest parts of the Flock Snapshot! The idea is to figure out the real cost to the operation. Revenue Canada depreciation rates do not work as they are simply too crude to be of much help.

<b>Equipment &amp; Infrastructure 2010</b>				
   	<b>Equipment</b>	<b>Description</b>	<b>Market Value</b>	<b>Percent Sheep Use</b>
		Tractor	\$15,000.00	50.00%
		Pickup	\$25,000.00	25.00%
		Stock trailer	\$8,000.00	100.00%
		Bale processor	\$5,000.00	100.00%
		Shearing equipment	\$800.00	100.00%
		Quad	\$7,500.00	25.00%
		Misc. sheep tools	\$4,262.96	100.00%
		0	\$0.00	0.00%
		0	\$0.00	0.00%
	<b>Total Equipment</b>		<b>\$33,687.96</b>	
	<b>Buildings &amp; Infrastructure</b>	<b>Description</b>	<b>Market Value</b>	<b>Percent Sheep Use</b>
		Barns	\$31,500.00	100.00%
		Corrals/Handling	\$14,000.24	100.00%
		Grain storage/bins	\$729.00	100.00%
		Feeders	\$3,500.00	100.00%
		Fences	\$7,500.00	100.00%
		(Add other items as needed)	\$0.00	0.00%
		0	\$0.00	0.00%
		0	\$0.00	0.00%
		0	\$0.00	0.00%
		<b>Total Buildings</b>	<b>\$57,229.24</b>	
	<b>Office &amp; Electronic</b>	<b>Description</b>	<b>Market Value</b>	<b>Percent Sheep Use</b>
		Farmworks & PSION	\$1,882.94	100.00%
		Computer system	\$500.00	100.00%
		0	\$0.00	0.00%
		0	\$0.00	0.00%
		<b>Total Office &amp; Electronic</b>	<b>\$2,382.94</b>	
	<b>Land</b>	<b>Description</b>	<b>Number of Acres</b>	<b>Percent Sheep Use</b>
		Grazing acres	132	100.00%
		Building site area	6	100.00%
<small><b>Instructions:</b> Fill in the blue text boxes. Run your mouse over any text boxes with little red dots for detailed instructions. Text boxes will change from blue to brown as you fill them in. To clear text-boxes use backspace (Open Office) or delete (Excel) ... or just over-write the text-boxes with new information.</small>				

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## Description

**Equipment** - This includes things like tractors, pickup trucks, trailers, feed mixers, tools, auto-drafting equipment etc.

**Buildings and infrastructure** - This area includes buildings, corrals, grain storage, feeders, fences, etc., that are used for the sheep enterprise.

**Office and electronic** - This would include computers, software, and electronic tools such as the PSION used in many RFID systems.

## Market Value

Market value is simply the fair market value for the item. If the item is new, you would enter the amount you paid. If it is used, you would enter the value the item would sell for at auction. The market value of your equipment, buildings and infrastructure, and office equipment are depreciated at the rates entered in the Farm Data tab and this cost is added to the operational costs of the sheep farm.

**Trick:** *All sheep infrastructure that provides value should be included.* How to estimate value for older things is very hard, especially things like fences. Here is a trick you can use. We'll use fences and barns as an example:

1. The program depreciates infrastructure at a default rate of 3% per year or the rate you select (see Fine-tuning Market Value and depreciation below).
2. Figure out your fence's value using this 3% depreciation rate by estimating how much value the fence loses per year.
3. If you think the fence loses \$500/year in value (not counting upkeep since upkeep would be a general ledger item), it would be worth  $\$500/.03 = \$16,667$  today.
4. Likewise, if you think your barn will lose \$2,000 each year (not counting upkeep), then the barn should be valued at  $\$2,000/.03 = \$66,667$ .

Fine-tuning Market Value and depreciation. To fine-tune the way the Flock Snapshot calculates depreciation you can use the following method for setting market value and depreciation rate (Buildings and Infrastructure example):

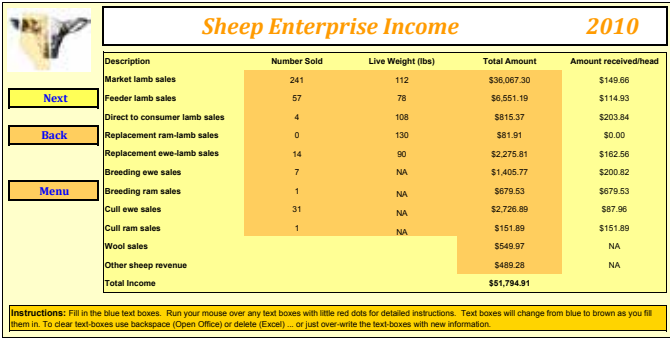
1. Estimate the fair market value of your buildings and other infrastructure. For example, maybe the buildings and other infrastructure you have is worth \$200,000
2. Estimate how many years you will be in the business, e.g., 10 years before you sell the business or otherwise part with these assets.
3. Estimate the future value of your buildings and other infrastructure in 10 years (assuming you maintain them). For example, estimate they will be worth \$150,000 in 10 years
4. This means your projected depreciation will be  $\$200,000 - \$150,000 = \$50,000$
5. This means your projected depreciation rate is  $\$50,000/10 = \$5,000$  per year on average
6. If you take  $\$5,000/\$200,000$  you get a depreciation rate of 2.5%.
7. Enter 2.5% in the FarmData tab for barns and infrastructure as your depreciation rate.

## Percent Sheep Use

The Flock Snapshot asks users to fill in the percent sheep use for items that are shared with other farming enterprises or shared with personal use (e.g., an ATV). This helps to figure out the value of these items to the sheep enterprise. If an item is used 50% of the time for the sheep enterprise, its percent sheep use would be 50%.

## Sheep Enterprise Income Screen

This section of the Flock Snapshot lists sheep enterprise income by category. An enterprise specific bookkeeping system to track animal class and number of animals sold is highly recommended.



Description	Number Sold	Live Weight (lbs)	Total Amount	Amount received/head
Market lamb sales	241	112	\$36,067.30	\$149.66
Feeder lamb sales	57	78	\$6,551.19	\$114.93
Direct to consumer lamb sales	4	108	\$815.37	\$203.84
Replacement ram-lamb sales	0	130	\$81.91	\$0.00
Replacement ewe-lamb sales	14	90	\$2,275.81	\$162.56
Breeding ewe sales	7	NA	\$1,405.77	\$200.82
Breeding ram sales	1	NA	\$679.53	\$679.53
Cull ewe sales	31	NA	\$2,726.89	\$87.96
Cull ram sales	1	NA	\$151.89	\$151.89
Wool sales			\$549.97	NA
Other sheep revenue			\$489.28	NA
<b>Total Income</b>			<b>\$51,784.91</b>	

Instructions: Fill in the blue text boxes. Run your mouse over any text boxes with little red dots for detailed instructions. Text boxes will change from blue to brown as you fill them in. To clear text boxes use backspace (Open Office) or delete (Excel) ... or just over-write the text-boxes with new information.

**Note:** To access an active beta version of LTP Flock Snapshot click the paper clip in the upper left corner of this document screen.

### Number Sold

There are two options for tracking this information:

1. Use a bookkeeping system. Set up your bookkeeping system based on Flock Snapshot categories. For each lamb sale, enter a comment on how many animals were sold. At the end of the year you will need to review your comments to calculate this number.
2. Use flock management software:

Option 1 - Create a management group for each class of animal for each year. Add animals to these groups as you sell them;

Option 2 – If your buyers purchase only one class of animal, track lamb sales by buyer.

### Live Weight

One of the best ways to determine flock and financial performance is by the number of pounds of meat produced. Most producers do not have accurate data so the Flock Snapshot does not rely on this measure. If you want to know your cost/lb. of meat produced please see the “Old Snapshot” tab in the Flock Snapshot.

### Total Amount

This is simply the total amount of sales for each class of animal.

## Expenses Screen

A sheep enterprise specific bookkeeping system is recommended to make filling in the income and expense areas of the Flock Snapshot easier.

If you are setting up a new bookkeeping system consider using the Flock Snapshot categories or making your books compatible with these categories. **Note:** *If you do not have an accurate breakdown of your costs, the Flock Snapshot will still work very well, provided feed, labour, and long-term interest are entered reasonably accurately.*

**Feed** - This includes the cost and/or market value of the feed you used that year for your sheep. Farm produced hay would be valued at the market price for that year.

		<b>Expenses</b>		<b>2010</b>	
Variable Expenses	Feed	Description	Market Value	Percent Sheep	Sheep Value
		Forage (i.e. hay/silage)	\$12,505.91	100%	\$12,505.91
		Energy (i.e. barley)	\$6,000.00	100%	\$6,000.00
		Protein (i.e. canola/soybean)	\$3,500.00	100%	\$3,500.00
		Minerals	\$700.00	100%	\$700.00
		Straw	\$1,500.00	100%	\$1,500.00
		Other	\$300.00	100%	\$300.00
		Grazing			\$3,300.00
		<b>Total Feed Cost</b>			<b>\$27,805.91</b>
		Sheep Expenses	Description	Amount	Percent Sheep
Veterinary / health	\$1,726.72		100%	\$1,726.72	
Other sheep supplies	\$3,256.07		100%	\$3,256.07	
<b>Total</b>			<b>\$4,982.79</b>		
Sheep "Farm" Costs	Description	Amount	Percent Sheep	Sheep Value	
	Small tools	\$1,243.82	100%	\$1,243.82	
	Building repair	\$531.58	100%	\$531.58	
	Equipment repair	\$1,331.58	100%	\$1,331.58	
	Fuel & oil	\$2,389.68	100%	\$2,389.68	
	Short-term interest	\$689.67	100%	\$689.67	
<b>Total</b>			<b>\$6,166.33</b>		
Labour	Description	Amount	Percent Sheep	Sheep Value	
	Owners drawings	\$2,275.19	100%	\$2,275.19	
	Hired	\$970.34	100%	\$970.34	
	Contract	\$1,108.71	100%	\$1,108.71	
	Unpaid labour			\$15,234.47	
<b>Total</b>			<b>\$19,588.71</b>		
Animal Purchases	Description	Number	Total amount	Amount each	
	Lambs	8	\$1,120.00	\$140.00	
	Ewes	12	\$2,210.10	\$184.09	
	Rams	2	\$734.92	\$367.46	
	Other	0	\$23.51	\$0.00	
<b>Total</b>		<b>\$4,088.12</b>			
Fixed Expenses	Overhead Costs	Description	Amount	Percent Sheep	Sheep Value
		Utilities & Insurance	\$2,273.01	100%	\$2,273.01
		Long-term interest	\$435.28	100%	\$435.28
		Building site cost			\$150.00
		Depreciation			\$5,126.80
	<b>Total</b>			<b>\$7,965.09</b>	
	Other Fixed Costs	Description	Amount	Percent Sheep	Sheep Value
		Marketing	\$79.41	100%	\$79.41
		Office expenses	\$683.71	100%	\$683.71
		Other expenses	\$393.20	100%	\$393.20
<b>Total</b>			<b>\$1,156.32</b>		
Summary	Total Variable Costs			\$62,661.86	
	Total Fixed Costs			\$9,141.41	
	<b>Total Expenses</b>			<b>\$71,803.27</b>	
	Income minus expenses			-\$20,008.38	

**Note:** To access an active beta version of LTP Flock Snapshot click the paper clip in the upper left corner of the document screen.

**Grazing** - The cost for grazing is automatically calculated based on acres used for grazing (Equipment tab) times the rental cost for grazing (FarmData tab).

**Veterinary/Health** - Veterinary costs, health supplies, vaccination costs, etc.

**Other sheep supplies** - This is a general category for sheep expenses and supplies.

**Small tools** - Small tools used for the sheep operation. **Note:** Large tools should be added on the equipment tab so that they can be depreciated over a number of years.

**Building repair** - Repairs to buildings and other sheep infrastructure

**Equipment repair** - Repairs to equipment used in the sheep enterprise.

**Fuel and oil** - Fuel and oil used in the sheep enterprise

**Short-term interest** - This is interest on lines of credit or other short-term credit.

**Owner's drawings** - This is the amount the owner withdrew from the operation as wages.



**Hired help** - This is how much you paid for hired help, but not for contractors. Note: Hired help time (person-hours) should be included in the sheep operation hours.

**Contract help** - This is for contract workers such as sheep shearers. Note: Contract work hours should not be included in the sheep operation hours.

**Unpaid labour** - This number is calculated based on total hours worked at the average labour rate that you entered for management and farm labour in the FarmData tab.

**Animal purchases** - This is the number of lambs, ewes, and rams purchased and their value. Note: Purchased lambs that gave birth in the year of the Snapshot should be entered as "ewes."

**Utilities and insurance** - These are sheep enterprise related utilities and insurance costs.

**Long-term interest** - This field is for long-term interest for sheep enterprise infrastructure, equipment, and office equipment only. Interest paid on land should not be included since land is rented back to the sheep operation.

**Building site cost** - This field is calculated based on rental rates entered in the FarmData tab and the number of acres entered in the Equipment tab.

**Depreciation** - This cost is calculated based on the depreciation rates entered in the FarmData tab and the value of assets listed in the Assets tab.

**Marketing** - This category is mainly for seed-stock breeders used to promote sales.

**Office expenses** - This includes office supplies and other office costs.

**Other expenses** - This is a general field for items that do not fit elsewhere. For example, you could put dog food in this category.

**Total variable costs** - This is the total of feed, sheep expenses, farm costs, labour, and animal purchases.

**Total fixed costs** - This is the total of the Overhead Cost and Other Fixed Costs categories.

**Total expenses** - This is the total of all sheep enterprise expenses listed on the Flock Snapshot including depreciation, unpaid labour, etc.

**Income minus expenses** - This is total income minus expenses.

## Flock Targets Screen

One of the key things about the Flock Snapshot is that it allows us to set goals or targets for our operation. This feature allows users to see how meeting these targets would affect their income.

For example, the targets area will tell you how much more money you would make if you were to increase your productivity, lower your death loss, or both. The targets feature is designed so that

you can play with your numbers to see what matters in your operation and how to make more money.

		Flock Targets		2010	
Performance		Your Farm Actual	Your Farm Targets	Commercial medium-input Benchmarks	
Ewes	Lamb drop rate	161.15%	150%	100.00%	
	Conception rate	100.00%	95.00%	95.00%	
	Cull rate (does not include death rate)	11.59%	12.00%	15%	
	Ewe death rate	6.80%	5.00%	0%	
Rams		Ram death rate	0.52%	4.00%	4.00%
Lamb		Lamb death rate	7.74%	10.00%	11%
Income					
Prices	Market lamb price	\$149.66	\$160.00	\$165.00	
	Feeder lamb price	\$114.93	\$120.00	\$120.00	
	Direct to consumer lamb price	\$203.84	\$200.00	\$200.00	
	Replacement ram-lamb sale price	\$0.00	\$325.00	\$225.00	
	Replacement ewe-lamb sale price	\$162.56	\$250.00	\$225.00	
	Breeding ewe sale price	\$200.82	\$250.00	\$250.00	
	Breeding ram sale price	\$879.53	\$600.00	\$775.00	
	Cull ewe sale price	\$87.86	\$90.00	\$80.00	
	Cull ram sale price	\$151.89	\$90.00	\$80.00	
	Total income (calculated)		\$51,794.91	\$51,320.44	\$59,616.86
Costs					
Feed Costs	Cost to feed each lamb	\$30.56	\$32.00	\$32.50	
	Cost to feed each ewe	\$50.83	\$55.00	\$56.00	
	Total Feed Cost (calculated)	\$27,806	\$30,808	\$32,106	
Labour	Total Operation person/hours	1,232	1,100	1,082	
Other Costs	Total "other costs"	\$20,380.96	\$15,000.00	\$14,820.38	
Equipment	Equipment investment	\$33,687.96	\$31,000.00	\$30,933.40	
	Barns & Infrastructure investment	\$57,229.24	\$55,000.00	\$31,900.16	
	Office & Electronic	\$2,363.84	\$2,225.00	\$3,673.38	
Estimated hourly return		\$4.36	\$15.56	\$17.28	

**Note:** To access an active beta version of LTP Flock Snapshot click the paper clip in the upper left corner of the document screen.

The benchmarks area on this page offers guidelines for you based on the flock type that you entered in the Welcome screen. The benchmarks are based largely on the data and models discussed earlier in the Industry Benchmarks section.

**Lamb drop rate** - This is number of lambs born dead or alive divided by the number of ewes that actually lambled whether or not the lambs survived.

**Conception rate** - This is the number of ewes that lambled divided by the number exposed.

**Cull rate** - This is the rate at which you replace your ewes. It does not include death rate or flock growth.

**Death rates** - This is the total number of deaths divided by the number of animals of each type.

**Prices** - These are the average prices for each animal type.

**Cost to feed each ewe and lamb** - This is a rough approximation of the cost to feed a ewe and lamb. The value is not accurate when there are large differences between opening and closing inventories and/or when large numbers of ewes and/or lambs were purchased during the year.

**Total feed cost** - This is the operation's feed cost as reported under expenses.

**Total operation person/hours** - This is the total number of person hours invested in the sheep operation in the year of the Flock Snapshot.

**Total other costs** - Other costs includes everything except feed, labour, and depreciation.

**Equipment investment** - This is the sheep enterprise value of all tools and equipment used in the operation.

**Barns and infrastructure investment** - This is the sheep enterprise value of buildings and infrastructure used in the operation.

**Office and electronic investment** - This is the sheep enterprise value of office and electronic equipment used in the operation.


**Estimated hourly return** - This is the estimated hourly return for each person/hour based on the information entered.

## Analysis

### Flock Snapshot Screen

The picture below is showing a summary report called the "Flock Snapshot."

The report calculates key flock performance measures such as lambing rate, income per lamb, cost of production etc., and compares them to farm-set goals or targets.

<i>Flock Snapshot</i>		<i>2010</i>	
			
Owner Name(s):	Alberta All Flocks		
Business Name:	Average Model (33 farms)		
Operation Type:	Commercial medium-input		
<b>Farm Summary</b>			
Average number of ewes:	294		
Lambs sold:	316		
Marketable lambs:	385		
Size of operation (acres):	138		
Operation growth :	12%		
<b>Performance Evaluation</b>			
Performance	Your Farm	Target	Alerts
Lambing rate	161%	181%	
Lamb mortality	7.74%	10.00%	
Marketable Lambs	149%	162%	
<b>Income</b>			
Income per lamb sold	\$163.91	\$175.41	
Average price per lamb sold	\$144.91	\$157.28	
Income of Production / lamb sold	\$185.75	\$195.16	
<b>Cost of Production (COP)</b>			
Feed per lamb sold	\$87.99	\$88.13	
Labour per lamb sold	\$58.48	\$47.20	
All other costs per lamb sold	\$80.75	\$58.06	
Cost of Production per lamb sold	\$227.23	\$193.39	
<b>Profitability</b>			
Profit per lamb sold	\$0.00	\$5.00	
ROI	0.00%	2.00%	
Labour return / hr	\$4.36	\$15.56	
Financial return	\$5,375.24	\$17,118.06	

**Note:** To access an active beta version of LTP Flock Snapshot click the paper clip in the upper left corner of the document screen.

Let's take a look at what the performance measures mean.

**Lambing** - This is lambs born divided by ewes exposed. For additional detail, the Targets tab breaks down lambing rate into drop rate (lamb born per ewe that lambed), and conception rate (number of ewes that lambed versus ewes bred).

**Lamb mortality** - This is the number of lambs that died divided by the number of lambs on farm.

**Marketable lambs** - This is the number of lambs born minus lambs that died from the birth group, divided by the number of ewes exposed.

**Income per lamb** - This is total income divided by the number of lambs sold or marketable (depending on which setting was chosen in the Welcome tab).

**Average price per lamb sold** - This is the average price received for market lambs, feeder lambs, direct to consumer lambs, and lambs sold as breeding stock.

**Income of production** - Income of Production is the sum of the total income plus the difference between the value of closing inventory and the opening animal inventory, all of which is divided by the number of lambs.

**Feed per lamb** - This is total sheep feed costs divided by the number of lambs (sold or marketable).

**Labour per lamb** - This is the number of hours you worked divided by the number of lambs times your average farm labour rate. Farm labour rate is set in the Farm Data tab.

**Other costs per lamb** - This is all other costs divided by the number of lambs (sold or marketable).

**Cost of production** - This is total Cost of Production, including feed, labour, plus all other costs including depreciation (but not return on investment), divided by the number of lambs.

**Profit per lamb** - Profit is calculated as Income of Production (IOP) minus Cost of Production (COP). The return will only be greater than \$0.00 once IOP is higher than COP.

**ROI (Return on Investment)** - ROI is the return to the operation (profit) expressed as a percentage. The way the Flock Snapshot calculates this may be a little different from what you are used to. The Flock Snapshot does not track how much of the investment is the owner's (owner's equity) or how much of the investment is the bank's (loans). For this reason we need to use a slightly different formula.

- The formula used for ROI is profit + long term interest divided by total investment.
  - The advantage of this method is that it allows us to see how well the operation is performing regardless of who owns the "stuff" that makes up the business.
  - This means we can fairly compare our operation's ROI year to year and/or against industry benchmarks.
- Total investment includes the value of your animals, equipment, barns and infrastructure and office equipment.
- This figure will be \$0.00 until the operation is able to pay for its labour costs and return a profit.

**Labour return/hour** - This is value of production divided by the number of hours worked.

## Flock Report Screen

The picture on this screen is the Flock Report. This report provides producers with a more detailed summary of their operation's animal and financial status.

Flock Report		2010					
Owner Name(s):	Alberta All Flocks						
Business Name:	Average Model (33 farms)						
Operation Type:	Commercial medium-input						
Sheep Flow Chart		2010					
Animals	January 1 Inventory	Purchases	Births	Lamb Transfers	Deaths	Sales	December 31 Inventory
Ewes	278	12	NA	78	20	38	310
Rams	10	2	NA	2	1	2	11
Lambs	358	8	448	80	63	316	355
Flock Performance		2010					
Ewes	Number	Rate	Target rate				
Lambing	278	161.15%	180.50%				
Conception	278	100.00%	95.00%				
Culling	31	11.15%	12.00%				
Replacement	51	18.35%	17.00%				
Death	20	6.80%	5.00%				
Lambs	Number	Rate	Target				
Lambs born	448	161.15%	180.50%				
Marketed	-42	-15.11%	8.85%				
Marketable	385	148.68%	162.45%				
Death	63	7.74%	10.00%				
Rams	Number	Rate	Target				
Replacement	2	19.05%	13.52%				
Death	1	9.52%	4.00%				
Financial Report		2010					
Analysis	Amount	Amount per ewe	Amount per lamb sold				
Gross Income	\$51,794.91	\$176.17	\$163.91				
Gross Expenses	\$71,803.27	\$244.23	\$227.23				
Net Margin	<b>-\$13,104.76</b>	<b>-\$44.57</b>	<b>-\$41.47</b>				
Net Margin without labour	<b>\$5,375.24</b>	<b>\$18.28</b>	<b>\$17.01</b>				
Investment	\$216,192.14	\$735.35	\$684.15				

**Note:** To access an active beta version of LTP Flock Snapshot click the paper clip in the upper left corner of the document screen.

It includes:

**Sheep Flow Chart** - This area provides an overview of the animal flow over the course of the year.

**Flock Performance** – The Flock Performance report gives the number of animals, the performance rate and the target rate for the flock.

- Ewes – The ewe section includes:
  - Lambing – the number of ewes that were exposed to lamb.
  - Conception - the number of ewes that conceived.
  - Culling - the number culled
  - Replacement - the number of ewes replaced.
  - Death – the number of ewes that died.

- Lambs – The lamb section includes:
  - Lambs born to the ewes that lambed.
  - New Marketed – This is the number of new-crop lambs that were marketed.
  - Marketable – This is lambs born less total lamb death loss
  - Death – this is the number of lambs that died
- Rams – The ram section includes:
  - Replacement – the number of rams that were replaced.
  - Death – the number of rams that died.

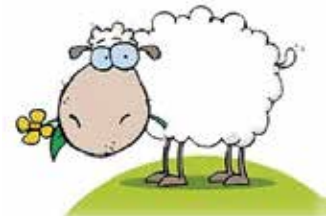
## Financial Report

- Gross Income – This is total sheep enterprise income.
- Gross Expenses – This is total sheep enterprise expenses including depreciation and labour.
- Net Margin – Net Margin includes value of production. This includes profit plus the change in the value of assets from the start of the year to the end of the year (depreciation and the cost of labour is included in this figure).
- Net Margin w/o Labour – This is how much the sheep enterprise earned without counting labour as a cost.
- Investment – This is the total investment in the sheep operation, including animals, equipment, buildings, office, etc.

## Action Planning

An effective Action Plan needs four things. We need to:

1. Be clear about “what needs to be addressed;”
2. Know what the root cause(s) are for the issues that need to be addressed;
3. Select appropriate actions to deal with these root cause(s), and;
4. List the action steps required to achieve these actions.



### What Needs to be Addressed?

When all data has been entered into the Flock Snapshot and you have set reasonable Targets, the Flock Snapshot “dashboard” will show you by colour which areas of the operation may have issues that need to be addressed. This can include ewe productivity, feeding, labour, or other issues. The Targets screen and Flock Report also give information that can help you to figure this out.

**Note:** *Increasing productivity (defined as increasing lamb drop rate, ewe conception rate, and reducing lamb death loss) will lower cost/lambs sold in every category so this is generally the number one thing to address if this is an issue. The next items of priority would be feed and labour issues.*

## Root Causes

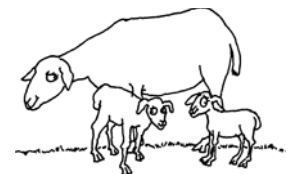
Once you have figured out the areas you want to address, your next step is probably not what you would think. The temptation for most people, once they figure out what the issues are, is to jump right away into action. That would be a mistake. The trouble is we do not yet know what the “root -causes” are of these issues or problems.

If we jump to action too soon we can end up with actions that do nothing to solve the problem at all.

The following example shows what we are talking about. Each of the three issues listed below on the left can have multiple root causes. Low conception can be caused by a number of things, including ewes being malnourished due to feed quality or feed quantity. Ewes can have a low lamb drop rate (prolificacy) due to their breed or breed cross, selection, feeding, lambing season, etc. Lamb mortality can be affected by ewe malnutrition, predation, overcrowding, disease, parasites, etc.

The key is to figure out which are the root cause(s) that you need to address (partial list below).

Issue	Possible Root Causes
Low conception	Malnourished ewes (feed)
	Open ewes kept
Low drop rate	Low prolificacy ewes (genetics)
	Malnourished ewes (feed)
	Replacements selected from low prolificacy ewes
	Lambing out of season
High lamb mortality	Malnourished ewes (feed quality)
	Predation
	Overcrowding (ewes and lambs get separated)



**Tip 1** – it helps to know what **all** of the potential root causes are for the issue you are dealing with. This comes with experience and education. Good shepherding knowledge is a must!

**Tip 2** – When thinking about root causes it helps to ask “why?” as many times as it takes to arrive at the root cause.

## Selecting Actions

Once you have figured out the root causes of the issues you want to address, your next step is to figure out appropriate actions to address these issues. We’ll use an easy example, because the point of this exercise is to demonstrate the process of action planning.

Let’s assume that we have identified ewe malnutrition as a possible root cause to the issues of low conception, low drop rate, and high lamb mortality that we have been experiencing. Our next step is to “brainstorm” possible



actions that would address this. Brainstorming is the process of listing as many solutions as we can without worrying about if they are good solutions or not. All we want to do is list what is possible. So, what actions would help us to increase ewe nutrition? (This is a partial listing.)

- Condition scoring ewes
- Feed testing
- Ration balancing
- Weighing/Monitoring feed consumption
- Ensuring there is adequate feeder space
- Ultra-sounding ewes to determine single/multiple births and feed these groups separately

Once we have a list of options, our next step is to select the action(s) we think will give us the best results. An easy way to do this is to list the pros and cons of each of these actions, and then select the best choices based on the pros and cons. Here are a few examples;

- Condition scoring ewes

**Pro** - Ability to fine-tune feeding program, potential to reduce feed costs by keeping ewes in optimum condition for each stage of production

**Con** - Handling facilities needed to do this, higher labour costs

- Feed testing

**Pro** - Better control over nutrition, potentially lower costs by feeding correct diet, better animal health

**Con** - Time and money required to send in feed samples

- Ration balancing

**Pro** - Potential to lower feed costs by customizing rations to stage of production, lower costs by feeding correct diet, better animal health

**Con** - Time and money required to ration balance feeds

## Action Plans

As we mentioned in the data collection plan, the basic idea behind action plans is to choreograph what needs to happen so that the job flows smoothly. Let's look more closely at how to build an action plan, using the idea of grocery shopping as an example.

Start by breaking down the tasks and activities that go into grocery shopping into manageable bite size pieces. We would start by figuring out what we need to do to have a smooth shopping experience. The easy way would be to list the key steps. For example:

- Make a list of the meals you want for the week.
- Check the recipes to see what you need.
- Check what you have on hand.
- Make a list for what you need.
  - Organize the list into food groups based on store lay-out.



- Go shopping.



Good management, as this example shows, is not limited to running a business—we can use the same management principles in every-day life so things run more smoothly. It does make one wonder, however, why it is common to do this kind of work for simple things like shopping when we often don't think we need to do this kind of work for **much harder** jobs like running our businesses!

Let's now use the examples of feed testing and ration balancing to put together an action plan.

**Note:** *Your own action plan may include additional and/or different steps.*

- Learn how to test feeds.
  - Identify labs that offer feed testing.
  - Contact the labs to determine how to submit feeds and how much it will cost.
- Purchase a subscription in SheepBytes ration balancing software.
- Take SheepBytes training.
- Submit feed samples to the lab yearly (fall).
- Enter feed tests to SheepBytes.
- Ration balance available feeds to discover appropriate rations.
- Select lowest cost feed rations that meet the nutritional needs of animals for each stage of the ewe/lamb cycle.
- Weigh feeds to determine appropriate volumes.
- Determine feeding groups and calculate feed volumes for each group for each stage of the ewe/lamb cycle.
- Monitor feed disappearance to ensure animals are consuming correct amounts.

**Reminder:** *This may sound silly or like too much work, but the result is the opposite. Proper planning like this makes businesses run more efficiently. Just as we saw in the grocery shopping example, we need to do our planning before we get to the store.*

## Implementing Change

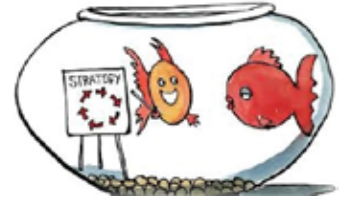
At this point we have figured out how to collect data and to figure out what the data means. We know how well our operation is performing and how we want our operation to perform. We have also figured out what we are going to do to meet our targets. All that is left is to figure out is how to get it done!

This isn't as easy as it sounds. Unfortunately, even when we know what to do it does not mean the job will actually get done.

There are a few things good managers do to get things done. And they of course involve having a plan. This one is called an implementation plan. This plan does not need to be written separately, but can be included as part of the Action Plan.

## Buy-in

Most sheep businesses are set up as owner-operator enterprises, so getting buy-in from the staff is usually not a big problem. Nevertheless, here are some tips that can help you get buy-in from yourself as well as from others to help implement the changes you want to make.



- Focus on early and quick rewards. This is about picking the low-hanging fruit. You want to do the easy things first so you get early results. If you focus on easy things first you gain some momentum to put in place the rest of the changes you want.
- Chill. Don't get overwhelmed by trying to do too much. Rome wasn't built in a day and neither will your business. The things we are talking about in this module are likely going to take you five years or more to get fully in place.
- Management needs to model the changes. If managers do not believe in the changes and act accordingly there is no way the staff will.
- It is a good idea to let employees have input into the plans. This is really important if the change is in their area of expertise. This helps with buy-in and is simply a best management practice.

## Milestones

A very useful and easy way to create your implementation plan is to make use of an idea we introduced earlier—back-casting.

We start by figuring out what the operation will look like when the plan is complete. We then work backward (back-cast) to the start of the job to figure out the steps involved.

Each of the main steps can be thought of as milestones. Milestones are key points or stages along the way to getting a job done. They help us to see how far along we are in a job and they help us to chart our progress. They also help keep us motivated because we can see our progress.

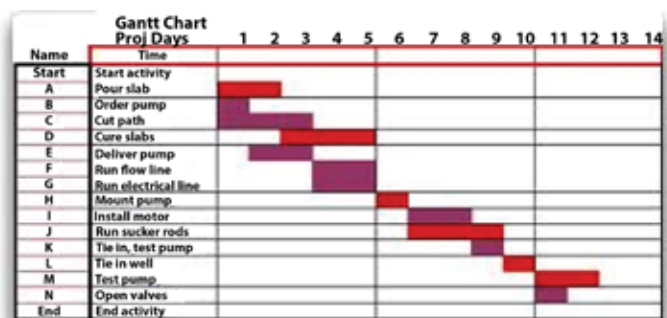
A computer loading bar is one type of mile-stone device that we have become very familiar with.



## Timelines

Once you have your list of milestones you can put that list into a time-line, also called a "Gantt chart."

Timelines help you to stay on schedule with your plan. The idea is to push hard to achieve each



milestone on time. If each milestone is done on time, eventually, the whole project will be done on time.

## Obstacles

Nothing goes according to plan. Problems will come up as you are planning and/or implementing your plans. When this happens you simply adjust your plans as needed to deal with the problem.

Your business at this point will have a variety of plans. The plan that you need to change will depend on the nature of the problem.



## Verifying

To verify that jobs get done you can use a simple weekly or monthly checklist. Larger businesses do this as well as smaller businesses—the difference is simply the scale of the job.

The idea is to work from your planning documents to develop check lists for what needs to get done each week or month. Then all we need to do is tick things off the list as they get done.



## The Complete Action Plan

A complete action plan includes action and implementation. Here are the main sections of a complete data collection action plan:

1. What needs to be addressed?
2. What are the root causes for the issues that need to be addressed?
3. What actions will you take to deal with these root causes?
4. What are the action steps required to achieve these actions?
5. What are the milestones for implementing this process
6. What is the timeline? When will it get done?
7. What obstacles are in the way?
8. Verify that it got done.

Points 1 to 4 make up the Action Plan and points 5 to 8 make up the Implementation Plan. Action and Implementation are both needed to get the job done.

# Key Messages

## Background

- The Canadian lamb industry is growing, with markets predicted to remain strong in the long term.
- Experience, training, money, time, and passion are needed if you are to succeed in business.
- Successful business owners learn how to manage.

## Strategy

- Finding the right niche is about knowing the strengths and weaknesses of your business.
- Opportunities and threats are external to the business.
- Having a clear business model is essential when you are building your strategy and plan.

## Operations

- Management is about breaking up big jobs into a bunch of little jobs.
- Plans are like blueprints— and are used to build and operate the business.
- Knowing and tracking the things that matter most, and having targets for those things, are keys to effective management.

## Marketing

- Producers raise lamb for people who love to eat lamb—the consumers.
- Knowing the customer and the consumer's wants and needs guides what and how to produce.
- It is possible to maximize returns by knowing what the market will pay for.

## Labour

- An effective labour plan includes training as well as contracting out some tasks.
- Training and education are life-long activities.
- Tracking labour is needed to figure out labour costs and to do something about them.

## Information Technology

- You need the right tools for your operation to collect the information you need.
- RFID management and traceability systems can be effective management tools for medium to large operations and for those who want to collect higher amounts of data.

## Finances

- Cost of production equals costs divided by the number of lambs sold.
- For most sheep operations, productivity per ewe matters most, then feed, then labour.

- Income varies by about \$20/lamb between top and bottom flocks, but costs vary by as much as \$150/lamb sold, so cost control is very important!

## Financing

- Don't spend all of your money before you ask for a business loan.
- Lenders want to lend to people who will pay them back, or if they don't, will give them something of equal value.
- Agriculture and Financial Services (AFSC) and Farm Credit Canada (FCC) are where most producers get financing.

## Data Collection

- Sheep enterprise specific financial records are needed to manage your sheep operation.
- Back-casting is a great way to figure out what information you need to collect (how will you use your data).
- Appropriate infrastructure is needed in order to gather information reliably.

## Flock Snapshot – Data Entry

- The Flock Snapshot combines animal and flock financial information to calculate how well your sheep enterprise is doing.
- The Flock Snapshot has been designed to fairly compare operations, both year to year and against industry benchmarks.
- The cost of labour is included in the Flock Snapshot calculations of cost of production.

## Flock Snapshot – Analysis

- The Flock Snapshot has a targets area that allows producers to play with variables such as ewe productivity, death rates, and costs, to see how changing these variables can affect profitability.
- Colour coding is used in the Flock Snapshot to identify areas that may need to be addressed.

## Action Planning

- Action planning requires an understanding of the root causes.
- We create plans to get things done, just as we do when we shop for groceries.

## Implementing Change

- Doing the easy things first helps us to get bigger jobs done.