THE ALBERTA SHEEP BUSINESS GUIDE

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September 2025

The Alberta Lamb Producer's Sheep Business Guide

Introduction

Financial support for this project was provided by the governments of Canada and Alberta through the Sustainable Canadian Agricultural Partnership. In Alberta, this funding is distributed by RDAR.

The Alberta Sheep Business Guide is a business course for sheep producers. This guide was originally created in 2012 by Tony Stolz, SWC Consulting, with funding and input from the Alberta Lamb Producers, ALMA, and the Government of Alberta. This version was substantially updated in 2025 and is meant for both experienced producers as well as for people new to sheep production.

The first section of this guide is organized using a traditional format common for business courses following six areas of management. (Kubr, 2002) This includes strategy, operations, marketing, labour, technology, and finances. Since it is impossible to manage without information the second section of the guide looks at what information you need to make management decisions. We then will look at how you can use this information to understand your costs of production using the Alberta Lamb Producers Cost of Production Tool. This analysis section also discusses how to create and implement effective plans to make your business more profitable.

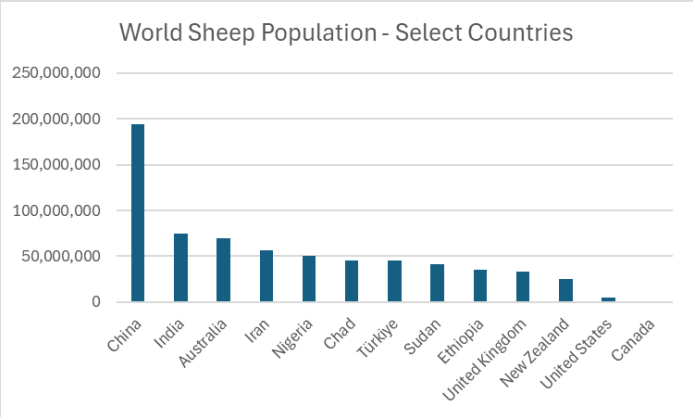
The guide follows a simple format, and we tried to make it fun by using questionnaires and interactive activities. When you complete this guide, you will:

- Understand the skills and training you need to run a sheep farm.
- Understand how to manage your sheep business
- Have the training and tools you need to complete a business plan to apply for financing
- Know what data you need to manage your operation
- Understand what your data means by learning how to use the Flock Snapshot cost of production & analysis tool (available for free through the Alberta Lamb Producers).
- Understand the key performance targets you need for your farm to be profitable
- Understand any areas of weakness in your sheep operation that need to be addressed
- Learn how to make action and implementation plans so that the changes you want actually happen.

We hope you find The Alberta Business of Sheep Guide informative, useful, and fun!

Background

The Global Sheep Industry



Globally there were approximately 1.32 billion sheep in the world in 2025 according to Worldostats.com. (Worldostats, 2025) China has the most sheep by far at 194 million, India has 75 million and Australia has 70 million. New Zealand is quite far down the list at 25 million, the US has 5 million, and Canada has between 850,000 to 1 million (depending on the time of year).

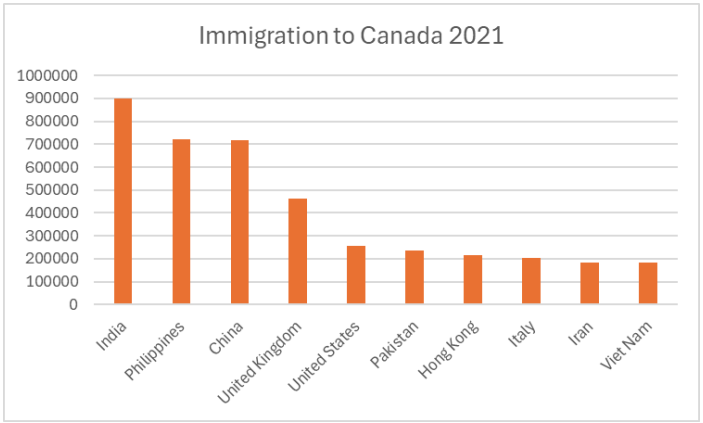
The Canadian Sheep Industry

The top three sheep producing provinces in Canada are Ontario (261,000), Alberta (171,000), and Quebec (170,000) based on Statistics Canada 2024 sheep inventory. (Statistics Canada , 2025) While flock size in Alberta was stable from 2022 and 2024, it has increased by 14% since 2020. The market appears to support growth at this time with record lamb prices reported in 2024.

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

The profile of the average sheep farm in Alberta is very small. Since all farms in Alberta require a "Premises ID", we know there are approximately 1,776 farms with sheep, although this number may vary between about 1,650 and 2,000 farms. This means the "average" flock in Alberta in 2024 had about 100 sheep. (Alberta Agriculture , 2025)

Although it is difficult to find accurate information, "micro flocks" historically have made up the majority of sheep farms with as few as 16 animals. While there are a large number of these "micro-flocks", the majority of lamb production happens on medium and larger operations. In fact, it is these "medium to very large" producers who are responsible for raising most of Alberta's lamb.

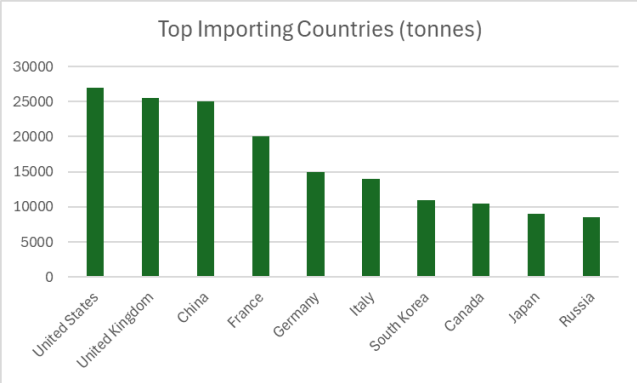


Canadian consumption increased from 1.08 kg per household in 2007 to about 1.2 kg in 2024. Most lamb is consumed by ethnic consumers living in Quebec and Ontario. Canada relies on imported lamb, mainly from Australia and New Zealand, to meet market demand with imports currently filling about 60% of total Canadian demand. (Government of Canada , 2025), (Statistics Canada , 2025)

Industry Trends

Global lamb consumption is predicted to be on the rise according to essfeed with estimates suggesting 1.6% y/y growth from 2025 to 2035. (essfeed.com, 2025)

Drivers for this increase include rising incomes, rising populations, and growing demand in key lamb-eating ethnic markets.



Growing consumption is also being seen in Canada as well, possibly due to recent increases in immigration that were 50% higher than historic rates between 2022-2025. It is possible this trend resulted in some of the increased demand for lamb meat. (Statistics Canada , 2025)

Environmental issues due to global warming are predicted to affect primarily hotter climates such as Australia and New Zealand. The University of Adelaide media, suggest that high temperatures may affect the reproductive cycle of sheep, potentially resulting in as many as 2.1 million fewer lambs being produced in Australia each year long-term. Additional concerns are also present in regard to soil salinity, soil degradation, and vegetation management. (University of Adelaide, 2025)

As the world's second largest exporter of lamb, next to Australia, the New Zealand flock has declined significantly from its historical peak of over 70 million animals in the 1980s, to its current size of about 25 million today. The primary drivers of this decline were attributed to competition from the dairy industry. Despite the national flock continuing to decline, during the last decade meat production and exports have remained stable. (essfeed.com, 2025)
(Public Domain Pictures, 2008 - 2025)
Here in Canada sheep inventories have been extremely stable for the past 16 years at about 850,000. Changes in the Canadian flock over the past 10 years included some provinces, like Alberta, recording increases and others, like Quebec, reporting decreases. Alberta is now the second largest producer of lamb in Canada, just ahead of Quebec. I should note that the actual number of animals on Canadian farms varies considerably between winter (about 830,000) and summer (about 1 million) due to the seasonality of lamb production in Canada. With lamb prices at historic highs the future appears quite bright for Canadian producers. (Statistics Canada , 2025)

Another relevant trend worldwide is the growth in solar, wind, and battery power, since they have recently become the world's cheapest energy source, and the rise of agrivoltaics. This idea may be relevant for some producers in Alberta. Utility companies benefit from sheep grazing as it helps to keep grass under control. Sheep producers tend to like solar farms since solar panels increase grass yields by providing the grass shading (which grass likes), a win-win situation. Other species can be used as well, but sheep are preferred since cattle and goats tend to damage infrastructure, while sheep do not. Alberta generates 82,000,000 MWh of electricity per year, and this figure is expected to grow substantially in the future. If Alberta was 100% powered by the sun, the land required would be 250,000 acres! This sounds like a lot, but Alberta has 49.2 million acres of farmland, so this is just ½ of a percent of Alberta farmland. This would be enough to graze 300,000 sheep or almost double the current Alberta flock! While it is unrealistic to expect this level of utility solar uptake, this idea is not

hypothetical since many, if not all, large utility solar installations in Alberta are making use of sheep today. (Stolz, SWC Solar, 2025)

Worldwide, Canada continues to be seen as a land of opportunity with greater availability of fertile arable land relative to human and animal requirements. This includes 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 well positioned to grow and to succeed and many consider this to be a good time to consider entering and/or expanding this business.

The Business Lifecycle

Before setting up your business it is useful to be aware that all businesses, including yours, will go through a lifecycle as follows.

- Start-up – This is the basic vision, planning, and start-up stage.
- Growth – You set up your infrastructure and grow your flock to its target level.
- Maturity – Your operation is at the size you targeted and is now functioning as intended.
- Expansion – Some businesses may expand at this point, some will not. The challenges at this stage are the same challenges as the initial growth phase.
- Exit – where the operation is sold as either functioning business or its assets are sold.

Being aware that all businesses have a lifecycle and being aware of when you will reach each of these stages is critical when planning! (Kubr, 2002)

For example, all business owners eventually will exit their business. The "exit" plan will be to either sell your business as a "going concern" or to sell the bits and pieces that make up the business (sheep, tools, equipment, farm, etc.). Either way having a plan for when this will happen is extremely important. This is true even when you are just in the "start-up" phase as many of the decisions you need to make will have long-term consequences.

Starting a Sheep Business

People start businesses for many different reasons. Making money is a given, but you may be interested in the sheep business specifically for lifestyle, because you really like lamb, or for other reasons unique to you. With lamb prices currently at record high prices and with the relatively low investment needed to enter the lamb business, many entrepreneurs have become quite 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 for example. In addition, a smaller amount of land is needed to raise sheep and, the perception at least, is that sheep are easy to care for and maintain**.**

Note: The pictures used in this document are all public domain sourced primarily from (Public Domain Pictures, 2008 - 2025).

Like any business, you need to know what you are doing. Based on Statistics Canada data, 30.8% fail after 5 years. Shockingly, only 36% of small businesses that earn less than $30,000 survive for even 5 years according to some sources! These statistics are measured across all types of businesses, but it 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. Without good management systems in place and knowing what you are doing, 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 key local markets can change. (Statistics Canada, 2025), (Stolz, Business 201 - Making More Money from Sheep, 2012)

The message here is that knowing whether or not you should enter any business is hard. How can you know for sure? Well, based on research, entrepreneurs who succeed in their business 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 the business they are entering.
- They are passionate about the industry. 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 any business up and running. Very few businesses make money before their 3rd year, and most will need 5 years to become profitable.
- The "time" is right in their life. 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. Training and reading up on how to manage a business greatly improves your chances of success!

(Stolz, Business 101 - Making Money from Sheep, 2011)

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

What does it take to succeed? – Self-assessment

1. Do you have experience in the sheep production business?

a. Nope – I have never worked in a business like this — Score = 1
b. Nope – I have never worked in a business like this but I have training — Score = 2
c. Yes – I have worked in a business like this — Score = 3
d. Yes – I have worked in a business like this and I have training — Score = 4

2. What's going on in your life?

a. Life is great, relationship is great, kids are out of the house, mortgage is paid off, I'm looking for a challenge — Score = 4
b. Life is good, relationship is good, job is a hassle, I spend my weekend running kids around — Score = 3
c. I wish I had more time, less debt, and more energy — Score = 2
d. Life sucks, relationship is a mess, financial worries are dragging me down, I'm struggling with addictions, and my health is bad — Score = 0

3. Can you afford to start a business? (Note just use rough guesses for this exercise)

i. How much is all of your stuff worth? $ _____
ii. How much do you owe on your stuff? $ _____
iii. Calculate your "net worth" (= i - ii) $ _____
iv. Calculate your debt/equity ratio (ii / iii * 100) _____%

a. If your debt/equity ratio is more than 50% — Score = 0
b. If your debt/equity ratio is less than 50% — Score = 2

4. Do you have experience managing businesses?

a. Nope – I have never managed a business — Score = 1
b. Nope – I have never managed a business but I have some training — Score = 2
c. Yes – I have managed a business — Score = 3
d. Yes – I have managed a business and I have some training — Score = 4

5. Do you really want to do this?

a. Not really – I'm just doing this because my spouse wants me to — Score = 1
b. Maybe – but I'm expecting this to be worth my while! — Score = 2
c. 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

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!

(Stolz, Business 101 - Making Money from Sheep, 2011)

Your Business Plan

When building a house, construction companies rely on blueprints and plans. For example, there is a plan for the foundation, a plan for the framing, one for electrical, plumbing etc. Building a business is every bit as complex as building a house, yet for some reason, we often think we don't need a plan. We really do. Your plan only needs to be useful, so please use common sense when putting yours together and make it only as detailed as it needs to be. For example, the blueprints for your house will be quite complicated and detailed compared to the plan you would use to build a doghouse, but both clearly would benefit from a plan. The next sections in this guide talk about what you need in your plan.

Strategy

Strategy is the approach you take to your business to make it work best for your own unique situation. Your goal is to understand your own personal situation, the external lamb industry and trends, and what you want out of 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. Strategy is the foundation of your business, and understanding this foundation helps you to make good day-to-day and long-term decisions moving forward.

Your strategy does not need to be complicated - you just need to have one so that you understand your industry and your place in it.

Strategy is made up of four things:

1. External Factors - You need to understand what is happening in the world sheep industry, and especially the Alberta sheep industry. External factors affecting the industry can be split up into "opportunities" and "threats". For example, we know that Canadian producers have an opportunity to expand lamb meat production since Canada imports a lot of lamb meat and since our ethnic, lamb eating, population is growing. Threats to the industry in Alberta include high input costs, a limited a limited number of processing facilities and feedlots, and cheap imports from Australia and New Zealand.
2. Internal Factors - These are internal strengths and weaknesses about you, your life, and your situation. For example, you may have years of farming experience, experience with animals, a land base for a flock of sheep, and maybe underutilized farming equipment that could be used to expand your existing farming activities. These would be strengths supporting your operation. On the weakness side, maybe you are getting older and your kids, who used to help you, are soon going to be leaving home and starting their own careers.
3. Mission/Vision/Values – This is the big picture about what you want out of your business and how you approach it. Note – this is not about making money since making money is more accurately a fundamental requirement for any business.
4. Analysis – This is about pulling the above information together into a plan.

Your Business Model

The strategy you just figured out in the last section is going to be reasonably detailed. Your "Business Model" is a one paragraph summary of this plan.

If you were in a coffee shop and a friend asked what your sheep business was about, you would give them a simple overview highlighting the most important details of your business. It is important to do this since when you are in business, you are tasked with making day-to-day decisions. Understanding your business in these simple terms really helps you to make these day-to-day decisions.

Putting your Business Model together is easy. It should be no more than a paragraph or two long. You may want to consider the following points:

1. The basic "concept" of the business including what you are selling and who 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 this is, full-time, part-time, etc.
    - 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 seedstock, 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, auction, or will you sell 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?
    - Is there a specific time of year that you will focus on? … Why?

2. What makes your operation "special" including the "type" of operation it is including:
    - 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) vs high cost (intensive)

- Focus on high value breeding stock sales vs 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 you 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 to the wholesale Alberta market at about 110 lbs live-weight. Since our farm is close to Innisfail, we can market finished lambs reasonably efficiently to the federal processor there. We focus on being a low-cost operation, since we have access to grazing in the spring plus we have a quarter of hay land that we can graze in the fall. We also focus on low labour inputs though 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 important as it helps guide us in making day-to-day management decisions. Writing out your business model is one of the first steps before writing a Business Plan (developing strategy is the first step). Having a clear strategy and business model not only makes writing your Business Plan easier … it is makes writing the plan "possible".

Operations

Management

Operations are the day-to-day activities and tasks of running a business. There are a few simple "keys" to successful management including:

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

Planning to succeed

As mentioned earlier, even building a doghouse requires a plan. Like a doghouse, your business will work better if you take time to plan it out. If you think about it, everything we do in life benefits from planning. We even plan when we do our weekly grocery shopping … we make a list.

Managing Bite-size Pieces

Business planning can be a big job. The key to any big job is to break it down into manageable size pieces. This is one of the most important lessons 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, so It helps to spend the most time on the things that matter the most. For sheep farms, the things that matter most (in order) are usually ewe productivity, feed/grazing costs, labour cost, investment, and sales.

Tracking What Matters

You can't "manage" what you do not have information on. Good sheep operations collect information on all areas of the operation, and especially the things that matter most like ewe productivity, feed, labour, investment, sales, and other expenses.

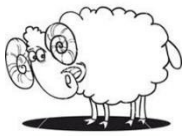
Having Targets for What Matters

Just like when you go on a road trip you need to know where you are going. Targets give you a destination and they 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 have calculated that you need 180% for your operation to be profitable. That 180% is your target.

When do we manage?
Basically, all the time. Successful managers are always thinking about how to make their operations easier and more profitable.

Storyboarding





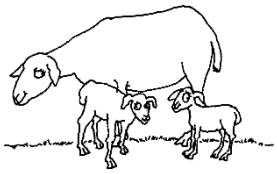
Most producers find there are times when they get mad or frustrated with their sheep. They also find there are times when things simply do not get done because of lack of time. While there are only so many hours in a day and sheep certainly can be challenging, it is also possible that these time and frustration issues are because of a problem with your system! To solve these types of problems, a good "tool" is to use a "storyboard".

A storyboard maps out your entire operation in steps, and it also details the specific tasks at each step in the operation. The idea we are using here is to break up the operation into those "bite size" pieces we talked about earlier to make it easier to understand.

The process is to first map out the main tasks that make up your sheep operation and then make individual plans for each step.

The idea behind 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 put yourself into the shoes 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 each step. The flow between the steps is 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 can also be 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 plan is to ensure that the sheep are able to flow smoothly between each of the major storyboard/activity plans as well. 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 where-ever you put them next). When you draw up your plans, take time to consider the transitions from one step to the next.

If this sounds like a lot of work, the result is the opposite. Proper planning makes businesses operate much more efficiently. The idea is to work smart, not hard!

The best run businesses do exactly this kind of planning and thinking. Good examples include Amazon, IKEA, and UPS.

It is good to note that the way you segment your operation, or the "categories" you choose is up to you. There are no rules. The point is to create categories that make sense to you and that your categories 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 who 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 farms, your Marketing Plan will be very simple but is nevertheless important. Some of the things you may want to consider include:

- The end consumer (who is eating your lamb)
- What your customers want and need
- The products you sell
- How you raise your lambs
- The price you expect

- How you will distribute your products
- How you will let people know you have lambs to sell
- 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 end of the chain who we hardly ever see - the consumer.

Producers have a lot of control over lamb quality including from the genetics we choose, to the way we raise and feed our lambs. The bottom line is if the consumer likes 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.

Historically, Canadian lamb consumers included

- 13% of Canadian households
- Fresh lamb was 75% of sales
- 51% of consumers earned $60,000 +
- Most consumers were from a lamb eating heritage
- 58% of lamb was sold through traditional retailers

(Statistics Canada, 2025)

Customers

As lamb producers, our customers are the people we sell directly to, including;

- Lamb buyers
- Auctions (Beaver Hill, VJV auction, Picture Butte, Fort Macleod, and Olds Auction)
- Direct to consumer sales
- Other sheep farms (seed-stock producers)

What Customers Want & Need

If we were to ask lamb buyers what they look for, what do you think they would say? This is an interesting question that is easy to answer because we can ask them. Here 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

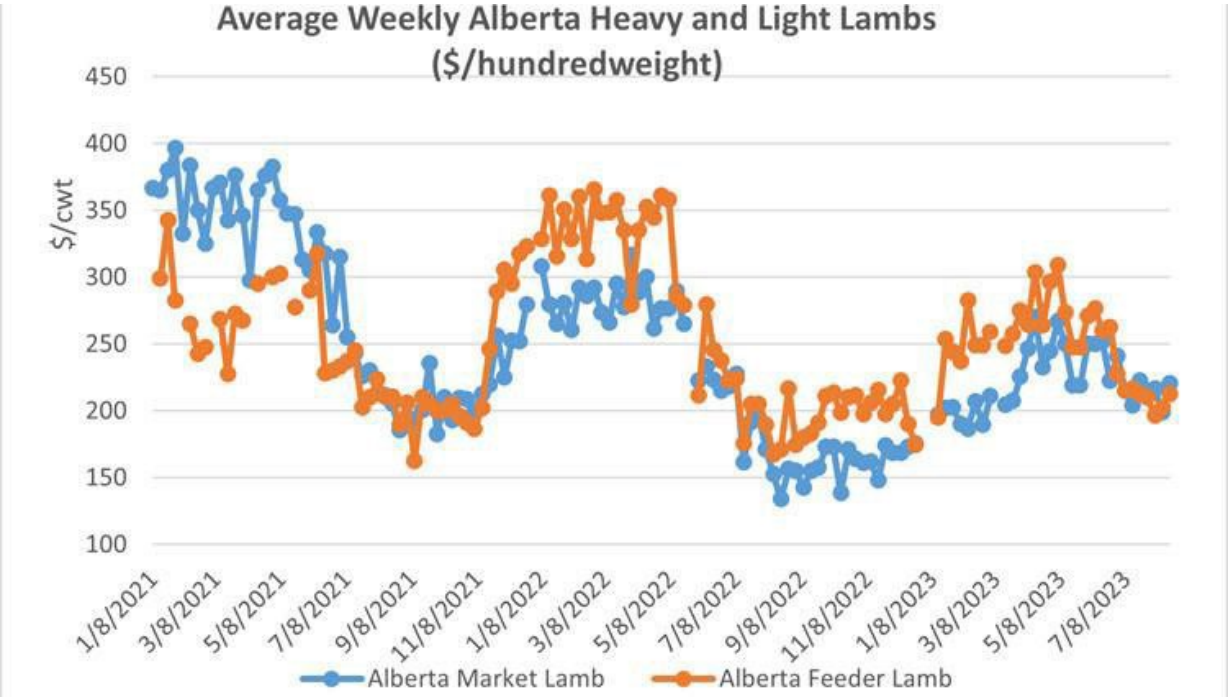
One of the most important things to do as a producer is to talk to the people who will be buying your lambs and ask them what they want … and what they are willing to pay for.

Price

The tables below show lamb income for both the Ontario and Alberta markets. Ontario returns are for finished, 120 lb lambs. The Alberta chart is from the Alberta Government, Agri-News publication and it shows feeder and finished lamb prices / 100 lbs. (Alberta Agriculture , 2025), (Ontario Sheep Farmers, 2025)

Ontario Sheep Farmers – Market Info

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
2022	$ 376	$ 373	$ 399	$ 412	$ 382	$ 311	$ 252	$ 215	$ 217	$ 240	$ 257	$ 261
2023	$ 257	$ 258	$ 295	$ 327	$ 330	$ 328	$ 260	$ 272	$ 269	$ 287	$ 286	$ 288
2024	$ 314	$ 316	$ 364	$ 407	$ 418	$ 404	$ 366	$ 334	$ 306	$ 308	$ 317	$ 369
Average	$ 316	$ 316	$ 353	$ 382	$ 377	$ 348	$ 292	$ 274	$ 264	$ 278	$ 286	$ 306



The wholesale price of lamb is seasonal. This is a big issue for the Canadian sheep industry!

The Ontario market is much larger than the Alberta market and, due to a larger ethnic lamb eating population, it usually offers higher returns. The cost to ship to Ontario including all fees is currently about $50 plus the cost of shrink and animal mortality. Most producers find the Alberta market provides better returns and avoiding this drive is much more humane.

If you wanted to project income targets based on the numbers provided, you would estimate between about $240 return on a 120 lb Alberta lamb sold between September and November.

Most producers breed their sheep to lamb in season, meaning they lamb between January and June. This means most producers market their lambs between May and October.

Sheep can breed out of season but at a price. When 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 8 months (3 times in 2 years) or the STAR system (5 times in 3 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 prices can vary a lot across the season. Based on Cost of Production research, lamb returns also vary between top performing sheep farms and bottom performing farms by as much as $20/lamb regardless of season. (Stolz, Alberta Lamb Traceability PIlot Project, 2011). Here is why.

Selling wholesale and/or feeder Lambs

- Weight
    - Selling bigger, highly muscled, lean lambs. Lambs are usually sold by the pound. 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 animal 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.

- Health
    - Lamb condemnations are a significant cost to the industry.
        - Worming your dogs to prevent sheep measles (cysticercosis) is one example of how producers can increase returns.
        - Injection sites – Injecting lambs either in low-quality muscles such as the neck or subcutaneously.
    - Clean lambs – Processors and lamb buyers want clean lambs to better control disease. This means ensuring lambs have good bedding, docking tails, and ensuing 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 will pay a premium to producers for lambs that are taken off feed.

Reliability

- Service – showing up at the right time and delivering the agreed to number of lambs will also ensure lamb buyers give you the best price possible. This is important!

- Develop relationships with your lamb buyers - It is important to support your local lamb buyers and local stakeholders. That said, for larger producers, it is a good idea to sell lambs to a variety of competitive buyers to ensure you receive a competitive bid on your animals.

Selling direct to consumer

- Charge your customers for higher-than-average industry quality if that is what you are delivering.

- Service – Giving your customer what they want as well as what they need (recipes, customer service, a "story" about your farm), can help you to earn a higher price per lamb.

- Charging your customer for any niche features you think they may want including Quality Assurance, Halal, grass fed, etc.

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

Selling genetics

- Buyers who are interested in buying quality genetics 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 a quality assurance 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 – Keeping 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.

<u>Distribution & Delivery</u>

Even if you live only 100 km from your markets your cost per lamb for delivery will likely range between $6.00 - $7.00. The further you drive the more important it is to sell larger groups to keep costs down. Fortunately, there is a tool available in the Alberta Lamb Producers Cost of Production tool (Formerly the "Flock Snapshot") that helps you to figure this out. (Stolz, Business 201 - Making More Money from Sheep, 2012)

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. It also allows you to play with your options so you can figure out which is the cheapest.

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. Whether you are looking at selling market lambs wholesale, feeder lambs, or selling direct to consumers, demand currently exceeds 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 need our competitors in other countries to fill the supply gap. Also, due to the seasonal nature of Canada's 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 your business is a hobby, labour must be considered. This section will help you to identify the skills you need in your operation and how you will 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 everything themselves, so they hire out some tasks. It helps to use the following process to figure out your labour.

- List the labour tasks for your business.
- List the tasks that you want to do.
- List the skills and tasks you need to buy.
- Rate your skill level in each task you want to do.
- Rate whether you need additional training for your tasks.
- Calculate the time you need to complete the tasks that you will do.

As you make your list you will probably realize that the tasks to run a sheep operation are very diverse. Here are just some of the tasks, and associated skills, that most sheep operations need; business management, ration balancing, lambing, veterinary, predation control, shearing, pasture management, mechanical repair, carpentry, fencing, electrical, plumbing, computer, data-gathering, bookkeeping, driving, etc.

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

If you are like most sheep producers I know, you will be tempted to do everything yourself. This however is not the best strategy since some tasks can be handled much more efficiently by trained contractors once you start to consider the value of your own time. My favorite example is bookkeeping. An accurate set of books is vital to help business owners manage their business. Most business owners do not like to do books, and they are not trained in how to do books, nevertheless many insist on doing this job themselves. Unfortunately, they often do a 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 skill/task 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 we need. We need to know how many person/hours will be needed as well as when we need the labour.

A person/hour is the time it takes for one person to do one hour of work. For example, 2 people working for 5 hours would equal 10 person/hours of work. Calculating labour needs is something that few managers like to do. To help you figure this out there is a Labour Calculator in the Alberta Lamb Producers Cost of Production tool (Formerly the "Flock Snapshot")

Reducing Labour – A 2008 study in the UK by consultants for the Scotland's Rural College (SRUC) found labour ranged from 1.8 to 7 hours per ewe for range flocks, and that an appropriate target would be 2 hours per ewe. Larger flocks (economies of scale) and well-choreographed operations (efficient) were associated with lower labour requirements. The storyboarding section we discussed earlier is a great way to lower your labour costs by streamlining what you do to be efficient so that you never waste your time. (Farmers Weekly, 2025)

Information Technology

Introduction

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

- Know what matters most
- 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 a little different depending on the operation, but for most the top three are ewe productivity, feed, and labour. It is up to you to figure out what is most important for your operation.

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

Data Collection

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 1990's 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 and journals), easy to set up and intuitive to use.
    - Cons – Slow, easy to make mistakes, no reporting ability, almost impossible to analyze information, will not make reports.

- 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. Also, computer spreadsheets are used by some producers although this is not recommended.
    - Animal records - Flock management software programs including basic versions of FarmWorks, Select SheepWare, and SheepBytes. Also, computer spreadsheets are used by some producers although this is not recommended (see below).

    - Financial records - Farm specific accounting software (i.e. AgExpert)
        - Pros – designed for Canadian farms, ability to assess each farm enterprise quickly and easily, ability 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.

- Financial records - General business accounting software (i.e. Quick Books, Simply Accounting)
    - Pros – Cost from $80.00, ability to assess each farm enterprise, ability 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 (i.e. basic versions of FarmWorks, Select SheepWare, EweBytes, etc.)
    - Pros – Gives producers the ability to quickly make reports on the flock as well as on individual animals (easy data analysis). Lower cost that 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 (i.e. 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 their 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 to track 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 (i.e. the 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 outsource this task to professionals. (Recommended)

About RFID / Computer Based Management & Traceability Systems

There are more and more RFID management systems available for sheep producers that work for both management and traceability. The software that many are most familiar with in Alberta include the Shearwell Data Farmworks system and TGM Select SheepWare. Software options change quickly, so you will need to research this for yourself.

The Shearwell system in 2012 was the most popular and proven system in Alberta (and arguably the world) for sheep management and traceability, but without testing newer options we can not recommend it above other options today.

That said, we would be confident in continuing to recommend either of these two programs 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 – Ability to gather data and measure individual ewe performance to identify best and worst ewes.
- Feed costs – Ability 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 & accuracy of data gathering, speed of animal processing, and speed of analysis

RFID systems make it easy to:

- Collect & recall information accurately - i.e. 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 – breeding, animal movements, treatments, buying, selling, etc.

- Make reports including.
    - Individual animal reports
    - Group reports
    - Timeframe or event reports

- Draft animals automatically
    - Larger operations can also benefit from automatic sorting systems. The Shearwell automatic drafter for example can 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 & 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 & Analysis

This graph is showing a Farmworks Lambing Summary Report. This is an example of one of the many reports producers can make use of 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 can generate reports instantly and analyse data much more quickly. For example, producers can 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 that cause management issues). This gives producers who use this technology the potential to more easily improve their flock’s 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 ID’s.

Panel Readers – Panel readers can free up labour by automatically reading tag numbers. These readers are installed in chutes and/or handling sytems 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 their cost is to produce what they are selling. For example, a widget manufacturer would want to know their 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 the cost of production gives producers a benchmark for how efficient their operation is. Knowing this also helps producers compare their farm year-to-year, and it gives them the ability to compare their operation against 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. This next section will discuss ewe productivity and how it affects the 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.

NOTE: This is the most important lesson in this guide.

The next section looks at examples of COP in the context of how ewe productivity affects feed costs (just feed costs). We talked earlier about how feed costs make up the largest part of sheep operations expenses. Feed costs in fact typically are about 40% of a sheep operation's total costs based on research conducted in Alberta under the Lamb Traceability Project 2009-2010. This means feed is the biggest single factor in most operations' total cost of production. (Stolz, Business 201 - Making More Money from Sheep, 2012)

COP – Feed Cost of Singles

Assumptions

- Lamb - Feed, pasture, plus salt/minerals cost = $60 to raise and finish a lamb

- Ewe - Feed, pasture, plus salt/mineral costs = $85 to keep a ewe raising a single lamb for a year.
- Note: These rates were calculated using 2025 feed prices with hay = $200/ton, barley = $250/ton, protein $800/ton, plus mineral, and grazing at $30/acre.

In this example, for a ewe producing 1 marketable lamb / year, the feed cost would be:

- Lamb feed cost = $60
- Ewe feed cost = $85
- Total feed cost = $145
- Lambs sold = 1
- **Feed cost / lamb sold = $145**

COP – Feed Cost of Twins

Assumptions

- Lambs - Feed, pasture, plus salt/minerals cost = $120 (there are now 2 lambs, so $60 X 2)
- Ewe – Feed, pasture, plus salt/minerals cost = $94 (feed is higher now for this ewe since she will eat more in the late gestation and lactation stages of the feeding cycle).

In this example, the ewe is now producing 2 marketable lambs / year, the feed cost would be:

- Lamb feed costs = $120
- Ewe feed cost = $94
- Total feed cost = $214
- Lambs sold = 2
- **Feed cost / lamb sold = $107**

This is a cost-of-production savings of $38 / lamb sold over ewes that only produce singles!

It is important to understand that the effect of productivity on cost-of-production works the same in all other areas of the operation as well. As productivity goes up, cost-of-production goes down. There is a limit of course to this. The reality is that feed, labour, death, and other costs go up as ewes become more productive. There is a point where 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 = $180 ($60 X 3 lambs)
- Ewe – Feed, pasture, plus salt/minerals cost = $103 (feed is higher again since the ewe will eat more in gestation).
- Milk replacer = $75 (one lamb is raised as an orphan in this example).

If the ewe produces 3 marketable lambs with one raised as an orphan lamb:

- Lamb feed costs = $180 (3 X $60)

- Ewe feed cost = $103
- Milk replacer cost = $75
- Total feed cost = $358
- Lambs sold = 3
- **Feed cost / lamb sold = $119**

In this example the feeding portion of your cost of production was $119. This is a total savings in feed of **$26/lamb** over ewes that only produce singles and **$12/lamb** more than ewes that had twins!

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 will be very high. If you have figured out how to feed by bucket, or if you have an automatic system, your labour costs can be very low.

We should also point out that if your ewe was able to raise all three lambs on her own, the cost per lamb would have been much lower since milk replacer is expensive! In this case the ewe would have eaten more during lactation, so cost/lamb would be about $100/lamb sold. This is $45/lamb less than ewes with singles and $7/lamb less than ewes with twins. Not all ewes can do this, however.

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 probably not going to be economically viable for you unless your operation has extremely low input costs.

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) = 2 hours
- Ewe – Total time spent on each ewe per year (all work except lambing) = 2 hours
- Orphan lambs – Total time spent per orphan lamb = 1 hour extra (wean at 23 days off milk replacer using an efficient bucket feeding system)
- Farm labour at $18/hr

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

Labour costs - assumptions

- Ewe labour cost = $36/year (2 hours)
- Lamb labour cost = $36/year (2 hours)
- Orphan labour/lamb = $18/year (one hour)

- Ewe raising a single
  - Ewe labour cost = $36
  - Lamb labour cost = $36
  - Total labour cost = $72
  - Lambs sold = 1
  - **Labour cost / lamb sold = $72**

- Ewe raising twins
  - Ewe labour cost = $36
  - Lamb labour cost = $72 ($36 X 2)
  - Total labour cost = $108
  - Lambs sold = 2
  - **Labour cost / lamb sold = $54**

- Ewe raising triplets (one as an orphan)
  - Ewe labour cost = $36
  - Lamb labour cost = $108 ($36 X 3)
  - Orphan lamb extra = $18
  - Total labour cost = $162
  - Lambs sold = 3
  - **Labour cost / lamb sold = $54**

Summary Table

Family Unit	Feed	Labour	Total
Ewe with a single	$ 145	$ 72	$ 217
Ewe with twins	$ 107	$ 54	$ 161
Ewe with triplets (ewe raised)	$ 100	$ 48	$ 148
Ewe with triplets (one orphan)	$ 119	$ 54	$ 173
Ewe with triplets (orphan dies)	$ 179	$ 81	$ 260

We would like to point out that while targeting high prolificacy looks great on paper, the skill level to make it work is high. This is especially true when flock size increases. As the above summary table shows, if you are not able to keep your triplets alive reliably, the cost of production/lamb sold for these family units can quickly become the most expensive. For this reason, ideal flock prolificacy is unique to your situation.

Industry Average Productivity

One of the very useful things the Alberta Lamb Traceability Project (LTP) did in 2009 and 2010, is they collected cost of production data from a large group of cooperating farms. This data was used to create farm financial models for different types of flocks, as well as the differences between top and bottom producing flocks. The next few sections of this guide will discuss the key differences between these 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 Project. As you can see, ewe productivity was clearly a factor in which farms were the most profitable. (Stolz, Alberta Lamb Traceability PIlot Project, 2011)

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

Financial 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 simply 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 must either make more money and/or you must spend less.

Expenses

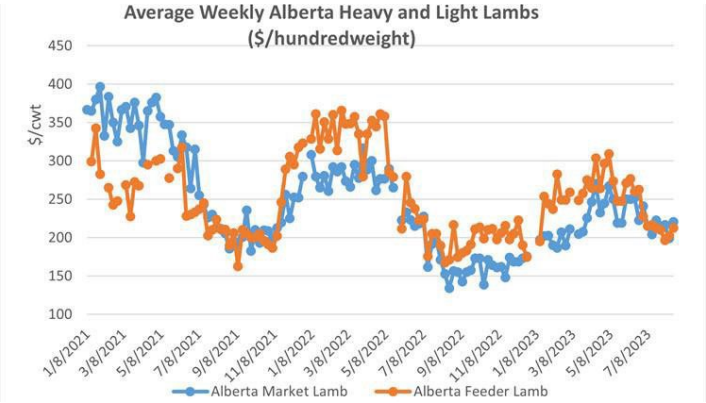
The table below shows the cost of production per lamb sold for the farms participating in the Alberta Lamb Traceability Project in 2010, adjusted for inflation for 2025. Unfortunately, since we do not have good data for 2025 these numbers will not be very accurate. That said, this table nevertheless is useful as it shows where the relative differences are between top, average, and bottom performing flocks, and it is probably close enough for projecting your costs if you do not have any of your own data.

Expenses	LTP – 2010 Alberta Flock Average Expenses			
	Ave Percent	Top	Average	Bottom
Feed	38.70%	$ 89	$ 118	$ 149
Labour	27.30%	$ 70	$ 78	$ 79
Depreciation	7.14%	$ 15	$ 22	$ 26
Supplies	4.53%	$ 7	$ 13	$ 23
Fuel	3.33%	$ 11	$ 11	$ 11
Utilities	3.16%	$ 4	$ 9	$ 17
Veterinary	2.40%	$ 5	$ 7	$ 8
Other	13.44%	$ 15	$ 47	$ 87
Total COP	**100%**	**$ 215**	**$ 305**	**$ 401**

(LTP 2010 - Costs per lamb sold – adjusted for inflation to 2025) (Stolz, Alberta Lamb Traceability PIlot Project, 2011)

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 – The "other" category was mostly animal purchases. The biggest difference between top, average, and bottom flocks in this category was that average and bottom flocks bought more breeding ewes rather than 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. Other significant "other" category items included tool purchases, equipment and building repair, and servicing debt.



Incomes

This table shows Alberta Livestock Market price of lamb over the past few years. As you can see, the average price for lamb fluctuates seasonally. The market recently has been paying about $240 for a 120lb finished lamb. (Alberta Agriculture , 2025)

The tables below show the income and percentage of sales in each category for the top, average, and bottom flocks on the Alberta Lamb Traceability Project back in 2010. Unfortunately, we do not have good data for 2025, but these tables are still very useful as they demonstrate the differences between top, average and bottom performing flocks. 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 2010)

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	$ 216	$ 201	$ 193
Feeder lambs	$ 169	$ 155	$ 164
Replacement lambs	$ 235	$ 219	$ 210
Cull animals	$ 140	$ 118	$ 94
Breeding ewes/rams	$ 709	$ 592	$ 175
Wool & other per ewe	$ 2	$ 2	$ 3
Direct to consumer	$ 232	$ 274	$ 208
Income per lamb sold	$ 231	$ 220	$ 207
Average price / lamb	$ 211	$ 195	$ 188
Income of Production	$ 250	$ 250	$ 238

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 prices received for lambs were $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 considers 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 this difference can be accounted for by differences in productivity, 33% is attributed to higher costs between the top and bottom flocks, and the last 17% by differences in income received per lamb. The message once again is productivity matters the most!

Investment

Investment is the 3rd 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** reasonably spend if you want to make money. The table below shows investment differences between top performing flocks compared to average and bottom performing flocks that were on the LTP program in 2010 adjusted for inflation for 2025. In this table, Ram and Ewe prices are what these farms spent per animal, while Equipment and Buildings are expressed as investment per lamb sold. (Stolz, Alberta Lamb Traceability PIlot Project, 2011)

Investment – amount per animal	LTP – 2010 Alberta Flock Average Investment		
	Top	Average	Bottom
Rams	$643	$487	$433
Ewes	$291	$293	$313
Equipment	$125	$144	$165
Infrastructure	$82	$243	$221

*

As you can see, top performing flocks valued their rams at over $210 more than bottom flocks. This means top flocks spent significantly more on their rams! Clearly, buying good rams is something top producers consider 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. Top producing flocks also tended to retain ewe lambs internally for breeding stock instead of buying, so they may have simply estimated a lower value for these ewes.

Top performing flocks spent significantly less on equipment and infrastructure (including buildings) per lamb sold compared to the average and bottom flocks. In the table above a top flock that sells 1,000 lambs per year invested $125 per lamb sold on equipment for a total equipment investment of $125,000. A Bottom flock in this example selling 1,000 lambs would spend $165 per lamb sold on equipment for a total equipment investment of $165,000. This higher investment resulted in higher costs from depreciation for these bottom flocks.

Equipment costs for top flocks were $40 per lamb sold less than bottom flocks and building & infrastructure costs for top flocks were about $139 per 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 noting that while top performing farms spent relatively little, there was quite a difference in the range of 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 $135 per lamb sold for equipment plus $135 for buildings & infrastructure. Spending over 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 applying for business loans. Financial projections are also great tools when expanding your business and for general management. The key to developing financial projections, like other areas of management, is to break the job down into "manageable" size pieces. To help you with this task, the Alberta Lamb Producers Cost of Production tool also has a "Financial Toolbox" with the forms you need.

Investment – Buildings & Equipment

The easiest way to figure out your sheep enterprise investment is to make a list of the "stuff" that will make up your operation. You will need to make a list for each year of your "projection". Banks generally require a three-year projection.

Sheep Enterprise Asset List			
Equipment	**Market Value**	**Percent Sheep**	**Total**
Tractor	$15,000	50%	$7,500
Truck (pickup)	$25,000	25%	$6,250
Stock Trailer	$10,000	100%	$10,000
Feed mixer	$10,000	75%	$7,500
Scale	$5,000	100%	$5,000
Small Tools	$15,000	25%	$3,750
Other sheep equipment	$4,000	100%	$4,000
Total Cost	NA	NA	**$44,000**

In this example, we have a list of tools and equipment. The projection includes the item, its market value, the percentage use for the sheep enterprise, and the total amount. (Stolz, Alberta Lamb Traceability PIlot Project, 2011)

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

Market value is simply the fair market value for the item you are listing (what it would sell for at auction). If you recently bought the item, you should 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

This table helps you calculate your flock growth, income, and expenses. As mentioned, a full 3-year version of this tool, and the others used in this section, are in the ALP Cost of Production Tool under the "Financial Tools) section. (Stolz, Alberta Lamb Traceability PIlot Project, 2011)

Sheep Three Year Flow Chart			
Year 1	**Ewes**	**Rams**	**Lambs**
Opening #	400	18	0
Purchases	0	4	20
Births			720
Transfers	80	2	82
Deaths	20	4	86
Sales	60	2	552
Closing Inventory	400	18	20

Opening inventory lists the number of ewes, rams, and lambs that you had on January 1. Purchases are what you intend to purchase the 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 the Guide 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.

Balance Sheet

Once you have listed the "stuff" that makes up the operation including your animals, you will be able to complete your balance sheet. This will help you to figure out how much money you will need to invest each year of the projection, and/or how much of a bank loan you will need.
(Stolz, Alberta Lamb Traceability PIlot Project, 2011)

Sheep Enterprise Balance Sheet - Year 1	
Assets	
Cash & receivables	$15,000
Animals (sheep & guardians)	$120,000
Sheep equipment	$55,000
Barns & Infrastructure	$50,000
Other	$6,000
Total Assets	**$246,000**
Liabilities	
Operating Loan	$10,000
Equipment Loan	50,000
Other long-term loan	$40,000
Accounts payable	$2,500
Total Liabilities	$102,500
Owners Equity	$143,500
Total Liabilities + Equity	**$246,000**

In this example:

- Cash and receivables are what you have on-hand at the start of the year. In this example we had $15,000 in cash and receivables on December 31.
- Animals is the value of your flock and guard dogs. The Sheep Flow Chart you completed earlier will tell you how many animals you will have for each year.
- Sheep equipment, barns and infrastructure should be the value to the sheep enterprise that you calculated earlier.
- Operating loans are used to balance the day-to-day cash flow of the business.
- Equipment and other loans may be used as necessary to help you buy animals, equipment, infrastructure, etc.
- Accounts payable are short-term debts owed to creditors (i.e. utility companies).
- Owner's equity is your own investment into the operation

Income Projection

This table lists the categories of your sales. The sheep flow chart projection you did earlier will tell you how many animals you have to sell. You can look up current market sales averages on the internet to estimate how much you will get for each sale category.
(Stolz, Alberta Lamb Traceability PIlot Project, 2011)

Sheep Enterprise Income - Year 1				
Description	**Number Sold**		**Amount/head**	**Total**
Market lamb sales	472	$	230	$108,560.00
Feeder lamb sales	52	$	180	$9,360.00
Direct to consumer lamb sales	10	$	350	$3,500.00
Replacement ram-lamb sales	0	$	-	$0.00
Replacement ewe-lamb sales	15	$	500	$7,500.00
Breeding ewe sales	0	$	-	$0.00
Breeding ram sales	2	$	750	$1,500.00
Cull ewe sales	60	$	250	$15,000.00
Cull ram sales	2	$	250	$500.00
Wool sales	$		1,600	$1,600.00
Other sheep revenue	$		-	$0.00
Total Income				**$147,520.00**

For example.

- Market lambs - 120 lbs. may sell for $240
- Feeder lambs – 80 lbs. may sell for $110

- Direct to consumer (variable) - Consider $200 + cost of processing and any delivery changes as needed.
- Replacements (variable) - Consider at least $250/lamb
- Breeding ewes & 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 income for the year, you would include bank loans and owner's equity investments under this category. Note: When calculating cost-of-production, your bank loans and owner's equity are simply tracked on your balance sheet.

Cash-Flow Projection

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

1. Complete the Sheep Flow Chart and Sheep Income spreadsheets.
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 established flocks can use information from their previous year's set of books as a guide. Otherwise, we can use information from the Industry Averages section discussed earlier. Your personal situation and experience will also help you set appropriate estimates.
4. Equipment depreciation – A good estimate would be total sheep value of equipment times 8%
5. Barns & infrastructure depreciation – Estimate total sheep value times 3%

Sheep Enterprise Cash Flow - Year 1

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**
Total Income (1)	*$2,000*	*$5,160*	*$19,520*	*$69,120*	***$95,800***
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**
Total Expenses (2)	**$3,713**	**$5,566**	**$19,149**	**$66,312**	**$94,740**
CASH FLOW (1-2)	**-$1,713**	**-$406**	**$371**	**$2,808**	**$1,060**

Note: Revenue Canada depreciation rates are not necessarily the right ones to use when doing cost of production work. You want your depreciation rate to be as close to "reality" as possible.

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 - Grants are sometimes made available by the Alberta or Canadian governments to encourage specific things. The Alberta Lamb Producers may track available grants that would be available to you. The most recent grants available for example were around energy efficiency.

The worst mistake that business owners commonly make is to spend all their own money first and then go looking for a loan or a grant once they run out. This is not a good strategy! The reason this is not a good strategy, is because to get a loan, lenders want you to invest some of your own money – 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 considering lending someone your own money. These things fall into five categories called the "5 Cs of lending". The "Red flags" discussed under each category below offer some examples 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 1:1 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

There are two farm lenders that are especially important that you will probably be dealing with including:

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 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.
- 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 addressed 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 Business 101 sample business plan and financial projection forms in the $heep 101 Tools (Excel document).

- Loan Application form
- Farmland Appendix
- Personal Resume
- Statement of Assets & Liabilities
- Farm Operating Statement
- Last 3 years tax returns (or accountant prepared financial statements)
- Birth certificates (proof of citizenship)
- http://www.afsc.ca

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.
- They provide financing, insurance, software, learning programs and other business services to producers, agribusinesses and agri-food operations.
- Land, equipment, buildings, improvements, livestock, etc.

Application Requirements

Getting a loan through FCC is quite 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 like 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 and what is needed to create an effective **Data Collection Action Plan**, it would look pretty much like a grocery list. We would ask ourselves;

- What data do we need?
- What tools do we need? (as discussed earlier)
- When, where, and how will we collect the data?
- And last, what infrastructure do we need to do the job? This includes the pens, chutes, alleyways, and so on, that we may need to use.

What data to collect?

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

The first step is to figure out what information you 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. What we collect depends on what we intend to do with the data.

The easy way to figure this out is to “back-cast”. Back-casting is a simple idea. You think about what the end result (what you want), then you work back to figure out what this means.

For example, maybe you want to 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 reliably give you two or more lambs without causing you any management issues. Likewise, maybe your worst ewes give you 4 or less lambs over a three-year period and/or cause management issues.

The next step would then be to figure out what information you need to accomplish this. In this case it means being able to track individual ewes (this requires ewe tags and individual records), lambing data (yearly), issue tracking (ability to comment), and sales data (did the lambs survive, why / why not).

This can of course be done electronically or by paper.

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 really should be coded individually in the farm books. If you do this, it makes it possible to assess how much each of your "enterprises" is contributing to the overall farm financial picture. If you do not do this you have no idea if one or more of your enterprises are costing you money.

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 bookkeeping software now makes it easy to track each of your farming enterprises separately.

As mentioned earlier, this is one area that you may want to contract with 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
  - Incomes
    - 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 & oil
    - Short-term interest
    - Owner's drawings
    - Hired labour
    - Contract labour
    - Animal purchases (lambs, ewes, rams, other)
    - Utilities & 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 & Infrastructure
        - Office equipment
    - Liabilities (what you owe on the "stuff")
        - Equipment loans
        - Building & Infrastructure loans
        - Line of credit
        - Shareholders loans
    - Owner's equity (the difference between the value of the stuff and what you owe)

- Labour – Labour is one of your biggest costs. Tracking your time or at the very least estimating your time is highly recommended. This is the only way to know what your labour costs are and whether your labour-saving strategies are working.

Note: Determining which financial categories to track is up to you. The categories outlined above will work well for most operations and are designed to work with the Alberta Lamb Producers Cost of Production tool to identify your Cost of Production.

Flock information

As mentioned earlier, the types of flock and individual animal information 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 info (ewes that lambed, how many lambs they had, lamb weight, their sex, ewe lambing difficulty, ewe milking ability, mothering, udder notes, ID numbers, etc.)
- Weaning information – lambs that survived until weaning, their weaning weights, days to weaning, daily weight gain
- 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 – days / paddock, rate of gain, worming notes, etc.
- Condition score and animal weights

Data Collection Process

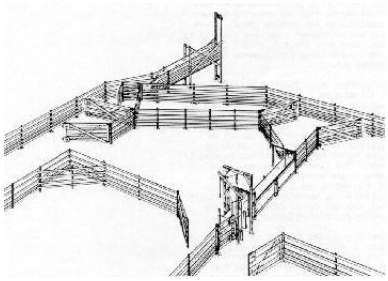
Now that we have figured out what information we want to collect and the tools we will use (discussed earlier in this Guide), the next step is to figure out how we will gather the information. What are the actions and steps needed to collect the information we are after?

These actions or steps form the basis of our data collection plan. Your data collection plan will basically be a list of steps (a "to-do" list). The idea is to choreograph the job, so everything runs smoothly. If this sounds like a lot of work, it isn't – since it saves you time in the long run. Big companies do this as well, this is the magic behind companies like IKEA, Walmart, UPS, and Amazon.

The action plan should also talk about when, where, and how we will collect the data. What data will we collect? How will we work the animals? 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



The final step to consider is if we have the infrastructure that we need to do the jobs we want to do. The infrastructure we will use and/or need becomes clear as we gain experience and when we write out the steps involved in data collection.

Here is an example looking at collecting data when selling market lambs.

- Sorting – We may want to sort market lambs every two weeks starting in September (for June lambing) and pen them into shipping groups so that we know which lambs, and how many, will be ready.
- Data needed – Lamb ID, weight
- Tools – Paper or electronic system (i.e. Farmworks – PSION)
- Process
    - Move lambs from the main feeding area to holding pens in the sorting area.
    - Sort lambs and collect information including
        - Problem / injury information
        - Weight
    - Weigh/sort heavy lamb group at least 24 hours prior to shipping to confirm shipping group.
        - Note: if you weigh every 2 weeks you will have a pretty good idea of your group sizes well ahead of time.
        - Place shipping group into shipping pen
        - Remove feed and water prior to shipping (as required for slaughter).
        - Create a manifest and track final weight, ID, and destination.
        - Load & ship the lambs

- Infrastructure
    - Lamb pens - Need at minimum one pen for market ready lambs, one for poor doers, and one for general feeding.
    - Weigh/sort handing system (data collection point)
        - Main corral
        - Assembly pen

        - Chute, anti-backup, scale/crate, 3-way sort
        - 3 pens to sort into (market ready, light, main group)
    - Alleyways – runs to easily move lambs from feeding pens, then to your corral / handling system, then to sorting pens (back to main feeding pen, poor doer pen, and shipping pen).
    - Shipping pen – requires a loading chute / truck access.

In the example above our data collection point is the chute/scale area. The necessary infrastructure needed to collect the data we want includes all infrastructure elements identified. If any of the elements were missing, then the job will most likely not get done because it is too hard. For example, if you did not have good alleyways connecting your main feeding pen to corral pens and to your sorting area it would be too difficult to sort the lambs, and the job would not get done.

Alberta Lamb Producers Cost of Production Tool

Background

The Alberta Lamb Producers Cost of Production Tool was originally developed under the Alberta Lamb Traceability Pilot Project in 2010, and it was also used in the National RFID project in 2010-12. The original name for this tool was the "Flock Snapshot". The Flock Snapshot received a major update in 2025 and is now called the Alberta Lamb Producers Cost of Production Tool. (Stolz, Alberta Lamb Traceability Pilot Project, 2011)

The ALP Cost of Production Tool is sheep enterprise specific. This means that it was designed to tell you only if your sheep enterprise is making money. It cannot you if our whole "farm" is making money. It also cannot tell you if you are making enough money to pay your bills. We would need to do a personal cash flow to figure that out. One of the changes we made in 2025 however was to include a new "Financial Toolbox", a set of tools including cash flow statements, balance sheets, and such for those who want to do forward looking projections.

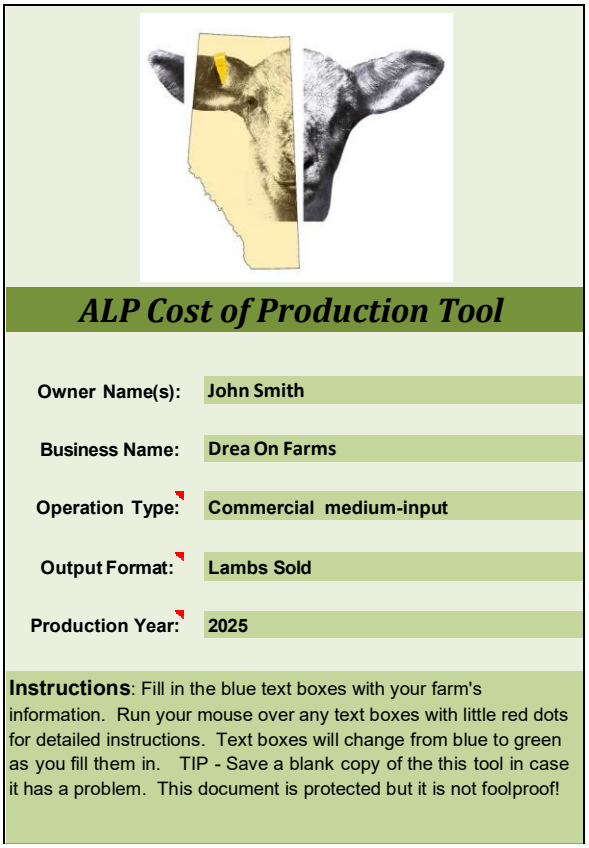
The idea behind the ALP Cost of Production Tool is that it combines our sheep enterprises financial information and our flock information to make sense of this data. It analyzes the information into performance measures such as cost per lamb sold, income per lamb sold, labour cost/lamb, feed cost/lamb, etc.

This COP tool also creates summary reports to make it easy to compare the operation year to year or against industry benchmarks. (Stolz, Alberta Lamb Traceability Pilot Project, 2011)

The program can be opened in either Open Office, which is available on the internet as a free download, or Microsoft Excel.

All screens on the ALP Cost of Production tool have drop-down menus that explain how to fill in the required field. For the COP tool to work, all fields should be filled.

Tip – save a blank copy of the ALP Cost of Production tool in case you mess up the file. The program is protected, but it is possible to corrupt the file.



Welcome

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

Owner & 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 automatically created by COP tool. 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 your Operation Type by clicking your mouse on the text box. An arrow will appear on the right side of the text box. Click on the arrow and you will see a drop-down menu. There are six choices for operation type, click on the one that best describes your operation.

For example, Commercial low input operations would focus mostly on selling lambs for meat. It would focus on very low costs, more grazing than feeding, and would probably run lower productivity range-style ewes. Commercial medium input would be most Alberta sheep farms. Commercial high input operations would focus on very high prolificacy ewes like Rideau Arcott, Finnsheep, or Romanovs, would have higher costs, and would rely more on feeding than grazing. Seed stock operations have a higher focus on selling breeding stock and would likely have higher costs. Select the operation type that best describes your operation.

Note – This selection affects the industry benchmarks that the Cost of Production Tool will suggest for your type of operation. It does not affect anything else.

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.

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

Farm Data

Farm Data			2025
Animals	Ewes	Number of ewes at the start of the year	210
		Ewes that died	5
		Average value of ewes	$300.00
		Number of ewes that should have lambed	205
		Number of ewes that actually lambed	200
		Size of mature ewes (lbs)	200
	Rams	Number of rams at the start of the year	3
		Rams that died	0
		Average value of rams	$700.00
	Lambs	Number of lambs at the start of the year	0
		Number of lambs born	525
		Ewe lambs transferred to breeding flock	25
		Ram lambs transferred to breeding flock	0
		Lambs that died	50
		Average value of lambs	$230.00
	Guardians	Number of guardian dogs	2
		Average value of dogs	$650.00
		Number of "other" guardians	0
		Average value of "other" guardians	$0.00
	Other	0	$0.00
		0	$0.00
Labour	Number of hours	Total hours spent doing general farm labour	2,000
		Total hours spent managing the operation	400
	Labour rate	Value of general **farm labour** per hour	$25.00
		Value of **management labour** per hour	$25.00
Other data	Other rates	Land rental rate (grazing/acre)	$30.00
		Land rental rate (building site/other) per acre	$30.00
		Depreciation rate - Farm Equipment (8% base)	8%
		Depreciation rate - Buildings & Infrastructure (3% base)	3%
		Depreciation rate - Office & Electronic (30% base)	30%

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 for breeding stock and expect them to lamb in the year of the COP tool. If you are using management software a flock report or a breeding report should give you this number.
- Ewes that died – Number of ewes that died in the production year.
- 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 production year. (This number is used to calculate lambing percentage)

  Note: Accelerated flocks – please count ewes just once even if they gave birth twice. That way the COP Tool will generate the total productivity of the ewe flock for the year.
- Number of ewes that <u>actually</u> lambed – This is the number of ewes that gave birth, whether the lambs survived or not.

  Note: Accelerated flocks – please 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 – Number of rams that died in the production year.
- 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 and that were expected to lamb in the calendar year of production) should be counted as ewes in the "number of ewes at the start of the year" area.
- 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 in the year of production (the lambs born field) that were then transferred to the flock to be retained as breeding stock to lamb next year.
- Ram lambs transferred – These are ram lambs that were born in the year of production (lambs born field) that were transferred to the flock to be retained as breeding stock.
- 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 & 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 (donkeys, llamas, etc.).
- Other animals – This is the value of any other animals used in the sheep enterprise including border collies.

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 considered - as it is in all other businesses.

  We need to know how many person-hours are required for your sheep farm. The ALP Cost of Production tool allows users to enter two classes of labour including farm labour and management labour, since the value / hour for each are usually different. Farm labour is for general day-to-day work such as lambing, feeding, sorting, shipping, etc., while management labour is for management work including training, strategy work, analysis, business planning, 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. Tracking labour is something that few managers do. Fortunately, there is a labour calculating tool in the Calculators tab of the ALP Cost of Production tool to help.

- Labour rate – Your wage rate per hour can be set in Farm Data tab. Farm labour should be set at the going rate for general farm work in your region. The pre-set is $18.00/hr. The value of management should be set at a fair rate for farm management work. The pre-set is $30.00/hr.

Other Rates

- 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 $30.00/acre. It is useful to set this rate at the rate you could earn if you were to rent out the grazing area to a neighbor.
- 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

The Equipment and Infrastructure tab is a list of the "stuff" that is used in your sheep operation and what it is worth. For an accurate cost of production calculation, we need this to be the fair market value of all items.

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 & electronic – This would include computers, software, and electronic tools such as the PSION used in many RFID record keeping systems.

Equipment & Infrastructure 2025

Equipment	Description	Market Value	Percent Sheep Use
	Tractor	$20,000	50%
	Pickup	$30,000	25%
	Stock trailer	$10,000	100%
	Sheep tools	$6,000	100%
	Bale processor	$7,500	100%
	Shearing equipment	$800	100%
	Quad	$8,000	25%
	0	$0	0%
	0	$0	0%
		Total Equipment	$43,800.00

Buildings & Infrastructure	Description	Market Value	Percent Sheep Use
	Barns	$35,000	100%
	Corrals/Handling	$15,000	100%
	Grain storage/bins	$1,000	100%
	Feeders	$4,000	100%
	Fences	$8,000	100%
	(Add other items as needed)	$0	0%
	0	$0	0%
	0	$0	0%
	0	$0	0%
		Total Buildings	$63,000.00

Office & Electronic	Description	Market Value	Percent Sheep Use
	PSION & software	$2,000	100%
	Computer system	$500	100%
	0	$0	0%
	0	$0	0%
		Total Office & Electronic	$2,500.00

Land	Description	Number of Acres	Percent Sheep Use
	Grazing acres	120	100%
	Building site area	6	100%

Market value

- Market value - is simply the "fair market value" for the item. If the item is new, you will enter the amount you paid. If it is used, you would enter the value the item would for at auction. The market value of your equipment, buildings and infrastructure, and office equipment will be depreciated at the rates you entered in the Farm Data tab. This depreciation makes up part of the total operational cost of your sheep operation.

- Tip - All sheep infrastructure that provides value should be included. How to estimate value for older things is hard – especially for things like fences. Here is a trick you can use so that your valuation is reasonable. We'll use fences and barns as an example:
    - The program depreciates infrastructure at a default rate of 3% per year, or whatever rate you select, (see Fine-tuning Market Value and depreciation below).
    - You could figure out your fences value using this 3% depreciation rate by estimating how much value the fence loses per year.
    - 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 new.
    - Likewise, if you think your barn is losing $2,000 in value 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)
    - Estimate the fair market value of your buildings and other infrastructure. i.e. maybe the buildings and other infrastructure you have are worth $200,000
    - Estimate how many years you will be in the business. i.e. 10 years before you sell the business or otherwise part with these assets.
    - Estimate the future value of your buildings and other infrastructure in 10 years (assuming you maintain them). i.e. they will be worth $150,000 in 10 years.
    - This means your projected depreciation will be $200,000 - $150,000 = $50,000.
    - This means your projected depreciation rate is $50,000/10 = $5,000 per year on average.
    - If you take $5,000 / $200,000 you get a depreciation rate of 2.5%.
    - Enter 2.5% in the FarmData tab for barns and infrastructure as your depreciation rate.

Percent Sheep Use

The ALP Cost of Production Tool asks users to fill in the percentage sheep-use for items that are shared with other farming enterprises and/or that are shared with personal use (i.e. an ATV). This helps to figure out the value of these items bring to the sheep enterprise. If an item is used 50% of the time for the sheep enterprise, it's percent sheep use would be 50%.

Income

This section of the COP Tool lists sheep enterprise income by category. To track this information, you will need a bookkeeping system that can track animal "classes", plus flock management records or software that can give track the number of animals in each class that you shipped.

Live Weight – One of the best ways to determine flock and financial performance is by the number of pounds of meat produced. Since most producers do not have accurate data on this point, the ALP Cost of Production Tool does not rely on this measure.

Sheep Enterprise Income			2025	
Description	**Number Sold**	**Live Weight (lbs)**	**Total Amount**	**Amount received/head**
Market lamb sales	450	120	$96,000.00	$213.33
Feeder lamb sales	50	90	$10,000.00	$200.00
Direct to consumer lamb sales	0	0	$0.00	$0.00
Replacement ram-lamb sales	0	0	$0.00	$0.00
Replacement ewe-lamb sales	0	0	$0.00	$0.00
Breeding ewe sales	20	NA	$200.00	$10.00
Breeding ram sales	0	NA	$0.00	$0.00
Cull ewe sales	0	NA	$0.00	$0.00
Cull ram sales	0	NA	$0.00	$0.00
Wool sales			$0.00	NA
Other sheep revenue			$0.00	NA
Total Income			**$106,200.00**	

Expenses

A sheep-enterprise specific bookkeeping system is recommended to make filling in the income and expense areas of the COP tool easier. If you are setting up a new bookkeeping system, consider using the categories listed here.

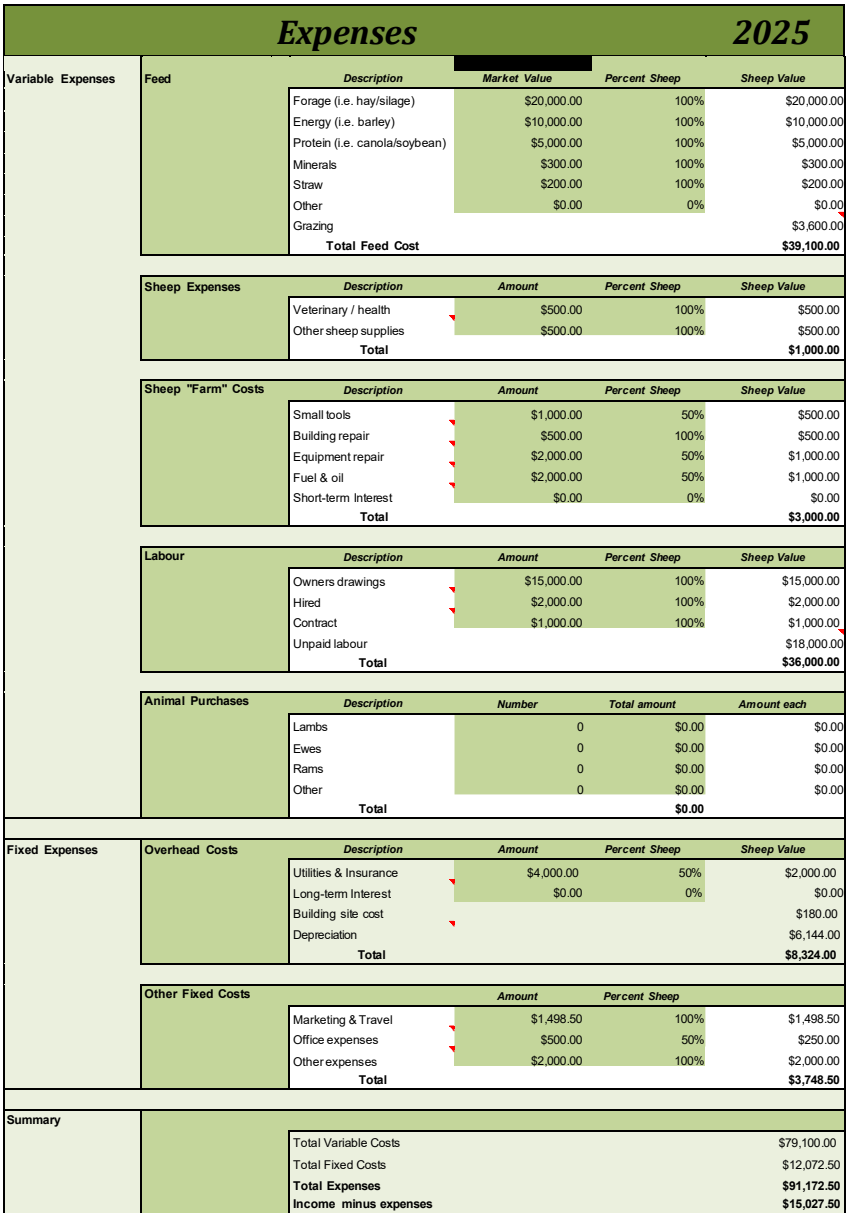
Feed – Feed is the market value of the feed consumed. Farm produced hay would be its value at the market price for that year.

Grazing – The cost for grazing is automatically calculated based on acres used for grazing (Equipment tab) times the rental rate for grazing (FarmData tab). If you are charged a flat yearly rate, just adjust the rental rate and/or acres grazed as needed.

Veterinary/health – Veterinary costs, heath 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 to the equipment tab so that they can be depreciated over several years.
- Building repair – Repairs to buildings and other sheep infrastructure
- Equipment repair – Repairs to equipment used in the sheep enterprise.
- Fuel & oil – Fuel and oil used in the sheep enterprise
- Short-term interest – This is interest on lines of credit or other short-term credit.



Expenses **2025**

Variable Expenses

Feed

Description	Market Value	Percent Sheep	Sheep Value
Forage (i.e. hay/silage)	$20,000.00	100%	$20,000.00
Energy (i.e. barley)	$10,000.00	100%	$10,000.00
Protein (i.e. canola/soybean)	$5,000.00	100%	$5,000.00
Minerals	$300.00	100%	$300.00
Straw	$200.00	100%	$200.00
Other	$0.00	0%	$0.00
Grazing			$3,600.00
Total Feed Cost			**$39,100.00**

Sheep Expenses

Description	Amount	Percent Sheep	Sheep Value
Veterinary / health	$500.00	100%	$500.00
Other sheep supplies	$500.00	100%	$500.00
Total			**$1,000.00**

Sheep "Farm" Costs

Description	Amount	Percent Sheep	Sheep Value
Small tools	$1,000.00	50%	$500.00
Building repair	$500.00	100%	$500.00
Equipment repair	$2,000.00	50%	$1,000.00
Fuel & oil	$2,000.00	50%	$1,000.00
Short-term Interest	$0.00	0%	$0.00
Total			**$3,000.00**

Labour

Description	Amount	Percent Sheep	Sheep Value
Owners drawings	$15,000.00	100%	$15,000.00
Hired	$2,000.00	100%	$2,000.00
Contract	$1,000.00	100%	$1,000.00
Unpaid labour			$18,000.00
Total			**$36,000.00**

Animal Purchases

Description	Number	Total amount	Amount each
Lambs	0	$0.00	$0.00
Ewes	0	$0.00	$0.00
Rams	0	$0.00	$0.00
Other	0	$0.00	$0.00
Total		**$0.00**	

Fixed Expenses

Overhead Costs

Description	Amount	Percent Sheep	Sheep Value
Utilities & Insurance	$4,000.00	50%	$2,000.00
Long-term Interest	$0.00	0%	$0.00
Building site cost			$180.00
Depreciation			$6,144.00
Total			**$8,324.00**

Other Fixed Costs

	Amount	Percent Sheep	
Marketing & Travel	$1,498.50	100%	$1,498.50
Office expenses	$500.00	50%	$250.00
Other expenses	$2,000.00	100%	$2,000.00
Total			**$3,748.50**

Summary

Total Variable Costs	$79,100.00
Total Fixed Costs	$12,072.50
Total Expenses	**$91,172.50**
Income minus expenses	**$15,027.50**

- 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 (not 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 <u>should not</u> 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. We need to track this because it is one of the biggest costs for most sheep operations.
- 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 COP tool should be entered as "ewes".
- Utilities & Insurance – 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 is not included since the cost of land, for the purpose of calculating cost-of-production, is the agriculture rental value to your sheep operation.
- Building site cost - This field is calculated based on rental rates entered in the FarmData tab and the number of acres used for the building site entered in the Equipment tab.
- Depreciation – Depreciation is a cost calculated based on the depreciation rates entered in the FarmData tab and the value of assets you listed in the Assets tab.
- Marketing - This category is mainly for seed-stock breeders used to promote sales. You can also use this category for shipping costs to market unless you already account for this elsewhere.

- Office expenses – 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 entered including depreciation, unpaid labour, etc.
- Income minus expenses – This is total income minus expenses.

Targets

A very useful feature in this cost of production tool is that it allows users to set goals or "targets" for the operation. This feature allows you to "play" to see how meeting different targets would affect your farm's profitability.

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, etc. The targets feature is designed so that you can play with your numbers to see what matters in your operation to make more money.

Flock Targets			*2025*		
Performance			**Your Farm Actual**	**Your Farm Targets**	**Commercial medium-input Benchmarks**
	Ewes	Lamb drop rate	262.50%	250%	199.50%
		Conception rate	97.56%	95%	95.00%
		Cull rate (does not include death rate)	0.00%	3%	13%
		Ewe death rate	2.38%	3%	5%
	Rams	Ram death rate	0.00%	3%	4.00%
	Lambs	Lamb death rate	9.52%	10%	11%
Income					
	Prices	Market lamb price	$240.00	$230.00	$226.85
		Feeder lamb price	$200.00	$190.00	$164.98
		Direct to consumer lamb price	$0.00	$250.00	$274.97
		Replacement ram-lamb sale price	$0.00	$300.00	$343.72
		Replacement ewe-lamb sale price	$0.00	$300.00	$309.34
		Breeding ewe sale price	$10.00	$300.00	$343.72
		Breeding ram sale price	$0.00	$500.00	$378.09
		Cull ewe sale price	$0.00	$200.00	$109.99
		Cull ram sale price	$0.00	$200.00	$109.99
		Total income (calculated)	$106,200.00	$97,939.26	$76,103.15
	Feed Costs	Cost to feed each lamb	$45.32	$50.00	$50.00
		Cost to feed each ewe	$79.85	$90.00	$90.00
		Total Feed Cost (calculated)	$39,100	$41,688	$37,683
	Labour	Total Operation person/hours	1,400	900	828
	Other Costs	Total "other costs"	$10,928.50	$15,000.00	$15,542.82
	Equipment	Equipment investment	$43,800.00	$45,000.00	$33,981.68
		Barns & infrastructure investment	$63,000.00	$65,000.00	$35,043.61
		Office & Electronic	$2,500.00	$3,000.00	$4,035.32
		Estimated hourly return	$35.73	$38.67	$21.61

The benchmarks area on this page offers rough guidelines for your type of operation as 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 lambed whether or not the lambs survived.
- Conception rate – This is the number of ewes that lambed 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 – Prices are the average prices for each animal type.
- Cost to feed each ewe & lamb – This is a rough approximation of the cost to feed a ewe & lamb. Note: This 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 operations 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.

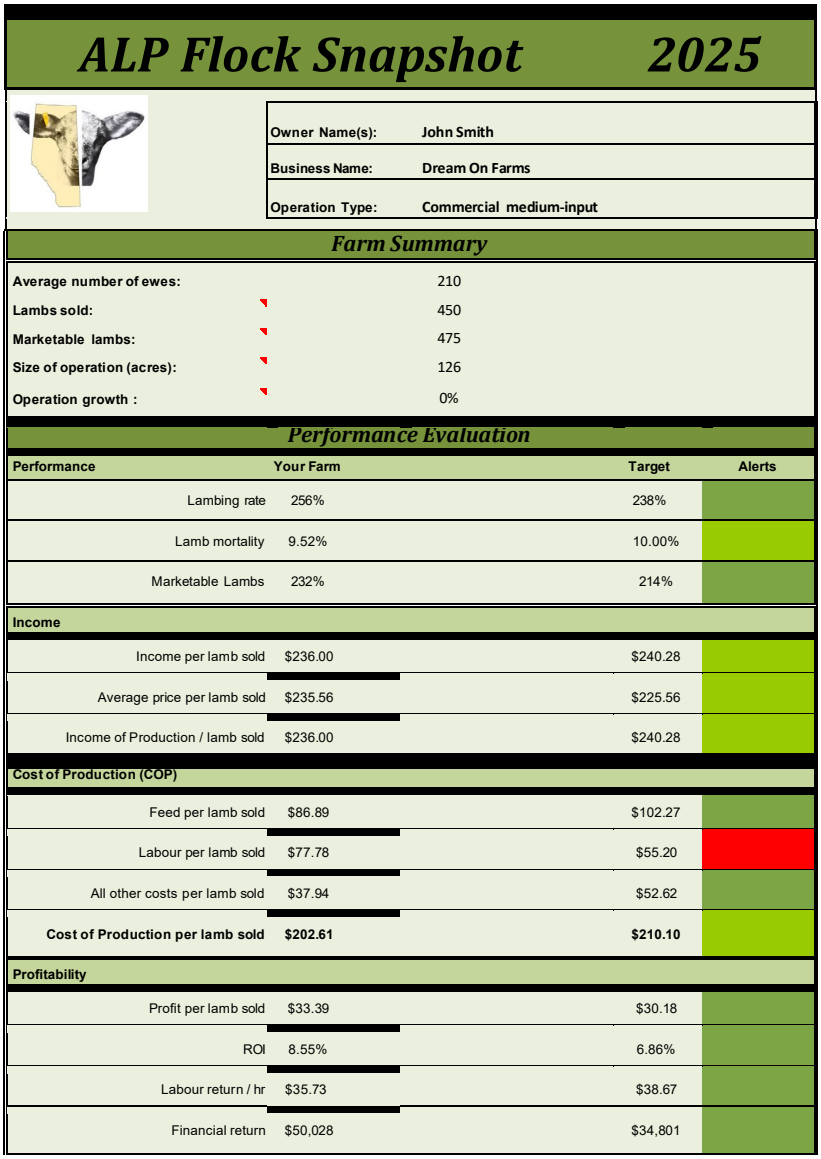
- Total other costs - Other costs include everything except feed, labour, and depreciation.
- Equipment investment – The sheep enterprise value of all tools and equipment used in the operation.
- Barns & Infrastructure investment - The sheep enterprise value of buildings and infrastructure used in the operation.
- Office & Electronic investment – 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 Summary Report

The picture to the right 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 against farm-set goals or "targets". Let's look at what the performance measures mean.



ALP Flock Snapshot 2025

Owner Name(s):	John Smith
Business Name:	Dream On Farms
Operation Type:	Commercial medium-input

Farm Summary

Average number of ewes:	210
Lambs sold:	450
Marketable lambs:	475
Size of operation (acres):	126
Operation growth :	0%

Performance Evaluation

Performance	Your Farm	Target	Alerts
Lambing rate	256%	238%	
Lamb mortality	9.52%	10.00%	
Marketable Lambs	232%	214%	
Income			
Income per lamb sold	$236.00	$240.28	
Average price per lamb sold	$235.56	$225.56	
Income of Production / lamb sold	$236.00	$240.28	
Cost of Production (COP)			
Feed per lamb sold	$86.89	$102.27	
Labour per lamb sold	$77.78	$55.20	
All other costs per lamb sold	$37.94	$52.62	
Cost of Production per lamb sold	**$202.61**	**$210.10**	
Profitability			
Profit per lamb sold	$33.39	$30.18	
ROI	8.55%	6.86%	
Labour return / hr	$35.73	$38.67	
Financial return	$50,028	$34,801	

Performance Measures

Lambing rate – 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 vs 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 – 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 total income plus the difference between the value of opening and closing animal inventory divided by the number of lambs. This is an important measure for growing flocks!

Feed per lamb – 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.

Note: The way the Alberta Lamb Producers COP tool calculates this may be a little different than you are used to. This tool does not track how much of the investment is the owner's (i.e. owner's equity) vs how much of the investment is the banks (i.e. 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.

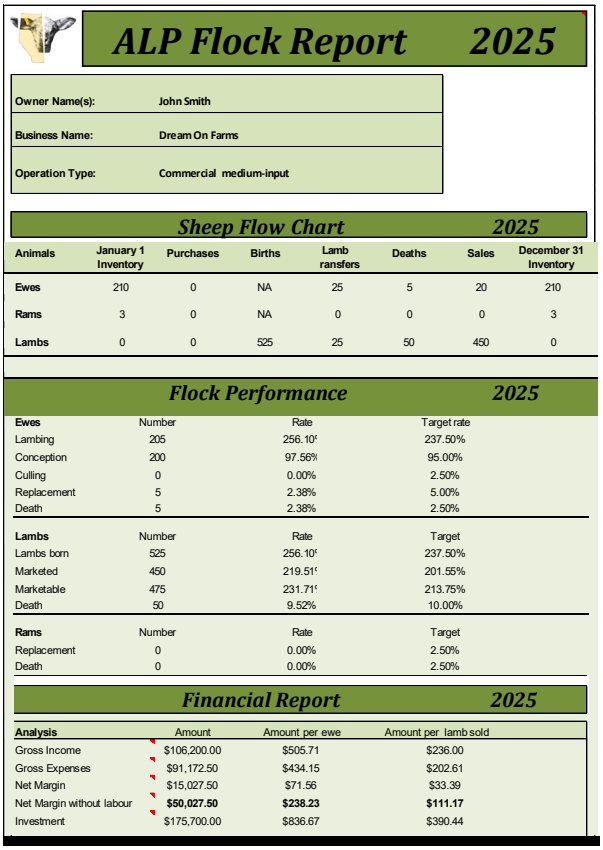
Labour return/hr. - This is value-of-production divided by the number of hours worked.

Flock Report

The picture below is the Flock Report. This report provides producers with a more detailed summary of the operation. 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.



ALP Flock Report 2025

Owner Name(s):	John Smith
Business Name:	Dream On Farms
Operation Type:	Commercial medium-input

Sheep Flow Chart 2025

Animals	January 1 Inventory	Purchases	Births	Lamb ransfers	Deaths	Sales	December 31 Inventory
Ewes	210	0	NA	25	5	20	210
Rams	3	0	NA	0	0	0	3
Lambs	0	0	525	25	50	450	0

Flock Performance 2025

Ewes	Number	Rate	Target rate
Lambing	205	256.10%	237.50%
Conception	200	97.56%	95.00%
Culling	0	0.00%	2.50%
Replacement	5	2.38%	5.00%
Death	5	2.38%	2.50%
Lambs	**Number**	**Rate**	**Target**
Lambs born	525	256.10%	237.50%
Marketed	450	219.51%	201.55%
Marketable	475	231.71%	213.75%
Death	50	9.52%	10.00%
Rams	**Number**	**Rate**	**Target**
Replacement	0	0.00%	2.50%
Death	0	0.00%	2.50%

Financial Report 2025

Analysis	Amount	Amount per ewe	Amount per lamb sold
Gross Income	$106,200.00	$505.71	$236.00
Gross Expenses	$91,172.50	$434.15	$202.61
Net Margin	$15,027.50	$71.56	$33.39
Net Margin without labour	**$50,027.50**	**$238.23**	**$111.17**
Investment	$175,700.00	$836.67	$390.44

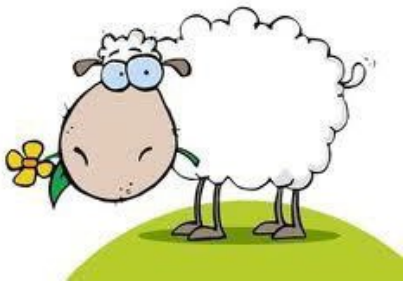
- Ewes – The ewe section includes:
  - Lambing – the number of ewes that were exposed to lamb.
  - Conception - the number of ewes that conceived.
  - Culling - the number culled
  - Replacement - the number of ewes replaced.
  - Death – the number of ewes that died.
- Lambs – The lamb section includes: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

The next two sections are rarely even mentioned when developing business plans, but I thought I would include them as they can be useful.



Action Planning

An effective Action Plan needs four things:

1. Be clear about "what needs to be addressed" … the things that are your "top" priorities.
2. Understand 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

(Kubr, 2002)

What Needs to be Addressed?

When all data has been entered into the ALP Cost of Production tool and you have set reasonable Targets, the Flock Snapshot report will show you, by colour, which areas of your operation may have issues that need to be addressed (based on the targets you set). The most common areas that need to be addressed include ewe productivity, feeding costs, labour hours, or other issues. The Targets page 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 you identified this as an issue for your operation.

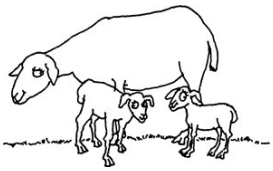
Root Causes

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 could be a mistake. The trouble is, unless it is obvious, we may not 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 root problem at all.

The example below shows what we are talking about. Each of the three issues listed below on the left can have multiple root causes. Low conception for example 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.

It is vital to figure out which are the root cause(s).



Issue	Possible Root Causes
Low conception	- Ewes are malnourished (feed) - Open ewes are kept
Low drop rate	- Low prolificacy ewes (genetics) - Ewes are malnourished (feed) - Selecting replacements from low prolificacy ewes - Lambing out of season
High lamb mortality	- Ewes are malnourished (feed quality) - Predation - Overcrowding (ewes and lambs get separated)

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

Tip 2 – When thinking about "root causes" it helps to ask the question "why" as many times as it takes to arrive at the "root cause". I know this sounds a bit weird, but it works.

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 that would address these issues.

Let's assume that we have identified nutrition as a possible root cause for the 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 whether they are good solutions or not. All we want to do is list what is possible. So, what actions would help us to increase flock 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 actions(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 for the operation. Here are a few examples:

- Condition scoring ewes
  - Pro – Ability to fine-tune feeding program, and the potential to reduce feed costs by keeping ewes in optimum condition for each stage of production.
  - Con – Handling facilities are needed to do this, labour costs would be higher
- Feed testing
  - Pro – Better control over nutrition, potentially lower costs by feeding correct diet, better animal health.
  - Con – Requires time and money 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 – Requires time and money to ration balance feeds

Action Plans

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 grocery shopping as an example.

We 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 to do this 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 of what you need
- Organize the list into groups based on store lay-out
- Go shopping

Good management, as this example shows, is not limited to running a business as we can use the same management principles in everyday life. It does make one wonder, however, why it is common to do this kind of work for simple things like shopping, but 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 i.e. 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 - If this sounds silly or like too much work, try it, the result is the opposite. Proper planning like this makes businesses run more efficiently. Just like we saw in the grocery shopping example we need to do our planning before we get to the store.

Implementing Change

Now that you have your Action Plan figured out, all that is left is 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 get done. I friend of mine trenched in water lines for their lambing barn years ago but never got around to finishing the job. Instead, they hauled 5-gallon buckets of water daily. Why? They didn't have an implementation plan.

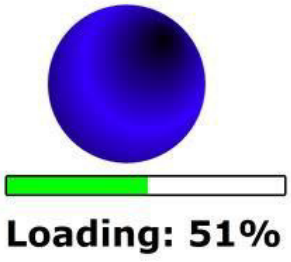
Please note, this plan does not need to be written as a separate plan. You can just do this as a part of your Action Plan.

Buy-in

Most sheep businesses are set up as owner-operators, 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 to improve your sheep operation may realistically take 5 years or more to get fully in place!
- Management needs to model the change. 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 especially 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.

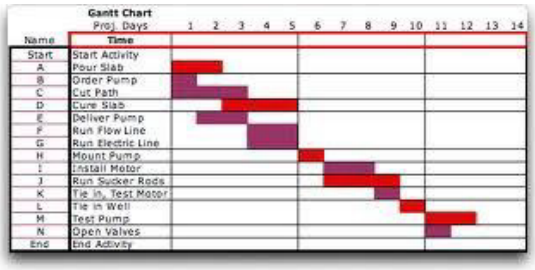
We start by figuring out what the operation will look like when the plan is complete. We then work backward (back-cast) to the start of the job to figure out the steps involved.

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 "milestone" that we have become very familiar with.

Timelines

Once you have your list of milestones you can put that list into a timeline. The one on the right is 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, then 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 are 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 of 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 there 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 stable and has been growing in Alberta with markets predicted to remain strong.
- Experience, training, money, time, and passion are needed 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 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 key to effective management.

Marketing

- Producers raise lamb for people who love to eat lamb … the consumer.
- Knowing what the customer/consumer wants & needs guides what & how you produce.
- It is possible to maximize returns by knowing what the market will and won't pay for.

Labour

- An effective labour plan includes training yourself as well as contracting out some tasks.
- Training & education are life-long activities.
- Tracking your labour is important so you can figure out your labour costs. When you know your labour costs, and where your labour goes, you are then able to plan how to lower these costs.
- Storyboarding your operation is a great way to reduce your labour by making it more efficient.

Information Technology

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

Finances

- Cost of production = costs divided by the number of lambs sold.
- **For most sheep operations, productivity per ewe matters most, then feed, then labour.**
- Income can vary by as much as $20/lamb between top and bottom flocks, but costs can vary more than $150/lamb sold. Clearly cost control is very important!

Financing

- Don't spend all your money before you ask for a business loan if you need one.
- Lenders are more likely to lend money to people who they think will pay them back. Banks protect themselves by making sure the loan is backed by something that is worth more than the loan.

- Agriculture & Financial Services (AFSC) and Farm Credit Canada (FCC) are where most producers get financing.

Data Collection

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

Alberta Lamb Producers Cost of Production Tool

- The ALP COP tool combines animal and flock financial information to calculate how well your sheep enterprise is doing.
- This tool has been designed so that producers can fairly compare their operations year-to-year and against industry benchmarks.
- Ewe productivity, feed, and labour are usually the most important factors in cost of production.

Analysis

- The ALP COP tool has a “targets” area that allows users 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 ALP COP tool to highlight the areas that may need to be addressed.

Action Planning

- Action planning is only effective if you identify the root causes of the issues you are trying to address.
- We create plans to get things done - just like we do when we shop for groceries.

Implementing Change

- Doing the easy things first helps us to get bigger jobs done.
- It helps to make use of milestones and timelines, and to verify our progress in steps, to ensure things get done.

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