Introduction To Sheep Production In Ontario

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Ontario Sheep Marketing Agency

The Ontario Sheep Marketing Agency (OSMA) is a producer run and funded organization that represents all sheep and lamb producers in Ontario. The agency was formed in 1985 under the Ontario Farm Products Marketing Act. As a requirement of the regulations all sheep, lamb, and wool producers must register with the Agency.

The OSMA Board:
The province is divided geographically into eleven electoral districts. Each district elects a Provincial Director to represent them on the board for a three-year term. The current board members are listed on the OSMA website or can be obtained by contacting the office directly. The board typically meets once per month with the OSMA General Manager to review the funding allocations and staff activities. Each district holds an annual meeting at which district representatives are elected. The OSMA annual general meeting is typically held in the late fall, giving producers an opportunity to review OSMA's activities, budget, and auditor's report.

Producer Funding:
In order to fund OSMA's staff and activities, a mandatory check-off fee of $1.55/head is collected on all animal sales.
Producer check-off funds are used to:

- Encourage and promote the marketing of sheep, lamb, and wool products through promotional campaigns to increase public awareness. Among other activities, this includes developing new markets for Ontario products, development of promotional materials (recipe cards, posters), representation at public events (Royal Winter Fair, Western Fair etc.), and maintenance of the OSMA website.
- Supply producer education resources regarding marketing opportunities, means of improving production efficiency, and product quality. This also includes development of the website and publication of the Ontario Sheep News magazine.
- Administration of various programs offered to Ontario sheep producers (Ontario Sheep Health Program and Maedi-Visna Pilot project)
- Provide a voice for Ontario sheep producers regarding developments within the agricultural sector (e.g. environmental initiatives, food safety issues, national identification programs, etc.) through liaison with the Canadian Sheep Federation, other commodity organizations and with various levels of government.

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Introduction

Beginning a sheep flock is both a lifestyle choice and a business venture. As with all ventures, the greater your interest in and dedication to maintaining your flock, the greater are your chances for success. If proper care and attention are taken, sheep farming can be a financially and emotionally rewarding endeavour. With close to 3800 farms, Ontario has approximately 25-30% of the sheep population in Canada, and approximately 50% of the national slaughter. With per capita consumption of lamb increasing there is great potential for growth within this industry. It is estimated that domestic production only supplies approximately 35% of the demand for sheep and lamb products in Ontario. Ontario in particular has the potential for an increased demand for lamb due to an expanding ethnic market.

For people who wish to raise livestock, sheep offer a unique level of flexibility in terms of required overhead. If you are considering starting a sheep operation, it is important to assess the resources available to you (land base, livestock facilities, equipment, time) to help you decide where to start and how large your flock may expand. Having a general understanding of sheep biology, reproductive management systems, and marketing opportunities will help you make informed management decisions, foresee possible problems and help maintain the viability of your flock as you get started.

The goal of this manual is to provide you with basic information regarding sheep production in Ontario. It is likely that this manual will not answer all of your questions as you get started with your flock. If you need additional information, go to www.ontariosheep.org, www,omafra.gov.on.ca or call the Ontario Ministry of Agriculture, Food & Rural Affairs (OMAFRA) contact centre at 1-877-424-1300, or your veterinarian.

Acknowledgements:
The Ontario Sheep Marketing Agency gratefully acknowledges the contribution to this manual by the Ontario Ministry of Agriculture and Food through the use of fact sheets and material review. Thanks are also extended to the Alberta Sheep and Wool Commission, the Saskatchewan Sheep Development Board, and the South Saskatchewan Wool Growers, for excerpts from their manual '*The Western Canadian Sheep Production Manual*'.

Disclaimer:
The Ontario Sheep Marketing Agency is absolved from any liability resulting from the use of information in this manual. We strongly urge producers to contact their veterinarian and feed company

Current State of Ontario Sheep Industry

Anita O'Brien, Sheep & Goat Specialist, OMAFRA

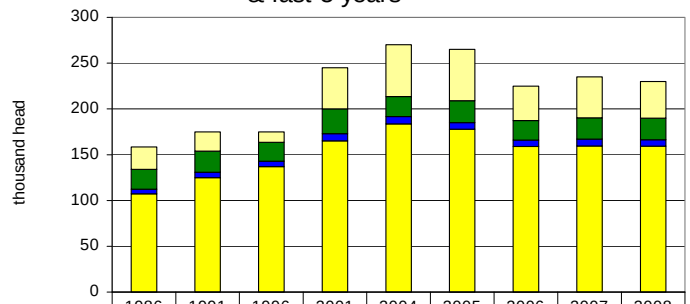
Introduction

This is a short synopsis of the presentation "Current State of the Ontario Sheep Industry" that was given at the Ontario Sheep Marketing Agency's Annual General Meeting, so only deals with key points rather than the complete presentation.

Flock size:

- as of January 1, 2008, the total Canadian flock is 6.1 percent lower than a year ago; the breeding flock (rams, ewes & replacement lambs) is 5 percent lower at 532,500 head
- the national flock size has decreased each of the past 4 years.
- Compared to most other provinces, Ontario's total flock has declined slightly from 2007 & the breeding flock has stayed virtually the same at 198.9 head (ewes, rams & replacement lambs) see figure 2.

Figure 2 Ontario Sheep flock, by census year & last 5 years

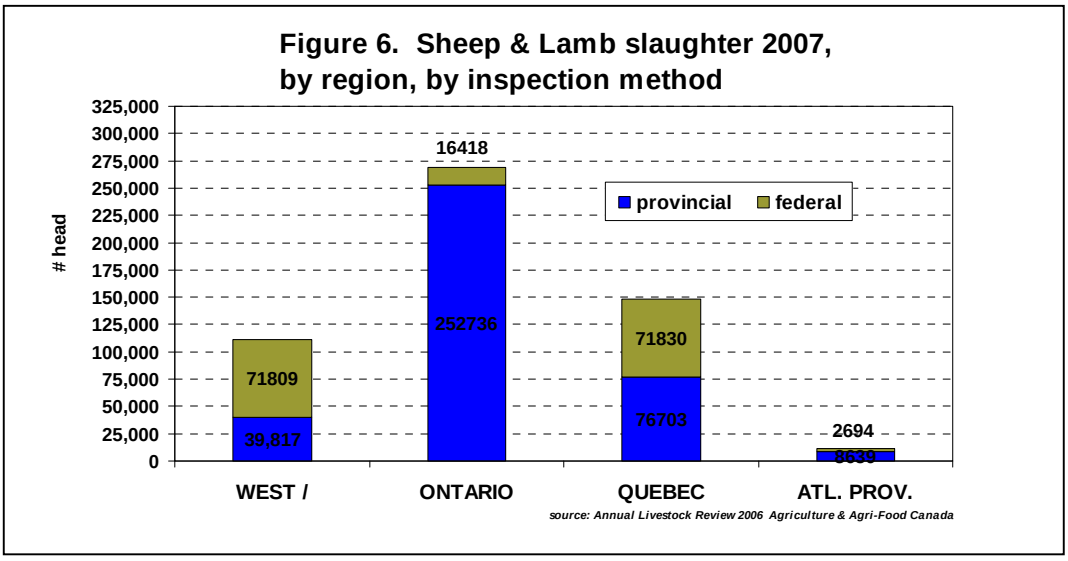


	1986	1991	1996	2001	2004	2005	2006	2007	2008
Market Lambs	24.5	21.1	11.5	45	56.5	56	37.6	44.7	40.1
Replacement Lambs	21.7	23	20.5	27	21.9	24	21.5	23.3	23.5
Rams	5	5.9	6	8	8	7.2	7	7.5	7.2
Ewes	107.3	125	137	165	183.6	177.8	158.9	159.5	159.2

source: Statistics Canada

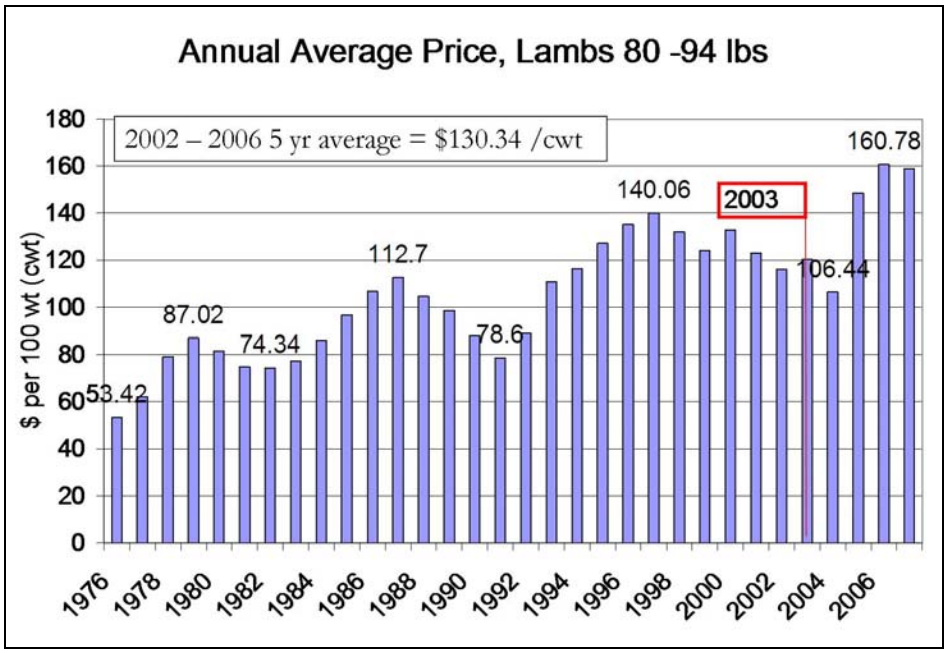
Slaughter data

- Total Canadian sheep & lamb slaughter in 2007 declined for the second year in a row– at 540,646 head, is 2% lower than 2006.
- Ontario's 2007 slaughter at 269 thousand head is 6% lower than in 2006.
- Although total slaughter in Ontario has declined, federal slaughter has nearly doubled over 2006 at 16,418 head. See Figure 6.
- Western Canada showed a 12% increase in slaughter to 111,626 head
- Ontario accounts for 49.8 % of total Canadian sheep & lamb slaughter – the LOWEST share in 15 years. Generally has been 52 to 55% since 1992. Quebec accounts for 27.5%; Western Canada 20.7% & Atlantic 2%
- Looking at major North American sheep and lamb slaughter regions, Ontario continues to rank 3rd (269 thousand head), behind Colorado (1,047 thousand head) and Iowa (395 thousand head). Quebec and Alberta also rank in the top 10 slaughter regions
- Average warm carcass weight in 2007 for Ontario was 46 pounds, while nationally it was 51.3 pounds



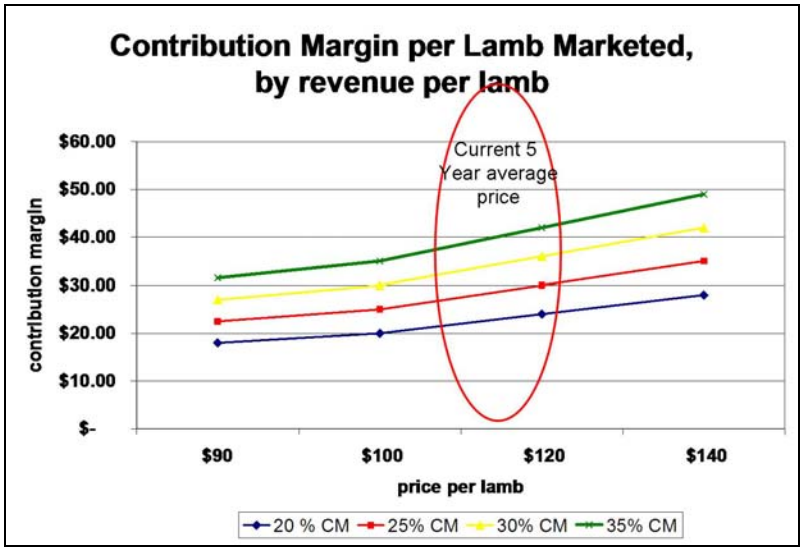
Market Prices

- Price for lambs sold through the auction marts in the 80 to 94 pound category in 2007 was pennies lower than 2006's high price of $160.78 per hundredweight.
- however, price for 1st 6 months of 2008 at $165.49 is lower than 1st 6 months of 2007 of $167.07 & 1st 6 months 2006 of $173.21
- Traditionally, we have used the 80 to 94 lb category as representing Ontario lamb prices – is this still valid? Should we be using the heavier weight categories as indicator of lamb market price? Over the past 10 years, we have seen the following changes:
    - Lambs less than 79 pounds has decreased from 59 to 53%
    - Lambs 95 to 109 pounds has increase from 10 to 12%
    - Lambs +110 pounds has increase from 4 to 6%
    - Lambs 80 to 95 pounds has remained unchanged at 23%



Industry Issues and Challenges

1. *C. Ovis (Sheep Measles)*
   - Late 2007 and early 2008 has seen increase incidence of carcass condemnations from sheep measles, both nationally and provincially
   - Although not a food safety concern, condemnations are an added cost to processors and producers alike
   - Sheep measles are the larval stage of the dog tapeworm *Taenia ovis* (sheep are one of the intermediary hosts) and result from sheep eating feed contaminated with feces from infected dogs
   - Dogs become infected from eating infected sheep muscle tissue (eg. sheep carcasses, access to on-farm deadstock)
   - All sheep producers should understand the risk factors and make every effort to eliminate the risk
   - **Canadian Sheep Federation has an excellent information brochure on sheep measles.**
2. *rising input costs*
   - during 2008 we saw increased prices for farm diesel, fertilizer, grain, protein supplements and mineral
   - recent world market activity suggests these will be lower in 2009, however to maintain profit margins producers will need to continue to find efficiencies wherever they can. With feed representing the largest share of production costs, targeting fewer days on stored feeds (rule of thumb: grazed forages equals ½ the cost of stored forages) is one means of attempting to achieve that
3. *profitability*
   - Farm cash receipts for Ontario sheep, lamb & wool was 43.3 million dollars, down 11.4 percent from 2006's 48.8 million.



   - This graph depicts how contribution margin changes (on a per lamb basis – y axis) with 4 different lamb prices & four contribution margins 20% in blue to 35% in green.
   - With the current 5 year average price ($ per lamb) just below $120 as shown with the red oval, you would be looking at contribution margins per lamb of approximately $21, $28, $34 and $40.

Lambs Marketed to Achieve Target Contribution Margin				
	Contribution Margin Per Lamb Marketed			
Target CM	$ 24	$ 30	$ 36	$ 42
$ 25,000	1042	833	694	595
$ 30,000	1250	1000	833	714
$ 40,000	1667	1333	1111	952
$ 50,000	2083	1667	1389	1190

- Target CM is what you need to cover your living expenses and capital costs etc, or what is left after direct production expenses, and will be different for different operations.
- contribution margin per lamb marketed is impacted by input costs, number of lambs marketed (therefore ewe conception rate, fertility & lamb death loss) plus other production and management factors.
- Take home message – to achieve a contribution margin of $50,000, a producer needs to market at least 1000 lambs and up to 2100 lambs, based on the contribution margins per lamb marketed shown in the accompanying table.

Frequently Asked Questions

These are typically some of the first questions we are asked by people who are interested in beginning a sheep flock.

1. I am interested in the sheep industry; what do I need to know?

This is a big question, the answer to which encompasses learning about marketing opportunities, expected economic returns, and various aspects of sheep husbandry. The vast majority of the sheep operations in Ontario raise lambs for meat production or for replacement breeding stock. Although all sheep produce wool, prices have been low in the recent past, and wool production is not generally a primary source of revenue. There are, however, opportunities for value added wool products. There are a growing number of dairy sheep operations in Ontario, which produce milk primarily for cheese and other dairy products.

Learning as much as you can about different farm types, breeding systems, and reproductive management systems will help give you an overall idea of the structure of the sheep industry in Ontario. In doing this you will be able to determine the type of operation that will be best suited to your goals, labour expectations, and resources.

The **type of farm** you choose will depend on your current resources, and ultimately, your plans for the future. The farm type dictates how intensively the flock will be managed. In Ontario, most sheep farms are 'farm flocks', using a combination of indoor and pasture housing. Total confinement and pasture-based operations are also relatively common and there are increasing opportunities for feedlot and dairy operations.

The **breeding system** you choose will depend on whether replacement breeding stock or commercial meat lamb production will be your primary goal. Although replacement stock breeders will still market some lambs for meat, a portion of the lamb crop of purebred or first generation crossbred animals will be sold as breeding stock to commercial breeders. Therefore, with commercial lamb production the strengths of various breeds are used to maximize the lamb crop while optimizing lamb quality. Some producers use breeding systems designed to supply their own breeding stock from within their own flock for commercial production.

It is particularly important for commercial operations to have lambs ready to sell when demand is high. We are fortunate to have many different market opportunities throughout the year for our sheep and their products in this province. With a relatively short gestation period, ewes can be bred more than once per year, therefore, producers have several **types of reproductive management systems** to choose from. The most common ones are: *once a year winter lambing* (usually targeting the Easter market for new crop lambs); *once a year spring lambing* (main goal is to maximize use of pasture for lower feed costs and marketing lambs in September through December); *accelerated lambing (either three times in two years or five lambings in 3 years)*. The focus of accelerated lambing systems is to market lambs on a year round basis, hopefully taking advantage of the lower cost of pasture based systems and hitting the high priced markets during the year.

2. When is the best time of the year to sell lambs? Are prices always high at Easter?

Lamb sales in Ontario are based on a free market, and prices can fluctuate widely from season to season and week-to-week based on supply and demand. It is important to stay on top of what is happening with the market and spread sales to minimize price fluctuations. Learn about the yearly and seasonal trends and use this information to your advantage when marketing.

When considering what time of the year you want to market your lambs, make sure that you have a good understanding of the advantages of each production system, and which one will best suit your particular situation. For example, with winter lambing, feeding costs are relatively higher and you must market extra lambs to have returns similar to other production systems. Excellent prices are often seen for top quality new crop lambs at Easter, but particularly when supply is heavy, prices can plummet from one week to the next. As well, although price per pound is generally higher for light lambs, the average

price per head is typically higher for lambs over 80 lbs live weight. Therefore, the cost involved in raising lambs to a heavier weight must be balanced against potentially greater returns.

3. How much land and what type of barn do I need to raise sheep?

How much land you will need per ewe will depend on many factors, such as whether you wish to grow or buy winter feed, the productivity of the land and how intensively you manage the flock. In most areas of Ontario, an open front pole barn is adequate for ewes lambing in the spring. With winter lambing it is important to have at least part of the barn divided off and insulated (or warmed) during the lambing period. Hypothermia is the main cause of death in newborn lambs in Ontario. Lambing facilities should ensure that the temperature remains above freezing. For all types of housing, there must be adequate floor and feeder space for the number of animals.

4. How many sheep do I need to make a living?

The answer to this depends on the standard of living you want to maintain. Net return per lamb and the number of lambs marketed is more critical than the number of ewes kept. It will also depend on whether you expect the sheep to carry the mortgage for the farm. As general guidelines, you will need to keep a minimum of 300 ewes under an accelerated lambing program, and 600 to 1000 ewes under once a year lambing programs to expect to make a full time living from sheep farming. The majority of sheep producers also have an off-farm income. It is advisable to start with less than these numbers if you have no previous experience raising sheep. Fifty to 100 ewes will provide a good impression as to what is involved, justify any renovations that need to be done to facilities (particularly handling facilities), and provide a good number of lambs to market in your first year. Once you have an idea of the requirements, you will be better able to gauge how large your flock should grow.

5. How much time will I have to invest in the flock?

This again will depend largely on the type of management system that you choose. Generally speaking, the more intensive the system the greater the daily input of time. However, with any system the more time you spend monitoring the health and productivity of your flock, the greater your chances of success. This should involve maintaining a high level of flock health and maintaining records relating to flock production (animal health, lambing percentages, lamb growth rates, etc).

6. What breed of sheep should I get? How should I select breeding stock?

With over 40 breeds in Ontario this may seem to be a daunting decision. It is placed at the end of our list of questions as the decisions that you make regarding marketing and production systems should be considered before choosing the breed. You will also have to decide whether to raise pure-bred or commercial sheep. Once the production system and breeding system are chosen, then selecting a breed will be much easier. Identify the breeds that should do well under your chosen production system and that will help produce lambs for the type of market you wish to supply. Identify as many of the traits that may be critical for success with the system you have chosen. For example, if you want ewes to lamb in the winter or in an accelerated program, choose a breed known for its ability to breed out of season. Across and within breeds, individual sheep will differ in economically important traits, e.g. milking ability in ewes, lambing percentage, adaptability to specific management conditions, rapid growth in lambs, etc.

Types of Sheep Farms

The type of sheep farm you choose to operate will largely be determined by the resources available to you (land base, housing, etc.) and by the type of reproductive management system you are interested in developing. The basic types of sheep farming in Ontario are briefly explained below.

1.Farm Flock:

This is the most common type of sheep farm in Ontario. Farm flocks combine pasture grazing for part of the year and indoor or corral housing for the winter. For example, ewes and lambs may be left on pasture until weaning when lambs are moved to feedlot pens for feeding until they are ready for market. Housing requirements for this type of system will vary with the reproductive management system. A wide variety of barns are used for winter housing of ewes including open sided sheds, pole barns, hip barns etc. Generally some type of insulated lambing facility will also be needed, depending when lambing will occur. For producers planning on building a new facility, there are plans available from OMAFRA detailing various types of sheep barns.

2. Pasture-Based:

This type of operation is more common in the Prairies than Ontario. This type of operation generally involves a large flock, requiring a large land base. The system involves spring lambing, pasturing throughout the summer, fall marketing of lambs either as finished lambs or feeders, late fall breeding of ewes, and wintering on pasture with appropriate shelter provided. The main advantages to this system are the low costs involved and given the right circumstances, can be very economical. The buildings, if any, are simple and the sheep graze all year, with supplemental feeding provided in the winter. Drawbacks to this system include the vulnerability of the sheep to predation by animals such as coyotes, wolves, and dogs. Weather in spring can be harmful to new lambs and losses can be high if shelter is minimal.

3. Total Confinement:

As the name suggests, both ewes and lambs are kept in pens year-round and require year-round feeding. Three-sided barns with pens extending to the outside are frequently used with this system. Advantages of intensive management systems are that they do not require a large land base, and fencing costs and predation losses are low. However, feed costs are generally much higher, animal health can be a problem if management is less than excellent, and more labour is generally required. This type of system is not overly common in Ontario and would be found most often with intensively managed accelerated lambing programs and feedlots. A rare variation of total confinement system is controlled environment housing, which is similar to large poultry or swine operations. Producers wishing to manipulate the ewe's breeding cycle using light control may use this system.

4. Feedlot Lamb Production*:*

Feedlot operators purchase lambs that have not yet reached the weight at which they will be slaughtered and finish them on high-energy diets. With a relatively low average market weight, this type of operation is relatively uncommon in Ontario, as most sheep breeders hold their lambs until they are market weight. Lamb feedlots are more common in Western Canada, however, and the trend may eventually extend east. Depending on how large of an operation you are considering, feedlots can offer the flexibility of involvement in the sheep industry without having to commit the overhead and time necessary for maintaining a breeding flock.

5. Dairy Production:

Dairy sheep production is relatively new to Ontario, but is well established in other parts of the world. Currently there are a growing number of dairy producers in Ontario. Dairy sheep producers market both lambs and dairy products, with milk being processed into such products as cheese, yoghurt and ice cream. Operating a dairy flock requires specialized equipment, facilities, and the requirement of attending to milking daily during the season. Depending on your marketing arrangements, the extra overhead and time required

may be offset by greater income stability compared to strictly producing market lambs. Contact the Ontario Dairy Sheep Association for details.

Wool Production

With the exception of 'hair' sheep, all breeds produce wool and need to be shorn yearly. Wool prices in Canada have been low for a number of years. Generally, prices paid have not been sufficient to cover the cost of shearing. When world stocks of wool decrease, there may be an increase in price. As well, certain breeds of sheep produce wool that is valuable in specialty and niche markets. Depending of the resourcefulness of the shepherd, value added wool products can add substantially to the farm income. However, wool production is not often the primary reason for keeping sheep in Ontario.

Reproductive Management Systems

Adapted from 'Evaluating Farm Resources and Sheep Production Systems'
By Bill McCutcheon, Former OMAFRA Sheep Specialist

The type of reproductive management system you choose should compliment your farm resources (land base, facilities, labour etc). The table below gives a brief outline of the advantages and disadvantages for the most common types of management systems.

Once per year Lambing:

System	Potential Advantages	Potential Disadvantages
Grass Lambing (April-May)	• **Lower feed costs**: Peak nutritional needs during lactation and lamb growth are met by grazing • **Lower lamb mortality:** Warmer weather during lambing and outdoor housing means fewer lambs lost to hypothermia and illnesses such as pneumonia • **More ewes/person**: Management is relatively simple during the year and less labour is required at lambing • **Reduced housing:** A warm barn for lambing is not needed • **Less reproductive management:** Breeding occurs in the late fall when sheep are naturally most fertile. Breeding at other times of the year will restrict you to specific breeds of sheep and/or intensive management of the reproductive cycle.	• **Deworming costs increase:** Anytime manure is in close contact with feed (i.e. feeding on the ground and grazing) there is an increased likelihood of worm infestation. Worms must be controlled, particularly in young animals, as heavy infestations will rapidly decrease profitability. • **Decrease in selling price:** As this is the least labour intensive type of production system, the majority of producers in Ontario lamb at this time of the year. Therefore there is a large increase in number of lambs marketed in the late summer and fall. As economic laws dictate, price generally decreases when supply increases.
Winter Lambing (Jan-Feb)	• **Improved market potential:** Lambing at this time of the year will allow producers to take advantage of the large Easter market for new crop lambs and market larger lambs before the large lamb supplies in fall. • **Lower worm loads:** Control of feeding sites should reduce the level of worm infestation, improving nutritional efficiency and lamb growth, while decreasing de-worming costs. • **Moderate reproductive management:** For winter lambing, ewes must be bred in the late summer or early fall. A number of breeds with long reproductive seasons will naturally begin cycling by this time of the year.	• **High lamb mortality**: Even with good management and facilities, death losses can be as high as 15% of the lamb crop. • **Increased housing costs**: A snug barn is essential. • **Higher feed costs**: Ewes must be fed high-energy rations to maintain lactation and lambs not sold for Easter must be fed for growth (not on pasture). • **More health problems**: Even with excellent management, disease losses in animals housed indoors are generally heavier, as the close contact between animals facilitates the spread of diseases. If ventilation, sanitation, and stocking levels are substandard, very high losses may occur. • **Fewer ewes per person**: Management and labour are higher relative to spring lambing (feeding, keeping animals clean, and closely monitoring lambing).

Multiple lambings per year

System	Potential Advantages	Potential Disadvantages
Accelerated Lambing (individual ewes lamb 3 times every two years OR five times in 3 years-Cornell 'Star' Program)	• **Year round supply of lambs:** There is great potential to supply lamb during the winter months and for the Christmas and Easter markets. • **Price stability:** With an increase in the number of marketing dates and the potential to supply diverse markets, there is less risk of being dramatically affected by price fluctuations. • **Lower lamb mortality:** With two warm weather lambing seasons and one cold weather season, overall lamb mortality is decreased relative to once/year winter lambing • **More lambs marketed/ ewe/year:** Greater returns are possible per ewe. • **Reduced lambing space:** Relative to once/year winter lambing, less barn space is needed as 1/3 to 1/2 of the flock is lambing at a given time.	• **Intensive management:** Year round lambing requires year-round attention to management. • **Higher feed cost/ewe/year:** Although more lambs are produced per ewe, the cost of keeping the ewes productive is also greater. Ewes must be fed at a high level of nutrition for longer periods of the year, and cannot be allowed to lose condition between lambings. • **Housing costs:** Although only a percentage of the flock will be lambing at a given time, there still must be insulated barn space for winter lambing. • **Ewe longevity and health:** There may be more udder and health problems with ewes on accelerated lambing programs.