

Marketing and Economics

Marketing Lamb in Ontario34

 Where Should I Market My Lambs?34

 Sales Barns34

 Producer to Dealers, Packers, and Retailers35

 Producer to Consumers.....37

 When Should I Market My Lambs?37

 Long-term Cycles37

 Seasonal Cycles37

 What Should Market Lambs Look Like?40

Appointed Sales Agents41

Business Management Tools42

Transportation44

 Bruising Caused by Grabbing Fleece44

 Avoiding Heat and Cold Stress During Transport.....46



Marketing Lamb in Ontario

Marketing decisions can dramatically affect the profitability of your operation. Your marketing strategy will influence important management practices, including the timing of breeding and lambing seasons, amount of feed required for raising lambs (pasture and/or confinement feeding), and lamb weight at marketing. Your marketing plan should determine your management system, rather than management dictating your marketing decisions. Learning about your options regarding where and when to market your lambs will help you make informed decisions regarding this important aspect of your operation. The information in this chapter is intended to give a basic overview of lamb marketing in Ontario. The consumer base and therefore type of lamb in demand varies from area to area across Ontario. It is advisable to talk to other sheep producers and/or the OSMA director in your area to gain a full appreciation of marketing options in your district.

Where Should I Market My Lambs?

There are three basic approaches for marketing lamb in Ontario: through auctions, direct to buyers and/or packing plants, or directly to consumers. Each of these marketing strategies has advantages and disadvantages. A diverse marketing strategy using more than one of these approaches may help decrease the risk of having ‘all of your lambs in one basket’, if the price in one market falls.

Marketing Who's Who:

- **Packers** own processing plants and buy animals for butchering and sell meat products to wholesalers and retailers.
- **Livestock dealers** buy from producers, auctions, etc. and resell live animals.
- **Livestock brokers** are similar to dealers, however, do not actually own or take possession of the animals. They charge a commission fee for arranging the sale of your animals (e.g. auctions).
- **Wholesalers** buy animals or meat products from any of the above groups to supply retailers.
- **Retailers** sell directly to the consumer through shops, restaurants, etc. Some retailers may only be interested in buying specific cuts of lamb and will generally go through a wholesaler. Others may wish to deal directly with producers, and have a slaughter facility that they deal with regularly.
- **Ontario Sheep Marketing Agency:** OSMA does not have direct involvement in the sale of sheep and lambs in Ontario. OSMA is enabled by the Products Marketing Act to claim a per head check-off fee for the sale of sheep and lambs. The check-off is used to benefit the industry as a whole through product promotion and producer advocacy.

Sales Barns

In Ontario, most producers sell their animals through public auctions. This is a free market system, where prices can vary daily and seasonally depending on supply and demand. Buyers for packing plants and abattoirs will buy live animals at auctions (sales barns). An advantage of selling through sales barns is that the producer doesn't have to expend effort in finding a buyer. Auction marts are generally bonded, which guarantees that the producer will be paid in a timely fashion. Sales can be risky, however, as the price you receive will be largely based on the amount of competition among buyers on a given day.

Although there are ~105 packing plants/abattoirs that deal with sheep in Ontario, only four handle the majority of the sheep and lambs. Factors that are generally out of your control, such as whether your lambs go through at the beginning of the sale or at the end, can also influence the price regardless of the quality of the lambs. Once the sale has started the producer has little control over the price he/she receives. Some auctions will allow the producer to set a minimum (floor) bid before the auction as a condition of sale. Auctions are not required to provide this service, however, and your animals may go for much less than anticipated. Sales barns charge a per head fee for selling animals, which goes towards facility maintenance, auctioneer, and staff salary. If there are a number of sales barns in your area you may wish to contact each one to compare their fee rates. The sale barns must also be registered with OSMA and are required to collect and pay to OSMA the License Fee, on behalf of the seller, for any sheep or lambs sold or processed through their organization.

There are many sales barns throughout Ontario. Eight of these markets provide weekly sales information to the OSMA office. Of these eight, four sales handle a large majority of the sheep and lambs which include, the Ontario Stockyards Inc. (OSI), Ontario Livestock Exchange Inc. (OLEX), Brussels Livestock and Embrun Livestock Exchange. Although the largest sale (OSI) tends to set the price trends, there can be a wide variation in price across the province.

Weight Categories:

At auctions, animals are sold based on their live weight. The weight categories for Ontario sales are as follows:

Lambs

- Under 50lb*
- 50-64 lb*
- 65-79lb
- 80-94 lb
- 95-109 lb
- Over 110 lb

Sheep (adult animals of any weight)

* Lambs under 65 lbs may also be referred to as ‘new crop’, ‘milk lambs’, or (in the US) ‘hot house lambs’. They are generally freshly weaned at the time of sale.

Breeding Stock

With the mix of animals that come together at sales barns, buying breeding stock at auctions increases the risk of bringing an unwanted disease home with your new animals. Many of the adult animals that are sold at auction are there as culls. By purchasing breeding stock from these sources, you may be buying another producer’s problems. It is far better to go through a reputable breeder and buy animals with a known health status. Producers who buy or sell breeding stock may wish to advertise in recognized agricultural newspapers such as the Ontario Farmer or in publications such as in the Breeder’s Directory of the Ontario Sheep News.

Price Reporting:

Prices from these sales are reported as *price per hundred weight* (\$/cwt) for live animals. Dividing this number by 100 will give you the *price per pound*. The low-high range, average price, and top price for individual weight groups are reported from each sale. To account for abnormally high and/or low prices, the range includes 80% of the animals marketed for that day. Data is presented by OSMA from each of the four largest sales (OSI, OLEX, Brussels, and Embrun), and as a summary of eight markets. Summarized prices are reported as *weighted averages* to account for the number of animals sold for specific price. For example, more emphasis is placed on the price of 100 animals from market A, compared to the price of 10 animals from market B. A non-weighted average places equal emphasis on both prices.

Sources of Ontario Sale Barn Data

Weekly Ontario market information can be accessed via the OSMA market line (519-836-0043 select market data option from menu), website (www.ontariosheep.org), or the Ontario Sheep News. As well, The Ontario Farmer also posts market data provided from OSMA.

Producer to Dealers, Packers, and Retailers

An estimated 10-15% of the market in Ontario involves direct sales from producers to dealers, packers, retailers etc, without using the services of an auction mart. Direct marketing provides the producer with the option of negotiating with the buyer and not selling the animals if a price is not adequate. Developing a long-term relationship with a reliable buyer is ideal for both parties. Over time the producer is able to adjust his/her management to consistently produce the type of lamb the buyer requires. The producer receives a relatively predictable price and may be able to negotiate a premium for providing the buyer with animals of a known

quality. However, succeeding with this marketing option may require a great deal of time, effort, and market knowledge on the part of the producer. Keeping an eye on sales barn prices during the time of the year you are selling will help ensure you are receiving a fair price for your animals. Finding out as much as you can about the buyer, including asking for a credit check, may prevent problems with future payment.

Know what your rights are with regard to the timing of payment and when it is appropriate to file a complaint. A lone producer contributing a small percentage of the total business for a buyer may not be a priority for speedy payment and there have been cases in Ontario of such problems in the past. When selling directly to buyers it is important to maintain a paper trail of all transactions. Controversies, such as the agreed upon price, the number of animals received or length of time between delivery and slaughter, are more likely to be resolved in your favour if you have documentation. This should include a proper invoice, including the buyer and seller name, sale date, number of animals, and the buyer/transporter signature.

Another option for a producer is marketing through a forward contract program, which involves direct marketing from producers to packing plants.

All abattoirs, processors and sales agents must register with OSMA and are required to collect and pay to OSMA the License Fee, on behalf of the seller, for any sheep or lambs sold or processed through their organization.

Feedlots

In Ontario, the majority of sheep operations keep their lambs from birth until they are sold for slaughter. In Western Canada the practice of feedlotting lambs is relatively common. This involves gathering young stock (feeders) from various sources for finishing. To date, feedlots haven't been commonplace in Ontario, but there are some indications that they may become more popular in the future. If this occurs there may be new opportunities for sheep producers to supply lambs directly to these operations.

Live weight vs dressed weight

When selling lambs directly to a buyer, you may have the option of being paid either on a live animal or dressed carcass basis. With the auction system, you will always be paid based on live weight on the day of the sale and paid accordingly. Live weight when selling to a buyer, is generally based on the weight of the animal as it crosses the scale at the abattoir or processing plant. Once the animals have left your possession (i.e. they are picked up from your farm or you deliver them to the plant) you have no control over how they are handled before slaughter. Animals may be held for a day or more before being killed, which may lead to significant 'shrink'. Shrink is the change in live weight that occurs during transport and holding before slaughter, if animals are not given full access to feed and/or water. This change includes the loss of gut fill and (generally after 24hrs) moisture and nutrients from carcass tissue. This change can be 3-5% of the total carcass weight or higher in some cases. You may wish to discuss applying a shrink calculation to the sale price to compensate for this loss. Although they may not be accepted as the 'official' sale weight, it is also a good idea to weigh animals on your farm before shipping, to cross-reference with the weights at slaughter.

When lambs are sold on a live weight basis, the buyer estimates what the yield and quality of the carcass will be and accepts the risk of being wrong. Alternatively, dressed weight (or rail grade) price is based on the actual carcass weight and grade. Complexity of the grading system may vary considerably depending on the buyer, from measurements for fat depth and muscling, to a visual assessment, to not being performed at all. Carcass weight generally ranges between 48 and 54% of the live weight, depending on animal age, finish (fat cover), and how the carcass was dressed (i.e. head on/off, organs in or out). Carcass dressing methods vary depending on the market requirements (e.g. some retailers may require that the head is left on and organs included etc.). Be sure to ask about the details of how the carcass will be graded and dressed before agreeing to a price. As only the carcass, not including the digestive system, is weighed no shrink calculation enters into rail grade pricing. If the animals are left without feed and water to the point that the body is absorbing moisture from the carcass (causing tissue shrink), the producer is not compensated for this loss.

Producer to Consumers

Producers may sell a portion or their entire lamb crop directly off-farm one animal at a time as 'freezer lamb'. This involves developing your own client base and can be a good way to diversify your market. It eliminates the cost of the 'middle-man' and may allow you to realize more return on your product. Since you negotiate the

price, you should be able to avoid the price fluctuations of the open market. Provided you've done a good job of establishing a solid client base, you will have a steady market for at least some of your lambs if auction prices fall. However, this method can be time consuming, as you may need to deal with many individual clients interested in buying only a single animal. Individuals may have very different preferences, requiring the producer to have a wide variety of animals available. By law, lamb for off-farm sales must be slaughtered and butchered in a licensed abattoir or processing plant. In most cases producers incur the cost of slaughter and butchering. The producer or seller is also responsible for remitting the OSMA License Fee directly to OSMA when selling directly to customers or other producers. Producers may have to spend considerable amount of time promoting their product and developing their client base. As with selling to larger buyers, it is important to maintain a paper trail, including invoices, to prevent misunderstandings.

When Should I Market My Lambs?

As with all free market livestock commodities, lamb price fluctuates throughout the year and from year to year. Before you decide when to market your lambs it is important to learn as much as possible about typical price patterns and what to expect when marketing lambs of different weights. You may wish to market lambs at different stages to take advantage of various marketing opportunities, rather than relying on a single market for one weight range.

Market Cycles

Long-term Cycles

Long-term price cycles tend to last for several years and continue to repeat the same pattern over a long period. Changes in price trends (either up or down) are due to changes in product volume, feed availability and cost (partially dependent on weather), international and inter-provincial trade activities, and the overall state of the economy. The lamb market is based on free market trade and is not controlled by a marketing board or quota system. In this type of market, the number of producers often triggers the changes in the long-term cycle. If prices have been high for several years, the number of new producers entering the industry will increase. If demand remains the same eventually there will be an oversupply of the product. With more product on the market, the price falls and the cycle will repeat. Although the sheep industry does go through these cycles, it is estimated that only ~41% of the demand for lamb is provided domestically. There is ample room for the industry to grow if imported lamb is replaced with domestic product.

Seasonal Cycles

To a certain extent prices in all livestock markets tend to follow seasonal patterns and conform to the pattern every year. Seasonality in price occurs as a result of the interaction of consumer demand and the supply of the product. Fluctuations in consumer demand for lamb are largely based on cultural traditions, from centuries-old religious celebrations to more recent rituals, such as barbeque season. On a seasonal basis, changes in product supply are due to sheep biology and the prevalence of various management practices, such as out-of-season breeding. The influence of supply and demand lead to distinct seasonal price patterns in each of the lamb weight groups.

i. Market Data:

To gain a clearer picture of the changes that occur during the year, it is advantageous to look at market data from past years. The supply of lambs under 65lbs increases dramatically at specific times during the year, whereas changes in the 65-79lb group are prolonged and consistent. Generally speaking, prices in all groups are highest for the first few months of the year. They fall relatively quickly from ~mid-April until ~mid-June, at which time the decline levels off. The lowest prices of the year tend to occur in the late summer and early fall.

Although price per pound is higher for the lighter lambs, the price received per head is higher for lambs over 80lbs. The extra cost of feeding lambs to higher weights should be taken into account when considering marketing heavier lambs.

ii. Sheep Biology and the Markets:

Traditional fluctuations in the supply of lamb throughout the year are in part due to the seasonal nature of sheep reproduction. Left to their own inclinations, sheep will breed during the shortening day lengths of the fall and lamb in mid to late spring. Although more producers are going to year-round or out of season breeding systems, many producers have a single lambing season in the spring. The supply of lamb, therefore, tends to increase after mid-June and peaks in August and September. The price paid is influenced by the availability of the product, and the time of peak supply generally corresponds with the lowest prices. More operations using year round productions systems would decrease the seasonal nature of the sheep industry. This type of operation is not for everyone, however, as there are often increased overhead and labour requirements. You must also choose a breed of sheep that is adapted to reproduce out of season and/or consider using methods of controlling the estrous cycle.

ii. Holidays and Ethnic Markets:

Lamb holds a significant meaning in the observances of many major religions, and lamb and mutton are dietary staples in many countries. A large portion Ontario's population increase is due to immigration. As ethnic diversity increases, the traditional patterns of supply and demand for lamb in Ontario may change. As such, there is substantial advantage in learning about the type of lambs preferred for these markets. In particular, the Islamic faith is estimated to be one of the fastest growing religions in Canada.

Lamb is a traditional dish for many important events and celebrations. As well as the holidays listed below, demand for lamb may increase before the summer long weekends and prior to various other ethnic observances.

Western or Roman Easter: Easter lambs should be freshly weaned (milk fed) and not older than 3 months of age. Numbers of lambs under 65 lb begin to increase approximately three weeks before Easter, and peaks during the week before Easter. Numbers of 65-79lb lambs tends to increase during this time as well.

- April 20, 2014
- April 5, 2015
- March 27, 2016

Eastern or Greek Orthodox Easter: Generally speaking the same type of lamb preferred for Western Easter is preferred for Orthodox Easter. Orthodox Easter very often falls on the same day or within a week of Western Easter, making it difficult to determine demand and supply patterns from past data.

- April 20, 2014
- April 12, 2015
- May 1, 2016

Passover: Passover is an eight-day Jewish observance, which generally falls in close proximity to Easter.

- April 14-22, 2014
- April 3-11, 2015
- April 22-30, 2016

Christmas: Lambs preferred for the Christmas market are similar to those preferred for Easter (ie. light weight and milk fed). Out-of-season breeding is required to produce the favoured type of lamb for this market. Christmas will fall on December 25 for the foreseeable future.

Ramadan: Ramadan is the Islamic holy month. During the month Muslims fast during the daylight hours, but often prepare special foods for family and friends after the sun has set. Lambs can be either male (castrated or intact) or female and not older than one year of age. Preferred lambs are between 60-80lbs

live weight and not overly fat. The first day of observance can vary slightly from the dates stated (see the Note on the Hijah or Islamic Calendar below).

- June 28, 2014
- June 18, 2015
- June 6, 2016

Id al Fitr: Id al Fitr is the Festival of breaking of the Ramadan fast, and occurs at the end of the month of Ramadan. Generally the same type of lamb is preferred as for Ramadan.

- July 28, 2014
- July 17, 2015
- July 5, 2016

Id al Adha: Id al Adha, the festival of sacrifice, is one of the most important observances in the Islamic faith. Lambs should be under a year of age and be unblemished. Blemishes may include open wounds, torn ears or other physical unsoundness. In some cases, wethers and lambs with docked tails may not be acceptable. This observance may also be referred to as Qurbani. Although this term more correctly refers to the actual act of slaughtering the animal.

- October 3&4, 2014
- September 22 & 23, 2015
- September 10 & 11, 2016

Note on the Hijah or Islamic Calendar:

One of the more confusing aspects of marketing lamb for Islamic holidays is that these events do not occur within specific seasons or on fixed dates of the Gregorian (Western) calendar. Since ~638 AD, the timing of these observances has been determined using the Islamic (Hijah) calendar. This calendar has twelve months with each new month beginning at sunset on the day the crescent moon appears. As the calendar is based on lunar activity, the 12-month rotation occurs in approximately 354 days. Therefore the months move backwards through the seasons and occur approximately 11 days earlier every year according to the Western calendar. The start of each month of the Hijah calendar is based on actual sightings of the moon and/or astronomical calculations. The importance of sightings versus calculations varies from place to place, with some relying heavily on physical sightings and others using only calculations. If sightings are required, the first day of the month may vary slightly from the predicted starting date depending on atmospheric conditions and other events affecting the sightings.

What Should Market Lambs Look Like?

Lamb weight	As discussed earlier different markets favour lambs of different weights. Generally speaking lambs in Ontario and Quebec are marketed at a lighter weight than in the West or in the US. Excepting various holiday peaks, the majority of lambs marketed in Ontario are between 65-79lbs. Buying a scale and monitoring lambs on-farm will help ensure your lambs are fitting into the desired category.
Degree of finish	The amount of finish (fatness) will depend to some extent on the age of the lambs. Generally speaking, market lambs should have a good fat cover, but not be overly fat (condition score of ~2.5). Condition scoring and modifying your feed schedule accordingly will help finish lambs properly. Be aware that some breeds will mature at different weights. If you wish to market heavy lambs, breeds with light adult weights may mature and be over-finished (too fat) before they reach the desired weight.
Healthy & Clean	Buyers will be much more likely to pay a good price for lambs that look healthy and clean. Some ethnic markets require ‘unblemished’ lambs, referring to the lack of marks, injuries, or other faults. Many buyers prefer shorn animals with docked tails. Shorn animals are easier for buyers to visually assess for quality (muscling, fat cover etc.). As well, shorn animals take up less room during transport. There is less chance of carcass contamination during slaughter by bacteria from soiled fleece if the animals have been shorn and the tails are docked.
Castration	Castration of ram lambs is preferred or of little importance in most cases. When marketing older lambs, castration may help decrease bruising from animals fighting. Generally, however, lambs will be marketed before they become sexually mature and some producers prefer to leave them intact. As well, certain ethnic markets favour ram lambs.
Uniform	If you are selling a number of animals, try to have the group as uniform as possible. Buyers are often looking for a specific type of animal. If your animals are similar in appearance, they may go for a better price than if the buyer has to pick and choose the preferred animals.
Food Safety	Maintain records regarding the use of medication and double check that animals being shipped to market have met the recommended withdrawal dates for all medications.

Appointed Sales Agents

SALESBARN	ADDRESS	PHONE #
Aylmer Stockyards Inc.	8933 Walker Rd. RR1 Alymer, ON N5H 2R1	(519) 765-2672
Brussels Livestock	RR 3, Box 59, Brussels, ON N0G 1H0	(519) 887-6461 www.brusselslivestock.ca
Denfield Livestock Sales	12952 Sixteen Mile Rd. RR 2, Denfield, ON N0M 1P0	(519) 666-1140
D.H. Hickson Ltd.	2508 County Rd. 8, RR 5, Campbellford, ON K0L 1L0	(705) 653-3660 www.hoardstnsalebarn.ca
Embrun/ Ottawa Auction Centre Livestock Exchange Ltd.	1643 Salebarn Rd. Box 340, Greely, ON KOA 1Z0	(613) 821-2634 www.ottawalivestockexchange.ca/
Hagersville Auction Centre	97 First Line, RR 6, Hagersville, ON N0A 1H0	(905) 768-5601
Kawartha Lakes Coop Auction Market Inc.	580 Woodville Road, Woodville, ON K0M 2T0	(705) 439-4444 www.klcauction.ca
Keady Livestock Market Ltd.	117012 Grey Rd. 3, RR 4, Tara, ON N0H 2N0	(519) 934-2339 www.keadylivestock.com
Lowes Auction Services Inc.	2138 Little Britain Rd, Lindsay ON K9V 4R2	(705) 328-3500 http://www.lindsaylivestockexchange.com/
Ontario Livestock Exchange Inc.	856 Weber St. N, P.O. Box 443, R.R.#1, Waterloo, ON N2J 4A9	(519) 884-2082 www.olex.on.ca/Olex/Default.asp
Ontario Stockyards Inc.	3807 Highway 89, RR 1, Cookstown, ON LOL 1L0	(705) 458-4000 www.ontariostockyards.on.ca
Renfrew-Pontiac Livestock Ltd.	18156 Highway 17, RR 3, Cobden, ON KOJ 1K0	(613) 646-7335
Selby Livestock & Auction Centre	11 Pleasant Drive, Selby, ON K0K 2Z0	(613) 354-6260
Temiskaming Livestock Exchange	#883006 Hwy 65 East, RR 3, New Liskeard, ON P0J 1P0	(705) 647-5415
Vankleek Hill Livestock Exchange	1239 Ridge Rd., Vankleek Hill, ON K0B 1R0	(613) 678-3008

Business Management Tools

There are several business management worksheets available free of charge to Ontario farmers from OMAF and MRA. Visit their website at www.ontario.ca/agbusiness or contact OMAF and MRA directly to receive worksheets. A partial list of available worksheets are listed below.

OMAF and MRA Contact:

John Molenhuis
Agriculture Development Branch,
95 Dundas Street East
Brighton ON K0K 1H0

Ph. (613)475-9472 Fax. (613) 475-3835
john.molenhuis@ontario.ca

The OMAF and MRA Loan Calculator

The OMAF and MRA Loan Calculator: An Excel Version based Spreadsheet worksheet which includes: Payment Schedule, 3 Loan Comparison Sheets, Loan Prepayment Schedule, Refinancing Schedule plus other Schedules and Graphics. Download the program.

Land Leasing Tools

[Land Leasing Tools.xls](#) is a set of worksheets that allow you to examine various types of leasing arrangements. Landlords and tenants can look at their costs and determine if the leasing arrangement is suitable for them. The Crop Share Calculator calculates the appropriate crop share split for a landlord and tenant and analyses the projected net incomes.

The Building Rent Calculator

[RentBldg.xls](#) (24k, Excel File) Owners of farm buildings frequently ask "What is a fair rent for my farm buildings? How do you arrive at either a fair asking price, or at a fair offer price for a building rental? This program will help you calculate a fair rent for your building.

Hay Cost of Production Worksheet

[Haycost.xls](#) The hay cost of production worksheet is designed to calculate cost of producing dry hay. It reflects the various variables that make up costs ie. yield, establishment costs, type and weight of packaging, number of cuts, return on investment of land, storage and equipment costs.

Grass Stocker Worksheet (Cattle)

The [Grass Stocker Worksheet.xls](#) is an excel worksheet for calculating the return and the margin of placing stockers on grass pasture.

Machinery Cost Calculator

[Machinecostcalculator.xls](#) is an excel worksheet that contains a machinery cost calculator, cost charts, factsheets on machinery tax and budgeting, a comparison worksheet that looks at machinery replacement options including purchase, repair, lease and custom hire. It also has a simple cash basis lease worksheet.

The Land Cost Calculator

[The Land Cost Calculator.xls](#) is an excel worksheet that allows you to examine the cost of owning land and what you can afford to pay for it using a number of worksheets.

The Farm Financial Analysis and Planning Workbook

The Farm Financial Analysis and Planning Workbook - [Publication 37 ver1.xls](#) is an excel worksheet based on OMAF and MRA publication 37. It contains a full set of current and projected financial statements including a cash flow statement, debt servicing and inventory worksheets.

The Equipment Lease Analyser

The [Equipment Lease Analyser.xls](#) is an excel spreadsheet that compares the the cost of leasing equipment to purchasing. This can be done by using the simple calculator or the cashflow analyser. Other options are compared such as the cost of buying used and repairing equipment.

The Custom Farmwork and Short-Term Equipment Rental Rate Calculator

The [ratecalculator.xls](#) is an excel worksheet that allows you to calculate what to charge for custom farmwork. Also included are charts of machinery costs that are required for the calculations and a factsheet containing the survey or Custom Farmwork Rates charged in Ontario and a guide to writing custom farmwork agreements. The Short-term Equipment Rental Rate Calculator is an excel worksheet that allows you to calculate what to charge for short-term equipment rentals.

Budgeting Tools

[Budgeting Tools](#) allow you to enter data specific to your operation into the budget in excel format. Calculations are performed automatically, and you are able to view/modify/print the results for your own use. The Budgeting Tools also allow you to address the potential impact of production and marketing risk factors and risk management strategies.

Cost of Meat Processing Tool

The [Cost of Meat Processing Tool](#) will allow users to calculate the cost of meat processing per meat product by summarizing the costs of animal transport, slaughter, further processing into cuts, transport costs for meat pickup.

Transportation

Please refer to Chapter 6, in the Code of Practice for the Care and Handling of Sheep (2013).

Lamb Carcass Bruising Caused by Grabbing Fleece

FACTSHEET

ISSN 1198-712X ©Queen's Printer for Ontario

Agdex#: 430/26

Publication Date: 08/02

Order#: 02-031

Last Reviewed: 01/12

History: New

Written by: C. Richardson - Animal Care Specialist/OMAFRA

Pre-planning and use of proper handling facilities are essential to avoid bruising of lamb carcasses. Catching, holding or lifting sheep by the fleece pulls on the hide of the animal and causes broken blood vessels on the surface of the muscles. It is important for producers to realize that any "grabbing" of the wool at all will result in significant bruising to the carcass.

British researchers have been studying the causes of bruising in sheep for many years. They found a high frequency of bruising in lambs sold through sales barns. A correlation was found between wool-pulling and bruising. The idea that a fleeced lamb was less likely to be bruised because it had some protection afforded it by its fleece is wrong. Bruising frequency was higher in fleeced lambs than in shorn lambs. Observers found that wool-pulling was the most frequently seen potential bruising event caused by human handling. Wool-pulling was observed at every stage of marketing of sheep; significantly more was seen during unloading and pre-sale handling, compared to post-sale handling and loading.

Handlers used wool-pulls and tail-pulls to change the direction of sheep, to restrain them, and to pull individuals from a group. Potential bruising incidents were higher during unloading compared to loading of sheep. At sales barns, over 11% of all potential bruising events observed were due to wool-pulls. Researchers observed wool-pulling at the following points:

- unloading trucks
 - pulling the first few animals to start movement down the ramp
 - lifting sheep by wool from upper deck to ground level
- loading trucks
 - lifting sheep by wool from ground to upper deck

Another study at an abattoir concluded that 26% of bruising was attributed to handling and behavioural problems. Of this 26%, 1/3rd of bruising was caused by wool-pulling.



Figure 1. Illustration of damage to a lamb carcass caused by a handler grabbing the fleece.

Conclusion

The use of proper handling facilities and preplanning are essential to eliminate handling sheep by their fleece. Producers and truckers need to ensure that proper handling facilities are used to move sheep from one location to another.

References

- Cockram, M.S. and Lee, R.A. (1991) *British Veterinary Journal* 147, 120.
Jarvis, A.M. and Cockram, M.S. (1995) *Veterinary Record* 136, 582.
Knowles, T.G., Maunder, D.H.L., and Warriss, P.D. (1994) *Veterinary Record* 134, 44.

FACTSHEET



ANIMAL
SCIENCE

ORDER NO. 02-013

JANUARY 2002

AGDEX 430/90



Ontario

Ministry of Agriculture,
Food and Rural Affairs

AVOIDING HEAT AND COLD STRESS IN TRANSPORTED SHEEP

C. Richardson

Heat and cold stress can be avoided in transported sheep by planning ahead. Check on the weather before leaving. At anytime during the trip, know what you can do to reduce the effects of severe weather on the sheep. Change the timing of the trip if necessary.

The following are extracts from the Canadian Agri-Food Research Council's (CARC) *Recommended Codes of Practice for the Care and Handling of Farm Animals* — the Sheep and Transportation Codes.

BEST PRACTICES IN ANY WEATHER

- Ensure that all animals intended for transport are fit to be transported.
- Stop and check on the sheep after the first hour of the trip and every 2–3 hours afterwards.
- Sheep must be protected during transit to prevent suffering caused by exposure to severe weather conditions.
- Sufficient ventilation must be available at all times while the sheep are in the vehicle. Aerodynamic airfoils installed on truck tractors to enhance fuel efficiency must not restrict the airflow into the trailer necessary for ventilation and cooling.
- Appropriate measures must be taken to prevent engine exhaust from entering the area occupied by the sheep.
- Ventilation should be adjustable from the outside of the vehicle. As the temperature changes during a trip, adjustments can be made without unloading the sheep. The use of adjustable weather panels is an effective way to achieve this.
- Reduce loading density to 85% of maximum for trips in excess of 24 hours to allow room for sheep to lie down.

PRECAUTIONS IN COLD WEATHER

- Sheep need to be protected from freezing rain and wind blowing into the sides of the truck because it increases their loss of heat and can cause death from hypothermia, even at temperatures above freezing.
- Young and recently shorn sheep are particularly susceptible to frostbite and loss of body heat during transportation.
- Remove wet bedding after each trip to prevent it from freezing onto the truck.

Signs of Animal Discomfort (Cold Stress) During Transportation

- Wet sheep
- Eating of available bedding
- Fluids frozen to the face or nostrils

During Winter Travel

- Increased bedding or insulation is necessary in cold weather.
- Increased loading density beyond recommendations can predispose to frostbite in individual animals because it prevents them from repositioning in the truck.
- Cover openings to protect sheep from cold winds caused by movement. Wind chill lowers the effective environmental temperature and can cause frostbite.
- Protect sheep on the side of the truck that is exposed to a cold crosswind.
- Replace bottom slats in vehicles to protect from the cold and road splash.
- Adjust openings to balance the need for protection from wind chill with the need for adequate ventilation.
- Close nose vents.

BRINGING THE RESOURCES OF THE WORLD TO RURAL ONTARIO

Chapter 3: Marketing and Economics

- Take precautions to protect lambs. They must be kept dry and provided with an adequate supply of bedding.

PRECAUTIONS IN HOT / HUMID WEATHER

- Take precautions to avoid stress, suffering and possibly death caused by the combination of high temperature and high humidity.
- Sheep require sufficient floor space to allow for adequate ventilation and a reasonable level of comfort.
- Severe heat build-up may result from overcrowding. Reduce loading density to 85% of maximum in hot/humid weather.
- Keep frequency and length of stops where sheep are not off-loaded to a minimum during transit to prevent rapid build-up of heat inside the vehicle.
- Protect shorn sheep from prolonged exposure to direct sunlight to prevent sunburn.

Signs of Animal Discomfort (Heat Stress/Overcrowding)

During Transportation

- Overcrowded load will not “settle”; sheep continue to scramble for footing and the load continues to be noisy for prolonged periods of time. Sheep involuntarily lie down and are unable to get up.

- Sheep pant when overheated; animals standing with neck extended and with open-mouthed breathing are in a dangerous situation.

During Summer Travel

- Handle sheep carefully because exertion in hot/humid weather is particularly stressful and increases the chances of heat stroke.
- Allow every animal to rest when over-exerted.
- Sufficient ventilation must be available at all times while the sheep are in the vehicle.
- Whenever possible, avoid trips during hot/humid periods.
- When high heat and humidity are forecast, schedule transportation at night and in the early morning.
- Avoid periods of intense traffic congestion.
- Do not park loaded vehicle in direct sunlight.
- When necessary to stop, minimize the duration of the stop to prevent the buildup of heat inside the vehicle.
- Sheep can be cooled by watering the floor of the vehicle or by using a fine mist spray. If you have an overheated sheep, **gently** run cold water over the back of the head.

WIND CHILL FACTORS

Select the Actual Air Temperature (°C) column and Wind Speed (km/h) row. The figure where these intersect represents the Wind Chill Factor.

Actual Air Temperature (°C)	10	4	-1	-7	-12	-18	-23
Wind Speed (km/h)	Wind Chill Factor						
8	9	2	-3	-8	-15	-21	-26
16	4	-2	-8	-15	-22	-29	-34
24	2	-5	-12	-21	-28	-34	-41
32	0	-8	-16	-23	-31	-37	-45
40	-1	-9	-18	-26	-33	-39	-48
48	-2	-11	-21	-28	-36	-42	-51
56	-3	-12	-21	-29	-37	-44	-54
64	-3	-12	-22	-29	-38	-47	-56
72	-4	-13	-22	-30	-39	-48	-57
80	-4	-13	-23	-31	-40	-48	-58

Source: Kansas State University and Livestock Conservation Institute
 Precautions and warning signs of cold stress and wind chill chart courtesy of Canadian Agri-Food Research Council, Recommended Code of Practice for the Care and Handling of Farm Animals — Transportation.
 Reprinted with permission from Canadian Agri-Food Research Council

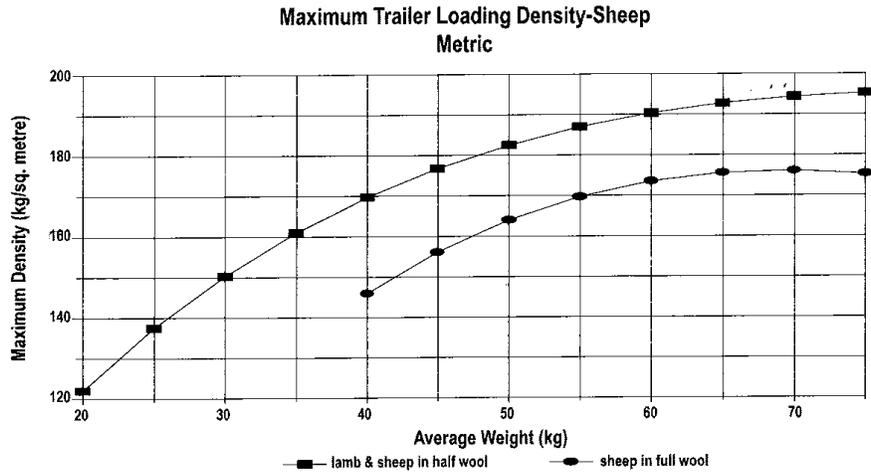


FIGURE 1. Maximum trailer capacity for sheep transported standing based on average individual animal weight. A 35 kg lamb at 160 kg/m² has .22 m² of floor space. Reduce loading density to 85% of maximum in hot humid weather and for trips in excess of 24 hours to allow room for sheep to lie down.

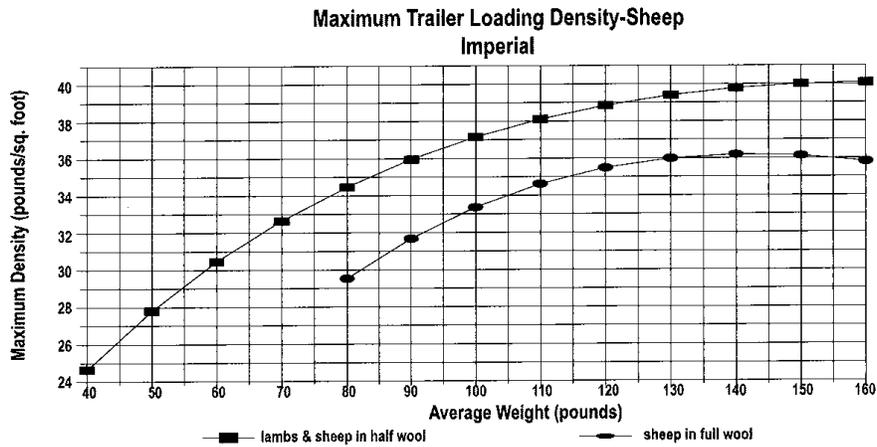


FIGURE 2. Maximum trailer capacity for sheep transported standing based on average individual animal weight. A 70 pound lamb at 32 lbs/ft² has 2.2 square feet of floor space. Reduce loading density to 85% of maximum in hot humid weather and for trips in excess of 24 hours to allow room for sheep to lie down.

Source: Graphs courtesy of Canadian Agri-Food Research Council
 Recommended Code of Practice for the Care and Handling of Farm Animals — Transportation.
 Reprinted with permission from Canadian Agri-Food Research Council