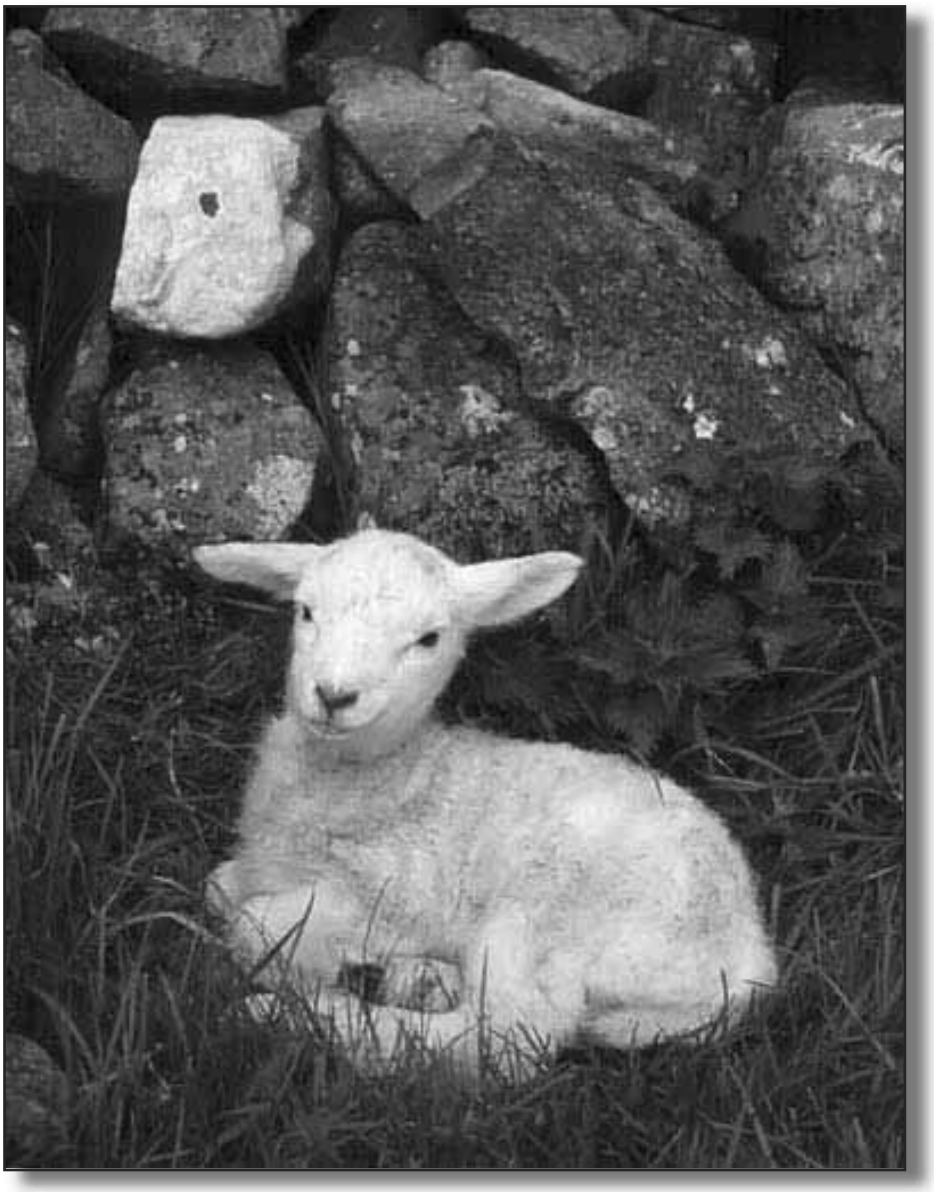

THE 4-H SHEEP PROJECT

Manual for Members and Leaders

4-H Ontario April 2008

THE 4-H PLEDGE

"I pledge:
My Head to clearer thinking
My Heart to greater loyalty
My Hands to larger service
My Health to better living
For my club, my community and my country."

THE 4-H MOTTO
Learn to do by doing

This project produced with the support of Agriculture & Agrifood Canada

Agriculture and Agri-Food Canada | Agriculture et Agroalimentaire Canada

We would also like to thank Grober Nutrition for their donation of resource materials included in this project. In addition, many other organizations and individuals contributed valuable information for the production of this resource - see the content of this project for further credits.

VISION FOR 4-H ONTARIO
We will be recognized for delivering quality, innovative, and sustainable leadership and life skill programs for youth and volunteers; which will benefit the citizens and communities in which they live.

VOLUNTEER STATEMENT
4-H Ontario volunteers are passionate and dedicated individuals essential to the delivery and success of the Ontario 4-H program.

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Sheep Project - Table of Contents

Use the spaces beside the topic to record dates the topic was covered. You can also use this from year to year to help plan your meetings.

Welcome to the 4-H Sheep Project!

This project has been developed for the use of the National Resource network for 4-H Sheep clubs across Canada.

Planning Your 4-H Year

The key to a successful project year is planning ahead.

Meet with your fellow leaders and discuss what you hope to cover this year. Use evaluations and input from members from previous years to help decide what topics are of interest to your members.

With this manual you can mix and match the subjects as you wish. Record on the table of contents what you use so in future years you can cover different topics. Information sheets that work particularly well as handouts have been marked with a clover leaf symbol in the top left corner of the page. However, use any information sheets that you think would be useful to hand out to your members!

Use the activities section to help plan activities, tours or select guest speakers. You will also need to plan an achievement program and usually an awards program is held to recognize member's achievements.

Sign Up Night or Organizational Meeting

The first gathering of your prospective members is your opportunity to explain your plans for the year and share an outline with your members. The more information you are able to provide at this meeting the easier it will be for members to plan their schedule and find their way to meetings as well as understanding what is expected of them. This meeting is also your chance to take care of any paper work that needs to be completed by parents/guardians and collect membership fees as per your local association policies.

Members should receive:

- A list of expectations
- Meeting dates, locations and topics if known, roll calls for each meeting
- Resource pages copied out of manual for topics to be covered in this project year
- The Project Record Book.
- New Members
  - Basic Care Guide for Lambs
  - Fitting and Showing Your Sheep

Using the Binder

This binder has been designed with many independent topics. You can choose which ones to use each year based on what is suitable for your members. You may wish to track the dates each topic was used on the table of contents so you can remember from year to year which you have covered.

Leader's Handbooks

Check what your province offers in handbooks to help guide you as a volunteer. You need to be aware of the procedures and policies that apply in your organization.

Opportunities

4-H offers numerous opportunities to 4-H members, volunteers and their families. Make a point of finding out what opportunities are available and encourage your members to participate. They will never regret it!

Farm Visits

At some point during the year make an effort to meet with each member where their lambs are housed. This way you can offer suggestions on how to improve facilities, and let them know if their feeding program needs any changes before the achievement program.

End of the Year Evaluation

In the activities section is a sample evaluation you can use to have members evaluate your 4-H year. This will help you with your planning for the next year.
Good luck and enjoy!

A typical 4-H meeting consists of 120 minutes [2 hours]. Your meeting should include the following:

- Welcome/may include warm-up activity while others are coming
- 4-H Pledge
- Roll Call
- Secretary - minutes
- Press report
- Treasurer's report [if any]
- New business-includes county events, regional and provincial events, and any club plans
- Meeting content or background
- Activities for the theme
- Clean-up /Adjournment /Refreshments [optional]
- Closing - motto
- Suggested timing for the first 6 items should be about 10 minutes or less
- New business [varies depending on special planning etc] from 1-5 minutes
- Meeting content or background 5-20 minutes
- Activities - 80-90 minutes
- Clean-up and closing 5-10 minutes

Glossary-General Terms

Each section also includes a glossary specific to that topic, found at the end of each section.

Bummer: A lamb that needs to be fed by the producer. Usually an orphan or multiple.

Dam: Mother, female parent

Dry: The period between lactations, a female who is non-lactating is dry.

Ewe: Female sheep

Feeder Lambs: Animals under one year of age placed on high quality feed stuffs to produce market lambs.

Flock: A group of sheep

Gestation: Time between breeding and Lambing. In sheep the gestation is 147-153 days.

Gummer: An old sheep missing all or most of its teeth.

Lactation: The period during which a ewe is producing milk

Lamb: Newborn or immature sheep, typically under a year of age. No adult teeth have come in yet.

Mutton: Meat from a mature or aged sheep over 1 year old.

Polled: Naturally hornless.

Resources

Printed Materials

Introduction to Sheep Production- Ontario Sheep Marketing Association Binder

Previous 4-H Ontario Sheep Project Resources

Quality Equation, Manitoba 4-H

4-H Funpack,

4-H Ontario Judging Tool Kit

Storey's Guide to Raising Sheep- Paula Simmons & Carol Ekarius, Storey Publishing, 2001

Alberta 4-H Sheep Resources

Nova Scotia Sheep Projects

Websites

Canadian Animal Health Coalition www.animalhealth.ca , September 15, 2007

Ontario Sheep Marketing Association, www.ontariosheep.org , September 1, 2007

Canadian Sheep Federation, www.cansheep.ca , September 28, 2007

Sunterra Meat Markets Website, www.sunterrameats.ca , September 15, 2007

Canadian Purebred Sheep Breeders Association, www.sheepbreeders.ca , September 15, 2007

Canada Plan Service, www.cps.gov.on.ca , January 2, 2008

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Topics & Resource Pages

4-H Ontario

Health

Keeping Your Flock Healthy

The key to flock health is preventing disease and then controlling health problems through early diagnosis and timely treatment.

All flocks need to establish a flock health program to ensure that all preventative measures are in place and the best treatment is followed when a problem arises.

Reduce Environmental Stress

There are pathogens which can cause disease in a sheep's environment all the time. A healthy sheep that is well fed and properly housed will be immune to most of these pathogens. It is when the sheep is stressed that the pathogens have a chance to infect its body. Stress can be caused by poor ventilation, crowding, poor nutrition and dirty conditions.

Reduce Stress to your flock by:

- Maintaining a consistent routine-feeding practices including type of feed, time of feeding and amount fed need to be kept constant. Any changes should be made slowly to allow the microbes in the sheep's stomach to adjust.
- Maintain Facilities-Follow proper stocking densities as laid out in the housing section
- Keep pen well bedded with a suitable bedding material.
- Ensure there is adequate ventilation to keep the air fresh for the sheep. Warm moist air is a leading cause of pneumonia outbreaks.
- Lambs born in winter require some heat or protection from cold when born and for the first few days after.
- Good drainage will help keep stock dry and help in preventing foot disorders and parasite problems
- Maintain buildings, corals and fences, and keeping ground free from sharp objects can help prevent injuries to animals
- Have pens available to keep new stock or sick animals separate from flock to prevent spreading of disease.
- Check and clean water daily
- Keep feeders clean and free from manure, wet or spoiled feed
- Check pastures for plants which may be toxic to sheep

Observe the Flock Regularly

By observing the flock daily, or even twice a day will allow you to compare behaviour of animals from day to day. If a sheep that is normally an aggressive eater stands back from the feed you know there is something wrong, and you can check that animal more thoroughly. Check the floor of the pen or the ground around sheep for diarrhea; check the stool for blood or parasites. Watch animals moving to feed or out to pasture for signs of lameness.

Signs of health problems include:

- Not eating or ruminating
- Standing away from the flock
- Look depressed- head down, droopy ears, back arched and feet close together under animal
- Show signs of diarrhea, runny manure on wool around rump
- Breathing heavily, coughing, runny nose
- Bloating in the triangle on the left side above ribs
- Unable to walk straight, walking in circles, walking with head down or crooked
- Show signs of stiffness or appear lame when walking
- Animals losing condition can be a sign of disease

Working With Your Veterinarian

It is important when raising livestock to establish a relationship with your veterinarian.

When you begin with your flock you should have the veterinarian out for a visit & explain your flock program. They will offer input into your flock health practices.

This will also make them familiar with your operation in case you need to speak to them about a problem.

Watch Out for these Plants!

The following plants can be Poisonous to sheep. The effects of these plants can range from kidney damage to poisonous to causing birth defects in lambs.

Red Maple Leaves

Acorns

Rhododendrons

Mountain laurel

Azalea

Yew Needles

Apple Seeds

Nightshade

Skunk Cabbage

Wild Tobacco stalks

Potato sprouts

Death camas

Horsebrush

Lupine

Milkweed

Chokeberry

Loco

Halogeton

Water Hemlock

Larkspur (particularly dangerous, as sheep like it!)

Tansy ragwort

Red Maple Leaves

Livestock Biosecurity

A 'Foreign Animal Disease' (FAD) in your flock can have a devastating effect on the health and welfare of your livestock, and the economic viability of your business.

The same is true for every flock in Canada. We have only to look at the foot and mouth disease experience in the UK to see that an outbreak in Canada would permanently alter your business and cost billions to Canada's livestock industry.

You can reduce the chance of an outbreak – or the impact, if it occurs – by having your own **biosecurity program.**

WHAT IS IT?
A management program to prevent the spread of disease

WHY DO IT? **To reduce – in your flock and the national flock:**
- **The chance of introducing disease;**
- **The spread of disease, and;**
- **The cost of disease.**

HOW TO DO IT?

As part of the management program for your operation. Consider your inputs, the products you produce, the assets you manage (i.e. the livestock, feed, equipment, and buildings), and the costs and risks you are prepared to bear.

WHERE TO GET HELP?

From your veterinarian, commodity group, provincial veterinary service, the CFIA, and the Canadian Animal Health Coalition.

WHEN TO DO IT?

Now. Implement a control program for your operation right away… and keep it current.

WHO HAS TO DO IT?

You. You are responsible for animal health on your operation – that is a critical control point in preventing or controlling the spread of disease to the national flock.
Your program will assist those responding to a major outbreak

Do your part…
Prevent foreign animal diseases from entering Canada…
Implement a biosecurity program.
Contact Canadian Animal Health Coalition
'…promoting a collaborative approach to animal health'
www.animalhealth.ca
This bulletin supported by the Western CARD Council

Your Livestock Biosecurity Checklist

Visitors

- ☐ Control traffic on and off the farm
- ☐ Post prominent signs to restrict access and provide directions to the farm office.Discourage unnecessary visitors
- ☐ All visitors must be accompanied, and prohibited or limited from accessing structures or pens containing animals, medications or feed
- ☐ Keep a 'visitor log'
- ☐ All visitors, service calls and deliveries – no exceptions
- ☐ Date, name, business, contact information, next farm visit, previous farm visit www.animalhealth.ca
- ☐ Ask visitors to arrive in clean clothes, footwear, and vehicles
- ☐ On arrival, instruct visitors as to your sanitation practices
- ☐ Provide clean clothes and footwear if this condition is not met
- ☐ Discuss visitors from other countries with your veterinarian or the CFIA, to assess the risk and appropriate measures

Livestock

- ☐ Purchase healthy livestock from reputable suppliers following good management practices and recognized on farm food safety programs
- ☐ Isolate purchased livestock for a minimum of 2 weeks
- ☐ Purchase quality feed from feed mills that follow good manufacturing practices
- ☐ Separate sick from healthy animals
- ☐ Deadstock should be:
  - ▶ removed immediately from other animals
  - ▶ Disposed of as soon as possible according to provincial regulations
  - ▶ **Necropsied to confirm cause of death,** if you suspect a contagious and/or reportable disease

Sanitation

- ☐ Keep clean… all personnel, buildings, yards, equipment, instruments, feed storage areas, and feed equipment
- ☐ Disinfecting
- ☐ Choose the right product for the job
- ☐ Clean items with warm water and detergent, before disinfecting
- ☐ Use disposable equipment once, and discard

Wildlife & Pests

- ☐ **Control or eliminate vermin**
- ☐ **Protect your feed and water supplies** from fecal contamination by wildlife

Vaccination Programs

'An ounce of prevention is worth a pound of cure'

Following a proper vaccination schedule can help to prevent many of the common illnesses that affect and frequently kill sheep.

As with human vaccines, vaccines for sheep are available to help fool the sheep's immune system into building up immunity to certain diseases.

You should consult your veterinarian when deciding which vaccines are necessary and when they should be given.

Immunizing agents fall into four categories:

Antisera: Otherwise known as serums or antitoxins these come from animals that have an immunity established to a infection. It is basically borrowing antibodies from another animal. The period that it will work is short. Typically 10-21 days. It is used in a case where a known disease is present in a flock to help keep it under control. Antiserum can be used in young lambs because it is a passive immunity.

Bacterins: Cultured Bacteria that is grown and then killed either by heat or chemically. These are killed vaccines and cannot produce disease or spread it. These types of vaccines require a booster before the needed immune response is triggered and need to be repeated each year.

Toxoids: Contain the actual inactivated toxin produced by bacteria such as tetanus, enterotoxemia, and black leg. This can help prevent the deadly effect of the toxins after infection with the disease.

Vaccines: This is a modified live or killed biological preparation that stimulates the immune system to create its own antibodies against a disease. Usually the live modified vaccine produces a stronger and longer lived response than the killed vaccine.

Two for one deal:

By vaccinating the ewe 4-6 weeks before lambing the immune response can also be passed on to her lamb meaning both will share the immunity by just needling one animal! Check with your veterinarian to determine which vaccine should be used prior to lambing.

Categories of Sheep Illnesses

Disorders affecting a ewe's health can be divided into two categories; **Infectious and Non-infectious.**

Infectious disorders can be divided into the following:

Bacteria

- Single celled microorganisms
- Can be treated with antibiotics

  Examples: Clostridial diseases, foot rot, some pneumonia, some abortion diseases

Virus

- Smaller than bacteria and unable to live on its own.
- Cannot be treated with antibiotics.
- Some can be prevented by vaccinating
- Some viruses will be cleared by the immune systems. Others once in the system will always remain.

  Examples: Foot and Mouth, Sore mouth, rabies, Maedi-Visna

Parasites

- A Parasite obtains food and shelter from a host. They range from single celled organisms to more complex organisms such as worms and insects.
- Some are relatively benign but others can have serious consequences.
- Can be treated with wormers, coccidiostats etc.

  Examples include coccidiosis, worms, keds

Prion

- Proteins that always exist in the body but become mutated and cause nervous system disorders

  Example- Scrapies (The sheep version of Mad Cow disease)

Non-Infectious includes the following:

Nutritional

- Deficiency or excess of certain nutrients in diet

  Example: White Muscle, Photosensitivity, Cooper Toxicity

Metabolic

- Animals metabolism is not able to keep up to the body's demands due to poor nutrition in advance of the disorder
- Usually occurs when there is a drastic change in the ewes requirements such as at lambing or when there is a sudden change in feed such as starting on pasture.

  Examples: Pregnancy toxemia, hypocalcaemia, grass staggers

Digestive

- Is linked with nutrition and changes in diet

  Example: bloat

Genetic

- Defects inherited from parents
- Often caused by line breeding or lack of record keeping

  Example: Entropion, Overshot jaw

Sheep Disorders

Digestive System Disorders

Bloat-Stomach appears largely distended- especially the left side where the rumen is. Sometimes froth around mouth. Gas builds up in rumen and is not released. Usually due to legumes in pasture or feedlot diets with a large amount of grain being fed. It is important to slowly introduce animals to these types of diets. Severe cases are an emergency and should be treated by a vet. Some cases can be treated by using a stomach tube inserted into the stomach and adding mineral oil to cut down on the foam. A trochar or large diameter needle can be inserted through the wall of the rumen to release the gas build up.

Grain Overload- Caused by a sudden intake of fermentable foods such as grain, sugar beets, potatoes. Usually in feeder lambs that have seen a sudden change in feed. Symptoms are depression, stiffness, lack of appetite sometimes blindness. Treatment begins with removing grain immediately. Feed good hay and introduce grain again slowly when symptoms disappear. Treat with antacids and mineral oil.

Rectal Prolapse-Usually in feeder lambs on lush pasture or high concentrate feedlot ration. Rectal intestine is protruding visibly. Looks like a red ball. Can be caused by docks being cut too short, excessive coughing, straining etc. Treatment is rarely satisfactory, lamb should be slaughtered. If a high incidence occurs genetics should be considered a possible cause.

Type D Enterotoxemia-(Pulpey Kidney/ Overeating disease) affects the largest, fastest growing lambs. Most common in nursing lambs or those newly introduced to the feedlot. Lambs are usually found dead. An autopsy will reveal mushy kidneys, fluid in the sac around the heart and maybe bloody spots in the intestines. Bacteria (Clostridium Perfringens Type D) Normally present in the intestines they multiply excessively under certain conditions (sudden changes in feed or gorging) and produce a toxin. The toxin causes blood poisoning. Treatment is not usually possible. Prevention is the key. Vaccinate ewe flock against the clostridial diseases. Be cautious when making changes to feeding.

Type C Enterotoxemia-(Acute bloody enteritis) –Usually animals under 3 months of age. Autopsy reveals bleeding in the small intestine. Bacterium(Clostridium Perfringens Type C) produces toxin causing systemic blood poisoning. Prevent with the same vaccine as above.

Scours-Most often observed in first 2 weeks. Whitish yellow or whitish green diarrhea. Lack of appetite may be observed as well as dehydration(indicated by sunken eyes). Some lambs will have scours but still be drinking and remain bright and alert. Caused by weakened immune system due to environmental stress. Lack of colostrum at birth compromises immune system and makes lambs more susceptible. There are many scour treatments available for less severe cases. Discuss treatment with a vet.

Coccidiosis-Actually a parasite. Common intestinal infection which causes diarrhea sometimes with traces of blood. Sudden changes in diet cause stress which allows the coccidian to multiply causing infection. Check with your vet for the best treatment plan. Coccidiostats are commonly used in lamb starter rations to prevent outbreaks.

Nutritional Disorders

Copper Toxicity- Sheep store copper in their liver. Exposure to excessive levels of copper over time can cause large amounts to be stored. During periods of stress the liver suddenly releases the copper which causes a breakdown of red blood cells and jaundice results. The best prevention is to remove all sources of copper from the sheep's environment and diet except for the amount added to an approved sheep mineral or premix. If it is not possible to do so then there are minerals which can be fed which counter the effects of copper. The most effective are Molybdenum, Sulphur, Zinc, and Iron. Copper is found in cattle feed and salt blocks.

White Muscle Disease-caused by a selenium deficiency. Usually in new lambs or lambs not on pasture. Lambs stiffen up. Lambs often end up dying from secondary issues such as starvation or pneumonia. It is common management practice in Canada to needle new born lambs with a combination Selenium and Vitamin E injection. Ewe flock should be fed a loose mineral with an appropriate amount of selenium for the local levels of selenium in the soil.

Respiratory Disorders

Pneumonia-One of the most common causes of death in lambs and ewes. Often secondary to another infection or disorder. Clear in a post mortem investigation due to abscesses, foam or white puss in the lungs. Most easily spotted in lambs that become weak, laboured breathing. Number of infectious agents can cause pneumonia. Caused by environmental stress weakening the immune system and allowing a bacteria or virus to infect the lamb. Check with Vet for treatment to ensure the correct one is being used. Keep barn dry, well bedded and well ventilated.

Shipping Fever-Follows weaning, shipping and auctions. High fever, off feed, progresses to frothy open mouth respiration. Treat with antibiotics as recommended by vet. Reduce stress on moving lambs. Wait ten days to carry out any work such as vaccination, handling, castration etc. Try not to mix too many groups too quickly.

Wasting and Neurological Diseases

Maedi Visna-Of serious economic impact to the sheep industry in Canada. Usually seen after 3 years of age. Animals can be carriers without showing any symptoms of the disease. Causes weight loss and respiratory distress usually leading to death. Sometimes expressed at lambing with a hard udder (Hard-bag) and little or no milk for lambs. Virus that spreads from mother to lambs and by direct contact from sheep to sheep. Blood testing can be done to cull positive animals. Buy replacement stock from Maedi Visna free herds.

Caseous Lymphadenitis-External abscesses are visible usually in the lymph nodes. Found on the neck, under jaw, side of face, shoulder. Also post mortem inspection will reveal abscesses in lungs and other internal organs. Bacteria which enters through cuts in skin. Often spread at shearing. Infected stock should be culled. Vaccine is available to help eradicate disease if it has become an issue.

Scrapie-Relatively rare but serious reportable disease. Long incubation, animals may be infected at birth but not show any signs until 2 years old. Uncoordinated, tremors, twitching, convulsions. Some die quickly with few symptoms, most die within 6 months of signs. Diagnosis can only be confirmed by lab exam of brain. Transmitted through placenta and birth fluids. Genetic testing can identify stock with the gene for scrapies resistance. Buying rams that are resistant will help breed the gene into your stock.

Tetanus-Limb stiffness, convulsions can be triggered by startling. Usually die with 3-4 days. Caused by bacteria in soil enters body through a wound such as from castrating or docking. Toxin is produced and causes infection. Usually too late to treat(Cost of treatment is not practical for sheep). Can be prevented by vaccinating with a 7 or 8 way vaccine.

Listerosis-(Circling Disease) Can affect animal of any age but most often seen in feedlot lambs. Look depressed off feed. Very high fever Walk in circles, one side of body is affected, droopy one side of face, paralysis. Diagnostic lab will check for brain abscesses and can identify bacteria. Usually caused by spoiled feed, especially silage. Difficult to treat, antibiotics are rarely successful. Remove spoilage from silage when feeding. Dispose of dead stock properly. Keep pregnant ewes away from sick lambs.

Rabies-Restlessness, twitching lips. Excessive drooling. May be extremely docile or very aggressive. Animal becomes progressively paralyzed and usually dies within 6 days. Reportable disease, you must contact your veterinarian. Usually contracted from a bite from an infected dog, fox, skunk etc. No

vaccine available for sheep but farm dogs, cats should be vaccinated annually. Control wildlife that are potential carriers.

Metabolic Disease Associated with Pregnancy and Lambing

Pregnancy Toxemia-Usually affects ewe carrying multiples in late pregnancy. Ewe that are too fat or too thin are more at risk. Temperature is normal or even low. Lacking appetite, depressed, progresses to weakness, staggering and blindness. May grind teeth as though in pain. Sometimes convulsions, coma and then death. Post mortem will show a fatty liver. Usually there is an energy shortage in these ewes. May have been on a diet of only hay, straw or poor silage. Ewe is unable to consume enough energy to support lambs. Treatment is rarely effective. A veterinarian should be consulted about removing the lambs in an attempt to save the ewe. The nutritional needs of the ewe need to be filled to prevent the body trying to metabolize fat stores. Ultra sounding for number of lambs can allow ration to be tailored. Body condition score ewes to see if they need more or less feed. Avoid stress during last month of pregnancy.

Hypocalcaemia-Usually occurs just before or shortly after lambing. Staggering, tremors and a stilted gate will be observed. Ewes usually go down after an hour or two. There is no fever in fact temperature is usually lowered. Ewes may look bloated. They will die if not treated promptly. An injection of 80ml of Calcium borogluconate under the skin will usually help the ewe. Avoid stress in late pregnancy. Good quality Ca-P minerals should be available at all times. Avoid sudden changes in feed.

Abortions

Most abortion diseases are spread through water and fee or contaminated tissues such as placenta fetus, and fluids. To diagnose the cause it is important that the fetus, placenta and any other membranes be submitted to a lab for examination. Fresh, clean uncontaminated samples are the best.

Non infectious causes of abortions should also be considered such as:

- Nutritional deficiencies, (Vitamin A, iodine) or malnutrition(Especially in young ewes who are still growing.)
- Rough handling, accidents
- Exhaustion from stress, transport, dog attacks.
- Diseases causing a high fever
- Hormonal disturbances

Enzootic abortion (Chlamydia)- Late pregnancy abortions, stillbirths or weak lambs. When it first occurs in a flock abortions rate will be high and then drop down as immunity builds up. Placenta is severely damaged and may be retained. The organism lays dormant in the uterus until ewe conceives. Once the organism infects the placenta the ewes immune system triggers a response which causes the abortion. Ewes will usually only abort once but will still carry the organism. Can be vaccinated for this.

Vibrosis- (Campylobacter)- Late pregnancy abortions, still births or weak lambs. When it first occurs in a flock abortion rates will be high and then drop down in subsequent lambings as immunity builds up. Some ewes will die from complications such as infected uterus or retained placentas. Infected ewes shed bacteria in feces which infects new ewes when the ingest it. Can be vaccinated for this.

Toxoplasmosis-Generally no signs in healthy non pregnant ewes. When ewes are stressed and immune system is compromised it can cause illness and sometimes death. Ewe infected in first 2 months of gestation will reabsorb the embryo. Mid gestation ewes will abort or give birth to weak lambs. In the last trimester weak lambs are born or healthy but infected lamb. Typical loses can be 15-20 % of the lamb crop. Toxoplasmosis is caused by a protozoa which infects cats. The ewes are infected by consuming feed or water contaminated by feces from infected cats.

Salmonella-Abortion may occur earlier in gestation but most commonly in the last month. Abortion rates are as high as 70%. Diarrhea is commonly seen. Lambs may contract the disease and die. Ewes that have aborted are immune but can still carry and shed the bacteria for up to 4 months.

Lactation Disorders

Mastitis- Can be caused by bacteria such as Staphylococcus or Pasteurella or could be a result of dirty conditions or injury. May be an obvious cause, bruising, cuts, sore mouth scabs. Mastitis can develop rapidly. There are various levels of seriousness. In more obvious cases the udder will become hot and swollen and may also cause a fever. Ewes may not let lamb nurse. If udder is hard on both sides but not hot a likely cause could be Maedi visna. Often this is from a ewe producing more milk than the lambs are drinking or when drying off the ewe. Antibiotics can be helpful but you may need a vet to determine which one is best. Udder should be kept emptied out either by stripping or allowing the lambs to drink. The ewe should be culled as the resulting scarring will likely compromise her ability to raise lambs in the future.

Agalactia-Ewe produces little or no milk. May be little udder development leading up to lambing. No fever illness or pain. May be a fibrous mass in the udder extending down into the teat canal. If there is some milk it is normal in colour and consistency. Cause is unknown. Could be caused by too much barley in the diet, chilling of udder, old mastitis infection, mycoplasma, early winter lambing (Dec-Jan). There is no treatment and affected ewes should be culled.

Disorders in Rams and Wethers

Urinari Calculi- Caused by the urinary tract being blocked by kidney stones which form as a result of an imbalance in the Calcium/ Phosphorous ratio in their diet. Predominantly found in male feedlot lambs. Affected lambs will be restless, straining and kicking at bellies. Abdomen will begin to swell. If not resolved animal will die. Contact a vet to treat. Lots of water available at all times is also key to preventing this problem.

Epididymitis-A bacterial infection affecting the testicles and epididymis and can leave lumps or obstructions. Can be quite painful and affect fertility. Caused by a bacterial infection of an injury. Cull any rams that have abnormal testes.

Sheath Rot- affects rams and wethers, usually on a high protein diet. Signs are swelling and possible blockage of the prepuce and irritation of surrounding area. Caused by urine and ammonia irritating the sheath and prepuce. This irritation leads to bacterial infection. Area needs to be cleaned and antibiotic cream applied. If this problem occurs more than once consider modifying the diet of the ram.

Foot Disease -Foot Rot-Starts with moist red skin between the claws of the hoof. As the infections spreads the outer portion of the hoof will separate. Foot rot is easily identified by its extremely fool odour. There is no pus. Sheep will lose condition and be laying down a lot. If front feet are sore sheep will often walk around on their front knees. Sheep are more easily infected when feet are wet and the bacteria prefers overgrown, cracked and dirty feet. Keep feet trimmed and ewes on dry footing will help to prevent the formation of foot rot. Foot baths can help with treatment

Other Disorders

Sore Mouth-(Orf) 8-10 days after exposure small red blisters form and then scab. Common areas of infection are the udder, eyelids, nose, mouth and feet. Ewes may stop lambs from nursing if udder is sore. Spread through direct contact. Sheep will recover on their own. This is contagious to people, wear gloves when handling infected animals. There is a vaccine available. Wear gloves when handling vaccine.

Navel Ill- puss and swelling at naval. May extend further into belly. Can cause high fever, depression, weakness lack of appetite. Can spread to the joints. Treat with a strong dose of antibiotics for several days. Prevent by treating navals with iodine at birth. Keep lambing conditions clean and dry.

Joint Ill- Infection of joints of the legs of lambs. Stiffness and pain when getting up. Affected lambs are rough, gaunt, and unthrifty. Joints may fuse so lambs cannot stand. Caused by bacterial infections that enter through the naval or castrating and docking wounds. Can be treated with antibiotics. Keep facilities and equipment clean.

Entropion-Eye lid turns in/under. Usually most noticeable when the eye runs which causes wool around eye to be dirty and matted. Eye becomes cloudy and can form ulcers. Eyes remain closed and painful. Can cause blindness. Some can be genetic, sometimes birth fluids on eye lid dry up. Eyelashes rub on eye causing sores. Clean around eye. An injection into the eyelid can stop it from rolling under for a short while. The eyelid can also be stitched. Eye ointment or pink eye powder can help heal the sore on the eye. Records may indicate if there is a ram whose lambs are consistently having the problem.

Tips For Using Antibiotics

Antibiotics are, of course, only one type of the medications that you may use to treat sheep. However, with recent concerns regarding the use of antibiotics for livestock production, it is important keep in mind how and when to use this type of medication. Using antibiotics responsibly helps maintain the effectiveness of these important drugs and helps producers save on medication costs. Some basic rules when using antibiotics are listed below:

1. As a producer, know what diseases are prevalent at particular production stages or seasons. Consult your veterinarian if you are uncertain about the diagnosis.

2. Recognize the limitations of antibiotics. Remember that some bacteria are only sensitive to certain antibiotics, and that antibiotics are not effective against diseases caused by viruses. An antibiotic will not remove scar tissue from lungs, and there is no advantage in treating some animals with persistent respiratory problems.

3. Take the sheep's temperature. If the temperature is normal (101-103°F), the cause of the disorder is not likely to be due to an infection and antibiotics will generally not be effective.

4. Monitor animals regularly and treat early. Infections are more difficult to treat once they are well established.

5. Follow label or veterinarian instructions regarding dosage and length of treatment. Do not cut the treatment time short even if the animal appears to have recovered. Although it may seem that you will save a dose or two of antibiotic by decreasing the treatment time, in the long run you could be creating even larger problems. The antibiotics may have only had time to curb the bacteria growth, but not completely eliminate the population. The remaining bacteria have a good chance of surviving and becoming resistant to the antibiotic.

6. Identify animals that have been treated. Ensure that everyone that works on the farm understands the identification system and is recording each time medication is administered.

7. Vary antibiotics if the one you are using is not effective after the first round of treatment. Maintain records regarding which medication has been effective in the past.

8. Take care of drugs and store according to label recommendations (e.g. refrigerate, store out of direct light etc.). Watch expiry dates and do not use outdated drugs. Medications that are old or not stored correctly may be less effective at eliminating all of the bacteria (possibly leading to resistance), and in some cases may become toxic to the animal you are treating.

9. Antibiotic residue in meat and milk is a major food safety concern. Maintain records regarding the withdrawal dates of all medications administered to animals. Double-check your records before shipping animals for slaughter. If you accidentally ship animals that have not met the withdrawal dates, notify' the buyer as soon as possible.

10. **Prevent problems. Do not rely on antibiotics to replace good management. Provide sheep with a dry, clean environment, ample feed and have a biosecurity plan in place.**

Taken from the 'Introduction to Sheep Production in Ontario' from the Ontario Sheep Marketing Agency

Injection Methods

Prepared by veterinarians in the Veterinary Science Group, OMAF

Do More Good than Harm

Injection is the only method of administration for many medicines and vaccines. Although the purpose of an injection is to benefit your animal, each injection has the potential to do harm, besides pain or suffering. The injection could also create residues, scar tissue, or abscesses. Here are methods of giving vaccines and injectable treatments to avoid problems at injection sites and to maximize the benefits of your treatments.

Read the Label

Manufacturers guarantee their products for safety and efficacy when used according to label directions. Extensive research revealed the best site, route, and dosage for the product. The most common injectable routes are subcutaneous (SQ), intramuscular (IM), and intravenous (IV). Read the label, look for the following information, and follow the directions.

1. The **product name,** the active **ingredient** and the concentration appear on the label.

2. The **description** of its use describes a product and its purpose.

3. The **instructions for** preparation describe how to prepare a product for injection.

4. The **formulation** describes the contents of the package and tells you if the product is suitable for injection.

5. **Warning** statements show hazards to human health from handling the product, the withdrawal time, and restrictions on use.

6. The **withdrawal time** is the minimum time between the last treatment and the slaughter of the animal for food (or sale of the milk). This is the time needed to allow for residues to deplete to safe levels.

7. **Product usage** information appears on the side panels of a label.

8. The **precautions** statements alert you to **storage** and safe **handling** practices to maintain stability and potency.

9. The **indications** statements show the species, class of livestock, and the disease conditions for the product.

10. **Dosage and** administration statements show the directions for use (e.g. how much, how often, how long), and the route of administration (e.g. IM, SQ, TV), and the timing of treatment.

11. **Cautions** and contraindications statements warn about hazards to animal health and safety (e.g. known adverse reactions).

12. **Restricted** uses will appear on the labels of some products. (e.g. do not use in sheep).

13. **Read package insert for complete directions**, additional precautions or more complete instructions.

14. The **expiry date** is the date past which the product should not be used. It is valid only if the product has been properly stored.

15. The **lot number** describes the manufacturer's batch during production. It is used to trace the drug if necessary.

Bottles and Bottle Tops

1. Clean bottle tops with alcohol and cotton.

2. Place one sterile needle in the bottle top to fill the syringe and use a separate needle for injection.

3. Remove needles from all bottles prior to storage.

4. Write the date the bottle was opened on the label.

The Injection Site

1. Choose SQ (or subcutaneous) when given a choice of IM or SQ on the product label.

2. Choose muscle tissue of lesser value to consumers (e.g. neck) for IM injections.

3. Give SQ injections in the neck in front of the shoulder or over the ribs behind the shoulder.

4. Inject through an area of clean dry skin.

Clean Equipment

1. Wash your hands before and after handling products.

2. Use sterile disposable needles and syringes.

3. If not using disposable equipment, clean and sterilize all equipment before and after use.

4. Use only hot water to rinse syringes before using modified live virus vaccines. Chemicals may destroy the live virus.

5. Use hot water and mild disinfectants to clean syringes for other injectable products.

Needles

1. Use a new, sterile, disposable needle for each animal.

2. If using the same needle for multiple injections, change the needle frequently (e.g. 10 animals) to ensure it is not bent or burred (slight bent at the point).

3. Choose the smallest needle size for the product to minimize tissue damage and reduce leakage at the injection site. Use 16 or 18 gauge needles for most injectable products (20 for lambs).

4. Choose the correct length needle, 1 inch for IM and *0.5* inch or less for SQ sheep.

Restraint

1. Restrain the animal to prevent injury to yourself or the animal, and to prevent needles from breaking off in tissue.

Volume of Injectable Product

1. Inject quantities no greater than recommended on the label (for one dose).

2. Split large volumes into smaller amounts and inject in different locations (e.g. opposite side of the neck). For IM injections, inject no more than 10 ml per site. For SQ injections, inject only 20 ml per site.

Multiple Injections

1. Choose different body locations (e.g. opposite sides of the neck) when repeating injections over a number of days.

2. Place repeat injections about *4* inches from a previous injection site.

Needle and Syringe Techniques

1. Eject air from the syringe before injecting the product.

2. After inserting the needle, check that it is not in a blood vessel when injecting IM or SQ. Pull back on the plunger and observe for blood. If blood appears, remove the needle and put it **in** a slightly different location.

3. Give SQ injections into a tent of skin. Lift a fold of skin and insert the needle through the skin into the tented space. The needle enters the skin at an angle of 30 to *45* degrees to the body. Use a 0.5 to 1 inch long needle.

Disposing of medical materials:

Be very careful when disposing of material such as used needles, syringes and drug containers. Some companies will actually recycle the containers and they should never be burned. Serious injury can result. Consult your veterinarian for safe disposal methods of these materials.

4. Give IM injections deep into a muscle. Your needle must be long enough to penetrate skin, subcutaneous tissue and fat to reach the muscle. The needle enters at a 90 degree angle to the body. A 1 inch needle will suffice.

5.For IV injections, get advice and training from your veterinarian.

Mixing Products

1. Do not combine vaccines or products unless the label clearly states to do so. Mixing inactivates products through changes in pH, alterations to chemical composition, or precipitation out of solution.

2. Do gently shake or agitate products to ensure that they stay in proper suspension in the bottle. Some products settle out and you need to invert and gently shake the bottles before and during use.

Adverse Reactions

1. Injecting medicines into sites other than the one recommended on the product label can lead to adverse reactions,

Examples include:

- delayed absorption of the drug, achieving lower than therapeutic levels, and less-effective treatment
- delayed absorption of the drug and extended withdrawal times due to residues from pooling of the product in tissue;
- moderate to severe tissue reaction with pain, swelling, interruption of blood supply and delayed absorption of the product, or formation of scar tissue and excessive trim at slaughter; or
- allergic reactions, shock, or death.

Records

1. Keep records of injections given to your herd or to individuals.
2. Record the animal identification, date, product name, dosage given, the route, the site, and the withdrawal time.
3. Ask your veterinarian for written instructions when medications are being dispensed.
4. Save the box tops or labels with product names, lot numbers and expiry dates.
5. Keep a package insert for reference.

For further information, please contact your local veterinarian.

Taken from the 'Introduction to Sheep Production in Ontario' from the Ontario Sheep Marketing Agency

Parasites

Parasite control is very important in keeping your flock healthy. Sheep are affected by both internal and external parasites. Sheep are the host and parasites live on or in them. They take their food from the sheep usually in the form of blood and cause the sheep to become weak and run down. This causes the immune system to be compromised which makes the sheep more likely to become ill from other diseases. In order to control parasites effectively both the type of wormer used and the timing are very important.

Parisites thrive with mild winters, moist warm weather, overgrazed and permanent pastures, marshy or wet pasures.

Sheep are vulnerable when very young or very old, stressed, when there is a high number of parasites.

Preventing Parasite Damage

Dewormers:

An effective parasite control program includes a chemical dewormer as well as careful management of pastures and housing.

Timing of worming is critical to its success. Here are some examples of worming schedules:

Ewes: Early lambing (January through February)

- Deworming ewes shortly after lambing will help to protect young lambs.
- Deworm ewes again before they go to pasture to prevent pasture contamination.
- If possible, deworm flock again 3 weeks after they have been on pasture
- Deworm ewes at weaning time

Ewes: Late Lambing (April through May)

- Deworm ewes in midwinter (January, February) before the spring thaw, to prevent heavy contamination of pens or corrals during spring thaw
- Deworm ewes shortly after lambing (before sheep go to pasture) and at weaning time

Weaned lambs:

- Deworm lambs at weaning time or before they enter feedlot or new pasture.

Replacements

- Deworm all newly purchased stock when they arrive on farm at beginning of quarantine period and again 3 weeks later.

After deworming it is advisable keep animals in the same area for 12 to 24 hours, and then move them to a clean pasture or pen. Moving animals to a new pasture immediately after deworming will contaminate the pasture, as eggs will be passed with the dead worms. Animals will become re-infected sooner if they are put back into the original pasture.

Preventing Resistance

Resistance to dewormers can build up over time when the same dewormer is used repeatedly. The following is important to prevent resistance from building up and to make sure the use of chemicals is cost effective.

Fecal Egg Count

These are done by taking a fecal sample and having it analysed by your veterinarian. They will then note the type of parasites that exist and how heavy the load is.

Rotating dewormers

There are three main groups of wormers. Fenbenzadole, imidazothiazoles, and avermectins. Using a different family each year for the full year prevents the Parasites from building up resistance to the wormers.

Nutrition and Health

As long as the ewe flock is healthy and well cared for the parasites will remain in check. However any immune system that is compromised will allow the parasites to thrive.

Pasture Management

Many parasites remain close to the soil. Keeping sheep from grazing the pasture right down to the ground can cut back on how many worms they ingest. Allowing the pasture to rest during the year at some point for at least 6 months will help keep the parasites to a minimum. Harrowing the pasture to spread out manure dries it quickly and prevents worms from living in it. At the same time do not let pastures overgrow as this also allows for cool dark places for the worms or larvae to live.
Use clean ungrazed pastures for lambs as they are very susceptible to worm infestation.

Sanitation

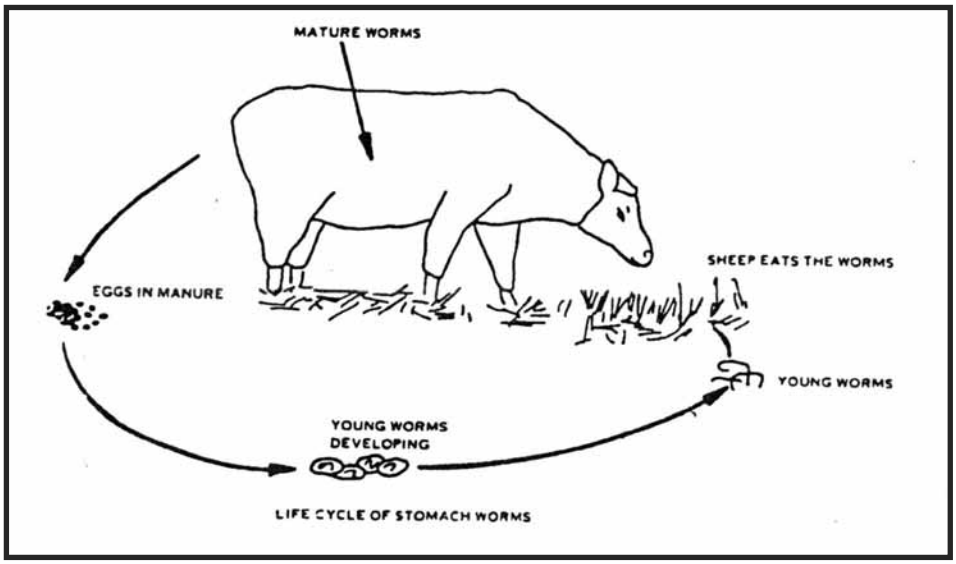
For sheep in barns or confinement housing, cleanliness is the best prevention. Keep feces out of feeders, mangers and water supplies. Pens need to be clean and dry.

Genetic Resistance

There is a genetic link to parasite resistance. At this time it hasn’t been mapped on the DNA chain but with DNA testing the gene will be indentified and sheep can be bred for parasite resistance the way they are bred for scrapies resistance!

Internal Parasites

Life Cycle of Stomach Worms



Internal Parasites include worms, and protozoa that live inside the animal's digestive tracts and/or respiratory tracts.

Types of Internal Parasites:

Stomach worms: Attach to the stomach lining, suck blood and cause ulcers and inflammation. Seen in anemia, swelling under jaw, sometimes sudden death. Diagnosed by post-mortem examination or fecal exam.

Intestinal Round Worms: Cause damage to intestinal lining. Leads to enteritis, diarrhea, appetite loss, weight loss sometimes death.

Lung Worms Most common in wet marshy pastures. Live in lungs. Eggs are coughed up and then swallowed with grass. Signs include rapid breathing, coughing, weakness.

Tapeworms The sheep type are not a great problem but tapeworms spread by dogs cause cysts in muscles that can then cause the meat to be condemned. Dogs that are in contact with sheep need to be wormed annually. Found at slaughter. May see pieces of worms in feces.

Sarcosporidiosis Protozoal parasite. Causes cysts in esophagus, abdominal muscles, diaphragmor cheek muscles.This can not be treated for. Usually found at slaughter.

Coccidiosis: Also caused by a protozoa(coccidia) that is usually present in soil and intestines. Often a major problem in young stock. Stress causes protozoa to muyltiply and cause infection. Keeping conditions dry and clean are key to preventing infection. Medicated lamb starter can be used to keep Coccidia in check. Usually seen as diarhea, sometimes with tinges of blood in stool. Once infected anti –coccidial medication is necessary and can be obtained through your veterinarian.

External Parasites:

The most internal parasites are lice and Keds. They bother the sheep enough to cause them to lose condition.

There are a number of sprays and powders that can be used to control External parasites. The best time is just after shearing when the wool is short and does not interfere with the medication.

Examples:

Sheep Ked: Wingless insect. Spends entire lifecycle on sheep. Most numerous in fall and winter. Spread from sheep to sheep by jumping and are often worse when overcrowding occurs. Adult keds are visible and are best seen on lambs. Dusting right after shearing is best. Every animal in herd must be treated or the few that are left will reinfest the remainder of the herd.

Biting or sucking Lice: Sucking lice feed on blood or dander and other material in the wool. Can survive for a few days of the sheep. Infected animals rub and become unthrifty. Clean out bedding and dust entire flock as above.

Blow flies: Flies lay eggs in open sores or in manure around tail. After hatching they invade wounds or bore into the sheepd flesh. Maggots and infection smell are easily detected. Toxins produced by maggots will kill sheep in a matter of days.shear sheep before pastureing, dock tails on young lambs. If treatment is quick it can be effective. Shear the area and clean wound with benzene or chloroform. Consult with vet.

Mange Mites: Cause intense itchiness. Scabs are visible from rubbing. Treat with dusting after shearing.

Sheep Nasal Fly: Related to the warble fly which infects cattle. Deposties larvae near nostrils. They enter the nasal passages and sinuses irritating the membranes. Usually large amounts of nasal discharge. Sheep have a tendency to try and push nose into ground or other sheep to keep flies away. Infestations are not as bad if sheep have access to sheds or clumps of bush.

SHEPHERD'S CALENDAR

On a sheep farm there are many things that have to be done throughout the year. It is important to be prepared and do the job at the right time. It is a good idea to draw up a calendar for your farm based on when you plan to market lambs. Here are examples of early and late lambing calendars, and details of some of the things that should be done.

SHEPHERD'S CALENDAR: EARLY LAMBING (JANUARY, FEBRUARY)

Month	Management Details
May (late)	• Deworm ewes and any lambs not marketed if needed.
June (late) to July	• Take fecal samples to laboratory for fecal egg count. • Deworm ewes and any lambs not marketed if results of fecal tests show need. • Flush ewes three to four weeks before breeding by placing on good pasture or feeding 0.3 kg grain. • Have ewes in good condition with a body condition score of three or higher. • Do not breed ewe lambs unless they are well grown and weigh at least two-thirds of their expected adult weight. • Have rams in good condition. • Trim feet if needed. • Cull ewes with bad udders or mouths. • Take fecal samples to laboratory for fecal egg count
August	• For January/February lambs turn rams into flock the first week in August. • Continue to flush, especially ewes in poor condition.
September	• Use a marker harness on rams and change colours every 16-18 days. • Remove rams first week of September.
October	• Maintain ewes on pasture as long as possible. • Reduce grain intake to zero except on thin ewes two to three weeks after breeding season ends. • Prepare winter quarters; clean out barns, repair gates, check operation of water bowls, etc.
November	• Deworm sheep coming off pasture using a deworming agent effective against immature larvae. • Move sheep into winter quarters. • Avoid overcrowding and poor ventilation. • Feed free choice first cut good quality hay.

Month	Management Details
December	• Provide salt and sheep mineral free choice. • Feed 0.5 kg to 0.7 kg grain four weeks before lambing. • Prepare for lambing. Provide lambing pens, heat lamps, etc. • Provide for identification of ewes and lambs. • Shear ewes to lamb if in warm barn. • Be on hand for lambing. • Put a clean-up ram with the ewes not conceiving in August. • Prevent clostridial diseases (enterotoxemia, tetanus, etc.) by vaccinating ewes four to six weeks before lambing with Vitamin E-Selenium.
January	• After lambing feed ewes 0.5 - 1.4 kg grain or recommended amount on feed tag plus good second cut hay or follow a formulated ration.
February	• Always keep lambed ewes from those yet to lamb. • Prevent white muscle in new lambs with Vitamin E-Selenium injection. • Separate ewes nursing triplets from those with twins and singles. • Feed triplets rearing ewes extra grain. • Start creep feeding lambs at one to two weeks of age. • Dock lambs at 2-3 days of age (before 24 hours of age if an elastrator is used).
March	• Shear ewes if not sheared in December. • Wean and market lambs for the Easter market and market in April and May at heavier weights.
April	• Shear rams. • Trim feet if needed. • Mark ewes to be culled. • Drench ewes after lambing for parasite control if needed. • Market lambs.
May	• Drench ewes for internal parasites three weeks after going on pasture if needed. • Provide salt, sheep mineral, water and shade in pasture. • Market lambs.
June	• Rotate pastures. Take fecal samples for worm egg count to laboratory. If after deworming, wait 3 weeks after the treatment before collecting the samples • Market lambs.
July	• Deworm flock on pasture if need indicated by fecal egg count.

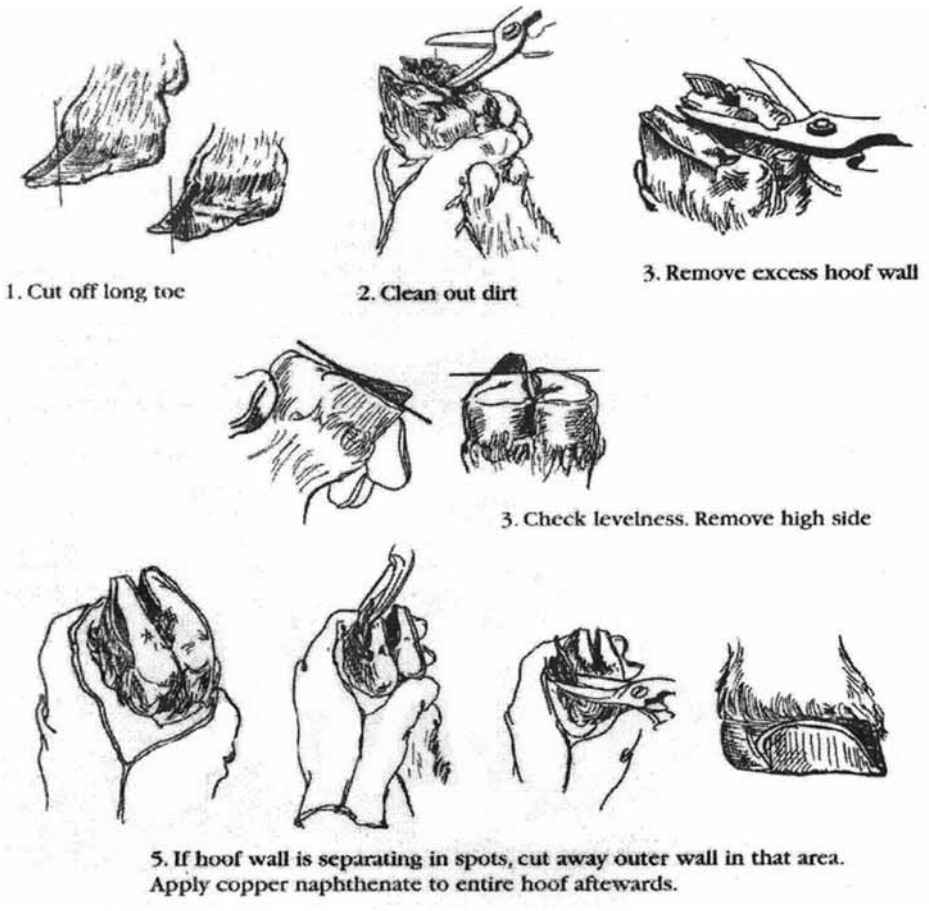
SHEPHERD'S CALENDAR: LATE LAMBING (APRIL, MAY)

Month	Management Details
October	• Deworm ewes and any lambs not marketed when they come off pasture. • Flush ewes three to four weeks before breeding by placing on good pasture or feeding 0.5 kg grain. • Have ewes in good condition. • Do not breed ewe lambs unless they are well grown and weigh at least 2/3 of their expected adult weight. • Have rams in good condition. • Trim feet if needed. • Market lambs. • Cull ewes with bad udders or mouths. • Prepare winter quarters; clean out barns, repairgates, check operation of water bowls, etc.
November	• For April, May lambs, turn rams into flock the second week of November. • Market lambs.
December	• Continue to flush, especially ewes in poor condition. • Use a marker harness on rams and change colours every 16-18 days. • Maintain ewes on pasture as long as there is adequate feed available. • Provide hay or grain, if necessary, to flush as pasture deteriorates. • Move sheep into winter quarters. • Market lambs.
January	• Reduce grain intake one to two weeks after breeding season ends. • Market lambs.
February / March	• Avoid overcrowding and poor ventilation. Feed choice good quality hay. Provide salt and sheep mineral free choice. • Feed 0.3 to 0.5 kg grain six weeks before lambing. • Prepare for lambing. Provide lambing pens, etc. if needed. • Provide for identification of ewes and lambs. • Prevent clostridial diseases (enterotoxemia, tetanus, etc.) by vaccinating ewes four to six weeks before lambing.

Month	Management Details
April / May	• Be on hand for lambing. • Feed ewes 0.5 - 1.4 kg grain plus good hay after lambing before pasture is available. Prevent white muscle in new lambs with Vitamin E-Selenium combination injection. • Shear before lambing. • Trim feet if needed. • Provide salt, sheep mineral, water and shade on pasture if needed. • Deworm flock three weeks after going on pasture.
June / July	• Rotate pasture. • Late June, check fecal egg counts. • Market lambs.
August / September	• Deworm lambs on pasture as necessary. • Cull low producing or unsound ewes. • Market lambs.

Hoof Care

- Sheep should have their feet trimmed twice a year. Once in the spring and once in the fall before breeding if growth is there.
- Keep bedding dry in the winter and keep them away from wet marshy areas in the summer to help prevent disease.
- When trimming feet leave any with sore feet to the end to prevent spreading the bacteria to the healthy feet.
- Hoof trimmers should be used and are much safer than using a jackknife.
- Foot Rot Bacteria like damp ground and places where air cannot get to them. Sheep with infected feet should be put through a foot bath and kept separate from the flock until the infection is gone.
- New sheep should have their feet trimmed and be put through a foot bath before being mixed with the flock.



Health Glossary

Carrier: An animal that carries a disease but doesn't show any symptoms.

Electrolytes: Salts naturally found in blood. May be administered orally or intravenously during illness. Needed by dehydrated animals.

Infectious: A disease that is contagious- Can be spread from animal to animal.

Intramuscular: (IM) An injection into the muscle

Intravenous: (IV) An injection into the vein

Necropsy: Autopsy or medical examination of an aborted fetus or stillborn lamb.

Non Infectious: Caused by environmental or physical factors. Can not be spread from one animal to another.

Protozoa: An organism bigger then bacteria that can be a parasite in sheep.

Quarantine: Keeping an animal isolated from other animal to prevent spread of infection or to observe new flock additions for any disease they may be carrying.

Reportable Disease: Diseases outlined in the Health of Animals act that must be immediately reported to a CFIA Veterinarian by any veterinarian, laboratory or producer. Ex. Rabies or scrapies.

Sire: Father, male parent

Subcutaneous: (SQ)-An injection under the skin

Trochar: Tool for releasing gas from the rumen of a bloating sheep

Vaccines: A Preparation used to improve immunity to a particular disease.

Wether: Castrated or neutered ram

Withdrawal: The amount of time needed for a drug to clear the animals system so the meat or milk is safe for human consumption.

Yearling: Ewe or Ram between 1 and 2 years of age

Antiobiotics Commonly Used in Livestock Production

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Not all drugs are approved for use in sheep and goats. The mention of non-approved products is for informational purposes only. They require extra label use and can only be used legally under the advice of a licensed veterinarian in the context of a veterinary-client-patient relationship.

Trade Name	Drug Ingredient	Availability	Approved Species	Labeled Use	Labeled Dosage	Withdrawal Time
Ampicillin	Ampicillin Trihydrate	prescription	Cattle	Respiratory tract infection.	2-5 mg/lb IM daily for a maximum of 7 days	Cattle: 6 days slaughter Milk: 48 hours
Aureomycin® 50	Chlortetracycline	OTC	Beef Non-lactating dairy cattle Swine **Sheep** Poultry	Increased rate of weight gain and improved feed efficiency. For reducing the incidence of (vibrionic) abortion caused by *Campylobacter fetus* infection susceptible to chlortetracycline.	20-50 g/ton (growing lambs) 80 mg/head/day in feed (breeding)	Sheep: 0 days slaughter
Aureomycin® 4G Crumbles type C medicated feed	Chlortetracycline	OTC	Beef Non-lactating dairy cattle Swine **Sheep** Poultry	Increased rate of weight gain and improved feed efficiency For reducing the incidence of (vibrionic) abortion caused by *Campylobacter fetus* infection susceptible to chlortetracycline.	Mix in feed or top dress. 250 mg per day	Sheep: 0 days slaughter
Baytril®	Enrofloxacin	prescription	Cattle (not veal)	Treatment of bovine respiratory disease (BRD) associated with *Pasteurella haemolytica*, *P. multocida*, and *Haemophilus somnus*.	Single dose therapy: 7.5 to 12.5 per kg; multi-day therapy 2.5 to 5.0 mg/kg SQ for 3 to 5 days	Cattle: 28 days
Biosol® Liquid	Neomycin Sulfate	OTC	Cattle Swine **Sheep** **Goats**	Treatment and control of colibacillosis (bacterial enteritis) caused by *E. coli* susceptible to neomycin	10 mg/day in divided doses for a maximum of 14 days Administer undiluted or in drinking water	Sheep: 2 days slaughter Goats: 3 days slaughter
Cefa-Dry® Tomorrow® Intramammary	Cephapirin Benzathine	OTC	Dry cows	Mastitis caused by susceptible strains of *Streptococcus agalactiae*	10 ml tube/infected quarter	Cattle: 42 days slaughter Milk: 72 hours after calving

Infusion				and *Staphylococcus aureus.*		
Cefa-Lak® Today® Intramammary Infusion	Cephapirin Sodium	OTC	Lactating cattle	Mastitis caused by susceptible strains of *Streptococcus agalactiae* and *Staphylococcus aureus.*	10 ml tube/infected quarter	Cattle: 4 days slaughter Milk: 96 hours
Excenel®	Ceftiofur Hydrochloride	prescription	Cattle (not veal) Swine	foot rot, bovine respiratory disease, bovine acutre metritis, swine bacterial respiratory disease	cattle: 1.1-2.2 mg/kg IM or SQ every 24 hrs for 3-5 consecutive days; swine: 3 to 5 mg/kg IM every 24 hours for 3 consecutive days	Cattle: 2 days slaughter Swine: 4 days slaughter
Gentocin® (Garacin) Pig Pump Oral Solution	Gentamicin Sulfate	OTC	Neonate or suckling pigs	In neonatal swine 1 to 3 days of age for control and treatment of colibacillosis caused by strains of *E. coli* sensitive to gentamicin	one full pump/pig orally (5 mg gentamicin/pig)	Pigs: 14 days slaughter
Liquamycin® LA-200®	Oxytetracycline	OTC	Cattle Swine	Pneumonia, shipping fever complex, foot rot, bacteria enteritis, wound infections, acute metritis, and pinkeye	3-5 mg oxytetracycline/lb IV, IM, SQ up to a max. of 4 days 9 mg/lb as a single dose (IM)	Cattle: 28 days slaughter Milk: 96 hours Swine: 28 days slaughter
Micotil® 300	Tilmicosin Phosphate	OTC	Beef **Sheep**	For the treatment of ovine respiratory disease (ORD) associated with Mannheimia (P.) haemolytica.	10 mg/kg SQ Single injection	Cattle: 28 days Sheep: 28 days
Naxcel® Sterile Powder	Ceftiofur Sodium	prescription	Cattle **Sheep** Swine Horse Poultry	Sheep respiratory disease (pneumonia) associated with *Pasteurella haemolytica* and/or *P. multocida*	1.1-2.2 mg/kg IM repeat at 24 hr intervals for 3-5 days	Sheep: 0 days slaughter Milk: 0 days
Neomycin Soluble Powder	Neomycin Sulfate	OTC	Cattle Swine **Sheep** **Goats** Turkey	Treatment and control of colibacillosis (bacterial enteritis) caused by *Escherichia coli* susceptible to neomycin sulfate in cattle	10 mg/lb/day for 14 days Add to drinking water or milk	Sheep: 2 days slaughter Goats: 3 days slaughter
Nolvasan® Cap-Tabs®	Chlorhexidine Hydrochloride	OTC	Cattle, cows Horses, mares	For prevention or treatment of metritis and vaginitis in cows when caused by	Place 1 or 2 tablets deep in each uterine horn; or infuse a	n/a

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				pathogens sensitive to chlorhexidine dihydrochloride	solution of 1 tablet dissolved in an appropriate amount of clean boiled water Repeat 48-72 hours	
Nuflor® Injectable Solution	Florfenicol	prescription	Cattle	Bovine respiratory disease and foot rot	20 mg/kg IM 2nd dose - 48 hrs later	Cattle: 28 days (IM injection) Cattle: 38 days (SQ injection)
Oxy-Tet 100	oxytetracycline HCl	OTC	Cattle Swine	Pneumonia and shipping fever, severe foot rot, *e.coli* scours, wound infections, acute metritis.	3-5 ml/100 lbs.	Cattle: 18 days Swine: 26 days
Pen BP-48 Long-acting Penicillin	Penicillin G Benzathine; Penicillin G Procaine	OTC	Cattle	Shipping fever, upper respiratory infections and blackleg	2 ml/150 lbs. SQ Repeat in 48 hrs. Limit treatment to two doses	Cattle: 30 days slaughter
Pro-Pen G	Penicillin G Procaine	OTC	Cattle Horse **Sheep** Swine	Treatment of sheep for bacterial pneumonia (shipping fever) caused by *Pasteurella multocida*.	1 ml/100 lb (3000 IU/lb)/lb IM daily for a maximum of 7 days	Milk: 48 hours Sheep: 8 days slaughter
Spectam™ Scour-Halt	Spectinomycin	OTC	Swine	Effective in the reducing scours caused by *E-Coli*	50 mg/10 lbs. twice daily for 3-5 days	Swine: 21 days
Sulmet® Oblets	Sulfamethazine	OTC	Cattle Horse	Treatment of bacterial pneumonia and shipping fever, bacterial scours, foot rot, calf diptheria, acute mastitis, acute metritis, and coccidiosis	100 mg/lb first day 50 mg/lb following days	Cattle: 10 days
Terramycin®	Oxytetracycline Hydrochloride	OTC	Cattle Swine **Sheep** Poultry Fish	For increase rate of weight gain and improved feed efficiency For treatment of bacterial enteritis caused by E. coli and bacterial pneumonia caused by P. multocida susceptible to oxytetracycline	10-20 g/ton feed 10 mg/lb. weight for 7-10 days	Sheep: 5 days slaughter (10 mg)
Terramycin® Ophthalmic	Oxytetracycline Hydrochloride;	OTC	Cattle Horse	Ocular infections due to *streptococci*, *rickettsiae*, *E.*	Administer topically to eye two to four times	n/a

Ointment	Polymyxin B Sulfate		**Sheep**	*coli*, and *A. aerogenes* (such as conjunctivitis, keratitis, pinkeye, corneal ulcer, and blepharitis) and ocular infections due to bacterial inflammatory conditions which may occur secondary to other diseases in sheep	daily	
Terramycin® Scour Tablets	Oxytetracycline Hydrochloride	OTC	Cattle	Bacterial enteritis caused by Salmonella typhimurium and *E. coli* (colibacillosis) and bacterial pneumonia (shipping fever complex, pasteurellosis) caused by *P. multocida*.	250 mg/100 lbs. every 12 hrs.	Cattle: 7 days slaughter
Tylan® Injection 50 mg; Tylan® Injection 200 mg	Tylosin	OTC	Beef Non-lactating dairy Swine	Bovine respiratory complex, foot rot, and metritis	8 mg/lb IM daily for a maximum of 5 days	Cattle: 21 days slaughter Swine: 28 days slaughter

Source: Product labels and FDA Approved Animal Drug Products Online Database System @ http://dil.vetmed.vt.edu

Last Updated 29-Aug-2006 by Susan Schoenian.

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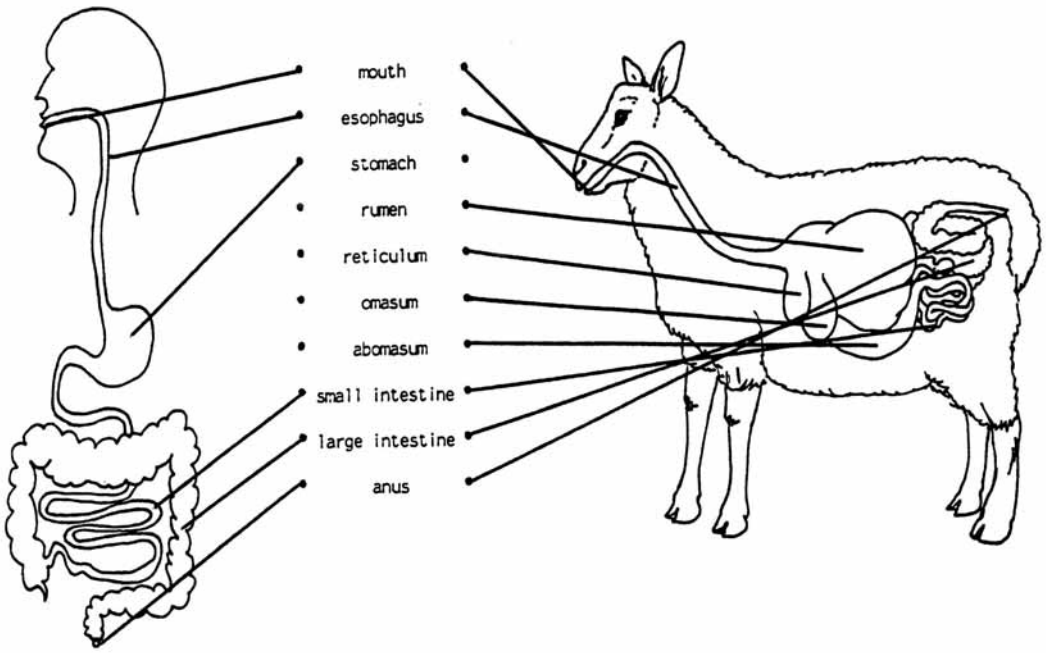
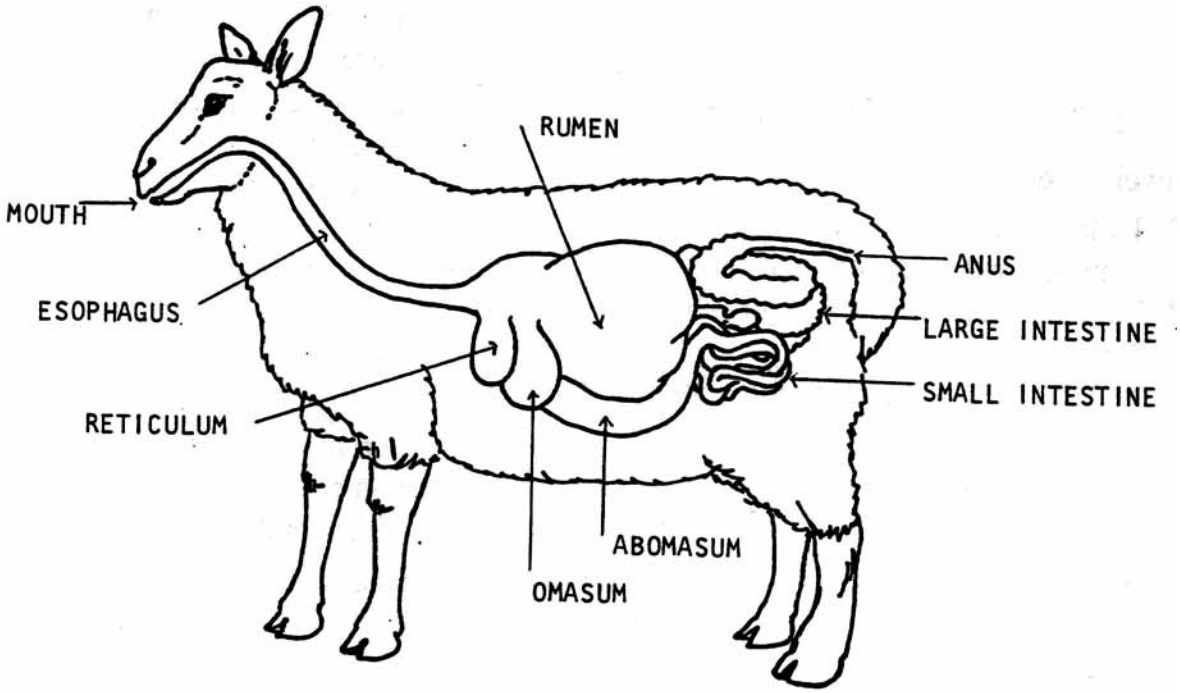
Nutrition

(From the Alberta 4-H Sheep Leader's Manual)

The Sheep's Digestive System

A sheep has a ruminant (compartmented stomach) digestive system. This is different from a human who has a single stomach or monogastric digestive system. Ruminants require very coarse feeds for their system to work properly. Following is how a ruminant system compares to a human.





Nutrition Basics

A sheep's diet must contain the following:

Water
Energy
Protein
Minerals
Vitamins

The more a sheep's body is doing the more nutrients are required. For example a Ewe who is in lamb or feeding a lamb will need more nutrients than a ewe that has been weaned and has not been bred back yet.

Water

- The water source must always be kept clean and fresh.
- Sheep are fussy drinkers and will not drink water with manure in it or foul smelling.
- The amount of water required will vary depending on the weather-heat will cause sheep to drink more to try and keep their bodies cool.
- Depending on the amount of snow available, sheep will eat snow as opposed to drinking cold water.
- During the stage of production, pregnant and lactating ewes will drink more than ewes that are weaned and not bred back.
- Type of feed, fresh grass and silage contain more water than dry hay does.

Energy

- Sheep need energy to run all body functions such as moving muscles, circulating blood, digesting food, breathing and keeping warm.
- Sheep are fussy eaters and require good quality food to keep up their energy levels. They will not eat moldy or spoiled feed even when hungry.
- Good quality pasture, hay and haylage will meet the needs of ewes when in the maintenance period. Supplements may be necessary to increase energy levels during late pregnancy or when nursing.
- Grains such as barley & corn are a good energy source that can be fed with the forage to increase total energy intake.

Too little energy in a diet causes:

- Slow or no growth
- Loss of body weight
- Early births of weak lambs
- Increase in stillbirths
- Poor milking ewes
- Poor wool growth
- Unable to withstand stress and disease
- Increase in prolapse
- Too much energy causes:
- Low fertility
- Greater chance of vaginal prolapse
- Greater chance of difficult births
- Digestive upsets
- Large birth weights for lambs and difficulty lambing

Proteins

- Proteins are complicated substances made up of 24 or more amino acids. When the proteins are digested by the microbes in the rumen amino acids break apart and are absorbed into the digestive system. The microbes and amino acids then move into the abomasum and intestines where they are both absorbed.
- Adult sheep require a large quantity of protein but it does not necessarily have to be top quality. However, for lambs it is important that the proteins are of high quality as the rumen is not yet fully developed and the microbes are not able to assist in the digestion.
- Lambs require ewe's milk or high quality milk replacer and a lamb starter that is around 18% protein.
- Some examples of protein sources:
  - Soybean meal (44-48% protein) It is tasty and can be used in a lamb starter ration
  - Rapeseed meal (38-40% protein) It has a low cost but sometimes not as palatable for animals when used in large quantities. It can be used in a lamb starter or finisher.
  - Good quality legume, grass or mixed legumes /grass hay 12-20% protein
  - Grains are energy feeds and are usually lower in protein- 8-12% protein

Minerals

Body cells, tissues and fluids contain minerals in varying levels. Minerals needed in small amounts are called microminerals and minerals needed in large amounts are called macronutrients.
Both are essential to normal bodily functions.

Macrominerals	***Microminerals***
Calcium	Iodine
Chlorine	Iron
Phosphorus	Copper
Magnesium	Molybdenum
Sodium	Cobalt
Potassium	Zinc
Sulphur	Manganese
	Selenium
	Fluorine

Feeds do not always contain the necessary minerals if the soils they are grown in is deficient in certain minerals. This is offset by providing sheep with a sheep mineral fed free choice or as part of a ration. These do need to be made specifically for sheep as the level of copper in cattle minerals can be toxic to sheep. Sheep will also crave a certain level of salt which should also be made available free choice. Loose, iodized salt (blue salt) is best choice as sheep may not get enough salt from a salt block. When included as part of a ration, salt should be 0.5% of the complete ration which includes forage and grain, or 1% of the concentrate portion, grain.

Vitamins

Vitamins are also vital, even though needed in small quantities.

Fat Soluble

Vitamin A, D, E and K are fat soluble which means they are stored in the fat or liver until they are needed.

Water Soluble

Vitamins B complex and C cannot be stored by the body as they are water soluble. In a healthy sheep the bacterium in the rumen produce B vitamins every day. In a stressed Ewe it may be helpful to give B complex injections. Vitamin C is made in the sheep's tissues. In order for them to make these vitamins proper levels of energy, proteins and minerals need to be fed.

Courtesy OFAC Animal Agriculture Photo Library

Feeding for Sheep Production Stages

Maintenance
Ewes that are dry and are neither fat nor thin are fed to maintain their body weight

Flushing
Increasing the feed to ewes 2-3 weeks before breeding will increase the chances of multiple births. This works best when the ewes are not too fat at the beginning of the flushing period.

Early Gestation
After breeding the ewes that were flushed are returned to a diet just above maintenance level. The fetus is not growing much for the first 15 weeks and it is important the ewe does not become over conditioned.

Late Gestation
During the last 6 weeks the fetus is growing very quickly. The ewe now requires a great deal more energy provided by additional grain as well as enough protein to build all that extra tissue. A good guideline would be to feed 25-40 % grain and 60-75% forage. Mineral needs become critical.

Lactation
At lambing a ewe`s body changes from nourishing the developing fetus to producing milk. Once her lambs are nursing her need for energy and protein become so great she may not be able to eat as much as she needs. At this point she begins to use the energy stored in her body. Multiple births will take more energy than singles. Increasing the grain now is important as well as the quality of hay.

Weaning
During the last 2 weeks of lactation the feed to the ewes should be gradually reduced. Grain is gradually removed completely. Both the quality and quantity of hay is reduced. This helps them end their milk production. Now we are back to the maintenance stage once more!

Ultrasounding

It is often a useful management tool to ultrasound during the early stages of pregnancy.

This can tell you where a ewe is in her pregnancy and how many lambs she is carrying. Then the stages of feeding can be tailored to the ewe's specific needs.

For example a ewe carrying triplets is going to need more feed during late lactation than a ewe carrying a single. As well increasing the feed for a ewe that is thought to be pregnant can be wasting money if she is really not pregnant at all.

Feeding Lambs

Colostrum

Colostrum is the first milk the ewe will produce for the lamb. It is a thick yellow colored milk. It contains antibodies that will protect the lamb from diseases such as scours.

It is very important that every newborn lamb receive *28-55* mL (1-2 oz) of colostrum with feedings every two hours, within 24 hrs after birth. The lamb's own mother's colostrum is the best, but if is not available for some reason, here are some replacements that can be used:

- frozen ewe colostrum*
- frozen or fresh cow colostrum*

*Colostrum should be heated slowly to the lamb's body temperature

Remember that it is better to underfeed than overfeed.

When planning to freeze cow, goat or ewe colostrum, try to pick an animal which has been vaccinated against clostridial diseases.

Orphan lambs are lambs that for one reason or another have no mothers. These lambs should still get colostrum first before any other milk. Then follow the directions on the lamb milk replacer package for feeding requirements. Be sure to use a milk replacer especially for lambs.

THE FIRST MONTH

A newborn lamb can digest only milk. A special groove takes the milk it drinks directly into its abomasum (fourth stomach) for digestion. As it begins to eat solid food, bacteria can enter its rumen (first stomach). Gradually, the rumen begins to work. Well-grown lambs may be weaned at 3-6 weeks of age, but most are left with their mothers for a longer period of time (7-9 weeks).

TIP: Always remember when thawing colostrum to do it slowly. Never boil it or heat it to high temperatures because the antibodies will be lost. The colostrum will not be any good then. A warm water bath is the best method. The antibodies will not be damaged as long as the liquid temperature stays below *50°C.Freezing in smaller quantities such as in an ice cube tray will allow the colostrum to be thawed out quicker.*

CREEP FEEDING OFF PASTURE

When the flock is not on pasture, lambs are often creep fed. A "creep" is a special area made so that only lambs can enter. If a palatable feed in a comfortable creep area is offered to lambs, they will eat larger amounts of solid food sooner. Creep fed lambs will have a fully operating rumen by five to six weeks of age.

A good creep area is: draft-free, well lit, clean and well bedded. Lambs must have access to fresh feed and water at all times.

Creep rations for lambs should contain at least 16% to 18% protein. Commercial pelleted feeds are available, but coarsely rolled grain with soybean meal and molasses is also a suitable creep feed.

EARLY WEANING

Creep-fed lambs can be early weaned at around three weeks of age, as long as they are healthy and eat solid feed.

Advantages

- finish lambs to market faster to take advantage of certain markets
- ewes may be rebred sooner
- ewes may be taken off grain earlier and placed on lower cost maintenance diet
- easier to care for orphans

Disadvantages

- lambs not eating enough solid food at weaning will grow poorly
- more care and labour are needed for success
- costs may be higher for extra space and labour

FEED FOR PASTURE LAMBS

While lambs born in the fall, Winter and early spring are often creep fed, late spring born lambs may not be. They go out to pasture for the summer with the ewes. Pasture lambs can also be creep fed by setting up a creep area in the pasture for them. To keep the creep feed fresh and dry, the area should be protected from rain. A shepherd might creep feed pasture lambs if pastures are of low quality.

Pasture lambs will always benefit by being able to "creep" ahead of the ewes onto fresh pasture. Then they can eat the choicest growth without competing with the ewes. The worm larvae levels may be lower "ahead" of the ewes.

Weaning time is stressful for both ewes and lambs (and shepherds if your house is close to the barn). The following strategies will minimize stress:

1. Reduce the amount of water and quality of feed being fed to the ewes one week before weaning to reduce milk production.
2. Reduce water one day before weaning.
3. Move the ewes away from the lambs.
4. Keep the ewes and lambs out of sight of each other, and if possible, out of earshot.
5. Make any changes in the lambs' diet slowly, after the stress of weaning is past.
6. Be sure lambs have plenty of fresh water available.
7. Return ewes to full water and dry ewe ration two to four days after weaning.

Some early-weaned lambs will go to market at weaning time as new crop lambs. If pastures are good, some pasture fed lambs can be marketed at weaning time. New crop lambs are usually less than three months old and are marketed prior to weaning.

Lambs that have not reached market weight at weaning will need further feeding to finish properly. Before the shepherd can design a ration for early weaned lambs, s/he must think about:

1. the purpose of lamb feeding -replacement breeding stock vs. market stock
2. source and costs of ration materials
3. space and equipment for feeding

Lambs raised for future breeding stock can be fed good pasture or hay and some grain to meet nutrition requirements. These lambs should stay in good body condition, but not be allowed to get fat.

Feedlot (market) lambs need to be fed basically a grain/protein diet for rapid growth, although 0-15% roughage content in the ration for finishing lambs is suggested. A totally prepared pelleted ration or a whole grain/protein supplement mixture can be used.

Lambs to go on a high grain ration should be vaccinated with a 7 or 8 strain vaccine against clostridial diseases. The vaccine should be given before they go on full feed and then given a booster shot two weeks later.

Some caution should be taken when feeding these heavy grain diets. Always remember to make feed and amount of feed changes slowly. Some problems that may occur with lambs on heavy feed are grain overload, digestive upsets and founder (lameness).

Another potential problem associated with feeding heavy grain diets to market lambs (especially ram lambs) is the formation of urinary calculi. This is a build-up of mineral deposits which can block the urinary tract. To help prevent urinary calculi, the Ca:P ratio should be greater than 2:1. In addition, the P content for growing and finishing rations should not exceed 0.4% of the ration on a dry matter basis. You can also use Ammonium Chloride as a treatment for calculi, or it can be included in the ration of susceptible lambs.

Artificially Rearing Lambs

Using Acid in Milk Replacer- Milk & Milk Replacer Acidification

Recently a new concept in calf feeding management has emerged from Finland that allows for reduced labour, improved growth and healthier calves in group feeding situations. This idea utilizes organic acids to acidify (lower pH) of milk or milk replacers to dramatically reduce bacterial loads in solution allowing feed to be presented free choice for a period of 1-3 days.

This method spread from calves to kid goats and is now being used by many sheep producers.

Producers have found a decrease in lambs becoming bloated and suffering from toxaemia style illnesses that often challenge milk replacer fed lambs.

By reducing the bacteria growth the milk can be left in front of the lambs so they can drink free choice. This is the way they feed when on the mother and is easier on their digestive system. It also means the producer does not need to visit the barn for the frequent feedings new born lambs require!

This acidification can also be used for storing whole milk if available.

The feed grade acid is available from local feed supply companies and is a product used to change the pH of water sources for poultry and swine herds.

Examples are Formic Acid and AgriACID.

Follow the distributor's instructions for diluting the acid and mixing with the milk replacer solution. The solution stays fresh for up to 3 days when stored at room temperature.

Computer Feeders

There are many breeds used today to produce multiple lambs per lambing. This means an increase in recent years in the number of lambs requiring artificial rearing.

The increase income from these extra lambs justifies the use of automatic lamb feeders to dispense milk replacer.

When lambs are taken from the ewe and placed on the machine the remaining lambs also benefit by the increase in milk available to them.

An automatic feeder with up to 6 feeding stations can reliably feed up to 120 lambs. The machine has a small mixer which is calibrated and dispenses the proper amount of replacer to mix with a measured amount of warm water. The Milk replacer solution is rapidly and intensively mixed. A thermostat control maintains the milk at the perfect temperature.

With milk at the right temperature mixed in small quantities so it is always fresh, lambs are able to feed ad lib which is best for young lambs!

Ration Formulation

The goal of ration formulation is to prepare a feeding program which meets the animal's nutrient requirements, is properly balanced, palatable, promotes or discourages intake (depending on the purpose of the ration), is suitable for a given management situation and is reasonably priced. To this end, there are a number of questions that need to be asked:

- What type, age, weight of sheep is being fed?
- What is desired production level and rate of gain?
- What feeds are available for use for the formulation?
- Are these feeds home-grown or are they purchased?

Feedstuffs

Sheep can utilize a wide variety of feedstuffs. Feeds are classified into groups based on their nutrient content and physical form. Most common feeds can be placed in one of the following groups:

Roughages (forages): (Note: Most mature sheep will require ~4-5lbs of hay/day through the winter)
Grass forages (hay or pasture)

- high in fibre (cellulose) and usually low to intermediate in energy
- protein content varies, depending on the plant species and stage of maturity, typical range in crude protein could be as varied as 5 to 12% (i.e. grass are highest in protein and lowest in fibre early in the growth period, as the stem matures and after 'setting seed' the protein level will drop significantly)
- examples are timothy, crested wheat, fescues, etc.

Legume forages (hay or pasture)

- fibre dependent on stage of growth and leave content (e.g. mature alfalfa has a high stem to leaf ratio)
- protein content is higher than grass forages, generally above 16-20% (legumes are able to fix nitrogen in the soil)
- because of particular proteins in legumes, caution should be taken when first feeding legume forages (i.e. switching from grass hay, or turning onto pasture in the spring) to prevent frothy bloat.
- Examples are alfalfa, clovers, etc.

Silage

- silage is produced when green forage is preserved using fermentation (acidification in the absence of oxygen)
- the major advantage of silage is that the crop can be harvested when it is ready in almost all weather conditions (hay must be dried to ~90% dry matter before baling to prevent spoilage, whereas silage is stored with a dry matter content of 40-60%).
- when exposed to oxygen, silage may spoil. Improperly stored silage may cause problems such as listeriosis in sheep
- ensiling is not restricted to grasses and legumes; silage can be made from a wide range of crops

including corn, barley etc

- compared to hay, harvesting, storing, and feeding silage can require a greater capital investment in equipment and facilities.

Green Feed

- forage is not dried thoroughly before baling
- may be used as a means of making use of a poor harvest or if conditions are poor during haying
- mildew and moulds can be a problem

Concentrates (grains and commercially mixed rations)

- high in energy and relatively low in fibre
- fibre level depends on processing of the grain; grains that are pelleted or crashed will have a much lower fibre content than whole grains with the hull included (some studies indicate that lamb performance is better and there are fewer digestive upsets with whole grains)
- most have a moderate protein content (“~1 2% crude protein)
- examples are corn, barley, oats, commercial mixes

Protein Supplements

- high in protein, usually high in energy
- variable fibre content
- examples are oilseeds (soybeans, canola meal)

Mineral Supplements

- may be included in a commercially mixed ration or supplied by free choice access to mineral blocks or loose mineral
- **do NOT** purchase cattle mineral supplements, as the copper is often too high for sheep

Pasture Management

- Graze at the correct stage of growth
- The grass must be long enough to have built its root reserves, yet short enough not to have gone to seed.
- When the sheep are moved out of the paddock, the grass should still have some leaf to assist the root reserves in boosting growth.
- Vary grazing interval

Spring growth is much faster and more vigorous. The sheep should be quickly rotated, just 'topping' the pasture at this time. During the summer months, the rotation slows, just as the grass growth dose. Sheep are eating more of the grass. It takes longer for the grass to re-grow and hence, the rotation is slower. In the late summer, the grass begins to grow faster. Often paddocks can be saved for fall pasture.

Each area (and year) has its particular climate. If it is very dry, then paddocks need to be rested longer. In general, the more severe the climate the larger the rewards from controlled grazing, but also the greater the risk from doing it wrong. Each grass species responds differently to grazing. Pasture height and rest periods need to be adjusted. For instance, if there is not enough alfalfa in the pasture, keeping the grasses shorter will encourage the alfalfa. If there is too much alfalfa, let the grass grow longer and some will be smothered out.

Aim for Good Utilization

You want the grazing to be as even as possible, with no un-grazed clumps or overgrazed areas. If you have difficulty achieving this, consider reducing the size of the paddock. Grazing with another species may also help clean up un-grazed areas.

Graze Quickly

The best-controlled grazing systems involve having the flock in a different paddock each day, or different section of a paddock each day. Some producers may use portable electric fencing to move the flock through the pasture gradually.

Do not over graze, particularly just prior to winter

Late in the season, plants that have been eaten down almost completely will have little opportunity to manufacture sufficient food for transfer into the roots as a reserve. Early growth in the spring as well as during a dry period relies on plant nutrient reserves.

Recognize surpluses early and conserve

If the grass is going to get away from you (i.e. go to seed before you can get the sheep into that pasture) consider cutting it for hay or silage. Silage (or greenfeed) may be preferable because it can be cut from shorter grass, which is easier on the pasture

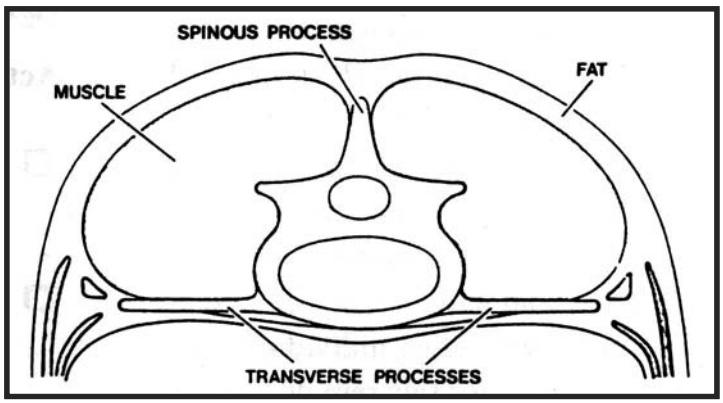
Harvest before fibre content gets too high

Try to feed the sheep hay that is the same quality as the feed they consume on pasture. This reduces supplemental feed costs, is better for the pasture as the grass has not grown too long, and is better for the sheep. Bales per acre is not a good measure of hay yield.

Condition Scoring of Ewes

Condition scoring is a method that has been developed for evaluating nutritional status of animals. Putting too much fat on the ewe is expensive and unprofitable. However, some fat is required for insulation and a limited energy store.

Vertebrae of the spine in the loin area have two (2) projections which you can feel. The bumpy top line of the back is made up of the spinous processes as you can see in the diagram below. The transverse processes extend from either side of the backbone. Condition scoring is based upon the ease with which you can feel these two (2) sets of processes. In a thin sheep, you will be able to feel the processes quite easily. In a fat sheep, it will be difficult to feel the bones.

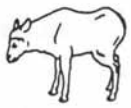
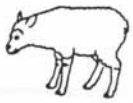
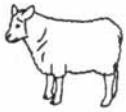
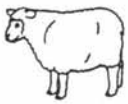
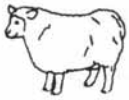


The condition score is an indication of the amount of fat cover on the animal.

Follow these steps for condition scoring.

1. Run your fingers down the backbone to determine the prominence of the spinous processes.
2. Push your fingers alongside the backbone to determine the prominence of the transverse processes.
3. Pass your fingers under the tops or ends of the transverse processes to determine the amount of fatty and muscular tissue.
4. Determine the fullness of the eye muscle in the angle between the spinous and the transverse processes.
5. Refer to the following chart to determine where your ewe fits.
6. Record the score you assign the ewe. Now you can begin to make comparisons between animals and between scoring.

If in doubt as to where any of these parts are, check the diagram above.

Condition Score		Characteristics	
1		• sharp spine • shallow back muscle • no fat	skinny
2		• sharp spine • full back muscle • no fat	lean
3		• can feel spine • full back muscle • some fat cover	good condition
4		• spine barely fat • muscle very full • thick fat cover	over conditioned
5		• can't feel spine • very thick fat cover • fat deposits over the tail and rump	fat

Uses of Condition Scoring

Condition scoring can be used to determine the overall nutritional status of the flock, and assist us in making management decisions about the feeding program.

In larger flocks, the higher and lower scoring ewes can be fed separately.

Suppose ewes are scored (3) weeks before lambing. Those ewes scoring below (3) can be flushed to bring them up to condition. Those ewes scoring above three (3) can be fed to limit soy further increase in
weight.

Once you've been recording condition scores for a while, you may be able to relate sickness problems to the scores.

Often, the older ewes with the lower scores will be those that are susceptible to lymphadenitis, pneumonia or Johns's disease.

Condition scoring has several advantages:

- It is easily learned
- There is no equipment required
- It eliminates size differences between ewes
- The nutrient status of pregnant animals can be determined

Be consistent! If you are, then the numbers will be valuable!

Nutrition Glossary

Concentrate: A high energy, low fiber feed.

Creep: An area allowing lambs to enter and be fed special feed their mothers do not have access to.

Flushing: An increasing plane of nutrition, fed to ewes 3 weeks before breeding to increase the ovulation and therefore the number of lambs.

Forage: Vegetable matter- pasture, hay, silage

Ration: The amount and type of feed fed to a specific group

More on Lamb Nutrition:

On the next few pages, we have included more information on lamb nutrition, including topics such as milk replacer and artificial feeders. We thank Grober Nutrition for their donation of these materials. Please note that 4-H Ontario does not necessarily endorse any one milk replacer company, and you may choose to use an alternate product in your business.

Lamb Management

Profitability in sheep farming is largely dependant on the number of lambs weaned per ewe per year (aim should be at least two). High prolific breeds (e.g. Finn, Romanov) used in the breeding program can achieve and surpass this.

Lamb survival is a result of good ewe management before and during lambing and attention to early care of lambs. Producers with flocks having a high percentage of multiple births should consider artificial rearing as a means to save and successfully rear more lambs and increase profitability. Under good management, orphan, mismothered, and multiple lambs can be successfully reared on milk replacer at an economic cost.

Special points of interest:

- Choosing the right colostrum source for your lamb
- Reasons to use Milk Replacer
- Available feeding methods for large and small flocks
- Establishing lamb housing
- Benefits to using Automatic Lamb Feeders in your operation
- Lambing Checklist

How to Prepare the Ewe for a Successful Lambing

The fittest lambs are born to ewes that have been maintained correctly from pre-mating to lambing. The ewe's gestation period is from 144 to 151 days, with an average of 147 days. Weight gain is usual during pre-mating, followed by constant weight (condition score 2.5-3) between days 50-90 of pregnancy. Nutrition needs increase significantly in the last 4-6 weeks of pregnancy and is important to support rapid fetal growth (70% of growth occurs in last 6 weeks). Low birth-weight lambs tend to have a lower average daily gain than high birth-weight lambs (Greenwood et al, 1998). Also udder development for colostrum and milk production occurs at this time. If nutrition is incorrect, Pregnancy Toxemia (Twin Lamb Disease) can result.

The ideal body condition score at lambing is 3-3.5. Ewes that are fat are prone to vaginal prolapse.

Ewe Management at Lambing

Provide lambing pens that are approximately 1.5 m² (1.8 square yards), with a corner divided off to give the lamb a safe area. Pens must have dry and clean bedding for each ewe. Each ewe can expect to spend 1-2 days in this pen. A 'normal' lambing has 3 stages: dilation of the cervix (approx. 4 hours); expulsion of lamb (up to 1 hour); expulsion of afterbirth (placenta) (2-3 hours after birth).

- Ensure that lambs start breathing.
- Clean mucus away from the nose and mouth.
- Disinfect the lamb's navel to prevent infection.
- Encourage lamb to nurse as soon as possible to maximize absorption of Immunoglobulins from colostrum.
- Weak lambs may need to be tube fed.
- Observe lambs carefully to ensure they are feeding correctly and regularly and do not become chilled.

Preparation for Lamb Survival

Hypothermia: The greatest proportion of lamb deaths is caused by hypothermia (a combination of chilling and starvation), which can account for the death of about 30% of lambs born alive.

There are two critical periods: the first five hours of life (high heat loss) and 12 to 48 hours (inadequate heat production-starvation). Lambs rectal temperature should be 39-40oC (102-104ºF); however a hypothermic lamb will have a temperature from 20-35ºC (68-95ºF). Should a producer be presented with a hypothermic lamb, slowly warm up the lamb and feed colostrum or dextrose solution as soon as possible and consult a Veterinarian.

Lambs at greatest risk from hypothermia include: small and premature lambs, lambs which are weak and/or limp at birth, lambs from ewes in poor condition, lambs from very old or very young ewes, lambs born into a cold, wet, or windy environment (chilling reduces the suckling drive), twins and especially triplets.

Fat (energy) reserves in lambs are only 3% of body weight compared to 10-15% in adults. Lambs require adequate colostrum and brown fat (a type of fat lambs are born with) to help maintain heat levels. Brown fat reserves will be used within 3 days after birth. A weak lamb or a lamb not receiving sufficient milk will be at risk.

Colostrum: Colostrum provides nutrients (high fat %) and immunoglobulins (Ig) which help prevent infection. Colostrum yield from ewes can be variable and low especially if the ewe has been underfed or is in poor condition.

Ideally use own mother colostrum, then pooled ewe colostrum from same flock, then pooled ewe colostrum from another flock (same disease status), then cow colostrum (30% more via one extra feed), then artificial colostrum.

Rearing Lambs Successfully on Milk Replacer

There are many techniques for feeding milk replacer to orphan, mis-mothered or multiple birth lambs.

The choice of system depends on number of lambs to be reared, individual preference, buildings, etc. Meticulous sanitation is critical for all systems.

The correct disinfection of mixing and feeding equipment will help prevent the proliferation of bloat and scour-causing organisms.

Milk Replacer: Only high quality lamb milk replacer should be used that has been formulated to a high fat content more similar to ewe's milk. Carefully selected ingredients ensure easy digestibility and solubility, thus increasing the absorption by the newborn lamb. Optimum vitamin and mineral levels will assist growth and promote health and immune function. Copper should not be added to avoid toxicity problems.

It is important to follow the manufacturer instructions for mixing quantities and temperatures.

Once mixed in suspension, milk can be cooled and stored at refrigerated temperatures for 24 hours before feeding.

Under natural conditions a lamb will suckle the ewe up to 40 times each 24 hours.

Small frequent feedings are more beneficial. Feed at manufacturers recommended rate according to average size of lamb. Milk consumption increases with the age and size of the lambs.

Typically a bottle fed lamb should consume 10kg (22 lbs) of milk powder and 13-15 kg (29-33 lbs) under free-choice feeding.

Grober LambGro is available in:

20kg bags
10kg bags
5kg pails
1kg Container

For your LambGro Milk Replacer needs

Feeding Methods

Limit feeding: ideal for a small numbers of lambs.

A quantity of milk is fed via a nipple on a bottle or nipple pail (one nipple per lamb) 3-4 times per day. It is labour intensive but can allow a reduced cost of the milk feeding period with an easier transition to solid feed and easier weaning. Milk should be fed at 38-40ºC (100-104ºF).

Free Choice Feeding: Typical systems include nipple pail units, teat bars and commercial automatic feeders.

Lambs have access to milk at all times and are group fed. The milk supply must not be allowed to run out as lambs will easily over feed with new milk. Milk should be fed warm or cool 4ºC (39ºF). Typically, when milk is fed at 4ºC (39ºF), it will be consumed in smaller amounts but more often. This reduces digestive upsets from overeating. In warm/hot weather, milk can be kept cold by floating a clean plastic (pop) bottle filled with frozen water in the milk replacer.

Nipples can accommodate 5-6 lambs and must be 40-45cm (16-18ins) above the stall floor. Lambs may require assistance in adapting to nipples for 1-2 days.

Free choice feeding can minimize labour but increase the possibility of disease transfer. Lambs can easily chew nipples which can result in milk replacer loss from the container.

Free choice feeding, results in a higher intake that encourages greater gains and earlier weaning potential.

Housing

Lambs should be housed in a well-ventilated, draft-free shelter at temperatures of no less than 10ºC (50ºF). To improve livability and performance, lambs should ideally be raised in a room at 15-18ºC. Lambs bedded on straw with solid floors require 0.55m^2 (0.66 square yards) of floor space per lamb.

Once established in a pen, lambs should not be moved and mixed with other lambs. It is best to feed lambs of the same age together. Teat bar systems with 4 teats can provide for a pen of 20 lambs.

Commercial Automatic Feeders (ie. Förster Lamb/Kid machine)

The automatic Lamb/Kid feeding machines can feed 50-120 lambs per unit and are ideal for dairy and large meat sheep operations or prolific breeds on accelerated systems.

After about 10 days, larger groups can be formed and 10-25 lambs can feed off one nipple.

Frequent, smaller meals are optimal for growing young lambs. The Automatic Lamb Feeder from Förster allows lambs to feed ad lib. The milk is always warm and freshly prepared in the mixer jar. Water and milk powder are rapidly and intensively mized. Thanks to the integrated special boiler, the water constantly maintains the set temperature (40ºC)

Lambing Checklist

Prepare Buildings - Ensure barns have good ventilation, are dry, no drafts, and a strict cleaning schedule as been prepared.

Prepare supplies well ahead of lambing. For example- lambing equipment, thermometer, warming box, frozen colostrum etc.

Select lambs for artificial rearing, e.g. the weaker, less aggressive lambs from ewes with three or more lambs, and malnourished or mismothered lambs from other ewes. Ideally leave similar weight, thrifty lambs with the ewe to avoid competition. Remove weak and 'uneven' lambs for rearing with milk replacer.

Ensure adequate colostrum intake by suckling, bottle or stomach tube within 12 to 18 hours after birth. Lambs require 50ml/kg (.85oz/lb) body weight; one feed right at birth and then every 4-6 hours for the first 24 hours. For example a 4kg (9lb) lamb should receive 850 ml (1.5pt). The quantity should be increased by 20-30% for lambs outside in bad weather (one extra feed).

Administer selenium, according to vet's recommendation, to prevent white muscle disease.

Only use a high quality milk replacer specifically formulated for lambs, e.g. Grober Lamb-Gro. Calf milk replacer is unacceptable. Lambs require different protein/fat content and ratio, no added copper and a specific mineral and vitamin package.

Check mixing recommendations with your supplier and have suitable weigh scales/cups available.

Train lambs to drink from nipple as soon as possible after the last feeding of colostrum.

Observe lambs closely and regularly for drinking behaviour, lamb vigour and signs of ill health or starvation. Treat as soon as possible.

Clean all milk feeding equipment daily: rinse in lukewarm water, wash with a detergent in hot water, rinse with clean water (ideally a 10% bleach solution) and dry thoroughly.

Place all foodstuffs such as hay, pellets and water in containers that reduce contamination by the lamb and clean regularly. Ensure water bowels have clean, fresh water daily.

Group lambs according to age and body weight and supply sufficient nipples (e.g. 5-6 lambs /nipple at start and increase to 10-25 lambs/nipple depending on machine and space etc).

By five days of age, provide lambs with a free-choice source of water and a highly palatable, high protein (18 to 20% crude protein) lamb creep feed to encourage early rumen development. Continue feeding high protein dry feed until lambs weigh 18 kg (40 lb). Then switch lambs to a lower protein growing feed or place lambs on high quality pasture for grazing.

Vaccinate lambs for Clostridium perfringens C & D at 3 to 4 weeks of age and booster 3 weeks later.

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Breeding & Lambing

Breeding

In order to decide when your sheep should be bred, you should know when you want to market lambs. The gestation period of the ewe (the time between when she was bred and when she lambs) is about 143-152 days, or roughly five months. If the ram is put in with the ewes at the end of August, they will begin to lamb in late January. If the ram is put in at the end of November, they will begin to lamb by late April. The ram is put in with the ewes at the required time of year and left for about four to five weeks (30-35 days). In this amount of time the ram should have bred all his ewes as long as the number of ewes per mature ram doesn't exceed 40 (in season).

EARLY VERSUS LATE LAMBING

There are good reasons for having lambs arrive either early or late in the year. By understanding the differences you can decide which is best for you.

Some benefits of early lambing (January/February) are:

1. lambs can be grain fed (creep fed) and sold at the special Easter market when prices may be stronger;
2. any lambs not sold at Easter can be put out on pasture when the grass is at its best, or fed in the feedlot to heavier weights;
3. there are fewer parasites on fresh spring pastures. Lambs may remain in the barns and yards for most of their time;
4. there are no problems with blow flies bothering lambs at docking and castrating time;
5. lambing is a busy time of year, and usually requires extra help. This also happens to be a time when not much other farm work is done;
6. less predator damage.

Some of the benefits of late lambing (April/May) are:

1. it is usually warmer and easier on the lambs (mortality rate is lower), and the shepherd;
2. in most parts of the province, ewes can lamb out on pasture. Not much additional shelter is needed;
3. less labour is required, ewes and lambs on pasture need little or no hand feeding, less chance of chilled lambs;
4. less grain is needed, as lambs are raised on pasture; and
5. lower cost of production (feed, housing and labour);

Here are some things you must consider when choosing between early or late lambing:

- labour
- markets
- facilities
- fences
- pastures
- cost of grain, etc.
- other farm activities (e.g. maple syrup)

The Breeding Ewe

Most ewes do not come into estrus or sexual heat until late summer. Estrus is brought on by the shortening days. Estrus usually lasts 12-14 hours and returns every 162 days. This is called a reproductive cycle.

Although some ewes are sexually active at seven months of age, they should weigh about three quarters of their mature body weight before being put in with the ram. Ewe lambs are usually bred late in the season. By waiting, they will be more fully grown by the time they lamb and have more lambs at their first lambing.

Before being bred, ewes should be given a "breeding tune up" 3 to 4 weeks before that includes:

- body condition scoring;
- foot trimming if needed;
- tagging (trimming wool and manure tags around tail area) if needed;
- worming (test and treat if required) if needed;
- flushing.

FLUSHING

Beginning about three to four weeks before breeding (depending on body condition score) and continuing until two weeks after, the ewes should be put on a rising plane of nutrition. This is done by improving the quality of hay, adding grain or moving the flock to better pastures. This practice is known as flushing. It makes

the ewe gain weight. This sends a signal to the ewe's reproductive system that conditions are right to produce and raise more than one lamb. The ewe then tends to shed more than one egg, and the possibility of twins or triplets is increased. Flushing ewes in above average condition will have less effect.

Ewes should not be flushed on red clover as it may contain estrogenic compounds that can cause fewer lambs to be born per ewe exposed to a ram. This may be a problem at flushing and during late gestation.

All changes in feed patterns should be made slowly. Otherwise, the sheep may suffer from stomach upset and loss of appetite. The flock should always have access to cobalt-iodized salt, a calcium-phosphorous sheep mineral mix and fresh clean water.

By condition scoring your sheep before they go to pasture in the spring, and again just before flushing you will know:

1. what shape they are in and whether flushing will be effective;
2. how well the feed/pasture program has been working;
3. how well the parasite control program has been working.

The Breeding Ram

The ram represents half of your flock. Without him the ewes wouldn't have any lambs. The quality of lambs produced is a shared responsibility of their sire (father/ram) and dam (mother/ewe). It's a 50/50 deal. But, because one ram might breed up to 30 or 40 ewes, one poor ram will create a lot more problems than one poor ewe. It is most important to protect your investment by taking good care of your ram.

You will want a healthy, fertile ram when breeding season comes around. To begin with, he should be kept in a separate pasture or pen, away from the ewes until breeding time. The heat can affect his fertility. Access to a cool shady area is most important. He should be wormed regularly, have his feet trimmed and be vaccinated. A ram should be kept in good shape but not be allowed to get too fat. Once the ram begins to breed he spends less time eating and tends to lose condition. It is simple to train the ram to "hand feed" grain during this period.

The ram lamb that is still growing needs to be fed 0.5 kg of grain per day plus good quality hay and pasture year round. As breeding season draws near his supplementary feeding should be brought up to 0.7 kg grain per day. Continue this practice until several weeks after breeding to help him recover condition.

Depending on the ram's breed and physical development he could be ready to breed at six months of age. He must be in good condition, and at least half of his expected adult weight. He should be put in with 20 ewes or less and not left for more than two cycles (34days).

A mature ram should be provided with fresh clean water, salt and sheep minerals and hay or pasture year round. If feed quality is low, and the ram isn't in top condition, supplement his diet. Two to four weeks before breeding starts supplement his diet with 0.5 - 0.7kg of grain per day.

Be very careful when handling or working around a ram, Don't pat him on the head as this only encourages him to butt. Always keep an eye on him when you are in his territory. He is likely to take a run at you and might catch you off guard.

MARKING HARNESS

During the breeding season the ram can be fitted with a marking harness, or his lower chest can be covered with an approved marking substance. The colour is changed every l7 days. When the ram breeds the ewe, that colour is left on her back. This will give you an idea as to when she will lamb and if the ram is fertile and getting the ewes pregnant.

If a number of ewes are marked a second time, what might that mean?

1. The ram is not fertile.
2. The ram has too many ewes to breed.
3. Ewes are not cycling properly.

Gestation Table

This table calculates due dates based on a 147 day gestation length. Gestation can range from 146-153 days.

Date Bred		Expected Lambing Date		Date Bred		Expected Lambing Date	
January	1	May	29	July	5	November	30
|	6	June	3	|	10	December	5
|	11	|	8	|	15	|	10
|	16	|	13	|	20	|	15
|	21	|	18	|	25	|	20
|	26	|	23	July	30	|	25
January	31	June	28	August	4	December	30
February	5	July	3	|	9	January	4
|	10	|	8	|	14	|	9
|	15	|	13	|	19	|	14
|	20	|	18	|	24	|	19
February	25	|	23	August	29	|	24
March	2	July	28	September	3	January	29
|	7	August	2	|	8	February	3
|	12	|	7	|	13	|	8
|	17	|	12	|	18	|	13
|	22	|	17	|	23	|	18
March	27	|	22	September	28	|	23
April	1	August	27	October	3	February	28
|	6	September	1	|	8	March	5
|	11	|	6	|	13	|	10
|	16	|	11	|	18	|	15
|	21	|	14	|	23	|	20
April	26	|	21	October	28	|	25
May	1	September	26	November	2	March	30
|	6	October	1	|	7	April	4
|	11	|	6	|	12	|	9
|	16	|	11	|	17	|	14
|	21	|	16	|	22	|	19
|	26	|	21	November	27	|	24
May	31	|	26	December	2	April	29
June	5	October	31	|	7	May	4
|	10	November	5	|	12	|	9
|	15	|	10	|	17	|	14
|	20	|	15	|	22	|	19
|	25	|	20	December	27	May	24
June	30	November	25				

Breeding Ewes Out Of Season

Sheep are seasonal breeders. Ewes will cycle in days of decreasing daylight. When in season sheep cycle every 17 days. Some breeds have more tendency to cycle out of season than others.
Sheep producers in Canada sometimes wish to cycle and breed ewes out of season for accelerated lambing program or to produce lambs for seasonal markets such as Christmas and Easter. It is important to note that the Rams are also seasonal and will show lower fertility and attraction to Ewes in the off seasons.

Methods of Breeding Out of Season

Breed and Selection: there are breeds that are known for having longer breeding seasons. An example of this is the Dorset.

Light Control: In barns with not a lot of natural light it is possible to trick the Breeding flock into thinking the days are shorter and cause them to cycle. This is effective also for the Rams you wish to use to breed the ewes out of season.

Hormone: Vaginal sponges soaked in progesterone can be used in ewes to cause them to cycle. The sponges are removed after 12-14 days and an injection of Pregnant Mare Serum Gondadotropin (PMSG) is given.

MGA: Is a feed additive that stops the ewes from cycling while it is being fed. The ewe will cycle 2-2.5 days after the last feeding of MGA.

These methods can also be used to synchronize ewes, cause a group to cycle all together.

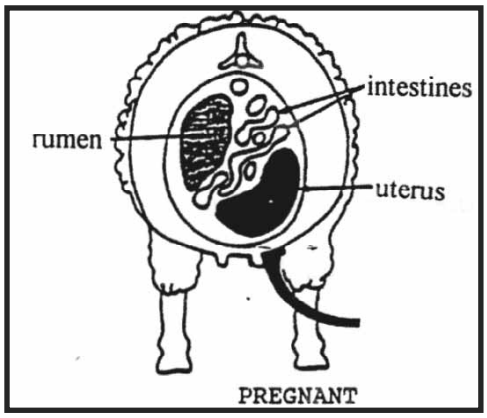
This means they will all be bred in 48 hours so it is easy to predict when lambing will be occurring. This way the shepherd can concentrate on the ewe flock when they are lambing.

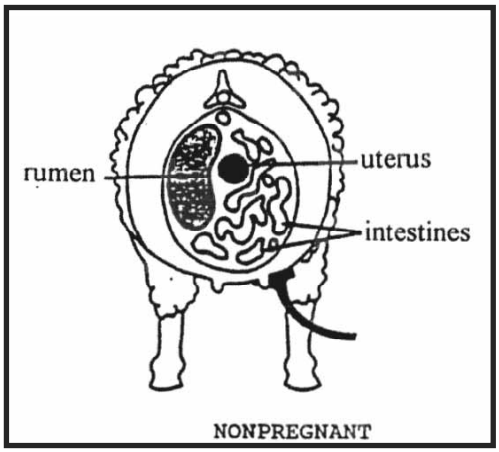
It is important to realize the Rams are breeding a large number of lambs in a short period of time. There should be at least 1 ram for every 7 ewes, more when out of season.

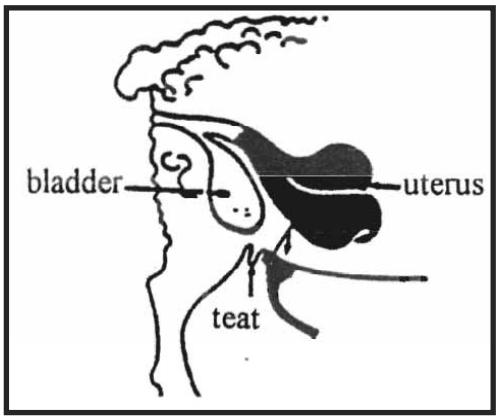
Ultrasounding for Pregnancy

Knowing if a Ewe is pregnant is important for a breeder in keeping their sheep business profitable. Different types of pregnancy testers have the same purpose but some are more accurate than others. Some will detect multiples and some will actually show the pregnancy on a screen. Pregnancy testing is usually done approximately 35 days after breeding, depending on the equipment being used. The Ewes should be taken off water 18 hours prior to testing. This is because a full bladder can give a false positive pregnancy reading.

Most testers use an ultrasonic scanning technique. That means they send out high frequency sound waves to the fluid filled uterus.







If the Ewe is open (not pregnant) the uterus is high up in the body cavity with little or no fluid present therefore preventing a reading.

If the Ewe is pregnant, the uterus is filled with amniotic fluid and the sound waves will bounce off the fluid indicating she is pregnant.

Lambing

Lambing time is the most exciting time of sheep raising. A good lamb crop is a measure of a successful breeding program and good management.

How can you tell that your ewe will soon lamb?

- 2 to 4 weeks before lambing, the udder of the ewe will begin to fill with milk.
- in the final week, the udder will become large and firm.
- the teats will become firm and full of milk.
- a day or two before lambing, the skin of the udder and teats will become dark pink or red.
- the vulva will become red, shiny and puffy.
- the ewe will have difficulty moving around, and she will grunt as she lies down.

When your ewe is only hours away from lambing, she may show some of the following signs:

- your ewe will begin to act “different” from usual
- a mucous discharge will appear form the vulva
- the ewe separates herself from the rest of the flock
- often she will refuse to eat and won’t chew her cud
- the ewe will lie down and get up often
- she will be nervous, making soft, low bleats
- she circles, pawing the bed, making herself a “nest”
- she will lie down with her head in the air
- lifting her head, she will purse her lips
- the “water bag” will appear
- some part of the body will appear - if all is well, the two front feet will appear first

How long will it take your ewe to lamb?

Generally, a ewe will lamb anywhere from half an hour to two hours after you see the early signs. The ewes which will lamb the fastest will be your mature ewes which have lambed several times before. If these mature ewes are carrying twins or triplets, they will lamb even faster.

What is Dystocia?

Sometimes a ewe will have difficulty in giving birth. This is called dystocia. This may be very minor or very serious. The problems that can occur during lambing include:

- the lamb could be backwards, or have the head turned back
- the lamb could have the feet trapped under the body
- if you have a ewe that is one year old, or a very small ewe, the lamb may be too large to be born easily

Assisting with Lambing

The following are indications that help is needed, but it may not always be so clear cut:

- only the head appears
- the water bag has been delivered or burst, but there has been no progress for thirty (30) minutes
- total lambing time has exceeded 90 minutes
- a tail or only one leg is showing

If in doubt, examine the ewe to check that all is well, or if help is needed. Here are some very important things to remember before you assist with lambing:

- Hygiene -make sure you are clean and the surroundings are clean and dry, to avoid any infection wash the area around the vulva with a mild non irritating disinfectant.
- Lubricant -to avoid damage to the ewe, use a good lubricant.
- Gentleness -be gentle at all times, remember that the ewe is already under stress, and that use of any force will surely cause damage.
- Lambing Aids -have ropes or cords ready in case you need them for securing the lamb.
- Training -an inexperienced worker may be more harmful than helpful. If in doubt, contact your veterinarian.

To determine the position of the lamb you must check the birth canal. Wash and disinfect your hands. Wash the area around the vulva of your ewe. Lubricate your hand and slip it in through the vulva and into the birth canal. Don't force it in suddenly -just use slow and easy press

Once your hand is in, you will likely feel a head or foot. If you feel the body, run your hand along the body until you contact a leg, head or tail. Then try to visualize how the lamb is positioned in the ewe. Remember, there may be two or even three lambs in there. When you run your hand along the body, don't lose contact with the lamb, you may start feeling the other one!

If you have trouble identifying a head, feel for an ear or a mouth. If you are not sure whether you are holding a front or rear leg, flex the first 2 joints up from the hoof. If both the joints bend the same way, it is a foreleg. If the joints bend in opposite ways, it is a rear leg. When you have a pair of legs and a head or tail located, you can more accurately visualize the position of the lamb in the uterus. By now, you will know the lamb must be moved to get it into the normal birthing position.
The presentation beside is normal. Note that both feet will exit first, immediately followed by the head and body. There may still be problems with birth in this position if the lamb is very big, the ewe is very small, or the ewe has a very small birth canal. Twin lambs usually present no problems when found in the normal position.

After you have assisted with a lambing, ensure that all lambs have been born. Check to be sure that the ewe has not suffered any physical damage. If she has, consult your veterinarian. It may be necessary to treat her with antibiotics. Watch the ewe to be sure that she does not retain her afterbirth, and that she cleans properly.

If you assist the ewe, try to assist only to the point where she can finish the job herself. If you had to pull the lamb, make sure you leave the lamb behind the ewe, so that she finds it in the normal place. The ewe-lamb bond is very important for raising a healthy lamb. We should try to encourage this bond by not interfering.

Preventing Lamb Losses

There are a number of things which can be done to prevent lamb losses. The steps below can assist you in preventing losses.

1 month before the start of lambing:

- Shear wool tags and manure from the ewes rump, legs and udder. This is known as “tagging” or “crutching”.
- Vaccinate with a clostridial vaccine.
- If your flock has had experiences with white muscle disease, weak or stubborn lambs, treat your ewes with a Vitamin E and Selenium solution.
- You may want to give your ewes extra Vitamin A and D, especially if they are receiving poor hay or pasture.
- If you had problems with coccidiosis or pneumonia last year, contact your veterinarian to assist you with preventative measures for this year. The ewes carry the coccidia and bacteria which infect the lambs. By treating the ewes before lambing, you will reduce the infecting organisms in the environment at the time of lambing.

At lambing time:

- Make sure your lambs are not hypothermic. Hypothermia refers to body temperature being below normal. The normal rectal temperature of lambs is 37°C or 3 8°C. If you find a lamb to be hypothermic, warm the lamb by placing it under a heat lamp for more than 12 hours or by rubbing it vigorously with a blanket. Feed 0.3 liters of colostrum immediately and another 0.3 liters two to four hours later.
- Dip the navel thoroughly immediately after birth, using a 7% iodine solution. This prevents infection from entering through the navel and spreading through the blood stream.
- Check the ewe’s udder, make sure the wax plug that fills the teat is milked out and the lamb can nurse freely.
- Always check each lamb. Look for those lambs which are droopy or depressed. Give these lambs 0.3 liters of milk.
- If weak or stillborn lambs were a problem at birth, and the ewe did not receive a Vitamin E and Selenium treatment, the lambs should be treated approximately 24 hours later

Taken from the Nova Scotia Sheep Leader Resource Guide.

TINT Your Lambs

In the first few days of a lamb's life there are several procedures that should be carried out. Once you are certain that the lamb has had adequate colostrum, TINT them.

T = Tails
I = Inject
N = Navels
T = Testicles

Tools used to TINT Lambs

Tails

The tails need to be docked before the lamb is seven days old *(Code of Practice for Sheep).* The tail can be removed with:

- electric or gas heated docker
- rubber ring
- crush and cut device
- rubber ring plus crushing device.

The docked tail should cover the anus of the ram or the vulva of the ewe. A good guide is to remove it at the joint in the tail bones just beyond the web on the underside of the tail.

Needling a Lamb - Courtesy OFAC Animal Agriculture Photo Library

Injection

In Ontario, newborn lambs can be born selenium deficient. As a routine, they should be injected with the appropriate dose of a Vitamin E/selenium preparation. Read the label on the bottle for the route of injection, either subcutaneous or intramuscular. Always inject into the neck area, never into the muscles of the hind quarters. (Note: If the ewe has been given supplements during pregnancy this may not be necessary)

Navels

The navel of the newborn lamb needs to be disinfected as soon after birth as possible.

The untreated navel is an excellent route for infectious agents to enter the lamb causing internal abscessation or joint ill. An iodine solution is the most common disinfectant used. It is either sprayed onto the navel or the navel is dipped in a small container of the solution. If dipping the navels, replace the disinfectant solution in the container after every tenth lamb.

Castration

If the market lambs are to be kept beyond three months of age, they need to be castrated.
Again, whether rubber rings, crushing or cut and pull is used, this should be done before seven days of age. *(Taken from the Code of Practice for Sheep)*

Identification

Whether tattoos, ear tags, or ear notching is used, the lamb must be identified before it leaves the lambing pen and the birth needs to be recorded if this hasn't already been done.

Treating Chilled Lambs

One of the most common reasons for new born lambs to die shortly after birth is Hypothermia. Learning to prevent, identify and treat this disorder can save the producer hundreds of dollars.
Fortunately with the proper materials and technique and a little bit of time and TLC many chilled lambs can be saved.

Cause of Hypothermia

- Hypothermia can be a result of a small lamb, often multiples, lambs with little or no fat deposits, ewe not tending to lamb or licking it dry, draft in the area where lamb is born causing the body temperature to decrease quickly.
- Lambs that do not get up quickly to nurse and receive colostrum are likely to become hypothermic even when the air temperature is not below freezing.
- Take the temperature of any lambs that are looking chilled. This will help you determine what treatment is required.

The appearance and behaviour of hypothermic newborn lambs.

[After F.A.Eales, 1983, "Hypothermia in Newborn Lambs", in *Diseases of Sheep*, edited by W.B. Martin]

Age (hours)	Cause	Appearance and Behaviour				
		35°C	30°C	25°C	20°C	Lower than 20°C
0-5	Long Delivery Immature Lamb	Weak but can stand	Recumbent	Coma	Deep Comma	Death
12+	Low Heat Production	Recumbent	Coma and Death			

Mild Hypothermia

The lamb is weak but still able to stand. Rectal temperature is between 37 and 39°C. It should be moved to shelter dried and fed colostrum by stomach tube. A 20% dextrose solution can also be fed by stomach tube to lambs who are very small.

Severe Hypothermia

1) Glucose: The temperature has fallen below 37°C. The lamb should not be fed colostrum until it has been revived and temperature is back up above 37°C. A 20% dextrose solution at a dose of 10 ml/kg in injected into the abdominal cavity (intra peritoneally). The site is about 2cm below the naval and 2cm laterally. Use a 60cc syringe and a 20 gauge or smaller 1 inch needle. Inject at a 90° angle to the body wall. The needle will push any internal organs out of the way.

2) Warming: The lamb now needs to be warmed slowly to return body to its normal temperature. A warming box can be used. There are commercial ones on the market and homemade ones which work just as well. Lambs are often warmed in front of a woodstove. The lamb should only be left in long enough to bring the temperature above 37°. At this point the lamb will begin to create their own heat. Warming the lamb too much will cause hyperthermia.

3) Return to Ewe:
   At this point the lamb can be fed colostrum usually by bottle as they should have their sucking reflex back. They can be returned to the ewe in a draft free location. Smaller lambs can be given a blanket to wear. Commercial 'woolovers' are available or a piece of stretchy square of fabric can be fitted by cutting 4 slits for the legs.

Breeding and Lambing Glossary

Castrate: To remove the testicles from a Ram so that he is permanently incapable of breeding.

Colostrum: The first milk produced by a ewe after giving birth. Colostrum contains antibodies which give the lamb immunity to disease in the first part of its life.

Edema: Swelling due to excess fluid in tissue spaces. Often in udders of fresh ewes.

Elastrator: A device used to apply heavy elastic bands to tail or scrotum for docking and castrating.

Estrus: The time when a ewe is receptive to being bred by the ram. Usually a period of 28 hours.

Fecundity: The ability to produce many offspring, either over a year or a lifetime.

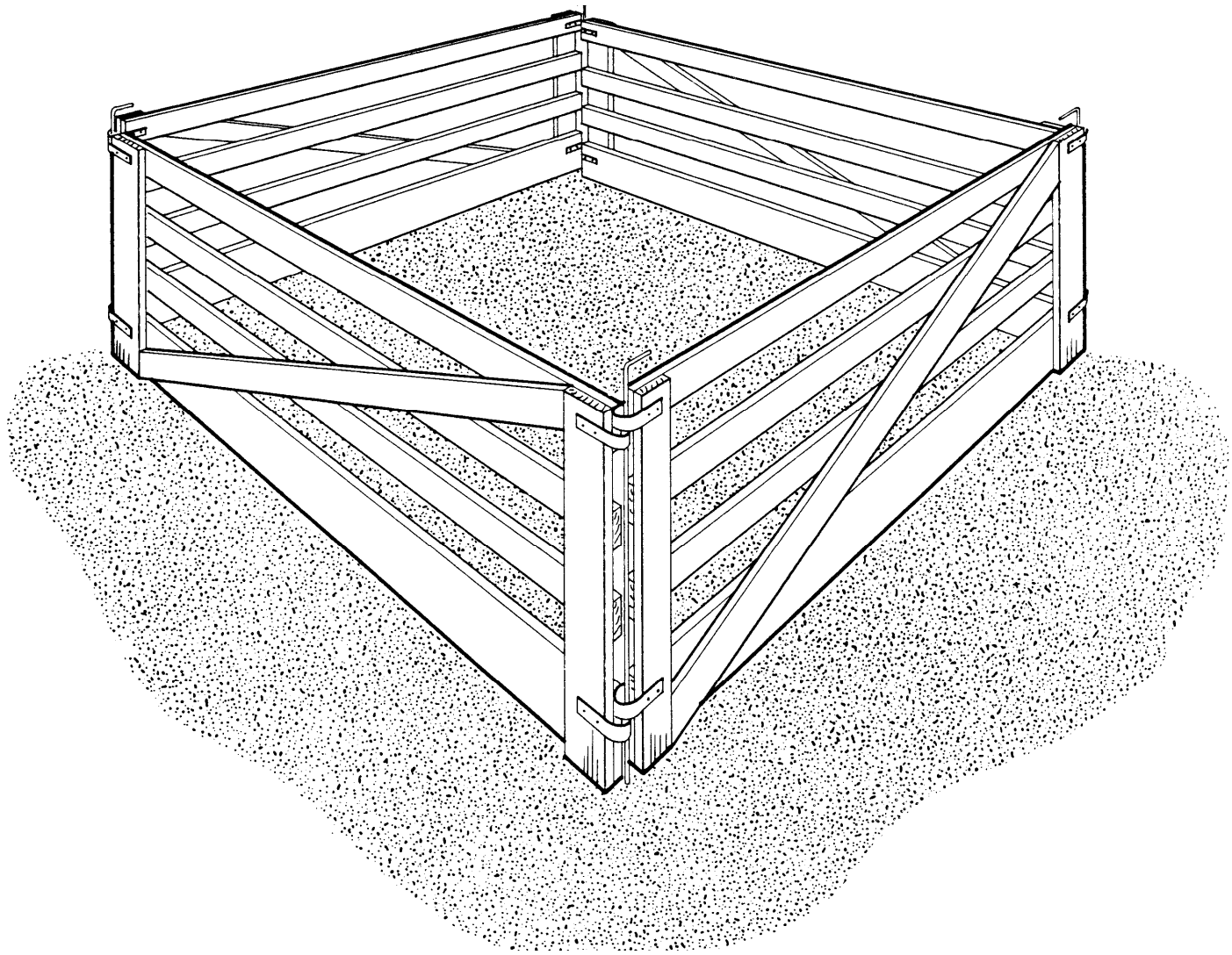
Meconium: First stool passed by a lamb. Black and very sticky. Colostrum contains a laxative which assists the lambing in passing this material.

Weaning: Separating lambs from their mothers or discontinuing feeding milk.

CANADA
PLAN SERVICE

PORTABLE CLAIMING PEN

M-4831
REV. 90.12



COMPLETE INSTRUCTIONS

The Canada Plan Service, a Canadian federal/provincial organization, promotes the transfer of technology through factsheets, design aids and construction drawings that show how to plan and build modern farm structures and equipment for Canadian agriculture.

For more information, contact your local provincial agricultural engineer or extension advisor.

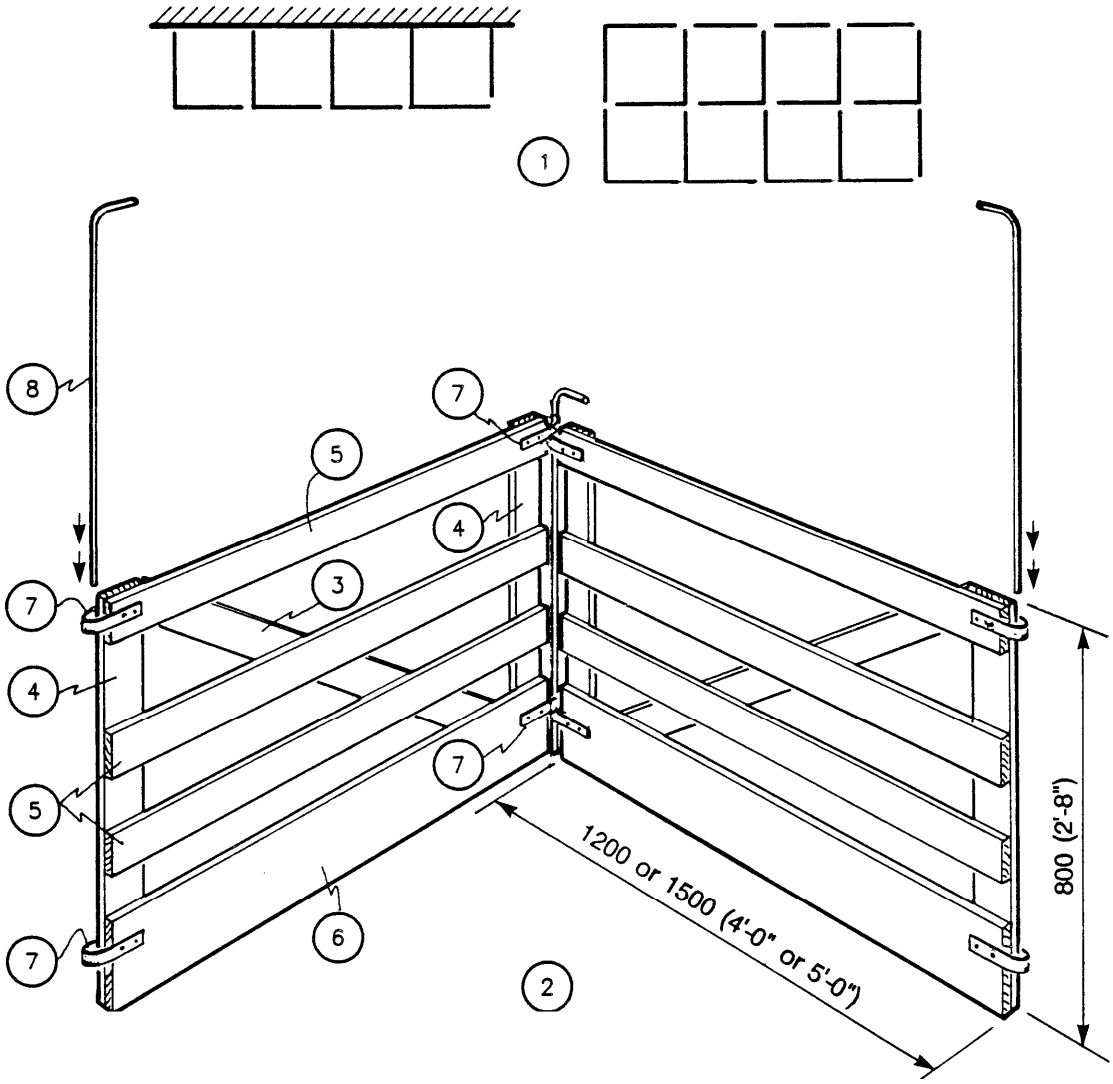
This leaflet gives construction details for a small claiming pen. Ewes and newborn lambs are held in a claiming pen for up to three days after lambing. Ewes, more than other animals, establish a motherhood bond with their young. The claiming pens provide isolation for this bond to develop.

Claiming pens should be provided for 10-15% of the ewes exposed to rams over a 1-month period. If breeding is synchronized, additional pens will be required.

All pen panels are similar except that some are 1.2 m (4 ft) long and others are 1.5 (5 ft) long. Different sized pens can be quickly arranged by clipping panels together.

A 1.2 x 1.2 m (4 x 4 ft) pen is adequate for an ewe and her young after lambing. However, if the pen is used for lambing as well, it should be enlarged to 1.2 x 1.5m (4x5ft)or 1.5x 1.5m (5x5ft).

Ensure the strap metal loops on the ends of the panels are large enough to allow the rods to be easily slipped into place when clipping the panels together. When not in use, panels can be conveniently hung flat on a wall for out-of-the-way storage.



1. possible claiming pen arrangements by clipping fence panels together.

2. two fence panels.

3. 19 x 89 mm (1 x 4 in.) brace.

4. 19 x 89 x 800 mm (1 x 4 in. x 2 ft 8 in.) uprights.

5. 19 x 89 x 1200 mm (1 x 4 in. x 4 ft) horizontal rail (make 1500 mm (5 ft) long if claiming pen is also used for lambing).

6. 19 x 184 (1 x 8 in.) bottom rail.

7. 6 x 38 x 250 mm (1/4 x 1 1/2 x 10 in.) bent strap, to fit vertical corner rod, bolt to top and bottom rails.

8. removable corner rod, min. 12 mm (1/2 in.) diam x 900 mm (3 ft) long.

Selection & Evaluation

(From the Canadian Sheep Breeders Association Web page - http://www.sheepbreeders.ca)

Selection

Economic Traits

Some traits have more effect on how profitable a sheep or flock will be. These traits are directly connected to how much money your flock will earn for you.

Traits that are of high importance economically include number of lambs born per ewe, lamb survival, weaning weights and average daily gain. Traits that you might consider but have low impact on profit include colour, and fleece quality.

Performance Information and Records

Keeping records is important to evaluate how your flock performs, and where you can improve your flock to increase the bottom line. When purchasing breeding stock, buy from flocks that have records on the above traits available. Producers on the Sheep Flock Improvement Program can provide information that compares their flock to other flocks in the same province, or across Canada adjusted by breed. Birth-twins and triplets are preferable and will be more profitable than single births. Sheep with broken mouths or missing teeth should not be considered for breeding stock. Reading teeth or checking tattoos can help determine age of breeding stock, and therefore the length of productive life left.

Conformation

Conformation is the physical structure of the animal you are evaluating. The score cards included later in this manual indicate the importance of different traits. The purpose of breeding stock is to produce a lamb that will be sold for market, so breeding stock needs to exhibit the traits expected in a market lamb.

Longevity

In breeding stock longevity is also important, and therefore correct feet and legs, strong skeletal structure and a sound bite (jaw structure) are important. Teeth should meet upper pad evenly. Undershot or overshot mouths are a serious defect.

Market Traits

Market traits include width throughout, a well developed loin and muscling down through the leg.

General Appearance

Mothering ability is necessary in a breeding ewe so she can raise a profitable market lamb. This includes width of chest and spring of rib which creates capacity, udder free from lumps, well balanced and no visible sores. Ewe lambs that are well grown for their age are more likely to raise lambs to market weight faster.

All animals should demonstrate overall balance from the standpoint of length, height, body capacity and body conformation.

Body conformation should exhibit adequate muscle development and wool production characteristics while maintaining ease of lambing.

Rams must have two testicles and ewes should have two teats.

Flock Health

Visiting the flock you are thinking of purchasing from will allow you to see first-hand the health of the flock.
Ask about the general management of the flock, vaccination, worming, and testing for diseases such as Maedi-Visna.(See Health Section for Description)
Watch carefully for signs of disease; coughing, runny noses, accesses, lameness, lumpy udders, sores on mouths, or lacking body condition.

Purchasing Rams

By purchasing an experienced ram which has bred ewes before you will have an indication that he

will successfully breed your ewes as well. You may even be able to see some of his offspring. However the experience may be reflected in the price. If purchasing young yearling rams they will not be able to breed as many ewes in the breeding season, but will have more years in the flock to pay for themselves.
The ram is a very important part of the flock – in fact; he is equal to half of your flock as he is the sire of all your lambs.

This makes it worth spending more money for a high quality ram and can make considerable genetic improvement simply by how you select that one animal.

Semen tests can be done to make sure a ram is fertile; scrapies genotyping can let you know if he has genetic resistance to Scrapies, and in the case of a very expensive ram a Veterinary examination may be desired.

It is important to check the testes to make sure they are even, both there and there are no lumps or sores.

Purchasing Ewes

Buying ewes that have lambed allows you to see how their lambs have performed, but there may be a financial incentive to purchase yearlings that are cheaper and will have more productive years in the flock. Check the teeth or tattoos to ensure they are not older than you think.

If ewes have lambed previously, check their udders to ensure there are no lumps, hardness or imbalances.

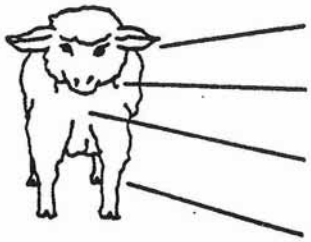
Smaller teats and tidy udders also lead to healthier udders from which lambs can nurse more easily.

Tips on Selecting a Project Lamb

- Find out what age and size your project lamb needs to be for your achievement program
- Determine if you are showing a market lamb or replacement breeding ewe lamb
- Evaluate your lamb crop for potential project lambs
- Evaluate conformation and performance of the lambs
- Consider conformation of the sire and dam, as their traits will be expressed in the lamb
- Consider the health status of the lambs, limit choice to the healthiest and friskiest of lambs
- Select lambs that are well grown for their age with good confirmation, sufficient length and width throughout
- Select lambs that are structurally sound. They should have good feet and legs, and a good bite
- Consider size of lamb at achievement program in relation to your own size
- Select a breed that is easy to handle if you are a beginner

Conformation Appraisal Techniques

FRONT VIEW



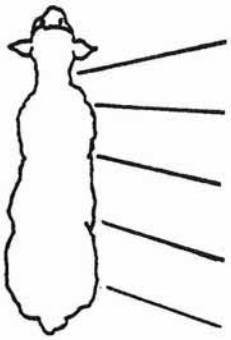
Head should be refined, possess some quality and character.

Throat and chest area free of excess skin according to breed.

Chest should be wide and clean and set back into the body.

Legs set out wide on the corners of the body.

TOP VIEW



Slim, clean neck that blends neatly into shoulders.

Slight prominence at the shoulders due to muscular shoulder.

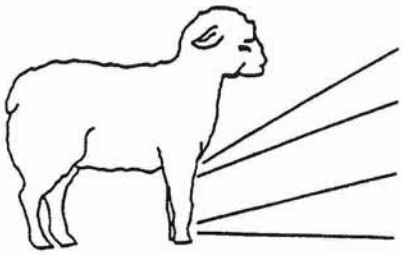
A shade tighter at the heart and free of excess cover.

More spread to the rear rib than the forerib.

Extra spread and thickness in the loin and rump.

SIDE VIEW

Length and ruggedness go along with high carcass yields.



Strong topped, neat and clean in foreshank.

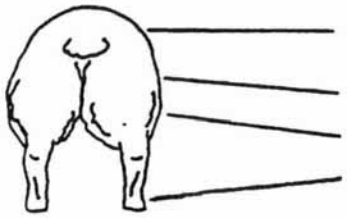
Legs should be in harmony with growthiness, age and stage of maturity.

Feet and legs placed squarely on all four corners of body.

Strong pasterns.

Thick, well-muscled lambs.

REAR END



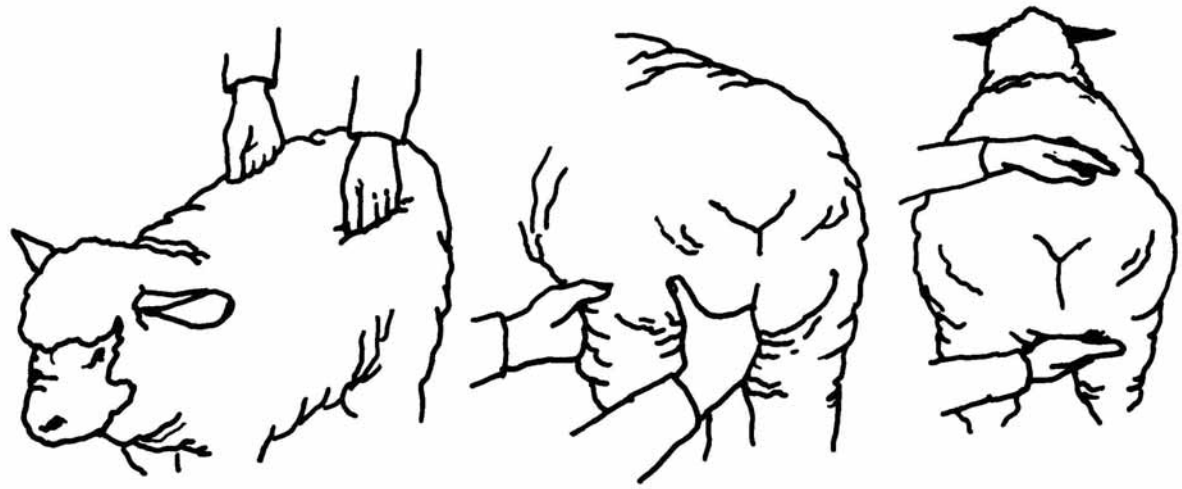
The back should be reasonably full and level out over the dock.

Wide, full rump.

Deep, thick, full, firm, muscled legs.

Rear legs set apart for good balance.

DETERMINING CONDITION AND MUSCLING:



Checking width of loin | **Checking size of leg** | **Checking depth of twist**

Judging

Compare the 4 sheep in the class to the ideal in your head. The placing will reflect how the entries compare to the true type. First will be the closest to the ideal, second the next closest and so on. Look at the traits that have the highest importance on the score card first to make your placings. If the placings are really close the less important traits can be used to help you make your decision.

Steps in Placing a Class

1. Use the score card to get a picture of the ideal sheep in your mind
2. Stand back and look at the class to get an impression based on general appearance
3. Compare the sheep in the class
4. Look more closely at the sheep and if permitted handle the legs, loin and shoulder to feel the structure under the wool
5. Check teeth for bite and in ewes or rams check testicles and udders for defects.
6. List the 4 animals and the main traits you notice for each
7. Place the class based on your observations. Do not second guess or discuss with fellow members. Your first instinct is usually the best.
8. list the class in order of placing and make point form notes for your reasons.
9. Try to memorize your points when ever possible for giving your oral reasons.

Here is an example of a work sheet were you can take notes about the lambs in the class.

Start by writing down 3 points about each and then transfer them to your reasons work sheet once you have decided on your placing.

4 – 1 – 3 – 2	
1	
2	
3	
4	

Giving Reasons

- Your points should be brief and yet justify you placing. Use two or three points per placing.
- Grants can be used when a lower placing has an obvious strength over one placed higher.
- For example, place 1st over second because first shows more width of loin and development through the leg than 2 but I do grant that 2nd shows more length throughout.
- Look the person taking reasons in the eye speak slowly and with confidence. Say thank you when you are done.

Reasons Format

I place this class of_____, _____.
(name of class) (your placing, ex: 3,1,2,4)

I place _____ at the top of the class:_____.
(3) (explain why)

I place____over _____ because_____.
(3) (1) (explain why)

I place____over _____ because_____.
(1) (2) (explain why)

I place____over _____ because_____.
(2) (4) (explain why)

I place_____ at the bottom/last because_____.*
(4) (explain why)

For these reasons I place this class of_____, _____.
(name of class) (your placing, ex: 3,1,2,4)

* NOTE: If you give good reasons why the 3rd exhibit places over the 4th, it is often unnecessary to give reasons for placing the 4th placed article last, or on the bottom. It is important to try to be positive at all times. Check with your leader to find out which format your association prefers. Make sure to check BEFORE the judging competition.

SHEEP – BREEDING

	PERFECT SCORE		
	WOOL BREED	MEAT BREEDS	HAIR BREEDS
BODY CONFORMATION	**20**	**40**	**40**
-skeletal structure -muscling, not over-conditioned -size and scale should conform to breed -sound mouth			
FEET, LEGS AND BONE	**20**	**20**	**20**
-strong, straight legs with heavy bone -legs square under body -sound feet and legs -strong, flexible pasterns			
FLEECE	**40**	**15**	**0**
-finest quality wool is found at shoulder -colour should conform to breed standard -consider length, wave and density -fleece should be uniform in fineness -clean and shiny -bright fleece and pink skin indicates health			
GENERAL APPEARANCE	**20**	**25**	**25**
-overall appearance should be pleasing -desirable balance and blending of parts -breed characteristics should be displayed -rams should be rugged with strong bone -ewes should be more refined			
COLOUR AND COVERING	**0**	**0**	**15**

Scorecard courtesy of the Canadian Sheep Breeders' Association

SHEEP – MARKET LAMBS

	PERFECT SCORE
CONFORMATION	**40**
- ideal market lamb - weighs 45-65 kg - straight, smooth topline - well-muscled leg - long body, wide loin, overall balance	
MUSCLING	**20**
- meaty lamb with proper finish - thickness through centre of leg - bulging stifle, thick over top	
QUALITY AND CARCASS YIELD	**20**
- heavily muscled lamb with a trim middle yields highest percentage of meat cuts - 70% of cuts are from leg and loin - select correctly finished, heavily muscled lambs with good conformation, balance and quality	
FINISH	**10**
- lambs must be handled to determine finish - ribs and edges of backbone can be felt in properly finished lambs - firm, uniform covering of ¼" fat over 11th and 12th ribs	
FLEECE	**10**
- fleece is important for salvage value - finest quality wool is at shoulder - no black fibres in white fleece - uniform in fineness or grade - long fibres are desirable	

General Terms For Use When Evaluating Sheep

Comparitive
Typier
Smoother
Higher Quality
Thicker
More balanced
More stylish
Shorter legged
Lower set
More compact
Deeper body
Deeper rib
Deeper at heart
Deeper flank
Shorter neck
Fuller behind shoulder
Smoother shoulder
Stronger top
Wider throughout
Greater spring of rib
Wider back
Wider, deeper, longer loin
Fuller leg
Deeper twist
Wider breech

Criticisms
Off type
Rough
Coarse
Narrow
Poorly balanced
Plain
Leggy
Rangy
Shallow body
Shallow Rib
Shallow cut up at heart
Long neck
Rough, open shoulders
Weak top
Low in front
Slack frame
Uneven lines
Uneven depth
Lacks Spring of rib
Narrow loin
Short in quarters
Droopy or sloping quarters
Narrow dock
Shallow twist
Small light leg

Market Sheep Terms
Comparitive
Shows more finish
More uniformly covered
Firmer finish
More finish of the loin
Trimmer middle
Trimmer or neater front end
Larger, well filled leg

Criticisms
Lacking finish
Soft finish
Wasty middle
Heavy front end
Small leg
Narrow loin

Breeding Sheep Terms

Comparative
More breed character
More feminine head
Stronger (rams)
Stands more correctly on front/rear legs

Criticisms
Plain or coarse head
Light bone
Narrow fronted
Legs sickled, toes out, or weak pasterns

Fleece Breed Terms
Comparitive
Greater Length of staple
Denser Fleece
Finer fleece
More uniform fleece

FLEECE

CLASSES

Category	Breed
Fine and Medium	Rambouillet, Corriedale, Columbia
Medium Strong	Strong Corriedale, Columbia, Fine Border Leicester, Romney
Strong	Lincoln, Leicester, Cotswold, Romney
Down Breeds	Suffolk, Hampshire, Dorset, Tunis, Oxford, Cheviot, Shropshire, Southdown
Novelty	Jacob, Scottish Blackface, Romanov

	PERFECT SCORE
UNIFORMITY - strength - crimp in overall fleece	**35**
PRESENTATION - overall presentation, tying, skirting of sample (fleece tied with a ribbon) - free from branding and second cuts (shearer missed some fleece and had to recut) - free from paints and stains	**25**
STAPLE LENGTH - staple is length of fleece in sample - appropriate to breed - minimum 2.5": about one year's growth	**20**
LUSTRE - brightness, colour and handle	**20**

DISQUALIFICATION FACTORS:

- wet, moldy, matted, black fibres, moths, tender, excessive vegetable matter or burrs

Estimating the Age of Sheep

The productive value of a sheep depends a great deal on its ability to graze efficiently. The correct development of the jaws, where the upper and lower jaw meet evenly, with no overlapping, is important. The incisor teeth on the lower jaw (there are not teeth at the front on top) must be well developed and firm. The condition of these teeth varies with age.

The approximate age of a sheep can be determined by looking at the animal's teeth. This is called mouthing.

Lamb

All the baby teeth are still present and are known as milk teeth or lamb teeth

Yearling

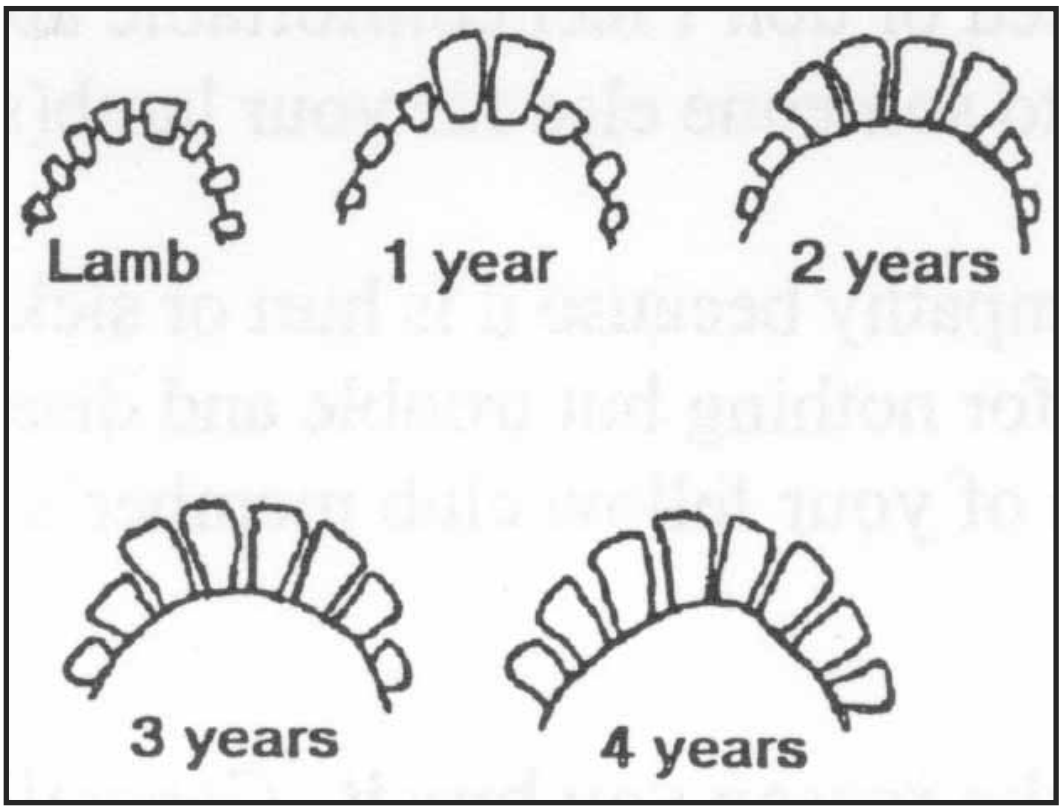
When the sheep is 12-14 months old, two permanent front teeth replace the front two baby teeth. They are larger and whiter then the milk teeth.

Two Year Old

At 22 to 24 months another pair of permanent teeth come in one on either side of the first set.

Three Year Old
At 34-36 Months the third pair of permanent teeth come in on either side of the first two pairs.

Four Year Old
At 46 to 48 months a sheep has a "full mouth", with all teeth being permanent. As the sheep grows older the teeth will spread and usually become shorter with wear. From here on in it is only possible to estimate age.



Broken Mouth
As a sheep matures it will gradually lose its teeth. A sheep with a broken mouth has trouble eating and should be culled from the flock.

Selection and Evaluation Glossary

Broken Mouth: Old ewe or ram that have lost teeth. Usually 4-5 years of age.

Closed Face: A sheep that has heavy wool around the eyes and cheeks.

Conformation: The structure of a sheep and it's parts and how they go together.

Crossbred: Animals that are known to have more than one breed in their lineage. Many crossbreds perform well due to hybrid vigor.

Cull: Selecting a breeding animal to ship due to poor performance, age, or poor health.

Grade: May be purebred but animals that are not registered with a breed association.

Sheep Breeds

The following breed booklet, entitled **Canadian Sheep Options and Opportunities**, has been provided courtesy of the Canadian Sheep Breeder's Association. If you would like to acquire more information, or a colour copy of this booklet, please contact the association at:

Canadian Sheep Breeders' Association
Address: 1489 Route 560, Deerville, NB E7K 1W7
Phone: Toll-Free: 1-866-956-1116 | Fax: 506-328-8165
Email: office@sheepbreeders.ca

Canadian Sheep Options and Opportunities

Moutons Canadiens Options et Opportunités

Ovinos Canadienses Opciones y Oportunidades

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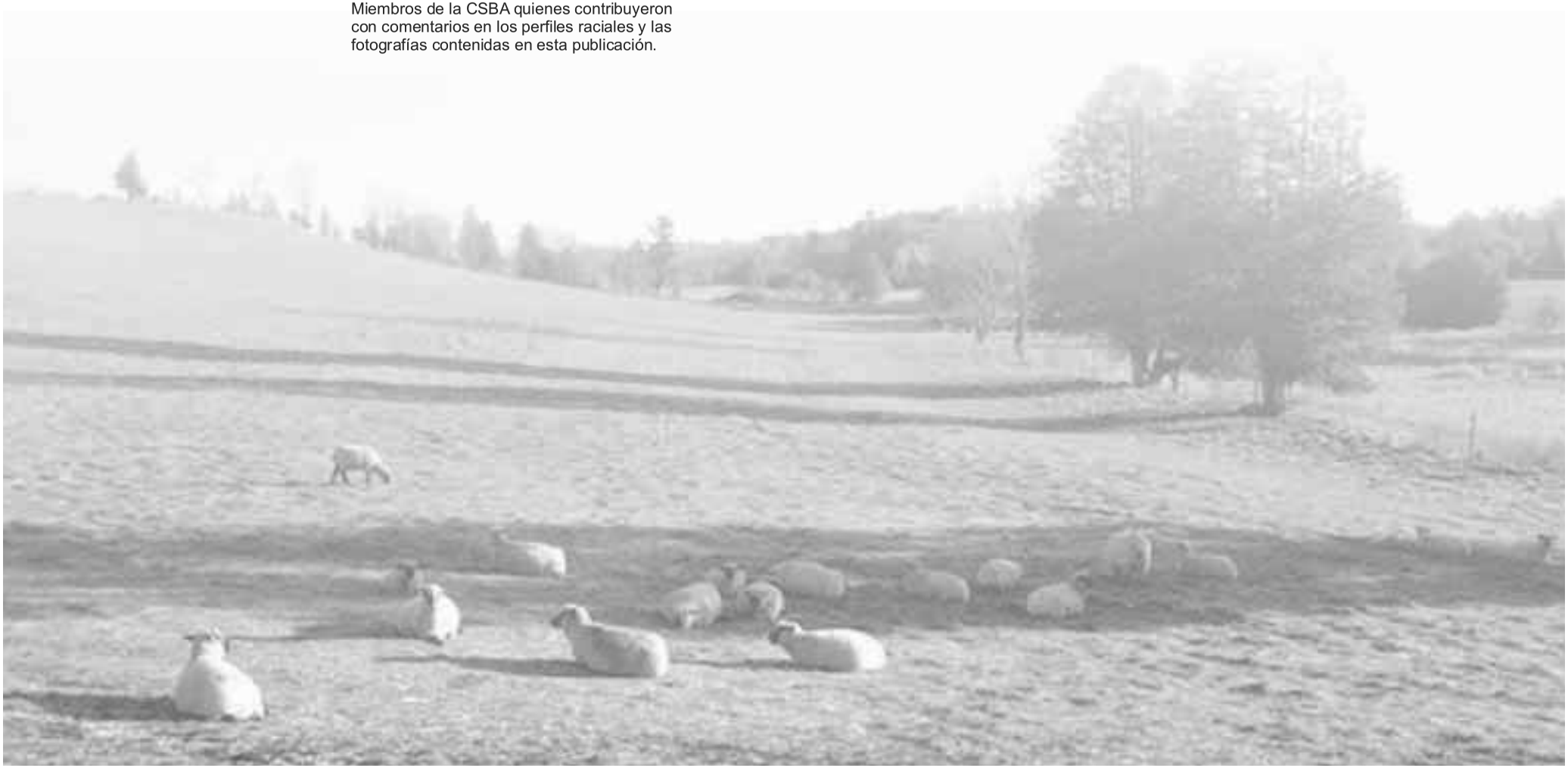

More information, an overview of the Canadian Sheep Industry on DVD and Canadian Breed Books are available from:

Canadian Sheep Breeders' Association
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Plus d'informations, une vue d'ensemble de l'industrie ovine canadienne sur DVD et le livret des races canadienne sont disponible de:

Société Canadienne des Éleveurs de Moutons
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Más informaciones, visión general sobre la Producción do Ovinos En Canadá en DVD y libros de Razas de Ovinos Canadienses están disponibles en la:

Asociación Canadiense de Criadores de Ovinos
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Agriculture and Agri-Food Canada | Agriculture et Agroalimentaire Canada

SECTION 1

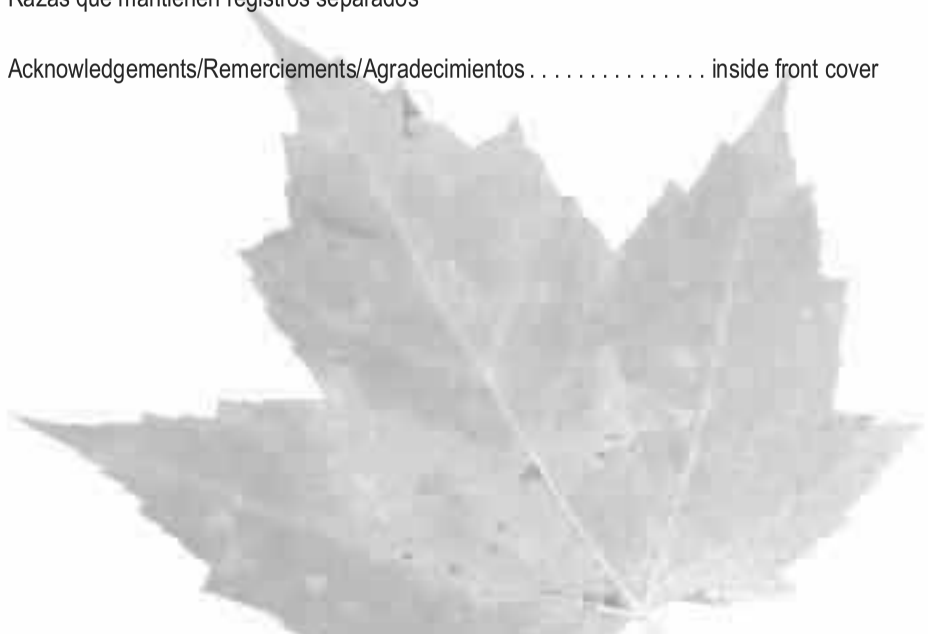
Breeds with >1000 registrations in the period 1999-2005
Races avec plus de 1000 enregistrements dans la période 1999 à 2005
Razas con más de 1000 registros en el período 1999-2005

SECTION 2

Breeds with 250-1000 registrations in the period 1999-2005
Races avec 250 à 1000 enregistrements dans la période 1999 à 2005
Razas con 250-1000 registros en el período 1999-2005

SECTION 3

Breeds with <250 registrations in the period 1999-2005
Races avec moins de 250 enregistrements dans la période 1999 à 2005
Razas con menos de 250 registros en el período 1999-2005



Sheep have been part of agriculture in Canada since the first settlement...

As the early pioneers pushed westward, sheep followed almost immediately as they offered the early settlers a steady supply of wool and meat. Sheep thrived on rough pastures that were unable to support cattle and were an important part of the country's early livestock industry.

Commercial lamb production has resulted in the selection of breeds with maternal traits such as prolificacy and mothering ability to cross with terminal sires which excel in the production of lamb meat. The introduction of hair sheep has been the result of an increased emphasis on meat production and a negative net return on wool sales. More recently, sheep dairying has become part of the Canadian industry. Consumer demand for high quality, specialty cheeses has stimulated recent growth in this area of sheep production. Despite the declining world wool market, Canada still maintains a number of breeds raised primarily for supplying fleeces to hand spinners and specialty wool producers. This dedication to constantly improve and adapt production to a changing international marketplace has resulted in the development of a variety of breeds and individuals to produce a range of products.

The registration system is supervised by the Canadian Sheep Breeders' Association and administered by the Canadian Livestock Records Corporation. Four generation pedigrees provide accurate ancestry for each animal and random DNA blood testing of every 500th animal registered helps insure the integrity of the registration system.

Genetic evaluation and improvement programs are available to Canadian producers. These programs are an important management tool which offer performance data to both the breeder and purchaser of Canadian genetics.

Programs such as the On Farm Food Safety Program, Voluntary Scrapie Flock Certification Program and provincial flock health programs provide a mechanism for the monitoring, control and verification of the health status of both individual animals and the national flock.

As a result of the systems and programs available to Canadian breeders, buyers of Canadian genetics can make their selections with confidence.

For each recognized breed there are photographs, a brief description of the breed's origin and history in Canada, and the key features of the breed. There is a chart outlining the total number of animals registered from 1999 to 2005, average body weights, prolificacy, fleece and dairy characteristics, as applicable.

Las ovejas han sido parte de la agricultura de Canadá desde los primeros colonizadores...

Conforme los pioneros se movilizaron hacia el oeste, las ovejas les siguieron casi inmediatamente ya que ofrecían a los primeros colonos un suministro constante de lana y carne. Las ovejas prosperaron en pastizales pobres que eran insuficientes para mantener al ganado vacuno y fueron una parte importante de la industria temprana del ganado del país.

La producción comercial de cordero ha resultado en la selección de razas con características maternales tales como prolificidad y habilidad materna para su cruce con razas terminales que sobresalen en la producción de carne de cordero. La introducción de ovejas de pelo ha sido el resultado de un mayor énfasis en la producción de carne y un retorno neto negativo en la venta de lana. Más recientemente, la lechería ovina se ha vuelto parte de la industria Canadiense. La demanda del consumidor de quesos de especialidad y de alta calidad ha estimulado el reciente crecimiento de esta área. A pesar de la declinación del mercado para la lana, Canadá mantiene todavía un gran número de razas criadas principalmente para suministrar vellón para hiladores y especialmente productores de lana. Esta dedicación a un mejoramiento y adaptación constantemente de la producción hacia un nicho de mercado internacional cambiante ha resultado en el desarrollo de una variedad de razas e individuos para producir una gran variedad de productos.

Les moutons font partie de la vie rurale canadienne depuis ses tous débuts... Peu après la progression des premiers pionniers vers l'ouest, les moutons firent le voyage, fournissant aux premiers colons une provision constante de laine et de viande. Les moutons pouvaient s'accommoder aisément des pâturages accidentés qui ne pouvaient subvenir aux besoins des bovins et, pendant de nombreuses années, ils constituèrent une part importante de l'industrie du bétail du pays.

La production commerciale d'agneaux a entraîné la sélection de races possédant des caractères maternels tels que la prolificité et l'aptitude maternelle à accoupler avec des béliers terminaux qui eux transmettent leur qualités bouchères. L'introduction de race à poil a été le résultat de l'accroissement de l'emphase mise sur la production de viande et du déficit engendré par la vente de laine. Plus récemment, la production laitière a fait sa place au sein de l'industrie canadienne. La demande des consommateurs pour des produits de haute qualité et des fromages de spécialité a stimulé la croissance récente dans ce secteur de la production ovine. Malgré la chute du marché mondial de la laine, le Canada compte toujours dans son cheptel un certain nombre de races élevées principalement pour fournir des toisons aux fileurs et aux producteurs de laine de spécialité. Ce dévouement à constamment améliorer et adapter la production à un marché international changeant a menée au développement d'une variété de races et d'individus pour produire une large gamme de produits.

Le système d'enregistrement est supervisé par la Société Canadienne des Éleveurs de Moutons et est géré par la Société Canadienne d'Enregistrement des Animaux. Les enregistrements de quatre générations fournissent la généalogie précise de chaque animal. De plus, un test sanguin d'ADN aléatoire est effectué à chaque 500 enregistrements afin d'assurer l'intégrité du système.

Des programmes d'évaluation et d'amélioration génétique sont disponibles pour les éleveurs canadiens. Ces programmes sont des outils de régie importants et fournissent de l'information sur les performances tant à l'éleveur qu'à l'acheteur de génétique canadienne.

Les programmes tels que le programme de salubrité des aliments à la ferme, le programme volontaire de certification des moutons à l'égard de la tremblante et les programmes provinciaux de santé des troupeaux permettent la surveillance, le contrôle et la vérification du statut sanitaire des animaux eux-mêmes et de l'ensemble du cheptel national.

Considérant les systèmes et les programmes disponibles aux éleveurs canadiens, les acheteurs de génétique canadienne peuvent faire leurs choix avec confiance.

Pour chaque race reconnue, il y a des photographies, une brève description de son origine et de son histoire au Canada ainsi que les caractéristiques propres à la race. Un diagramme décrivant le nombre total d'animaux enregistrés de 1999 à 2005, le poids moyen, la prolificité des moutons et, s'il y a lieu, les performances laitières et la qualité de leur laine est également présenté.

El sistema de registro está supervisado por la Asociación Canadiense de Criadores de Ovejas y administrado por la Corporación Canadiense de registros de Ganado. Pedigríes de 4 generaciones proveen una adecuada ascendencia para cada animal y pruebas de ADN al azar de cada 500 animales registrados ayuda a asegurar la integridad del sistema de registros.

Programas de evaluación genética y mejoramiento se encuentran disponibles para los productores Canadienses. Estos programas son una importante herramienta de manejo que ofrece datos de desempeño tanto para los productores y compradores de genética Canadiense.

Programas tales como el de Seguridad Alimentaria en Granja, Programa Nacional Voluntario de Prurito Lumbar y los programas provinciales de sanidad de rebaños proveen un mecanismo para el monitoreo, control y verificación del estado sanitario tanto de animales individuales como del rebaño nacional.

Como resultado de los sistemas y programas disponibles para los productores Canadienses, los compradores de genética Canadiense pueden realizar su selección con seguridad.

Por cada raza reconocida existen fotografías, una breve descripción del origen de la raza e historia en Canadá, y los aspectos claves de la raza. Existe una tabla señalando el número total de animales registrados desde 1999 al 2005, peso corporal promedio, prolificidad, vellón y características lecheras, cuando sea aplicable.

Dorset (Horned and Polled)

Dorset (Horned and Polled)

Horned Dorsets originated in England and Wales and have been an identifiable breed since the 16th century. Imported into Canada during the 19th century they were, for many years, one of the cornerstones of the sheep industry. The Canadian Horned Dorset type owes more to the older style British animal. It is a lower set animal and smaller than its American or Australian counterpart. After the introduction of the Polled Dorset in the 1950's, many breeders switched over and the Horned Dorset declined in numbers. The Polled Dorset originated from a mutation of the Horned Dorset which occurred at North Carolina State University in the early 1950's. They were accepted into the US breed registry in 1956 and since that time have spread into Canada and become a major contributor to the commercial lamb industry.

Dorset ewes are relatively prolific, good mothers and breed out of season. The breed adapts well to confinement and is readily used in accelerated crossbreeding programs. As they respond well to confinement, they do well under feedlot conditions and on small holdings with intensive management.

Number Registered	Nombre enregistré	Individuos registrados	14,681
Rams	Béliers	Carneros	90-125kg (H), 115-150kg (P)
Ewes	Brebis	Ovejas	55-90kg (H), 80-115kg (P)
Lamb/Ewe Percentage	Pourcentage d'agnelage	Prolificidad (Procentaje cordero/hembra)	175%
Fleece	Qualité de la toison	Vellón (Blanco brilloso, denso)	Bright white, dense
Weight	Poids	Peso	1.8-2.7kg
Micron Count	Micron	Diámetro (micrones)	27-33
Staple Length	Longueur de fibre	Longitud de la mecha	7-10cm

La Dorset con cuernos se originó en Inglaterra y Gales y ha sido una raza identificable desde el siglo XVI. Importada a Canadá durante el siglo XIX, fue durante muchos años, una de las piedras angulares de la industria ovina. La Dorset con cuernos Canadiense posee más del animal Británico tipo antiguo. Es un animal bajo y más pequeño que sus contrapartes Americanos o Australianos. Después de la introducción del Dorset acorne en la década de 1950, muchos criadores cambiaron y la Dorset con cuernos declinó en número. La Dorset acorne se originó de una mutación de la Dorset con cuernos que ocurrió en la Universidad del estado de Carolina del Norte a inicios de la década de 1950. Fue aceptada en el registro racial de los EUA en 1956 y desde ahí se ha difundido a Canadá y vuelto un contribuidor mayor para la industria comercial del cordero.

Las hembras Dorset son relativamente prolíficas, buenas madres y se reproducen fuera de estación. La raza se adapta bien al confinamiento y es fácilmente usada en programas de cruzamiento acelerado. Ya que responden bien al confinamiento, producen bien en condiciones de estabulación y en pequeñas extensiones con manejo intensivo.

Les Dorsets à cornes sont originaires de l'Angleterre et du Pays de Galles et la race est reconnue depuis le 16ième siècle. Importés au Canada durant le 19ième siècle, les Dorsets à cornes ont été, pendant plusieurs années, une des pierres angulaires de l'industrie ovine. Le type du Dorset à corne canadien doit plus au style plus vieux de l'animal britannique. C'est un animal plus bas et de plus petit gabarit que le Dorset américain ou australien. Après l'introduction du Dorset acère au cours des années 1950, beaucoup d'éleveurs se sont tournés vers ce dernier et le nombre de Dorset à corne a considérablement diminué. Le Dorset acère origine d'une mutation chez le Dorset à corne survenue à l'Université de la Caroline du Nord au début des années 1950. Les Dorset acères ont été acceptés dans le registre de race des États-Unis en 1956 et, depuis ce temps, se sont propagés au Canada et sont devenus une composante majeure de l'industrie ovine.

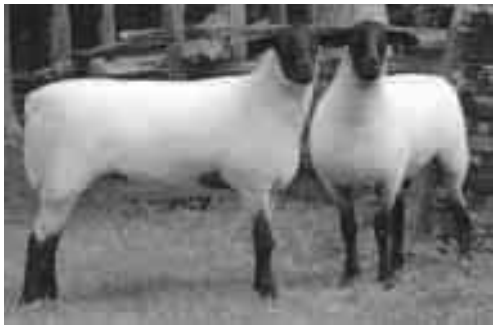
Les brebis Dorset sont relativement prolifiques, ont de bonnes aptitudes maternelles et sont dessaisonnées. La race s'adapte bien à l'élevage en bâtiment et s'utilise dans des programmes de production accélérée. Comme ils répondent bien à l'élevage en bâtiments, ils performent bien dans des conditions de parc d'engraissement et sur de petites fermes avec une gestion intensive.

Suffolk

The Suffolk was developed in the early 1800's in the southeastern area of England by crossing the Southdown and the Norfolk Horned sheep. The breed came to Canada in 1888 and interest in the breed grew rapidly after 1920. More than eighty years later it is still one of the dominant breeds in the Canadian industry. Because Suffolk lambs exceed all other breeds in rate of gain, and respond well to confinement, they offer excellent economic returns and continue to dominate the heavy lamb market in Canada. The rams are widely used as terminal sires in commercial ewe flocks due to their ability to produce lambs with excellent growth and carcass traits.

The Suffolk is, however, a heavy feeder and maintaining a moderate size sheep under more controlled management systems has been advantageous in exploiting their meat traits in an economically efficient manner.

Number Registered	Nombre enregistré	Individuos registrados	14,205
Rams	Béliers	Carneros	115-150kg
Ewes	Brebis	Ovejas	100-115kg
Lamb/Ewe Percentage	Pourcentage d'agnelage	Prolificidad (Procentaje cordero/hembra)	180%
Fleece	Qualité de la toison	Vellón (Denso)	Dense
Weight	Poids	Peso	2.2-2.7kg
Micron Count	Micron	Diámetro (micrones)	28-33
Staple Length	Longueur de fibre	Longitud de la mecha	8-10cm



Le Suffolk a été développé au début des années 1800 dans la région du sud-est de l'Angleterre et est issu du croisement entre le Southdown et le Norfolk avec cornes. La race est arrivée au Canada en 1888 et l'intérêt pour cette race s'est accru rapidement après 1920. Plus de quatre-vingts ans plus tard c'est toujours une des races dominantes de l'industrie canadienne. Parce que les agneaux Suffolk ont le meilleur taux de gain et répondent bien à l'élevage en bâtiment, ils offrent un excellent rendement économique et continuent de dominer le marché de l'agneau lourd au Canada. Les béliers sont largement utilisés pour les croisements terminaux dans des troupeaux de brebis commerciales en raison de leur capacité à produire des agneaux avec d'excellentes performances de croissance et des carcasses de qualité.

Le Suffolk a, cependant, une grande consommation et le maintien d'un mouton de taille modéré sous un système de gestion plus contrôlé est avantageux dans l'exploitation de leurs caractéristiques bouchères d'une façon économiquement rentable.

La Suffolk fue desarrollada al inicio de 1800 en el área del sudeste de Inglaterra mediante el cruzamiento de la Southdown y de la Norfolk con cuernos. La raza llegó a Canadá en 1888 y el interés en la raza creció rápidamente después de 1920. Más de ochenta años después sigue siendo una de las razas dominantes en la industria Canadiense. Debido a que la Suffolk excede a las otras razas en la tasa de crecimiento, y responde bien al confinamiento, ofrece excelentes retornos económicos y continúa dominando el mercado del cordero pesado en Canadá. Los carneros son ampliamente usados como línea terminal en rebaños comerciales de hembras debido a su habilidad para producir corderos con excelente crecimiento y características de la canal.

La Suffolk sin embargo, requiere mucha alimentación, y mantenerla en un tamaño moderado bajo sistemas de manejo más controlados ha sido ventajoso en la explotación de sus características cárnicas de una manera económicamente eficiente.

Rideau Arcott

Arcott Rideau

The Rideau Arcott is a purebred sheep which was created entirely in Canada. It was developed over a period of 10-15 years by Agriculture Canada at the research station near Ottawa. The original genetics came from the Finnish Landrace, Suffolk and East Friesian breeds. After many generations of selection, the new breed was released to Canadian producers in the late 1980's. The purpose of the Rideau Arcott development program was to produce a maternal breed that would offer high fertility, good milking and mothering characteristics, excellent body conformation and good growth rate.

Rideaus are highly prolific ewes, reaching sexual maturity at 7-8 months of age and excel in crossbreeding programs with terminal sire breeds which emphasize meat production. Due to the large number of multiple births, the Rideau does require additional attention to nutrition and lambing time management.

Number Registered	Nombre enregistré	Individuos registrados	7588
Rams	Béliers	Cameros	80-100kg
Ewes	Brebis	Ovejas	75-95kg
Lamb/Ewe Percentage	Pourcentage d'agnelage	Prolificidad (Procentaje cordero/hembra)	250%
Fleece	Qualité de la toison	Vellón	Variable

Le Arcott Rideau est un mouton de race pure qui a été entièrement créé au Canada. Il a été développé sur une période de 10 à 15 ans à la station de recherche d'Agriculture Canada près d'Ottawa. La génétique originale est venue principalement des races Finnois, Suffolk et East Friesian. Après plusieurs générations de sélection, la nouvelle race a été rendue disponible aux producteurs canadiens à la fin des années 1980. Le but du programme de développement du Arcott Rideau était de produire une race maternelle qui offrirait une haute fertilité, de bonnes caractéristiques laitières et maternelles, une excellente conformation et un bon taux de croissance.

Les Rideau sont des brebis très prolifiques. Elles atteignent la maturité sexuelle vers l'âge de 7 à 8 mois. Ces brebis donnent d'excellents résultats lorsque croisées avec un bélier de race terminale,dans le but de favoriser la production de viande. En raison du grand nombre de naissances multiples, le Rideau exige beaucoup d'attention supplémentaire pour l'alimentation et pendant la période d'agnelages.

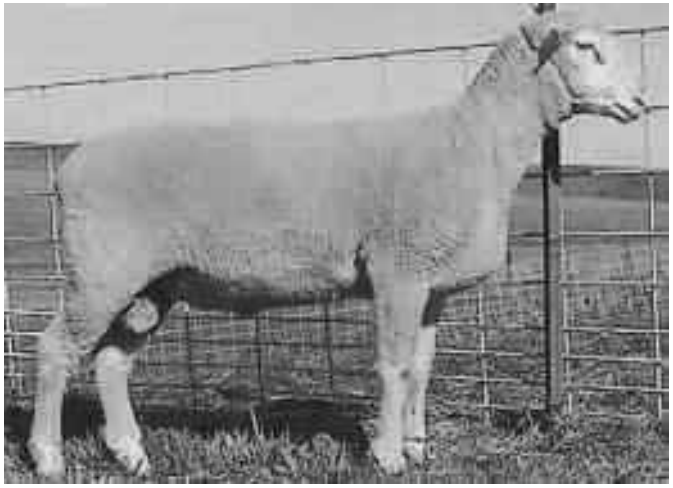
La Rideau Arcott es una oveja de raza pura que fue creada totalmente en Canadá. Fue desarrollada durante un periodo de 10-15 años por Agricultura Canadá en la estación de investigación cerca de Ottawa. La genética original proviene de las razas Finnish Landrace, Suffolk e East Friesian. Después de varias generaciones de selección, la nueva raza fue lanzada a los productores Canadienses a finales de la década de 1980. El propósito del programa de desarrollo de la Rideau Arcott fue el de producir una raza materna que ofreciera alta fertilidad, buenas características lecheras y maternas, excelente conformación corporal y buena tasa de crecimiento.

Las hembras Rideau son prolíficas, alcanzando la madurez sexual a los 7-8 mese de edad y sobresaliente en programas de cruzamiento con razas terminales que acentúan la producción de carne.

Polypay

The Polypay was developed at the experimental station in Dubois, Idaho starting in the late 1960's. Researchers drew from four breeds, Finnsheep, Rambouillet, Targhee, and Dorset, to produce a prolific sheep that would lamb out of season and produce a fast growing lamb with a high yielding carcass. The breed was fixed in 1975 and has since spread across the US, Canada and Mexico. Polypay lambs are good feeders and grow quickly and steadily to 36kg. They are docile, easily managed and adapt well to open pasture, rotational grazing or confinement systems.

Number Registered	Nombre enregistré	Individuos registrados	6310
Rams	Béliers	Carneros	90-125kg
Ewes	Brebis	Ovejas	100-115kg
Lamb/Ewe Percentage	Pourcentage d'agnelage	Prolificidad (Procentaje cordero/hembra)	190%
Fleece	Qualité de la toison	Vellón (Fino)	Fine
Weight	Poids	Peso	2.2-2.7kg
Micron Count	Micron	Diámetro (microns)	-
Staple Length	Longueur de fibre	Longitud de la mecha	8-10cm



Le Polypay a été développé à la station expérimentale de Dubois en Idaho à partir de la fin des années 1960. Les chercheurs ont utilisées les races Finnois, Rambouillet, Targhee et Dorset afin de produire un mouton prolifique qui peut agneler à contre-saison et produire des agneaux à croissance rapide avec des carcasses de qualité. La race a été établie en 1975 et, depuis, s'est répandue à travers les États-Unis, le Canada et le Mexique. Les agneaux Polypay ont une bonne consommation et un bon taux de croissance jusqu'à 36kg. Ils sont dociles, facile à garder et s'adaptent bien au pâturage extensif, au pâturage en rotation ou aux systèmes d'élevage intensifs en bâtiment.

La Polypay fue desarrollada en la estación experimental en Dubois, Idazo comenzando a finales de la década de 1960. Investigadores utilizaron cuatro razas Finnsheep, Rambouillet, Targhee y Dorset para producir una oveja prolífica que pudiera reproducirse fuera de estación y producir corderos de rápido crecimiento con alto rendimiento en canal. La raza fue fijada en 1975 y desde entonces se ha distribuido a lo largo de EUA, Canadá y México. Los corderos Polypay comen bien y crecen rápid y constantemente hasta 36 Kg. Es dócil, facil de manejar y se adapta bien a pastizales extensivos, pastoreo rotativo o sistemas de estabulación.

Hampshire

The Hampshire is one of the Down breeds that originated in Hampshire County, England. During the 18th century Southdown rams were crossed with local horned sheep. Fixed as a breed in 1889, it was exported to Canada at the turn of the century and has remained one of the consistently popular breeds in the industry. They are a large, stocky sheep with excellent meat characteristics and high-yielding carcasses. The lambs are fast growing and serve both the light and heavy lamb markets. The ewes exhibit average prolificacy, are long lived and easy keepers. They will adapt to either pasture or confinement management. Rams used as terminal sires pass on the Hampshire loin and leg but the lambs can be large at birth and breeding to larger ewes is advised.

The Hampshire breed is very docile, easy to manage and makes an ideal flock for smaller holdings.

Number Registered	Nombre enregistré	Individuos registrados	3369
Rams	Béliers	Carneros	115-150kg
Ewes	Brebis	Ovejas	80-115kg
Lamb/Ewe Percentage	Pourcentage d'agnelage	Prolificidad (Procentaje cordero/hembra)	160%
Fleece	Qualité de la toison	Vellón (Media, basta, medio brillo)	Medium, coarse, semi-bright
Weight	Poids	Peso	2.0-2.5kg
Micron Count	Micron	Diámetro (micrones)	25-33
Staple Length	Longueur de fibre	Longitud de la mecha	5-8cm

Le Hampshire est une des races Down issues du Comté du Hampshire en Angleterre durant le 18ième siècle suite au croisement de béliers Southdown avec des moutons à corne locaux. Établi comme race en 1889, il a été exporté au Canada au début du siècle et est demeuré une des races les plus populaires de l'industrie.
C'est un gros mouton, trapu, avec d'excellentes caractéristiques bouchères et de hauts rendements. Les agneaux ont une forte croissance et performent bien pour le marché d'agneaux légers et lourds. Les brebis ont une prolificité moyenne, une bonne longévité et sont faciles à garder. Elles s'adapteront à la gestion en bergerie ou au pâturage. Les béliers utilisés en croisement terminal transmettent la longe et le gigot propre au Hampshire. Cependant, les agneaux peuvent être gros à la naissance et il est conseillé de les accoupler avec des brebis de forts gabarits.

La race Hampshire est très docile, facile à gérer et compose un troupeau idéal pour de petites fermes.

La Hampshire es una de las razas Down que se originaron en el Condado Hampshire en Inglaterra. Durante el siglo XVIII, carneros Southdown fueron cruzados con la oveja con cuernos local. Fijada como raza en 1889, fue exportada a Canadá a finales de siglo y ha permanecido como una de las razas más populares en la industria. Son ovejas grandes, fornidas, con excelentes características cárnicas y con alto rendimiento en canal. Los corderos crecen rápidamente y sirven tanto para el mercado liviano o pesado. Las hembras exhiben prolificidad promedio, longevas y de fácil mantenimiento. Se adapta tanto a pasturas como a estabulación. Los carneros usados como línea terminal transmiten los lomos y patas de la Hampshire, pero los corderos pueden ser grandes al parto y se aconseja el empadre con hembras grandes.

La raza Hampshire es muy dócil, fácil de manejar y se convierte en un rebaño ideal para pequeñas extensiones.

Dorper & White Dorper

The Dorper is a white sheep with a black head or head and neck, with complete dark pigmentation of exposed skin. The covering is a short loose mixture of hair and wool with a natural clean kemp underline. The Dorper was developed as a meat sheep in South Africa in the mid 1900s by crossing a Dorset (horn) ram with a Blackhead Persian ewe. In July 1950 a breeder's society was founded.

The White Dorper is an all white sheep that shares its many attributes with the Dorper, differing only in color. The White Dorper was developed as a meat sheep in South Africa in the mid 1900s by crossing a Dorset (horn)/Blackhead Persian with a Dorset (horn)/Van Rooy. Later infusion of the Ronderib Afrikaaner created the White Dorper as we know it today. The sheep was originally called Dorsian and a breed association was formed. In 1964 it was decided to join with the Dorper society but to maintain the two as separate breeds. The White Dorper as a terminal sire on white faced sheep will render an "uninterrupted white" cross lamb with outstanding meat qualities.

The Dorper and White Dorper have retained the positive characteristics of their founding breeds; the hardiness of the desert sheep and the prolific, good mothering ability of the Dorset. Both breeds contribute their ability to breed out of season. They are non-selective grazers and bred to adapt and flourish under severe conditions; which is proven by their success in the wide variety of climates in which they thrive today. They are also known for their increased natural resistance to parasites.

Number Registered	Nombre enregistré	Individuos registrados	2461
Rams	Béliers	Cameros	90-100kg
Ewes	Brebis	Ovejas	70-80kg
Lamb/Ewe Percentage	Pourcentage d'agnelage	Prolificidad (Procentaje cordero/hembra)	150%
Fleece	Qualité de la toison	Vellón (Oveja de pelo)	Hair Sheep

Le Dorper est un mouton blanc à tête noire ou à tête et cou noirs, avec une pigmentation foncée de la peau exposée. La toison est un mélange lâche court de poils et de laine. Le Dorper est un mouton à viande qui a été développé en Afrique du Sud au milieu des années 1900 en croisant un bélier Dorset à corne avec une brebis Blackhead Persian. En juillet 1950 une société d'éleveurs a été fondée.

Le Dorper Blanc est un mouton tout blanc qui partage beaucoup de ses attributs avec le Dorper, différent seulement en couleur. Le Dorper Blanc a, lui aussi, été développé comme un mouton à viande en Afrique du Sud au milieu des années 1900, cette fois en croisant un Dorset à corne / Blackhead Persian avec un Dorset à corne / Van Rooy. L'ajout ultérieur du Ronderib Afrikaaner a donné le Dorper Blanc comme nous le connaissons aujourd'hui. Le mouton était à l'origine appelé Dorsian et une association de race distincte avait été formée. Ce n'est que plus tard, en 1964, qu'il a été convenu de se joindre à la société Dorper, mais en maintenant les deux races séparées. Le Dorper Blanc comme bélier terminal, croisé à des moutons à face blanche donnera toujours des agneaux blancs avec des qualités bouchères remarquables.

Le Dorper et le Dorper Blanc ont conservé les caractéristiques positives de leurs races d'origine; la vigueur du mouton du désert ainsi que les aptitudes maternels et la bonne prolificité du Dorset. Les deux races transmettent leur capacité à s'accoupler hors saison. Ils ne sont pas sélectifs sur le pâturage et ont été élevés pour s'adapter et évoluer dans des conditions sévères. On les connaît aussi pour leur bonne résistance naturelle contre les parasites.

La Dorper es una oveja blanca con cabeza negra o cabeza y cuello, con pigmentación oscura completa en la piel expuesta. La cobertura es una mezcla suelta de pelo y lana con fibras de pelo limpias en la línea inferior. La Dorper fue desarrollada como una oveja para carne en Sudáfrica a mediados del siglo XX mediante el cruzamiento de un carnero Dorset (con cuernos) con una oveja Persa cabeza negra. En julio de 1950 se formó una sociedad de criadores.

La Dorper Blanca es un animal blanco que comparte la mayor parte de atributos de la Dorper, difiriendo únicamente en el color. La Dorper blanca fue desarrollada como un animal de carne en Sudáfrica a mediados del siglo XX, mediante el cruzamiento de un Dorset (con cuernos)/Persa cabeza negra, con un Dorset (con cuernos)/Van Rooy. La inclusión posterior de la Ronderib Afrikaaner creó la Dorper Blanca tal y como la conocemos hoy. La raza fue originalmente llamada Dorsian y se formó una asociación de la raza, pero fue hasta después (1964) que se decidió unir con la sociedad Dorper, manteniéndolas a las dos como razas separadas. La Dorper Blanca como línea terminal cruzada con ovejas de cara blanca producirá corderos cruzados totalmente blancos, con características cárnicas excepcionles.

La Dorper y Dorper Blanca han retenido las características positivas de sus razas de fundación; la rusticidad de las ovejas del desierto y la prolífica, buena habilidad materna de la Dorset. Ambas razas contribuyen a su habilidad para reproducirse fuera de estación. No pastorean selectivamente, criados para adaptarse y prosperar bajo condiciones severas, lo cual es prueba de su éxito en la amplia variedad de climas en que progresan actualmente. Es también conocida por su mayor resistencia natural a parásitos.

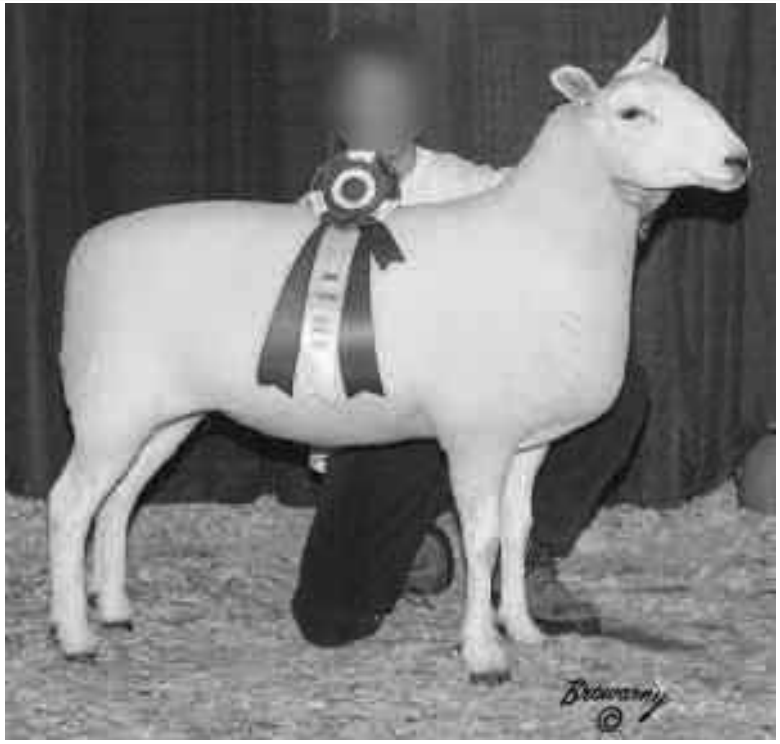
North Country Cheviot

North Country Cheviot

The North Country Cheviot is a breed that has been widely used in the north of England and Scotland for several centuries. They are independent sheep, strong willed, vigorous and very hardy in harsh climates and rough pasture. They are best suited to pasture based systems where the management is not intensive.

The ewes exhibit superior mothering instincts and deliver lambs easily. The lambs are vigorous at birth with excellent survivability. Although they only demonstrate an average rate of gain, the carcass quality is very good with an above average yield percentage. North Country rams are often used in crossbreeding programs to pass on the maternal strengths of the breed as well as to produce desirable carcasses.

Number Registered	Nombre enregistré	Individuos registrados	2913
Rams	Béliers	Carneros	100-125kg
Ewes	Brebis	Ovejas	55-80kg
Lamb/Ewe Percentage	Pourcentage d'agnelage	Prolificidad (Procentaje cordero/hembra)	150%
Fleece	Qualité de la toison	Vellón (Blanco puro, fuerte)	Pure white, lofty, strong
Weight	Poids	Peso	2.0-2.3kg
Micron Count	Micron	Diámetro (micrones)	27-33
Staple Length	Longueur de fibre	Longitud de la mecha	8-10cm



La North Country Cheviot est une race qui a été largement utilisée au nord de l'Angleterre et de l'Écosse pendant plusieurs siècles. C'est un mouton indépendant, à caractère fort, vigoureux et très robuste dans des climats arides et des pâturages accidentés. Les North Country Cheviot s'adaptent mieux aux systèmes basés sur le pâturage où la gestion n'est pas intensive.

Les brebis ont un instinct maternel développé et ont des agnelages faciles. Les agneaux sont vigoureux à la naissance et ont de bons taux de survie. Bien qu'ils démontrent une vitesse de croissance moyenne, la qualité de leurs carcasses est très bonne avec un pourcentage de rendement au-dessus de la moyenne. Des béliers North Country Cheviot sont souvent utilisés dans les schémas de croisement dans le but de transmettre tant les caractéristiques maternelles que bouchères de la race.

La North Country Cheviot es una raza que ha sido ampliamente usada en el norte de Inglaterra y Escocia, durante varios siglos. Es una oveja independiente, de voluntad fuerte, vigorosa y muy rústica en climas severos y pasturas pobres. Está bien adaptada a sistemas basados en pastoreo, donde el manejo no es intensivo.

Las hembras exhiben instintos maternos superiores y paren con facilidad. Los corderos son vigorosos al parto con excelente supervivencia. Aunque solo poseen una tasa de crecimiento promedio, la calidad de la canal es muy buena con un porcentaje de rendimiento superior al promedio. Los carneros North Country son usados frecuentemente en programas de cruzamiento para transmitir las fortalezas maternales de la raza así como para producir canales deseables.

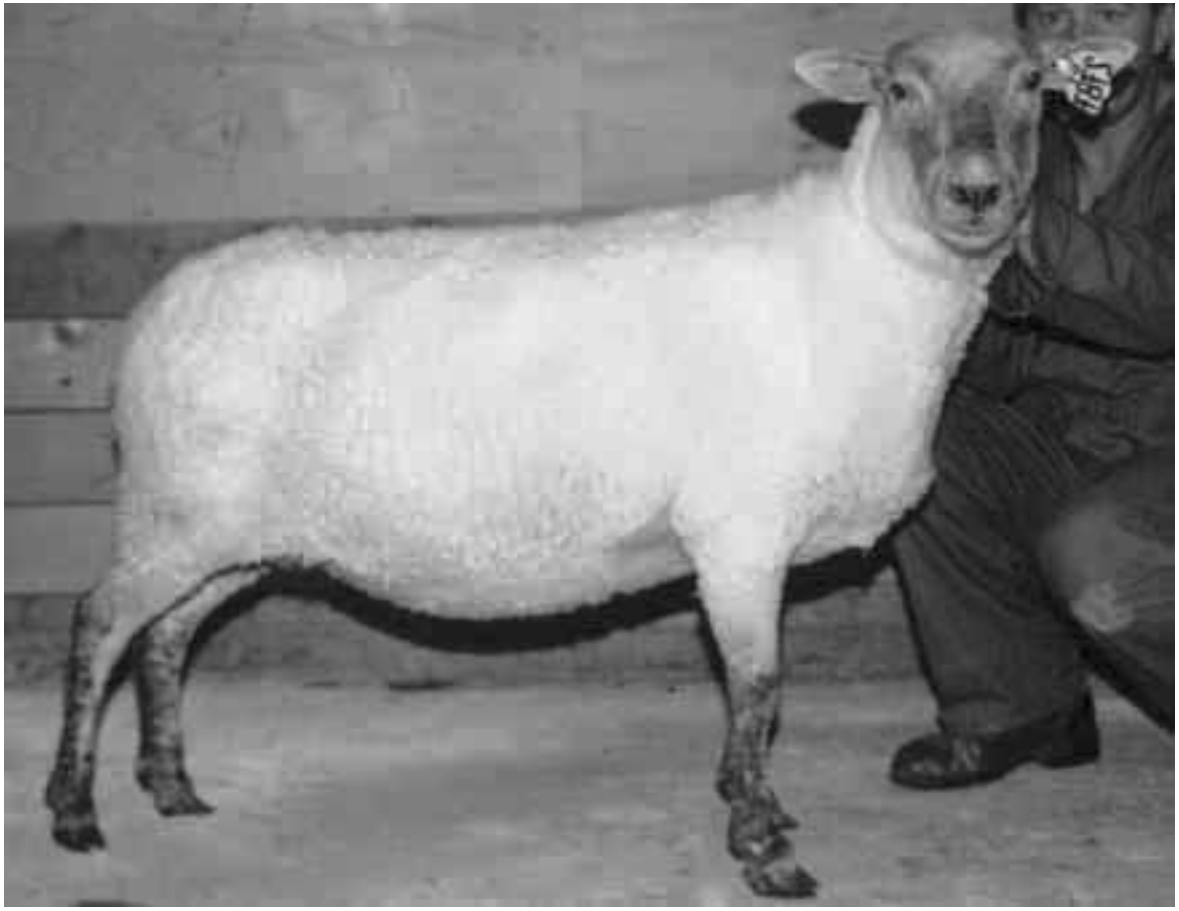
Outaouais Arcott

Arcott Outaouais

The Outaouais Arcott was one of three breeds developed at the Agriculture Canada research station near Ottawa. The Outaouais was produced by crossing a number of breeds but predominantly the Suffolk, Finnish Landrace, and Shropshire. The sheep resulting from this selection program were made available to Canadian producers in 1988.

The most striking feature of the Outaouais is its prolificacy. The ewes are well adapted to carrying large litters without losing body condition. Most mature ewes produce triplets or larger litters and both ewes and lambs convert feed very efficiently. The lambs are very fast growing to the 36-41 kg range but are a maternal breed and therefore have not been selected to serve the heavy lamb market.

Number Registered	Nombre enregistré	Individuos registrados	2328
Rams	Béliers	Carneros	80-100kg
Ewes	Brebis	Ovejas	75-90kg
Lamb/Ewe Percentage	Pourcentage d'agnelage	Prolificidad (Procentaje cordero/hembra)	260%
Fleece	Qualité de la toison	Vellón	Variable



L'Arcott Outaouais est une des trois races développées à la station de recherche d'Agriculture Canada près d'Ottawa.L'Outaouais a été produit en croisant un certain nombre de races, mais principalement le Suffolk, le Finnois et le Shropshire. Le mouton résultant de ce programme de sélection a été rendu disponible aux producteurs canadiens en 1988.

La caractéristique la plus saisissante de l'Outaouais est sa prolificité. Les brebis peuvent porter de nombreux agneaux sans perdre de condition de chair. La plupart des brebis adultes produisent des triplets ou plus. Les brebis et les agneaux ont un bon taux de conversion alimentaire. Les agneaux ont une forte croissance jusqu'à 36-41 kg, mais étant une race maternelle, ils n'ont pas été sélectionnés pour fournir le marché de l'agneau lourd.

La Outaouais Arcott fue una de las tres razas desarrolladas en la estación experimental de Agricultura Canadá cerca de Ottawa. La Outaouais fue producida mediante el cruzamiento de un gran número de raza, predominantemente la Suffolk, Finnish Landrace, y Shropshire. La oveja resultante de este programa de selección estuvo disponible para los productores Canadienses en 1988.

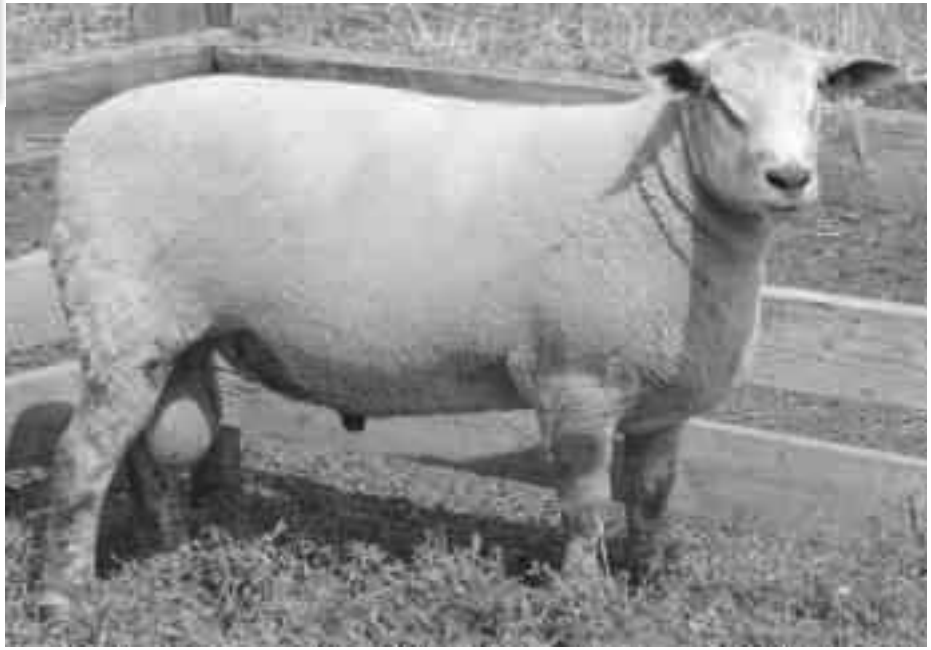
La característica más interesante de la Outaouais es su prolificidad. Las hembras están bien adaptadas a gestar grandes camadas sin perder condición corporal. Muchas hembras adultas producen trillizos o camadas mayores y tanto hembras y corderos convierten el alimento muy eficientemente. Los corderos crecen muy rápidamente hasta el rango de 36-41 Kg. pero ya que son una raza materna, no han sido seleccionados para utilizarse en el mercado de cordero pesado.

Canadian Arcott

Arcott Canadien

The Canadian Arcott was one of the three breeds developed at the Agriculture Canada research station near Ottawa. Canadian Arcotts were the result of a cross breeding program that included Ile de France and Suffolk to produce a new breed with strong meat characteristics. The mature sheep is medium sized, short and thick. The lambs are fast growing, meaty animals that finish well for either the light or heavy lamb market. They produce an excellent carcass with good meat to bone ratio. The ewes are easy lambers and require low to medium maintenance. They adapt well to either pasture or confinement management systems. The rams make excellent terminal sires to improve the meat characteristics of many other breeds.

Number Registered	Nombre enregistré	Individuos registrados	2136
Rams	Béliers	Carneros	120-150kg
Ewes	Brebis	Ovejas	85-115kg
Lamb/Ewe Percentage	Pourcentage d'agnelage	Prolificidad (Procentaje cordero/hembra)	180%
Fleece	Qualité de la toison	Vellón (Suave, brillante)	Soft, lustrous
Weight	Poids	Peso	3-3.5kg
Micron Count	Micron	Diámetro (microns)	25-33
Staple Length	Longueur de fibre	Longitud de la mecha	8-10cm



Le Arcott Canadien est une des trois races développées à la station de recherche d'Agriculture Canada près d'Ottawa. Le Arcott Canadien est le résultat d'un programme de croisement incluant l` Île de France et le Suffolk dans le but de produire une nouvelle race avec de bonnes caractéristiques bouchères. Le mouton adulte est de taille moyenne, court et épais. Les agneaux sont des animaux à forte croissance, de type boucher pour le marché d'agneau léger ou lourd. Ils produisent une excellente carcasse avec un bon rendement en viande. Les brebis ont de la facilité à agneler et requièrent relativement peu de soins. Ils s'adaptent bien au pâturage ou aux systèmes de réclusion en gestion intensive. Les mâles font d'excellents béliers terminaux afin d'améliorer les caractéristiques bouchères de beaucoup d'autres races.

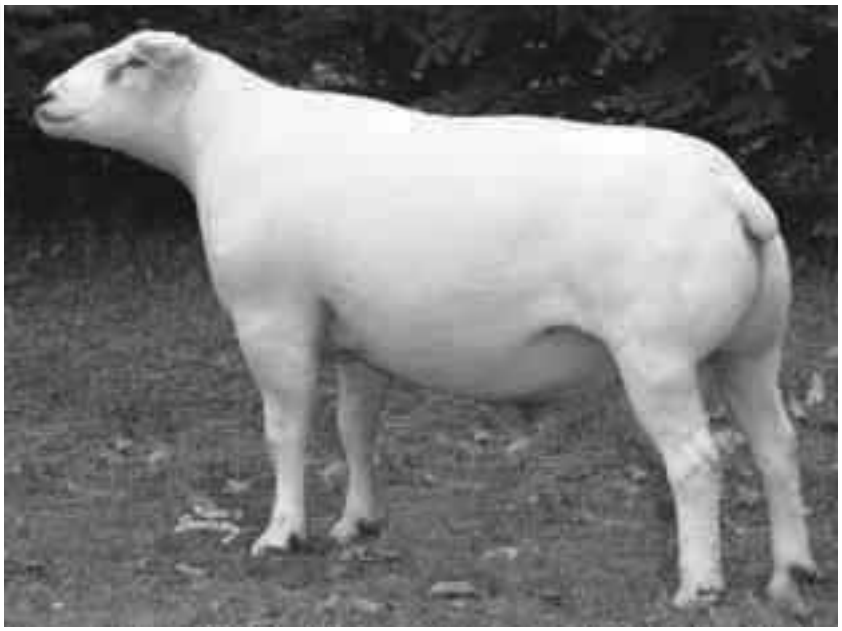
La Canadian Arcott fue una de las tres razas desarrolladas en la estación experimental de Agricultura Canadá cerca de Ottawa. La Canadian Arcott fue el resultado de un programa de cruzamiento y reproducción que incluyó las razas Ile de France y Suffolk para producir una nueva raza con características cárnicas fuertes. Las ovejas adultas son de tamaño medio, cortas y robustas. Los corderos son animales cárnicos de rápido crecimiento, que finalizan bien tanto para el mercado de cordero ligero o pesado. Producen una excelente canal con una buena relación entre carne y hueso. Las hembras paren con facilidad y requieren bajo a medio mantenimiento. Se adaptan bien tanto a sistemas de pastura como a manejo en estabulación. Los carneros son excelentes líneas terminales para mejorar las características cárnicas de muchas otras razas.

Texel

The Texel is a meat sheep that produces a lean, well muscled and high yielding carcass. Developed on the island of Texel off the coast of Holland in the early 1800's, the breed was imported in to Canada in the 1980's. Since that time, the breed has grown to make a significant contribution to the country's prime lamb trade. This has mainly been done through the use of Texel rams as terminal sires in commercial crossbreeding programs.

Although the ewes have only average prolificacy, they are very docile and easily managed. They adapt well to either pasture based or feedlot style management and show excellent feed conversion in all systems.

Number Registered	Nombre enregistré	Individuos registrados	1727
Rams	Béliers	Carneros	110-140kg
Ewes	Brebis	Ovejas	75-90kg
Lamb/Ewe Percentage	Pourcentage d'agnelage	Prolificidad (Procentaje cordero/hembra)	150%
Fleece	Qualité de la toison	Vellón (Medio, basta, voluminosa)	Medium, coarse, bulky
Weight	Poids	Peso	2.2-3.6kg
Staple Length	Longueur de fibre	Longitud de la mecha	9-15cm



Le Texel est un mouton à viande qui produit une carcasse maigre, bien musclée et à haut rendement. Développée dans l'île de Texel au large de la côte de la Hollande au début des années 1800, la race a été importée au Canada au cours des années 1980. Depuis ce temps, la race a évoluée pour apporter une contribution significative au commerce d'agneau du pays. Cela a principalement été réalisé grâce à l'utilisation de béliers Texel en terminal dans des programmes de croisement commerciaux. Bien que les brebis aient seulement une prolificité moyenne, elles sont très dociles et facilement gérées. Ces moutons s'adaptent bien à la gestion sur pâturage ou à l'engraissement en parc et démontrent une excellente conversion alimentaire dans tous les systèmes.

La Texel es una oveja de carne que produce canales magras, bien musculosas y de alto rendimiento. Desarrollada en la Isla de Texel, fuera de la costa de Holanda, a inicios de 1800, la raza fue importada a Canadá en la década de 1980. Desde aquella época, la raza ha crecido para realizar una contribución significativa al comercio de cordero del país. Esto se ha hecho principalmente a través del uso de carneros Texel como línea terminal en programas de cruzamiento comerciales.

Aunque las hembras poseen prolificidad promedio únicamente, son muy dóciles y fáciles de manejar. Se adaptan bien tanto a manejo en pasturas como en estabulación y muestran excelente conversión alimenticia en todos los sistemas.

Southdown

Southdown

The Southdown was developed in Sussex, England in the late 1700's and early 1800's and exported to the US shortly thereafter. In Canada it became known as the “Aberdeen Angus” of the sheep industry due to its ability to flesh out a small carcass. The breed declined drastically in the 1960's as a result of its very small stature and lambing difficulties. However breeding selection has restored the breed to a medium sized sheep, while preserving its feed conversion efficiency. As a result the breed has come back into favor for producing meaty carcasses for the medium and light lamb markets.

The Southdown is docile and adapts very well to confinement. Its size and quiet nature make the Southdown an excellent breed for starter flocks or 4-H projects for children. The ewes are generally maintained as purebreds. Southdown rams are widely used as terminal sires to put finish on crossbred lambs from other breeds. The Southdown does possess the ability to finish on pasture.

Number Registered	Nombre enregistré	Individuos registrados	1472
Rams	Béliers	Carneros	85-115kg
Ewes	Brebis	Ovejas	60-80kg
Lamb/Ewe Percentage	Pourcentage d’agnelage	Prolificidad (Procentaje cordero/hembra)	150%
Fleece	Qualité de la toison	Vellón (Fino, denso)	Dense, fine
Weight	Poids	Peso	2.7-3.5kg
Micron Count	Micron	Diámetro (micrones)	24-31
Staple Length	Longueur de fibre	Longitud de la mecha	4-5cm

Le Southdown a été développé au Sussex en Angleterre à la fin des années 1700 et au début des années 1800 et exporté aux États-Unis peu de temps après. Au Canada il s'est fait connaître comme le « Aberdeen Angus » de l'industrie ovine en raison de sa capacité à améliorer les petites carcasses. La race a décliné drastiquement au cours des années 1960 à cause de sa très petite stature et de ses difficultés à l'agnelage. Toutefois, la sélection a permis de restituer la race à un mouton de taille moyenne, tout en préservant sa bonne conversion alimentaire. En conséquence, la race est de nouveau utilisée pour la production de carcasses pour les marchés d'agneaux moyens et légers.

Le Southdown est docile et s'adapte très bien à l'élevage en bâtiment. Sa taille et sa nature calme font du Southdown une excellente race pour des troupeaux en démarrage ou des programmes de jeunes ruraux.

Les brebis sont généralement gardées en race pure. Les béliers Southdown sont utilisés en croisement terminal. Le Southdown a la capacité d'être élevé au pâturage jusqu'au poids du marché.

La Southdown fue desarrollada en Sussex: Inglaterra a finales del siglo XVIII y comienzos del siglo XIX y exportada a los EUA poco después. En Canadá llegó a ser conocida como la “Aberdeen Angus” de la industria ovina debido a su habilidad cárnica en canales pequeñas. La raza declinó drásticamente en la década de 1960 como resultado de su pequeña estatura y dificultad para parir… sin embargo, la selección reproductiva ha restaurado la raza hasta un tamaño medio, preservando su eficiencia en la conversión alimenticia. Como resultado la raza ha vuelto a ganar favor para la producción de canales musculosas para el mercado de cordero ligero y medio.

La Southdown es dócil y se adapta muy bien a la estabulación. Su tamaño y naturaleza tranquila hacen de la Southdown una excelente raza para rebaños en inicio o proyectos 4-H para niños.

Las ovejas son generalmente mantenidas como raza pura. Los carneros Southdown son ampliamente utilizados como línea terminal para finalizar corderos de otras razas. La Southdown posee la habilidad de finalizar en pastura.

Romanov

A native of the Volga River Valley northwest of Moscow, the Romanov is a fine boned medium sized sheep known for its remarkable prolificacy. The breed record is nine live healthy lambs from a single ewe. First exported to France in the 1970's, the breed came to Canada in 1980 as part of a research program in Lennoxville, Quebec. The breed was released into the Canadian industry in 1986.

The Romanov is extremely hardy and gains well to 30kg, producing a very lean carcass. Because of its fertility and hardiness Romanov genetics are used in replacement ewe lamb production in many intensive commercial operations. Romanovs cross very well with most breeds to produce a prolific hardy ewe with excellent maternal characteristics. Romanov cross lambs exhibit excellent hybrid vigor.

Number Registered	Nombre enregistré	Individuos registrados	1295
Rams	Béliers	Carneros	70-80kg
Ewes	Brebis	Ovejas	50-70kg
Lamb/Ewe Percentage	Pourcentage d'agnelage	Prolificidad (Procentaje cordero/hembra)	270%
Fleece	Qualité de la toison	Vellón (Basto, con fibras negras)	Coarse, black fibers
Weight	Poids	Peso	2.2-3.6kg
Staple Length	Longueur de fibre	Longitud de la mecha	10-13cm

Originaire de la Vallée du fleuve Volga au nord-ouest de Moscou, le Romanov est un mouton à ossature fine, de taille moyenne, reconnu pour sa prolificité remarquable. Le record de la race est de neuf agneaux vivants et en santé nés d'une seule brebis. D'abord exportée en France au cours des années 1970, la race est arrivée au Canada en 1890 dans le cadre d'un programme de recherche à Lennoxville au Québec. La race a été rendue disponible à l'industrie canadienne en 1986.

Le Romanov est extrêmement robuste, a une bonne croissance jusqu'à 30 kg et produit une carcasse très maigre. À cause de sa fertilité et de sa vigueur, la génétique du Romanov est utilisée dans la production d'agnelles de remplacement dans beaucoup de systèmes de production intensifs. Le Romanov se croise très bien avec la plupart des races pour produire une brebis prolifique, robuste avec d'excellentes caractéristiques maternelles. Les agneaux Romanov démontrent une excellente vigueur hybride.

Nativa del Valle del río Volga, al noroeste de Moscú, la Romanov es una oveja de huesos finos, tamaño medio, conocida por su notable prolificidad. El record de la raza es nueve corderos vivos y saludables de una sola hembra. Se exportó primeramente a Francia en la década de 1970, la raza llegó a Canadá en 1890 como parte de un programa de investigación en Lennoxville Québec. La raza fue lanzada a la industria Canadiense en 1986.

La Romanov es extremadamente rústica, y crece bien hasta los 30 Kg., produciendo una canal bastante magra. Debido a su fertilidad y rusticidad, la genética Romanov está siendo usada en la producción de corderas de reemplazo en muchas operaciones comerciales intensivas. La Romanov produce un cruce muy bueno con la mayoría de razas, para producir una hembra prolífica, rústica, con excelentes características maternales. Los corderos cruce Romanov exhiben excelente vigor híbrido.

Charollais

The Charollais was developed in the same region of France as Charolais cattle. Beginning in 1977, the Charollais was further improved in the UK and was exported to Canada as embryos, in 1994. The primary purpose of the breed in Canada is as a terminal sire for prime slaughter lamb production. The lambs have an excellent carcass with a wide long loin and a high lean meat yield. Charollais rams are ideal for using on ewe lambs or smaller framed ewes. The smaller head and wedge shaped body produces lambs that are easily delivered and vigorous at birth. The ewes work well in a pasture based or confinement system, lamb easily and are good mothers. The fleece of the purebred is of medium quality.

Number Registered	Nombre enregistré	Individuos registrados	1275
Rams	Béliers	Cameros	100-150kg
Ewes	Brebis	Ovejas	80-100kg
Lamb/Ewe Percentage	Pourcentage d'agnelage	Prolificidad (Procentaje cordero/hembra)	175%
Fleece	Qualité de la toison	Vellón (Denso, fino)	Dense, fine
Weight	Poids	Peso	1.5-2kg
Staple Length	Longueur de fibre	Longitud de la mecha	4-5cm

Le Charollais a été développé dans la même région de la France que les bovins Charolais. Depuis 1977, le Charollais a été amélioré au Royaume-Uni et des embryons ont été exportés au Canada en 1994. Au Canada, les béliers Charollais sont utilisés en croisement terminal pour la production d'agneaux de marché. Les agneaux ont une longe large et longue et un haut rendement en viande maigre. Les béliers Charollais produisent de petits agneaux à la naissance, il est donc judicieux de les utiliser sur des agnelles ou des brebis à plus petit gabarit. La tête plus petite et la forme pointue du corps des agneaux facilitent l'agnelage. Les agneaux sont vigoureux à la naissance. Les brebis performeront bien dans un système sur pâturage ou en bâtiment. Elles ont des agnelages faciles et sont de bonnes mères. La qualité de leur toison en race pure est moyenne.

La Charollais fue desarrollada en la misma región de Francia que el ganado Charollais. Comenzando en 1977, la Charollais fue posteriormente mejorada en el Reino Unido y fue exportada a Canadá, como embriones, en 1994. El propósito primario de la raza en Canadá es como raza terminal para producción de corderos de abasto de primera. Los corderos tienen excelentes lomos largos, y un alto rendimiento de carne magra. Los carneros Charollais producen crías fáciles de parir, y son ideales para su uso con maltonas, o hembras de tamaño pequeño. La cabeza pequeña y el cuerpo con forma de cuña producen corderos que son fácilmente paridos y vigorosos al parto. Las hembras producen bien en sistemas basados en pasturas o estabulados, paren con facilidad y son buenas madres. La calidad del vellón de los animales puros es de mediana calidad.

Border Leicester

One of the old British long wool breeds, the Border Leicester was imported from England to Canada in the mid-nineteenth century. The Border Leicester along with the Oxford became the dominant breeds of the early Canadian sheep industry. The emphasis on meat production after the 1950's caused Leicester numbers to decline. However, the Leicester line is present in many of the modern breeds and it remains an excellent maternal breed for producing lambs on pasture. The ewes are moderately prolific, good milkers and lamb easily. They are a forage based sheep and do not have a heavy protein requirement. Traditionally, they subsisted on pasture, hay and a light ration of oats. A Leicester ram is often used with Down breeds to produce an F1 ewe with good mothering ability and moderate prolificacy.

Number Registered	Nombre enregistré	Individuos registrados	1209
Rams	Béliers	Carneros	90-125kg
Ewes	Brebis	Ovejas	70-90kg
Lamb/Ewe Percentage	Pourcentage d'agnelage	Prolificidad (Procentaje cordero/hembra)	150%
Fleece	Qualité de la toison	Vellón (Larga, fuerte, brilante)	Long, strong, lustrous
Weight	Poids	Peso	4.5-6kg
Micron Count	Micron	Diámetro (micrones)	30-38.5
Staple Length	Longueur de fibre	Longitud de la mecha	12-25cm

Una de las razas Británicas antiguas de lana larga, la Border Leicester fue importada desde Inglaterra a Canadá a mediados del siglo XIX. Esta junto con la Oxford, llegó a ser una de las razas dominantes en la Industria ovina Canadiense inicial. El énfasis en la producción de carne después de la década de 1950 causó que la cantidad de raza Leicester disminuyera. Sin embargo, la línea Leicester se encuentra presente en muchas de las razas modernas y permanece como una excelente raza materna para producción de corderos en pastura. Las hembras son moderadamente prolíficas, con buena producción de leche y paren con facilidad. Son ovejas que basan su dieta en forraje y no tienen grandes requerimientos proteicos. Tradicionalmente, subsisten en pasturas, heno y una ración ligera de avena. Los carneros Leicester son frecuentemente utilizados con razas de Cara negra (Down) para producir hembras F1 con buena habilidad materna y prolificidad moderada.

Une des anciennes races britanniques à laine longue, le Border Leicester a été importé de l'Angleterre au Canada au milieu du 19ième siècle. Le Border Leicester et le Oxford, sont devenus les races dominantes de la première industrie canadienne du mouton. L'accent porté sur la production de viande après les années 1950 a causé une baisse du nombre de Leicester. Cependant, la génétique du Leicester est présente dans beaucoup de races modernes et elle demeure une excellente race maternelle pour produire des agneaux élevés au pâturage. Les brebis sont de bonne laitière, de prolificité moyenne et agnèlent facilement. Ils sont des moutons de pâturage et n'ont pas de grandes exigences en protéine. Traditionnellement, ils ont subsistés sur du pâturage, du foin et une petite quantité d'avoine. Un bélier Leicester est souvent utilisé avec des races Down pour produire une brebis F1 avec de bonnes aptitudes maternelles et une prolificité modérée.

East Friesian

East Friesian

The East Friesian Dairy Sheep originated in the Friesland area of Holland and Germany along with the Holstein dairy cow. Good feeding and careful genetic selection over several centuries has produced a high production milk sheep that is very docile and adapts well to intensive parlour milking systems.

The East Friesian is very prolific, and a good ewe will sustain a lactation period of 220 days averaging 400 liters of milk. Over the past 30 years the Friesian has been used in crossbreeding to improve the milk yields and prolificacy of other breeds. In Canada it was used to develop the Rideau Arcott. More recently a growing market for specialty cheeses has resulted in a significant growth in the number of East Friesian ewes being milked commercially.

Number Registered	Nombre enregistré	Individuos registrados	1079
Rams	Béliers	Carneros	90-100kg
Ewes	Brebis	Ovejas	79-90kg
Lamb/Ewe Percentage	Pourcentage d'agnelage	Prolificidad (Procentaje cordero/hembra)	230%
Fleece	Qualité de la toison	Vellón (Fino, blanco o negro)	Fine, white or black
Weight	Poids	Peso	3-6kg
Staple Length	Longueur de fibre	Longitud de la mecha	10-15cm
Liters/lactation	Liters/lactation	Litros/Lactancia	

Le mouton laitier East Friesian est originaire, tout comme la vache laitière Holstein, de la province de Frise au nord des Pays-Bas. Une bonne alimentation et une sélection génétique rigoureuse pendant plusieurs siècles ont produit un mouton avec une forte production laitière qui est très docile et s'adapte bien à la gestion intensive des salons de traite.

Le East Friesian est très prolifique. Une bonne brebis supportera une période de lactation de 220 jours, pour une production moyenne de 400 litres de lait. Au cours des 30 dernières années, le Friesian a été utilisé en croisement pour améliorer le rendement laitier et la prolificité d'autres races. Au Canada, il a été utilisé pour développer la race Arcott Rideau. Plus récemment, le développement du marché des fromages de spécialité a engendré un accroissement significatif du nombre de brebis East Friesian traites à des fins commerciales.

La oveja lechera East Friesian se originó en el area de Friesland de Holanda y Alemania, junto con la vaca lechera Holstein. Buena alimentación y cuidadosa selección genética a lo largo de varios siglos ha producido una oveja de alta producción lechera que es muy dócil y se adapta bien a sistemas intensivos de ordeño en salas. La East Friesian es muy prolífica, y una buena hembra mantendrá un periodo de lactancia de 220 días, con un promedio de 400 litros de leche. Los últimos 30 años, la Friesian ha sido utilizada en cruzamientos para mejorar la producción de leche y prolificidad de otras razas. En Canadá, fue utilizada para desarrollar la Rideau Arcott. Recientemente, un mercado creciente de quesos de especialidad ha resultado en un crecimiento significativo en la cantidad de hembras East Friesian ordeñadas comercialmente.

Oxford

The Oxford originated when British shepherds crossed Hampshire rams with Cotswold ewes in the mid 19th century. Exported to Canada in the 1860's, the breed became immediately popular for its toughness and adaptability. Their popularity has declined since the early 70's as a result of problems with wool-blindness and lack of fullness in the hindquarter. However the Canadian breed association has, more recently, made significant improvements in these areas and regained some of the breed's original popularity.

The ewes show superior mothering traits with a high survival rate for lambs. The lambs are slower to develop but gain very efficiently on grass. They require no pampering and thrive in a pasture based management system. Oxford rams are widely used as a terminal sire.

Number Registered	Nombre enregistré	Individuos registrados	980
Rams	Béliers	Carneros	90-135kg
Ewes	Brebis	Ovejas	70-90kg
Lamb/Ewe Percentage	Pourcentage d'agnelage	Prolificidad (Procentaje cordero/hembra)	150%
Fleece	Qualité de la toison	Vellón (Voluminosa, puntos pigmentados)	Bulky. Pigmented points
Weight	Poids	Peso	2.7-4.5kg
Micron Count	Micron	Diámetro (micrones)	39-34
Staple Length	Longueur de fibre	Longitud de la mecha	10-13cm

Le Oxford fut créé quand des bergers britanniques ont croisé des béliers Hampshire avec des brebis Cotswold au milieu du 19ième siècle. Exportée au Canada au cours des années 1860, la race est devenue immédiatement populaire pour sa résistance et sa polyvalence. Sa popularité a diminué au début des années 70 suite aux problèmes de cécité causé par la laine et le manque de développement dans leur gigot. Cependant, l'association canadienne de la race a, plus récemment, fait des améliorations significatives dans ces secteurs et a regagné un peu de la popularité originale de la race.

Les brebis montrent de bonnes caractéristiques maternelles et produisent des agneaux avec de hauts taux de survie. Les agneaux ont un développement plus lent, mais ont un gain très efficace sur l'herbe. Ils n'exigent aucun soin spécial et prospèrent dans un système de gestion basé sur le pâturage. Les béliers Oxford sont largement utilisés pour les croisements terminaux.

La Oxford se originó cuando ovejeros Británicos cruzaron carneros Hampshire con hembras Cotswold a mediados del siglo XIX. Exportada a Canadá en la década de 1860, la raza llegó a ser inmediatamente popular por su fortaleza y adaptabilidad. Su popularidad ha declinado desde el inicio de los años 70 como resultado de problemas por ceguera por lana y falta de musculatura en los cuartos traseros. Sin embargo, la asociación Canadiense de la raza he hecho, recientemente mejoras en estas áreas y la raza ha vuelto a ganar algo de su popularidad original.

Las hembras muestran características maternas superiores con una alta tasa de supervivencia de los corderos. Los corderos tardan en desarrollarse, pero crecen bien en pasturas. No requieren cuidados excesivos y prosperan en sistemas con manejo a base de pasturas. Los carneros Oxford son ampliamente utilizados como línea terminal.

Romney

The Romney is a British long wool sheep that evolved in the low wet Romney Marsh district in southeast England during the 13th century. Geographically isolated from the rest of the country, the Romney developed on its own and adapted well to its damp and often harsh environment. It was exported to New Zealand in 1853 where it flourished and became the dominant breed in that country. Because of its natural resistance to footrot and internal parasites, the Romney has become popular in the wet coastal regions of British Columbia, Canada.

The lambs are large and lean and convert feed efficiently. They are docile and easily managed but do not compete well when mixed with other breeds and commercial sheep. Romney wool is in demand with hand spinners who will pay a premium for good fleeces.

Number Registered	Nombre enregistré	Individuos registrados	792
Rams	Béliers	Carneros	90-100kg
Ewes	Brebis	Ovejas	65-80kg
Lamb/Ewe Percentage	Pourcentage d'agnelage	Prolificidad (Procentaje cordero/hembra)	175%
Fleece	Qualité de la toison	Vellón (Medio gruesa, brillante, blanca)	Medium coarse, lustrous, white
Weight	Poids	Peso	4.5kg
Micron Count	Micron	Diámetro (micrones)	31-36
Staple Length	Longueur de fibre	Longitud de la mecha	15-20cm

Le Romney est un mouton britannique à laine longue qui a été développé dans la zone basse et humide des Marais Romney dans le sud-est de l'Angleterre au cours du 13ième siècle. Géographiquement isolé du reste du pays, le Romney s'est développé seul et s'est bien adapté à son environnement humide et souvent rigoureux exporté en Nouvelle-Zélande en 1853 où il a prospéré et est devenu la race dominante dans ce pays. Au Canada, en raison de sa résistance naturelle au piétin et aux parasites internes, le Romney est devenu populaire dans les régions côtières humides de la Colombie Britannique.

Les agneaux sont grands et maigre et ont une bonne conversion alimentaire. Ils sont dociles et facilement gérés, mais ne rivalisent pas bien lorsque mélangés avec d'autres races ou avec des moutons commerciaux. La laine du Romney est en demande chez les fileurs artisanaux qui payeront une prime pour de bonnes toisons.

La Romney es una raza Británica de lana larga que evolucionó en bajo, húmedo, distrito de Romney Marsh en el sudeste de Inglaterra durante el siglo XIII. Geográficamente aislada del resto de país, la Romney desarrolló por si misma y se adaptó bien a su ambiente húmedo y frecuentemente severo. Fue exportada a Nueva Zelanda en 1853 donde floreció y llegó a ser la raza dominante en ese país. Debido a su resistencia natural al panadizo y ha parásitos internos, la Romney ha llegado a ser popular en las regiones húmedas, costeras de la Columbia Británica, Canadá.

Los corderos son grandes y magros, y convierten el alimento eficientemente. Es dócil y fácil de manejar pero no compite bien cuando se mezcla con otras razas y ovejas comerciales. La lana Romney posee demanda por parte de los hiladores manuales quienes pagan una prima por lanas de calidad.

Rambouillet

The Rambouillet is the French version of the Merino, created after 1786 when the Spanish relaxed their centuries-old ban on the export of Merino sheep. A purebred registry has been maintained since 1801 and most present day ancestry for the breed traces back to France and Germany. They are a range sheep, popular in the Canadian west because of their ability to survive in harsh conditions. They are long lived and have slightly higher prolificacy than the Merino.

Although the lambs finish more slowly they produce a good carcass, while preserving the hardiness and flocking instinct of the Rambouillet. Hand spinners and weavers pay a premium for the fleece.

Number Registered	Nombre enregistré	Individuos registrados	683
Rams	Béliers	Carneros	100-135kg
Ewes	Brebis	Ovejas	70-90kg
Lamb/Ewe Percentage	Pourcentage d'agnelage	Prolificidad (Procentaje cordero/hembra)	175%
Fleece	Qualité de la toison	Vellón	Fine, even
Weight	Poids	Peso	4.5-7.0kg
Micron Count	Micron	Diámetro (micrones)	19-25
Staple Length	Longueur de fibre	Longitud de la mecha	6-10cm

Le Rambouillet est la version française du Mérino, créé après 1786, moment où les espagnols ont levé l'interdiction, vieille de plusieurs siècles, d'exporter des moutons Mérino. Un registre de la race est tenu depuis 1801 et la plupart des ascendants de la race d'aujourd'hui remontent à la France et à l'Allemagne. C'est un mouton de pâturage, populaire dans l'Ouest canadien à cause de sa capacité à survivre dans de dures conditions. Ils ont une bonne longévité et une prolificité légèrement plus haute que le Mérino.

Bien que les agneaux atteignent le poids d'abattage plus lentement, ils produisent une bonne carcasse. Des races terminales sont souvent utilisées en croisement pour améliorer les caractéristiques bouchère tout en préservant la vigueur et l'instinct grégaire du Rambouillet. Les fileurs artisanaux payent une prime pour leur toison.

La Rambouillet es la versión Francesa del Merino, creada después de 1786 cuando los Españoles retiraron su antigua prohibición centenaria sobre la exportación de ovejas Merino. Un registro de animales puros se ha mantenido desde 1801 y muchos de los ancestros actuales de la raza se halan en Francia y Alemania. Es una oveja de pastizales, popular en el Oeste Canadiense debido a su habilidad para sobrevivir en condiciones difíciles. Son longevas y tienen una prolificidad ligeramente superior que el merino.

Aunque los corderos finalizan más lentamente, producen una buena canal y mantienan la rusticidad y el instinto de rebaño de la Rambouillet. Los hiladores manuales y tejedores pagan una prima por la lana.

Icelandic

Icelandic

The Icelandic sheep is descended from the Northern European short tail breeds and was brought to Iceland by the Vikings in the middle ages. The vigor, hardiness and variety of uses for these sheep made them a cornerstone of the Viking settlement and later development of Icelandic culture. The first importation into Canada occurred in 1985. Genetically the Icelandic sheep is the same today as it was 1100 years ago. It is possibly the oldest and purest domesticated breed of sheep in the world today.

The Icelandic is a medium sized, low set stocky sheep. They produce a thick light fleece in a variety of colors. Although they are generally a horned breed, there are a number of naturally polled individuals. They ewes are quite seasonal and generally breed from October – May. Traditionally they are grass fed and the lambs grow to 36-41 kg in 4-5 months and produce a good, lean carcass.

Canada maintains the registry for all the Icelandic sheep in Canada and the US. Numbers reflected here are for Canadian registrations only.

Le mouton Icelandic descend des races à queue courte du nord de l'Europe et a été apporté en Islande par les Vikings au Moyen-âge. La robustesse, la vigueur et la polyvalence de ce mouton en ont faits une pierre angulaire de la colonie viking et du développement ultérieur de la culture islandaise. La première importation au Canada a eu lieu en 1985. Génétiquement, le mouton Icelandic est le même aujourd'hui qu'il était il y a 1100 ans. C'est probablement la race de mouton domestiquée la plus vieille et la plus pure dans le monde aujourd'hui.

L'Islandais est un mouton de taille moyenne, bas et trapu. Il produit une toison épaisse et légère de couleurs variées. Bien qu'elle soit généralement une race à cornes, un certains nombres d'individus sont naturellement acère. Les brebis sont assez saisonnières et la période d'accouplement est généralement d'octobre à mai. Traditionnellement c'est un mouton de pâturage et les agneaux prennent 4 à 5 mois pour atteindre 36-41 kg et produisent une carcasse maigre.

Le Canada tient le registre de tous les moutons Icelandic du Canada et des États-Unis. Les nombres décrits ici correspondent aux enregistrements canadiens seulement.

La oveja Icelandic desciende de las razas de cola corta del Norte de Europa y fue llevada a Islandia por los Vikingos en la Edad Media. El vigor, rusticidad y variedad de usos de esta oveja fueron las piedras angulares para la colonización Vikinga y para el posterior desarrollo de la cultura de Islandia. La primera importación a Canadá ocurrió en 1985. Genéticamente la Oveja Icelandic es la misma hoy que hace 1100 años. Es posiblemente la raza pura ovina domesticada más antigua en el mundo actualmente.

La Icelandic es una oveja de tamaño medio, baja y fornida. Produce un vellón grueso, ligero de gran variedad de colores. Aunque es generalmente una raza con cuernos, existen un gran número de individuos naturalmente acornes. Las hembras son algo estacionales y generalmente se reproducen desde Octubre a mayo. Tradicionalmente se alimentan a base de pasturas y los corderos crecen hasta 36-41 Kg., en 4-5 meses y producen una canal buena y magra.

Canadá mantiene el registro de todas las ovejas Icelandic en Canadá y EUA. Los números que se muestran aquí son de los registros de Canadá únicamente.

Number Registered	Nombre enregistré	Individuos registrados	58
Rams	Béliers	Carneros	90-100kg
Ewes	Brebis	Ovejas	60-65kg
Lamb/Ewe Percentage	Pourcentage d'agnelage	Prolificidad (Procentaje cordero/hembra)	180%
Fleece	Qualité de la toison	Vellón (Abrigo grueso, borra fina y suave)	Coarse topcoat, fine, soft undercoat
Weight	Poids	Peso	2.2-2.7kg

Columbia

The Columbia was developed at the US research station in Idaho in the 1920's by crossing the Lincoln and the Rambouillet. The breed came to Canada after WW II and became popular on the western ranges and feedlots, both for meat and wool production. It is the largest of the pure breeds, is extremely hardy, long lived and has good flocking instinct.

The ewes have average prolificacy, lamb easily and require very little management. The lambs are raised primarily for the heavy market. They have an average rate of gain and produce a lean carcass. The wool is in demand amongst hand spinners and weavers.

Number Registered	Nombre enregistré	Individuos registrados	496
Rams	Béliers	Carneros	100-135kg
Ewes	Brebis	Ovejas	70-100kg
Lamb/Ewe Percentage	Pourcentage d'agnelage	Prolificidad (Procentaje cordero/hembra)	150%
Fleece	Qualité de la toison	Vellón (Media, pesada)	Medium, heavy
Weight	Poids	Peso	2.2-4.5kg
Micron Count	Micron	Diámetro (microns)	23-30
Staple Length	Longueur de fibre	Longitud de la mecha	8-15cm

Le Columbia a été développé à la station de recherche de l'Idaho aux États-Unis, au cours des années 1920, en croisant le Lincoln et le Rambouillet. La race est arrivée au Canada après la deuxième guerre mondial et est devenue populaire sur les pâturages de l'Ouest et dans les parcs d'engraissement, tant pour la production de laine que de viande. C'est la plus grande des races pures. Elle est extrêmement robuste, avec un bonne longévité et un bon instinct grégaire.

Les brebis ont une prolificité moyenne, agnèlent facilement et exigent très peu de soins. Les agneaux sont élevés principalement pour le marché de l'agneau lourd. Ils ont un taux de gain moyen et produisent une carcasse maigre. La laine est en demande auprès des fileurs artisanaux et des tisseurs.

La Columbia fue desarrollada en la estación de investigación de Idaho en EUA, en la década de 1920, mediante el cruzamiento de las razas Lincoln y Rambouillet. La raza llegó a Canadá después de WW II, y llegó a ser popular en las praderas y establos del Oeste tanto para producción de lana y carne. Es la más grande de las razas puras, extremadamente rústica, longeva y tiene buen instinto de rebaño.

Las hembras tienen prolificidad promedio, paren con facilidad y requieren muy poco mantenimiento. Los corderos son criados principalmente para el mercado pesado. Tienen una tasa de crecimiento promedio y producen canales magras. La lana tiene demanda de los tejedores e hiladores manuales.

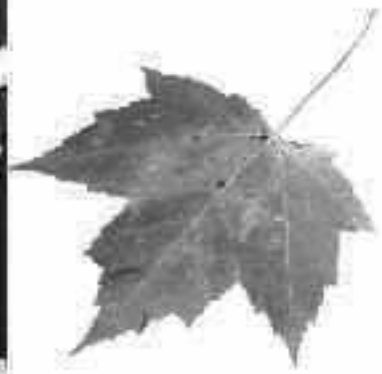
Lincoln

Lincoln

Possibly the original longwool breed of England, the Lincoln sheep is the largest of the traditional British breeds and was established in 1796. Animals were brought to Canada in the mid 19th century. Because they are a genetically pure sheep, they have been widely used to improve and develop modern breeds such as the Columbia, Corriedale and Panama.

Lincolns have a gentle disposition, good body conformation and superior mothering traits. Although the lambs grow quickly, they finish slowly and do not produce as good a carcass as the Down breeds. A Lincoln cross ewe improves vigor, size, conformation and fleece. When crossed again to a Down breed, the lambs produce a good finished carcass. The fleece commands premium prices because of its strength, length and luster.

Number Registered	Nombre enregistré	Individuos registrados	480
Rams	Béliers	Carneros	115-150kg
Ewes	Brebis	Ovejas	90-115kg
Lamb/Ewe Percentage	Pourcentage d'agnelage	Prolificidad (Procentaje cordero/hembra)	140%
Fleece	Qualité de la toison	Vellón (Media, pesada)	Coarse, strong, lustrous
Weight	Poids	Peso	6.8-11kg
Micron Count	Micron	Diámetro (micrones)	33.5-41
Staple Length	Longueur de fibre	Longitud de la mecha	18-20cm



Probablement l'authentique race à laine longue d'Angleterre, le Lincoln est la plus grande des races britanniques traditionnelles et a été établie en 1796. Les animaux ont été apportés au Canada au milieu du 19ième siècle. Parce que c'est un mouton génétiquement pure, il a été largement utilisé pour améliorer et développer des races modernes comme le Columbia, le Corriedale et le Panama.

Les Lincolns ont un tempérament doux, une bonne conformation et de bonnes caractéristiques maternelles. Bien que les agneaux croissent rapidement, ils ne produisent pas une aussi bonne carcasse que les races bouchères. Le croisement avec le Lincoln améliore la vigueur, la taille, la conformation et la toison des brebis. Ces femelles croisées de nouveau avec une race bouchère, produisent des agneaux ayant une bonne carcasse. La toison obtient des prix forts en raison de sa force, de sa longueur et de son lustre.

Posiblemente la raza original de lana larga de Inglaterra, la oveja Lincoln es la más grande de las razas Británicas tradicionales y fue establecida en 1796. Se llevaron animales a Canadá a mediados del siglo XIX. Debido a que es una oveja genéticamente pura, ha sido ampliamente utilizada para mejorar y desarrollar razas modernas tales como la Columbia, Corriedale y Panamá.

La Lincoln tiene una disposición tranquila, buena conformación corporal y características maternas superiores. Aunque los corderos crecen rápidamente, finalizan lentamente y no produce canales tan buenas como las de las razas Down. Una hembra mestiza con Lincoln mejora el vigor, tamaño, conformación y lana. Cuando se cruza nuevamente con una raza Down, los corderos producen una canal bien terminada. La lana obtiene precios con prima debido a su fortaleza, longitud y brillo.

Clun Forest

Clun Forest

Clun Forest sheep are a local breed of the upland hill country between England and Wales. The first flock was imported into Nova Scotia, Canada in the 1970's. They are easy keepers, hardy and able to fend for themselves under harsh conditions, while still producing good lambs. For these reasons, the breed has spread into many pasture based systems across Canada and the US, where they thrive in the desert conditions of Utah, the humidity of British Columbia and the cold of Minnesota.

Clun Forest sheep are a maternal breed. The ewes generally produce twins, are good mothers and good milkers. They are most often used in crossbreeding programs with Suffolk and Hampshire rams to produce market lambs. Clun Forest rams can be used on first time ewes to downsize the lambs and reduce lambing problems.

Number Registered	Nombre enregistré	Individuos registrados	434
Rams	Béliers	Carneros	75-105kg
Ewes	Brebis	Ovejas	65-80kg
Lamb/Ewe Percentage	Pourcentage d'agnelage	Prolificidad (Procentaje cordero/hembra)	180%
Fleece	Qualité de la toison	Vellón (Fino, denso)	Fine, dense
Weight	Poids	Peso	2.2-3.0kg
Staple Length	Longueur de fibre	Longitud de la mecha	8-13cm

Le Clun Forest est une race locale des collines des hautes terres entre l'Angleterre et le Pays de Galles. Le premier troupeau a été importé au Canada, en Nouvelle-Écosse, au cours des années 1970. Ils sont faciles d'entretien, robustes et capables de survivre sans assistance dans de dures conditions, en produisant toujours de bons agneaux. Pour ces raisons, la race est répandue dans beaucoup de systèmes basés sur le pâturage à travers le Canada et les États-Unis, où ils prospèrent dans les conditions de désert de l'Utah, l'humidité de la Colombie Britannique et le froid du Minnesota.

Le Clun Forest est une race maternelle. Les brebis produisent généralement des jumeaux, sont de bonnes mères et de bonnes laitières. Elles sont plus souvent utilisées en croisement avec des béliers Suffolk ou Hampshire pour produire des agneaux de marché. Le bélier Clun Forest peut être utilisé pour l'accouplement des agnelles dans le but de réduire la taille des agneaux et les problèmes à l'agnelage.

La Clun Forest es una raza local de las zonas altas y Colinas entre Inglaterra y Gales. El primer rebaño fue importado a Nova Scotia, Canadá en la década de 1970. Son fáciles de mantener, rústicos y pueden prosperar bajo condiciones difíciles, mientras continúan produciendo buenos corderos. Por estas razones, la raza se ha difundido en muchos sistemas basados en pasturas a través de Canadá y EUA, donde progresan en las condiciones desérticas de UTA, la humedad de la Columbia Británica y el frío de Minnesota.

La oveja Clun Forest es una raza materna. Las hembras generalmente producen gemelos, son buenas madres y producen buena cantidad de leche. Es utilizada frecuentemente en programas de cruzamiento con carneros Suffolk y Hampshire para producir corderos de abasto. Los carneros Clun Forest pueden ser utilizados en hembras primerizas para reducir el tamaño de los corderos y minimizar los problemas de parto.

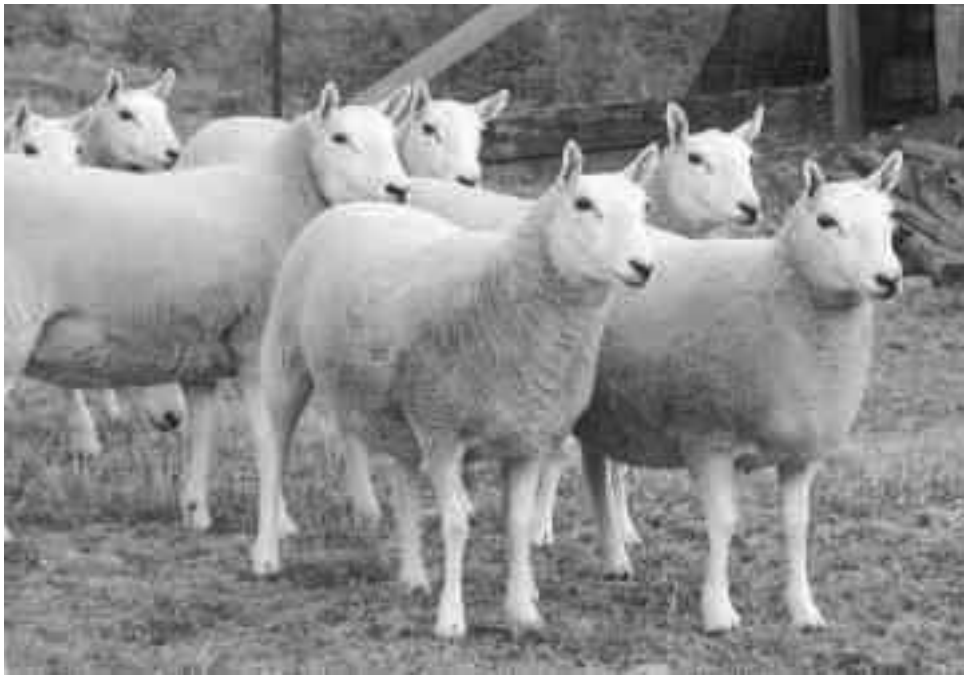
Border Cheviot

Border Cheviot

The Border Cheviot is a native of the Cheviot Hills of Scotland and is said to have originated when Merino sheep, carried by the Spanish Armada, washed ashore and crossed with the local breeds. Cheviots have been raised in Canada since the 1850's. Border Cheviots are extremely vigorous, hardy and good foragers that can survive harsher conditions than many other sheep. Border Cheviot ewes are smaller framed therefore take less feed for maintenance. They are a quick and alert breed who are excellent mothers requiring little help at lambing time, possessing good udders and small teats so that new born lambs can nurse easily. The lambs are vigorous and will finish on good pasture at 25-40 kg live weight.

Border Cheviot rams are used to produce smaller heads and shoulders for easier delivery in first time ewes.

Number Registered	Nombre enregistré	Individuos registrados	424
Rams	Béliers	Carneros	70-85kg
Ewes	Brebis	Ovejas	55-70kg
Lamb/Ewe Percentage	Pourcentage d'agnelage	Prolificidad (Procentaje cordero/hembra)	150%
Fleece	Qualité de la toison	Vellón (Larga, fuerte, brillante)	Long, strong, lustrous
Weight	Poids	Peso	1.8-2.2kg
Micron Count	Micron	Diámetro (micrones)	28-33
Staple Length	Longueur de fibre	Longitud de la mecha	10-13cm



Le Border Cheviot est originaire des Collines Cheviot de l'Écosse et aurait été produit quand les moutons Mérino, transportés par l'Armada espagnole, se sont échoués et accouplés avec des races locales. Les Cheviots sont élevés au Canada depuis les années 1850. Le Border Cheviot est extrêmement vigoureux, robuste, bon au pâturage et peut survivre dans des conditions plus dures que beaucoup d'autres moutons. Les brebis sont de petit gabarit et sont plus facile d'entretien. La race est rapide et alerte. Les brebis sont d'excellentes mères, qui exigent peu d'assistance à l'agnelage et ont de bons pis avec de petits trayons pour que les agneaux nouveaux-nés puissent se nourrir facilement. Les agneaux sont vigoureux et peuvent atteindre ,sur un bon pâturage, un poids d'abattage de 25 à 40 kg.

Les béliers Border Cheviot sont utilisés pour l'accouplement des agnelles de races « Down » pour produire des agneaux avec des têtes et des épaules plus petites pour un agnelage facile.

La Border Cheviot es native de las Colinas Cheviot de Escocia y se dice que se originó de la oveja Merino, llevadas por la Armada Española, establecidas en tierra y cruzadas con las razas locales. La Cheviot ha sido criada en Canadá desde 1850. Es extremadamente vigorosa, rústica y buena pastoreando, que puede sobrevivir en condiciones más difíciles que otras razas de ovejas. Las hembras son de talla pequeña y necesitan menor alimento para mantenimiento. Es una raza rápida y alerta y las hembras son excelentes madres, que requieren poca ayuda en la época de parto y tienen buenas ubres y pezones pequeños, así los corderos recién nacidos pueden lactar con facilidad. Los corderos son vigorosos y finalizan bien en pastura con peso vivo de 25-40 Kg.

Los carneros Border Cheviot son utilizados para producir corderos con cabezas y hombros más pequeños para facilitar el parto en primerizas.

Ile de France

This breed was developed in the 1830's and was first registered in 1892. Since 1933 they have been performance tested and have had their own test station since 1972. It is the dominant breed in France and was first imported to Canada in 1995. The Ile de France has been selected for two primary purposes: as a terminal sire to produce vigorous, hardy, and fast growing lambs with superior carcass traits; and as an improver for crossbreeding with maternal breeds in a commercial flock. In this capacity they add hardiness, longevity, feed conversion and out of season breeding ability to a ewe flock. They have an excellent flocking instinct and are very successful when raised on pasture. Their high wool quality is an asset when crossed with range breeds.

Number Registered	Nombre enregistré	Individuos registrados	274
Rams	Béliers	Carneros	100-150kg
Ewes	Brebis	Ovejas	85-95kg
Lamb/Ewe Percentage	Pourcentage d'agnelage	Prolificidad (Procentaje cordero/hembra)	170%
Fleece	Qualité de la toison	Vellón (Fina, limpia)	Fine, clean
Weight	Poids	Peso	5-6kg
Staple Length	Longueur de fibre	Longitud de la mecha	8-10cm

Cette race a été développée au cours des années 1830 et a été enregistrée pour la première fois en 1892. Depuis 1933, ils ont été évalués sur leurs performances de croissance et ont leur propre station de testage depuis 1972. C'est la race dominante en France et elle a été importée au Canada en 1995. L'Île de France a été choisi à deux fins : comme bélier terminal pour produire des agneaux vigoureux, robustes et à forte croissance, avec des caractéristiques de carcasse supérieurs et comme bélier améliorateur pour croiser avec des races maternelles dans un troupeau commercial. À ces qualités s'ajoutent la vigueur, la longévité, la bonne conversion alimentaire et la capacité à se reproduire en contre-saison. Ils ont un excellent instinct grégaire et ont beaucoup de succès lorsqu'ils sont élevés au pâturage. La qualité de leur laine est un atout lorsque croisé avec des races de pâturage.

Esta raza fue desarrollada en la década de 1830 y fue registrada por primera vez en 1892. Desde 1933 ha tenido pruebas de desempeño y tiene su propia estación de pruebas desde 1972. Es la raza dominante en Francia y fue importada a Canadá en 1995. La Ile de France ha sido seleccionada para dos propósitos primarios: Como raza terminal para producir corderos vigorosos, rústicos y de rápido crecimiento, con características de canal superiores, y para mejorar en cruzamiento con razas terminales en rebaños comerciales. En esta capacidad la raza añade rusticidad, longevidad, conversión alimenticia y habilidad de reproducción fuera de estación a rebaños de hembras. La alta calidad de su lana es un ingreso extra cuando se cruza con razas de pradera.

South African Meat Merino

South African Meat Merino

A small flock of German Meat Merinos were imported to South Africa in the 1930's as a research project. Through careful selection the breed grew in popularity and was eventually recognized as a separate breed in 1971. It is a dual purpose meat/wool sheep that is hardy and performs well in harsh, dry conditions. The breed is an efficient feed converter and performs well in both feedlots and on the range. It is an out of season breeder producing a heavy slaughter lamb at an early age. In addition the breed also produces a good quality fleece. Crossbreeding is common but the pure breed performs best.

Number Registered	Nombre enregistré	Individuos registrados	265
Rams	Béliers	Carneros	100-110kg
Ewes	Brebis	Ovejas	70-80kg
Lamb/Ewe Percentage	Pourcentage d'agnelage	Prolificidad (Procentaje cordero/hembra)	150%
Fleece	Qualité de la toison	Vellón (Media a fuerte)	Medium to strong
Weight	Poids	Peso	4-5kg
Micron Count	Micron	Diámetro (micrones)	28-33
Staple Length	Longueur de fibre	Longitud de la mecha	6-10cm

Un petit troupeau de German Meat Merino a été importé en Afrique du Sud au cours des années 1930 dans le cadre d'un projet de recherche. Par une sélection minutieuse, la race a gagnée en popularité et a finalement été reconnue comme une race distincte en 1971. C'est un mouton à double usage, viande et laine, qui est robuste et performe bien dans des conditions dures et sèches. La race a une bonne conversion alimentaire et performe bien tant au pâturage qu'en parc d'engraissement. Elle a la capacité de se reproduire hors saison et produit un jeune agneau lourd. De plus, la race produit aussi une toison de bonne qualité. Le croisement est fréquent mais la race pure performe mieux.

Un pequeño rebaño de Merinos Alemanes de carne fue importado a Sudáfrica en la década de 1930 como un proyecto de investigación. A través de selección cuidadosa la raza creció en popularidad y fue eventualmente reconocida como una raza diferente en 1971. Es una oveja de doble propósito carne/lana que es rústica y rinde bien en condicones severas y secas. La raza es eficiente convertidota de alimento y progresa bien tanto en estabulación como en praderas. Se puede reproducir fuera de temporada, produciendo corderos de abasto pesados a edades tempranas. Adicionalmente, la raza también produce lana de buena calidad. Es común el cruzamiento, pero como raza pura rinde mejor.

Shropshire

The Shropshire is a Down breed developed by crossing horned sheep with Cotswold, Leicester and Southdown. They were imported to Canada in the 1860's and for nearly a century were one of the country's most popular breeds. The breed declined drastically after the 1950's and they are currently on the rare breeds list. Docile, with a sound constitution, they are extremely hardy, enabling efficient flock management involving minimal time and effort. Rams are renowned terminal sires, robust with good conformation, hardy and long lived. Ewes make excellent mothers; have abundant milk, and reproductive longevity. The lambs produce an excellent carcass at lighter weights. The fleece is heavier and of better quality than the other Down breeds.

Number Registered	Nombre enregistré	Individuos registrados	228
Rams	Béliers	Carneros	90-120kg
Ewes	Brebis	Ovejas	63-90kg
Lamb/Ewe Percentage	Pourcentage d'agnelage	Prolificidad (Procentaje cordero/hembra)	180%
Fleece	Qualité de la toison	Vellón (Fino, denso)	Fine, dense
Weight	Poids	Peso	1.8-2.5kg
Staple Length	Longueur de fibre	Longitud de la mecha	10-15cm

Le Shropshire est une race « Down » développée en croisant des moutons à corne avec le Cotswold, le Leicester et le Southdown. Ils ont été importés au Canada au cours des années 1860 et pendant presqu'un siècle étaient une des races les plus populaires du pays. La race a déclinée drastiquement après les années 1950 et elle est actuellement considérée comme une race rare. Dociles, avec une constitution saine, ils sont extrêmement robustes, permettant une gestion de troupeau efficace avec un minimum de temps et d'effort. Les mâles sont des béliers terminaux réputés, robustes avec une bonne conformation et une bonne longévité. Les brebis font d'excellentes mères, ont une production laitière abondante et une longue durée de vie productive. Les agneaux produisent une excellente carcasse à un poids plus léger. La toison est plus lourde et de meilleure qualité que d'autres races « Down ».

La Shropshire es una raza Down desarrollada mediante el cruzamiento de ovejas cornudas con la Cotswold, Leicester y Southdown. Fueron importadas a Canadá en la década de 1860 y por casi un siglo fue una de las razas más importantes del país. La raza declinó drásticamente después de 1950 y actualmente se encuentra en la lista de razas poco comunes. Dócil, con una buena constitución, son extremadamente rústicas, permitiendo un manejo eficiente del rebaño, involucrando mínimo tiempo y esfuerzo. Los carneros son renombrados como línea terminal, robustos con buena conformación, rústicos y longevos. Las hembras son excelentes madres, tienen abundante leche y longevidad reproductiva. Los corderos producen excelentes canales a pesos ligeros. La lana es pesada y de mejor calidad que la de las otras razas Down.

Cotswold

The Cotswold is one of the oldest longwool breeds of England. Imported to North America during the 19th century, they were used widely in the US and Canada. After 1920 their numbers declined drastically as markets favored the Merino for wool and the Dorset and Suffolk for meat. The Cotswold is a large docile ewe that is an easy keeper, good mother and best suited to pasture management. The lambs are slow to finish and the ewes are often crossed with Dorset or Suffolk rams to produce a vigorous fast growing meat lamb.

Number Registered	Nombre enregistré	Individuos registrados	223
Rams	Béliers	Carneros	115-130kg
Ewes	Brebis	Ovejas	80-100kg
Lamb/Ewe Percentage	Pourcentage d'agnelage	Prolificidad (Procentaje cordero/hembra)	150%
Fleece	Qualité de la toison	Vellón (Larga, brillante, blanco plateada)	Long, lustrous, silvery white
Weight	Poids	Peso	4.7kg
Micron Count	Micron	Diámetro (micrones)	37-40
Staple Length	Longueur de fibre	Longitud de la mecha	5-25cm

Le Cotswold est une des plus vieilles races à laine longue d'Angleterre. Importés en Amérique du Nord au cours du 19ième siècle, ils ont été largement utilisés aux États-Unis et au Canada. Après 1920 leur nombre a drastiquement diminué alors que les marchés ont favorisé le Mérino pour la laine et le Dorset et le Suffolk pour la viande. Le Cotswold est une grande brebis docile qui se garde facilement et une bonne mère mieux adaptée à la gestion au pâturage. Les agneaux tardent à atteindre le bon poids d'abattage et les brebis sont souvent croisées avec des béliers Dorset ou Suffolk pour produire un agneau de marché vigoureux, avec une forte croissance.

La Cotswold es una de las razas de lana larga más antiguas de Inglaterra. Importada a Norte América durante el siglo XIX, fue utilizada ampliamente en los EUA y Canadá. Después de 1920 su número disminuyó drásticamente ya que los mercados favorecieron al Merino por la lana y a la Dorset y Suffolk por la carne. La Cotswold es una oveja grande, dócil que es facil de mantener, buena madre y mejor adaptada para manejo en pastura. Los corderos finalizan lentamente y las hembras frecuentemente son cruzadas con carneros Dorset o Suffolk para producir corderos musculosos vigorosos y de rápido crecimiento.

Jacob

Their true origins are not known; however documentation suggests these Spanish horned sheep were washed ashore from shipwrecks in the attempted invasion of England by the Spanish Armada. These sheep when crossed with the native flocks of Northern England and Scotland produced the breed we know today. Being a carrier of the polycerate gene they can produce 2, 4, 5 or 6 horns. The ewes are also horned. Handsome and hardy, the Jacob is ideal for the small flock owner.

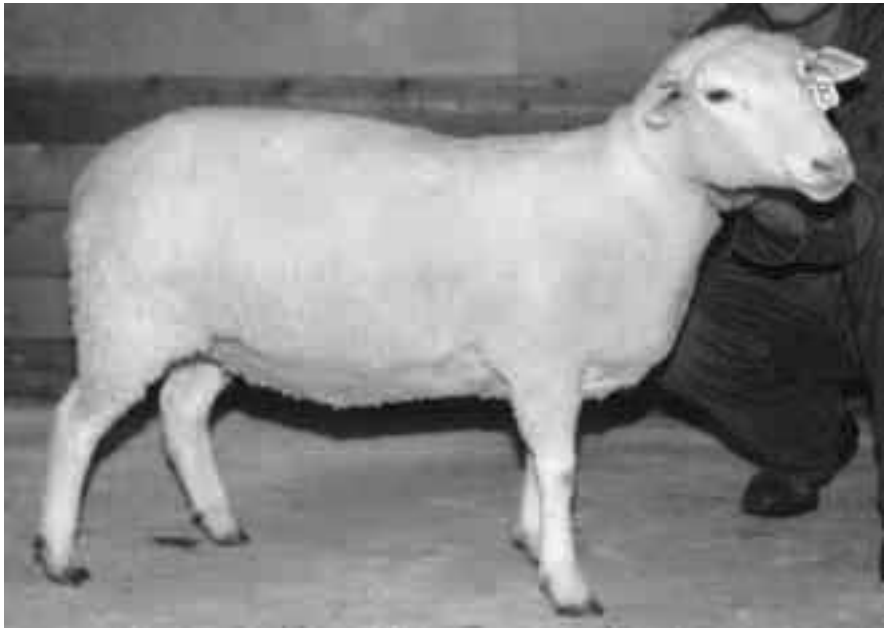
Number Registered	Nombre enregistré	Individuos registrados	194
Rams	Béliers	Carneros	54-82kg
Ewes	Brebis	Ovejas	36-54kg
Lamb/Ewe Percentage	Pourcentage d'agnelage	Prolificidad (Procentaje cordero/hembra)	200%
Fleece	Qualité de la toison	Vellón (Larga, brillante, blanco plateada)	Multi-colored
Weight	Poids	Peso	1.5-1.8kg
Micron Count	Micron	Diámetro (micrones)	variable
Staple Length	Longueur de fibre	Longitud de la mecha	7-10cm

Leur vraie origine est inconnue, cependant, la documentation suggère que ce mouton à corne espagnol se soit échoué lors du naufrage de bateaux pendant la tentative d'invasion de l'Angleterre par l'Armada espagnole. Ce mouton croisé avec les troupeaux natifs de l'Angleterre du Nord et de l'Écosse a produit la race que nous connaissons aujourd'hui. Étant un porteur du gène de cornes multiples, ils peuvent produire 2, 4, 5 ou 6 cornes. Les brebis sont aussi cornues. Beau et robuste, le Jacob est idéal pour le propriétaire de petit troupeau.

Su verdadero origen es desconocido, sin embargo, la documentación sugiere, que ovejas con cuernos españolas fueron llevadas a las costas desde barcos en el intento de invasión de Inglaterra, por la Armada Española. Estas ovejas cruzadas con los rebaños nativos del norte de Inglaterra y Escocia produjeron la raza que conocemos actualmente. Como portadora del gen polycerate, pueden producir 2, 4, 5 o 6 cuernos. Las hembras también poseen cuernos. Atractiva y rústica, la Jacob es ideal para formar pequeños rebaños.

DLS

The DLS was developed at Lennoxville, Quebec between 1965 and 1988. By using the Dorset, Leicester and Suffolk genetics, they produced a sheep that consistently breeds from June-August without external manipulation and has excellent meat characteristics. They adapt well to accelerated lambing programs.



Number Registered	Nombre enregistré	Individuos registrados	137
Rams	Béliers	Carneros	85-105kg
Ewes	Brebis	Ovejas	60-70kg
Lamb/Ewe Percentage	Pourcentage d'agnelage	Prolificidad (Procentaje cordero/hembra)	150%
Fleece	Qualité de la toison	Vellón	Variable

Le DLS a été développé à Lennoxville, au Québec entre 1965 et 1988. En utilisant le Dorset, le Leicester et le Suffolk, pour produire un mouton qui s'accouple d'août à juin sans intervention externe et a d'excellentes caractéristiques bouchères. Le DLS s'adapte bien aux programmes d'agnelages accélérés.

La DLS fue desarrollada en Lennoxville, Quebec, entre 1965 y 1988. Usando genética Dorset, Leicester y Suffolk, se produjo una oveja que se reproduce constantemente desde junio a agosto sin manipulación externa y tiene excelentes características cárnicas. Se adapta bien a programas de parición acelerados.

Corriedale

Corriedale

The Corriedale was developed in New Zealand as breeders attempted to improve the meat characteristics of the Merino by crossing with longwool breeds such as the Lincoln. The Corriedale was imported into Canada from New Zealand and for many years was a popular dual purpose breed. Its popularity has declined with the decline of the wool industry.

Number Registered	Nombre enregistré	Individuos registrados	115
Rams	Béliers	Carneros	80-125kg
Ewes	Brebis	Ovejas	60-80kg
Lamb/Ewe Percentage	Pourcentage d'agnelage	Prolificidad (Procentaje cordero/hembra)	150%
Fleece	Qualité de la toison	Vellón	Bright, soft
Weight	Poids	Peso	5.0-6.5kg
Micron Count	Micron	Diámetro (micrones)	22-34
Staple Length	Longueur de fibre	Longitud de la mecha	8-13cm

Le Corriedale a été développé en Nouvelle-Zélande quand les éleveurs ont essayé d'améliorer les caractéristiques bouchères du Mérino en le croisant avec des races à laine longue tel que le Lincoln. Le Corriedale a été importé au Canada de la Nouvelle-Zélande et a été, pendant plusieurs années, une race à double fin très populaire. Sa popularité a décliné avec celle de l'industrie de laine.

La Corriedale fue desarrollada en Nueva Zelanda cuando los productores trataron de mejorar las características de producción de carne del Merino mediante el cruzamiento de razas de lana larga como la Lincoln. La Corriedale fue importada a Canadá desde Nueva Zelanda y por muchos años fue una raza popular de doble propósito. Su popularidad ha disminuido junto con la de la industria de la lana.

Berrichon du Cher

Berrichon du Cher

This large framed sheep was developed in the arid southwest of France in the late 19th century by crossing the Spanish Merino with English longwool breeds. Ewes are often used in crossbreeding where its vigor and good conformation enable it to produce heavy lambs, without excess fat, any time of the year. Rams are used as terminal sires to improve carcass traits.

Number Registered	Nombre enregistré	Individuos registrados	43
Rams	Béliers	Carneros	90-110kg
Ewes	Brebis	Ovejas	80-90kg
Lamb/Ewe Percentage	Pourcentage d'agnelage	Prolificidad (Procentaje cordero/hembra)	160%
Fleece	Qualité de la toison	Vellón (Semi-fino, denso)	Semi-fine, dense
Weight	Poids	Peso	3.4kg
Staple Length	Longueur	Longitud de la mecha	8-9cm

Ce mouton à grand gabarit a été développé dans l'aride sud-ouest de la France à la fin du 19ième siècle en croisant le Mérino espagnol avec des races anglaise à laine longue. La brebis est souvent utilisée en croisement . Sa vigueur et sa bonne conformation lui permettent de produire des agneaux lourds, sans excès de gras tout au long de l'année. Les béliers sont utilisés en croisement terminal pour améliorer la qualité des carcasses.

Esta oveja de talla grande fue desarrollada en el árido sudoeste de Francia a finales del siglo XIX mediante el cruzamiento de Merino español con razas inglesas de lana larga. Las hembras son frecuentemente utilizadas en cruzamiento donde su vigor y conformación permiten la producción de corderos pesados, sin exceso de grasa, en cualquier época del año. Los carneros son usados como línea terminal para mejorar las características de la canal.

Rouge de L'Ouest

This breed is the result of crossing of Blue-faced Wensleydale rams on local sheep in the west of France in the 19th century. It is a large framed animal with a coppery red head and front legs and is valued for its early sexual maturity, prolificacy and milk production.

Number Registered	Nombre enregistré	Individuos registrados	41
Rams	Béliers	Carneros	95-120kg
Ewes	Brebis	Ovejas	70-90kg
Lamb/Ewe Percentage	Pourcentage d'agnelage	Prolificidad (Procentaje cordero/hembra)	180%
Fleece	Qualité de la toison	Vellón (Denso, fino)	Dense, fine
Weight	Poids	Peso	2.7-3.5kg
Staple Length	Longueur de fibre	Longitud de la mecha	4-5cm

Cette race est le résultat du croisement de béliers Blue-faced Wensleydale avec des moutons locaux de l'ouest de la France au 19ième siècle. C'est un mouton de grand gabarit avec une tête et des membres antérieurs de couleur cuivre. Il est valorisé pour sa maturité sexuelle hâtive, sa prolificité et sa production laitière.

Esta raza es el resultado del cruzamiento de carneros Cara azul Wensleydale con ovejas locales en el oeste de Francia en el siglo XIX. Es un animal de talla grande con una cabeza y patas delanteras de color rojo cobrizo y es conocido por su madurez sexual temprana, prolificidad y producción de leche.

Blackface

The Blackface breed is the most numerous breed in Britain accounting for over three million ewes, representing 16% of the British pure-bred ewe flock. The outstanding qualities of the breed are survivability, adaptability and versatility, with the ability to fit into any farming situation. They are one of the hardiest sheep breeds and are the backbone of the Scottish sheep industry.

Number Registered	Nombre enregistré	Individuos registrados	40
Rams	Béliers	Carneros	70-80kg
Ewes	Brebis	Ovejas	50-70kg
Lamb/Ewe Percentage	Pourcentage d'agnelage	Prolificidad (Procentaje cordero/hembra)	10-150%
Fleece	Qualité de la toison	Vellón	Variable

La race Blackface est la race la plus nombreuse en Grande-Bretagne, avec plus de trois millions de brebis, représentant 16 % du cheptel de brebis britannique de race. Les qualités distinctives de la race sont l'instinct de survie, la facilité d'adaptation et la polyvalence, lui permettant d'évoluer dans n'importe quel milieu agricole. C'est une des races les plus robustes et est le point d'appui de l'industrie ovine écossaise.

La raza Blackface es la más numerosa en Gran Bretaña, con un número de más de tres millones de hembras, representando el 16% del rebaño Británico de hembras puras. Las características más sobresalientes de la raza son la supervivencia, adaptabilidad y versatilidad, junto con la habilidad de calzar en cualquier situación de manejo. Es una de las razas más rústicas de ovejas y es la columna vertebral de la industria ovina escocesa.

British Milk Sheep

Developed during the 1970's in Wiltshire and Northumberland, the British Milk Sheep is the result of crossbreeding the East Friesian, Blue-faced Leicester, Polled Dorset and LLeyn sheep. It is a dual purpose meat/dairy breed with high prolificacy. When crossed with other breeds the BMS will improve prolificacy and milking ability.

Number Registered	Nombre enregistré	Individuos registrados	36
Rams	Béliers	Carneros	80-110kg
Ewes	Brebis	Ovejas	70-90kg
Lamb/Ewe Percentage	Pourcentage d'agnelage	Prolificidad (Procentaje cordero/hembra)	220%
Fleece	Qualité de la toison	Vellón (Fino, medio brilloso)	Fine, demi-lustre
Weight	Poids	Peso	4.0-4.5kg
Staple Length	Longueur de fibre	Longitud de la mecha	10-15cm
Liters/lactation	Micron	Litros/Lactancia	Up to 400

Développé durant les années 1970 dans le Wiltshire et le Northumberland, le British milk sheep est le résultat du croisement du East Friesian, du Blue Faced Leicester, du Dorset et du LLeyn. C'est une race à double fin, viande et lait, avec une forte prolificité. Lorsque croisé avec d'autres races, le British milk sheep améliore la capacité laitière et la prolificité.

Desarrollada durante la década de 1970 en Wiltshire y Northumberland, la Britsh Milk Sheep es el resultado del cruzamiento de razas East Friesian, Blue-Facede Leicester, Polled Dorset y Hellín. Es una oveja de doble propósito carne/leche con alta prolificidad. Cuando se cruza con otras razas la BMS mejorará la prolificidad y la habilidad lechera.

Shetland

The Shetland is a native of the Shetland Isles, located in the North Sea off the coast of Scotland. In this remote, rugged and harsh environment, the Shetland developed over a thousand years to become a hardy, self reliant breed. It is kept primarily for its fine, soft fleece which appears in a range of eleven natural colors.
** many Canadian Shetlands are registered with the North American Shetland Sheep Association in the USA*

Number Registered	Nombre enregistré	Individuos registrados	13*
Rams	Béliers	Carneros	40-75kg
Ewes	Brebis	Ovejas	35-60kg
Lamb/Ewe Percentage	Pourcentage d'agnelage	Prolificidad (Procentaje cordero/hembra)	140%
Fleece	Qualité de la toison	Vellón (Fino, suave, coloreado)	Fine, soft, colored
Weight	Poids	Peso	1.0-1.8kg
Micron Count	Micron	Diámetro (micrones)	20-25
Staple Length	Longueur de fibre	Longitud de la mecha	5-12cm

Le Shetland est originaire des Îles du Shetland, localisée dans la Mer du Nord au large de la côte de l'Écosse. Dans cet environnement éloigné, rude et dur, le Shetland s'est développé, pendant plus de mille ans, pour devenir robuste et indépendant. Il est élevé principalement pour son excellente toison douce qui apparaît dans une gamme de onze couleurs naturelles.
** Beaucoup de Shetlands Canadien sont enregistrés avec la North American Shetland Sheep Association aux Etats-Unis*

La Shetland es native de las Islas Shetland, ubicadas en el mar del norte de la costa de Escocia. En este ambiente remoto, escabroso y severo, la Shetland se desarrolló durante más de mil años para llegar a ser una raza rústica e independiente. Se cría básicamente por su lana, fina y suave, que aparece en un rango de once colores naturales.
** muchas Shetland Canadienses están registradas en la Asociación de Ovejas Shetland de Norte América, en los EUA.*

Karakul

The Karakul originated on the high desert plains east of the Caspian Sea and was the traditional source of lambskin and wool for Persian carpets. First imported into Canada at the beginning of the 20th century, it is now the only fat tailed sheep in Canada. They are all season breeders and produce a long, lean carcass.

Number Registered	Nombre enregistré	Individuos registrados	13*
Rams	Béliers	Carneros	40-75kg
Ewes	Brebis	Ovejas	35-60kg
Lamb/Ewe Percentage	Pourcentage d'agnelage	Prolificidad (Procentaje cordero/hembra)	180%
Fleece	Qualité de la toison	Vellón (Basto, muy fuerte, negro o gris)	Fine, soft, colored
Weight	Poids	Peso	1.0-1.8kg
Staple Length	Longueur de fibre	Longitud de la mecha	5-12cm

Le Karakul est originaire des plaines désertiques à l'est de la Mer Caspienne et était la source traditionnelle de peaux d'agneaux et de laine pour la fabrication des tapis persans. D'abord importé au Canada au début du 20ème siècle, c'est maintenant le seul mouton à queue grasse au Canada. Ils peuvent s'accoupler tout au long de l'année et produisent une carcasse longue et maigre.

La Karakul se originó en los llanos altos del desierto del Mar Caspio y fue la fuente tradicional de piel de cordero y lana para las alfombras Persas. Importada a Canadá a inicios del siglo XX, es ahora la única oveja de cola grasa en Canadá. Se reproducen en cualquier estación y producen canales grandes y magras.

Merino

The oldest established breed in the world, the Merino is named after a nomadic Berber tribe of North Africa who brought their sheep with them to Spain in the 12th century. After 1786 the Spaniards relaxed the ban on exports of breeding stock and the hardy, drought tolerant Merinos spread throughout the world as the predominant wool producing breed.

Number Registered	Nombre enregistré	Individuos registrados	10
Rams	Béliers	Carneros	115-150kg
Ewes	Brebis	Ovejas	90-115kg
Lamb/Ewe Percentage	Pourcentage d'agnelage	Prolificidad (Procentaje cordero/hembra)	125%
Fleece	Qualité de la toison	Vellón (Fino, denso y voluminoso)	Fine, thick and bulky
Weight	Poids	Peso	4-6kg
Micron Count	Micron	Diámetro (micrones)	<24
Staple Length	Longueur de fibre	Longitud de la mecha	6-10cm

La plus vieille race reconnue dans le monde, le Merino tient son nom d'une tribu berbère nomade du Nord de l'Afrique qui a apporté ses moutons en Espagne au 12ième siècle. Après 1786, les Espagnols ont assoupli l'interdiction d'exporter des sujets reproducteurs et le Mérino, robuste et tolérant à la sécheresse s'est répandue dans le monde entier en tant que race à laine prédominante.

La raza establecida más Antigua del mundo, la Merino recibe su nombre por una tribu nómada Berber del norte de África quienes llevaron sus ovejas con ellos a España en el siglo XII. Después de 1786, los españoles retiraron la prohibición de exportación de reproductores y el Merino rústico y tolerante al calor se difundió a nivel mundial como la raza predominante de producción de lana.

Targhee

Targhee

The Targhee was developed at the Dubois, Idaho experimental station starting in 1926 in response to a demand for a western range sheep with improved meat characteristics. The Targhee is an easy keeper, long lived, lambs on pasture and produces an excellent fleece.

Number Registered	Nombre enregistré	Individuos registrados	6
Rams	Béliers	Carneros	90-135kg
Ewes	Brebis	Ovejas	55-90kg
Lamb/Ewe Percentage	Pourcentage d'agnelage	Prolificidad (Procentaje cordero/hembra)	150%
Fleece	Qualité de la toison	Vellón (Fino, Brillante)	Fine, bright
Weight	Poids	Peso	4.5-6.6kg
Micron Count	Micron	Diámetro (microns)	22-26
Staple Length	Longueur de fibre	Longitud de la mecha	7.5-11cm

Le Targhee a été développé à la station expérimentale de Dubois en Idaho à partir de 1926 en réponse à la demande pour un mouton de pâturage avec des caractéristiques bouchères améliorées. Le Targhee est facile à garder, a une bonne longévité, agnelle au pâturage et produit une excellente toison.

La Targhee fue desarrollada en Dubois, estación experimental de Idaho, comenzando en 1926 en respuesta a la demanda de ovejas para pradera en el oeste, con características cárnicas mejoradas. La Targhee es de fácil mantenimiento, longeva, pare en pastura y produce excelente lana.

Breeds in Canada which are recognized but with no registrations from 1999-2005
Races au Canada qui sont reconnues mais sans enregistrement de 1999 à 2005
Razas en Canadá que son reconocidas pero sin registros desde 1999-2005

• Coopworth • Drysdale • English Leicester • Est á Laine Merino • Hexham Leicester • Kerry Hill • Lacaune • Montadale • Perendale • Romnelet • Ryeland

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Breeds in Canada which maintain their registry separate from CSBA
Races au Canada qui maintiennent un registre séparé de la scém
Razas en Canadá que mantienen sus registros separados de la csba

Canadian Katahdin Sheep Association (1999-2005: 10,953 registrations)
Incorporated, Live Stock Pedigree Act, January 3, 1991.
Ron Black, Secretary-Treasurer
2417 Holly Lane, Ottawa ON K1V 0M7
Telephone: 613-731-7110 Fax: 613-731-0704

Association Canadienne des moutons Katahdin
Incorporée, Loi sur la généalogie des animaux, 3 janvier 1991
Ron Black, secrétaire – trésorier
2417, Holly Lane, Ottawa ON K1V 0M7
Téléphone: 613-731-7110 Télécopieur: 613-731-0704

Asociación Canadiense de Ovejas Katahdin
(1999-2005: 10 953 registros)
Incorporada, Acta de Pedigrí para Ganado, Enero 3, 1991
Ron Black, Secretario- Tesorero
2417 Holly Lane, Ottawa ON K1V 0M7
Teléfono: 613-731-7110 Fax: 613-731-0704

Canadian Finnsheep Breeders` Association (1999-2005: 596 registrations)
Incorporated, Live Stock Pedigree Act, June 24, 1969.
Kathy Playdon (Interim President)
Box 10, Site 10, R.R.4, Stony Plain, AB T0E 2G0 CANADA
Telephone: 1 (888) 963-0416 or (780) 963-0416

Association canadienne des éleveurs de moutons Finnois
Incorporée, Loi sur la généalogie des animaux, 24 juin 1969
Kathy Playdon (Présidente par intérim)
Box 10, Site 10, R.R.4, Stony Plain, AB T0E 2G0 CANADA
Téléphone: 888-963-0416 or 780-963-0416

Asociación Canadiense de Criadores de Ovejas Finn
(1999-2005: 596 registros)
Incorporada, Acta de Pedigrí para Ganado, Junio 24, 1969
Kathy Playdon (Presidenta Interina)
Casilla 10, Site 10, R.R.4, Stony Plain, AB T0E 2G0 CANADA
Teléfono: 1 (888) 963-0416 ó (780) 963-0416

Housing and Transportation

Barn Structures

There are 3 typical barn structures used for housing sheep.

Tarp Structure:

A hoop structure covered with a fabric or tarp membrane stretched tight is the premise behind a Tarp structure. These buildings allow a tremendous amount of light in which can be credited with improved health of the flock. As well, the high cover allows for a great deal of air space above the sheep, which leads to excellent air quality especially when combined with chimney vents and/or Gable openings.

There are disadvantages to this type of housing. The tarp is easily damaged and depending on the warranty the structure may be costly to replace. The large volume of air inside the tarp means more space that requires heating so it is more difficult to maintain a moderate temperature for lambing. As there is no inside layer of insulation condensation builds up on the inside of the tarp and can lead to moisture dripping down on the sheep as the warm air inside hits the tarp, which is cold from the cold air outside.

Advantages include the large amount of light allowed into the structure. As well, these buildings are all prefabricated and just need to be assembled on site. This allows a crew or the farmer to quickly assemble and put up the structure.

Pole Barn:

Framed onto long poles put deep into the ground, the pole barn is a fairly simple structure as well. No foundation is required, and with sheep the steel on the walls lasts well. Fabric curtains are often installed along the length of the structures that can be opened for ventilation or closed to keep the barn warm during lambing. These structures are more flexible in their design than tarp structures. They can be made to various widths depending on how wide the feed alley needs to be, and how many pens across the farmer chooses. The advantage of Pole structures is their longevity, as steel stands up to weather and contact with physical objects better than fabric. The disadvantage is they typically take longer to build and delays are often incurred when waiting for construction crews to return to the project.

Bank Barn:

Throughout Ontario, there are a number of stone (or block) foundation style barns, many of which are bank barns. Bank barns are built into the side of a hill or have a hill built up to them allowing access to the upstairs for hay storage. With the ready availability of this style of barn it is sometimes more economical to use them than it is to build a brand new barn. The disadvantage of these barns is they are often low, making it difficult to get a tractor in for feeding or manure removal. The advantage is they are relatively well insulated and can be pleasantly warm for winter lambing.

Feeding Systems

Feeding should be done in such a way that the shepherd does not have to enter the pen.

Feeders built between two pens can also be used as a divider and allow the farmer to feed both pens at the same time.

There needs to be enough feeder space for all ewes to eat at the same time if grain is being fed or the dominant ewes get all the feed and the submissive ewes suffer.

Feeder designs need to prevent manure from getting into the feed, and therefore keep sheep from walking through it. While there are many commercial steel feeders available costs need to be considered to keep sheep farming profitable. It is also acceptable to make feeders out of wood that will work well.

Courtesy OFAC Animal Agriculture Photo Library

Fence Line Feeder

This allows a tractor to drive down one side of a fence and feed while the animals stand on the other side and eat through the fence.

Round Bale Feeders

These can be used for animals not requiring grain. They allow a constant supply of hay. They decrease the amount of labour required daily as the feeders can be filled up to feed the sheep for a few days. Unfortunately, when fed free choice sheep waste a large amount of hay so there is a cost associated with the time savings.

Feed Storage

Grain needs to be kept in a dry space with rodent control measures in place. Keeping hay stored out of the weather also prevents spoilage and leads to more nutritious feed with far less waste.

Water Source

Where possible, automatic watering devices are preferred. This ensures a clean fresh supply of water at all times and cuts down on the labor required to care for the stock.

The water bowl must be kept clean at all times as sheep will not drink water that has feces in it no matter how much they need the water.

If the location of the waterer reaches below freezing temperatures it needs to be insulated and either energy free or heated to prevent freezing. Energy efficient bowls use geothermal heat from below the

bowl to keep the water warm and prevent freezing. These are environmentally friendly, save on energy costs and will likely qualify for grants and incentives that will help cover the cost of the initial purchase.

Manure Storage

There are many provincial regulations now about where manure should be stored in relation to sensitive areas such as ground water, wells, tile inlets etc. Before planning a farmstead check your local regulations so you can chose an appropriate manure storage location.

Images Courtesy OFAC Animal Agriculture Photo Library

At the very least runoff needs to be contained or directed away from buildings, feed storage, and water supplies.

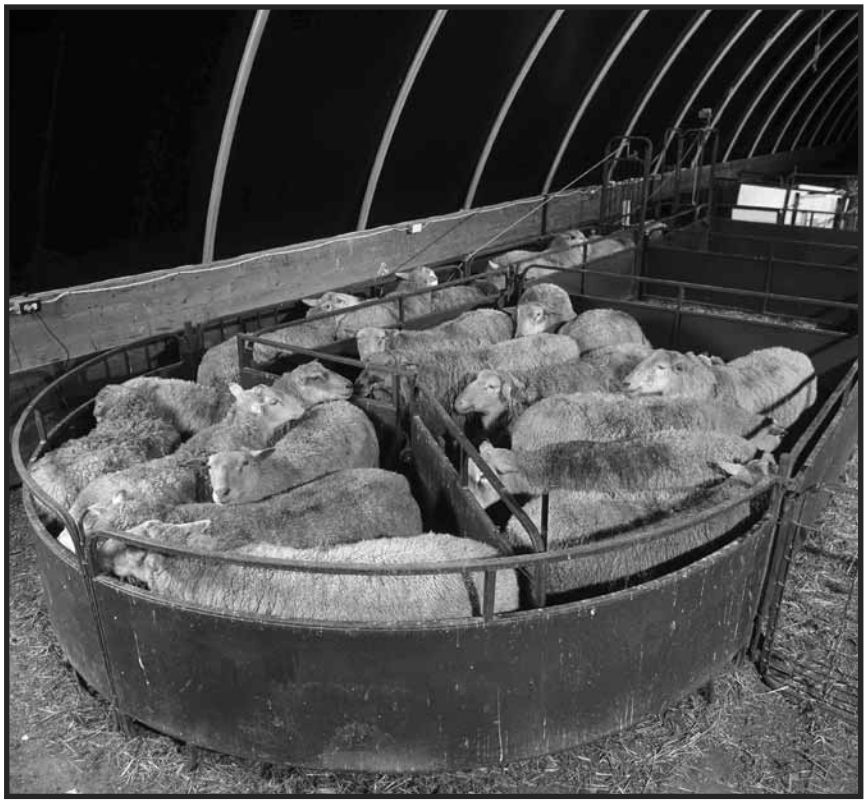
Feeding equipment:

There are a number of different tools that can be used to make feeding sheep easier.

3 Point Hitch Spinner: Attaches to the back of a tractor: It picks up the round bale and unrolls it on the ground by spinning it.

Drag unroller: Can be hooked to the back of a tractor or ATV and pulled to allow the bale to unroll on the ground.

TMR mixer: (Total Mixed Ration) A variety of feed stuffs can be mixed together including dry hay silage, haylage, grain, supplements etc. The feed is unloaded from the side on a short conveyer belt.



Hay Chopper: Cuts a large bale of hay into small pieces making it easier to fork out or spread along a drive through feeder.

Snack Wagon: pulled by an ATV the snack wagon distributes supplement in small piles out on the pasture allowing a shepherd to easily distribute feed to sheep on pasture.

Handling Facility:

All sheep housing needs to be designed with the sheep handling taken into consideration as well. Sheep need to be worked with on

a regular basis and the setup needs to be designed to allow this to happen with ease.

A crowding area of some sort, a chute to narrow the sheep into single file and a working squeeze or tilt table or scale are elements of a handling facility.

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PLANNING YOUR SHEEP HANDLING FACILITY

A. O'Brien

INTRODUCTION

Well-designed sheep handling facilities are essential if a producer is to have a successful sheep production operation. The sheep producer will find few other investments that can match handling facilities with respect to labour efficiencies and savings. Most producers will only build, or purchase, one handling facility in their lifetime, so planning is essential.

Incorporate existing paddocks, laneways and barnyards into the handling system to allow for ample space when the flock is held in the yards for extended periods of time. Sheep need to move smoothly between these areas with a minimum of fuss. To achieve this, a producer needs to understand how good design encourages the sheep and lambs to move ahead through the system without balking, thereby keeping problems for workers to a minimum. Well-designed facilities are easy to operate, saving stress, labour and their associated costs.

PLANNING

Sheep handling in "make-do" pens is not only hard, difficult work, it is outright unpleasant, and results in important jobs like vaccinating and deworming being delayed or not getting done at all.

To ensure that the handling facility will accommodate all the required jobs, make a complete list of the operations that will be carried out, and plan how these jobs will be done.

A useful checklist includes: shearing, crutching, sorting, deworming, vaccination, body condition scoring, pregnancy scanning, foot trimming, foot bathing, weighing, loading and sale of sheep.

Factors to be taken into consideration include:

- best location for the facilities
- size of groups the facility will need to handle
- amount of labour available for working the sheep in the facility
- modification of existing facilities, building new facilities, or purchasing portable yards
- cost involved.

FACILITIES DESIGN

In simple terms, handling facilities comprise the following: low density holding areas, high density holding areas, forcing (or crowding) area, drafting (sorting) race, and handling (working) race.

Most producers can use nearby pastures and laneways as their **low density holding areas**. These areas need to be secure enough to prevent escapes (particularly lambs) from one area to the next. Consider using net wire fencing with openings no larger than 15 cm by 15 cm, secured to closely spaced posts.

High-density holding areas need to be built with medium to strong fencing materials. Densities of 2 sheep in full fleece per square metre allows enough room to drive the group into the yards, while leaving space for gates to swing, and dogs to work where they are used. It is particularly important that these areas are long and narrow so that groups are easily controlled while being driven up into the forcing (crowding) race. Recommendations in Australia and New Zealand are that these high-density holding areas be no wider than 10 m. If greater capacity is needed, it is better to lengthen them, rather than making them wider. (Conroy and Hanrahan, 1994)

A **combined lead-up race and forcing pen** that is 3 m wide has proven very effective in many handling facilities, particularly for large flocks. It allows large groups to be broken down into smaller groups for ease of handling. The drafting and working races will lead off from this area.

Triangular force pens (sometimes referred to as 'V' force pens) are usually used in rectangular facilities and can be built in single or double forms (see *Figure 1*). Note that the single force pen has 1 fence as an extension of the race side, with the 2nd fence set at a 30–40° angle. The double-triangular force has 2-wing fences running back at similar angles and a central fence with a flip-flop gate at the race entrance to allow sheep entry from either side.

Curved force pens (bugle) were thought to take advantage of sheep's inclination to follow flock mates that

"disappear" around a curve, and enable one person to efficiently process the sheep alone. However, more recent research has shown that in 1.5 m wide races, sheep move better through straight races than through curved races. Only when they move in single file do races with corners prove superior to straight races. (K. Ransom & P. Hanrahan, 1990)

Force pen designs that do not work efficiently, and should be avoided, include square-shaped and the double-triangular force pen without the central fence (see *Figure 2*). The major problem with both of these designs is that sheep can easily avoid entering the race by turning suddenly (ringing) at the race entrance. (H.M. Hamilton, 1990)

For efficient drafting (sorting), the operator needs to be able to easily identify and draft the sheep he or she wishes to separate with a minimum of errors. To do this accurately requires an even flow of sheep. For small flocks, a 2-way sort is satisfactory, but in larger scale sheep operations, a 3-way sort, using 2 gates, may be necessary.

Make the **sorting race** at least 3 m long, with the exit point showing a clear escape route for the sheep. The race walls need to be solid-sided, to eliminate sheep being distracted by those on the opposite side, to ensure continuous flow of sheep. If the race is also used for drenching and vaccinations, a producer may want to consider a slightly wider race, or one with adjustable sides.

The **draft gate** needs to be a minimum of 1 m long to allow sheep to exit the race easily. Draft gates shorter than this cause sheep (particularly heavy wooled and pregnant ewes) to jam against the edge of the race when exiting, and slow the flow significantly. There is some debate as to whether the draft gate should be made of "see-through" panels or solid sheeting. Barber and Freeman (1993), in "Design of Sheep Yards", give the following as reasons for using "see-through" gates:

- the oncoming sheep can see the previous sheep moving away from the draft and are more inclined to follow
- see-through gates are lighter, and therefore, quicker and easier to use
- see-through gates are less affected by winds blowing across the drafting race.

As well, they list these points as reasons for using solid draft gates:

- such gates act as a continuation of the drafting race wall, thus directing the sheep into the exit pen;
- solid gates prevent horns or legs from getting caught.

A **multipurpose handling race** for drenching, vaccinating and other activities is needed in sheep yards. Most producers in Ontario will opt for this type of race over having both a handling race and a drafting race.

Several different types of handling races can be built:

- a single race 52–64 cm wide where the worker is outside the race
- a single race 70–80 cm where the worker is inside the race
- an adjustable-sided race in which the width can be varied between 45–80 cm

A suitable handling race is 6–15 m long with sides 85 cm high.

CONCLUSION

Handling facilities are essential if producers expect to find any savings in labour and efficiencies in the management of their sheep.

Figure 3 shows a basic handling facility layout for sheep flocks with the key components identified. *Table 1* provides dimensions for the various components of handling facilities.

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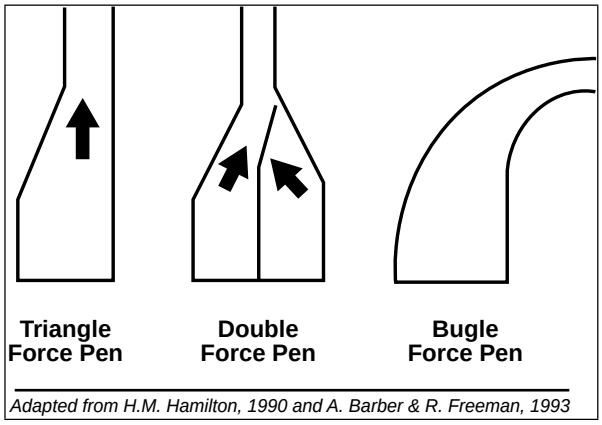
Sheepyard and Shearing Shed Design. Fiona Conroy and Peter Hanrahan. Agmedia. 1994.

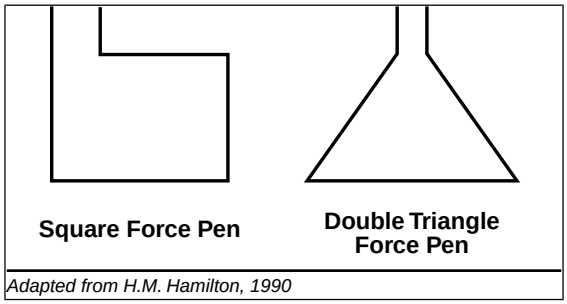
Yards 'n Yakka. Kondinin Group. 1990

Sheep Equipment Handbook. MidWest Planning Services. 1994



Adapted from H.M. Hamilton, 1990 and A. Barber & R. Freeman, 1993

FIGURE 1. Examples of successful force pen shapes.



Adapted from H.M. Hamilton, 1990

FIGURE 2. Examples of unsuccessful force pen shapes.

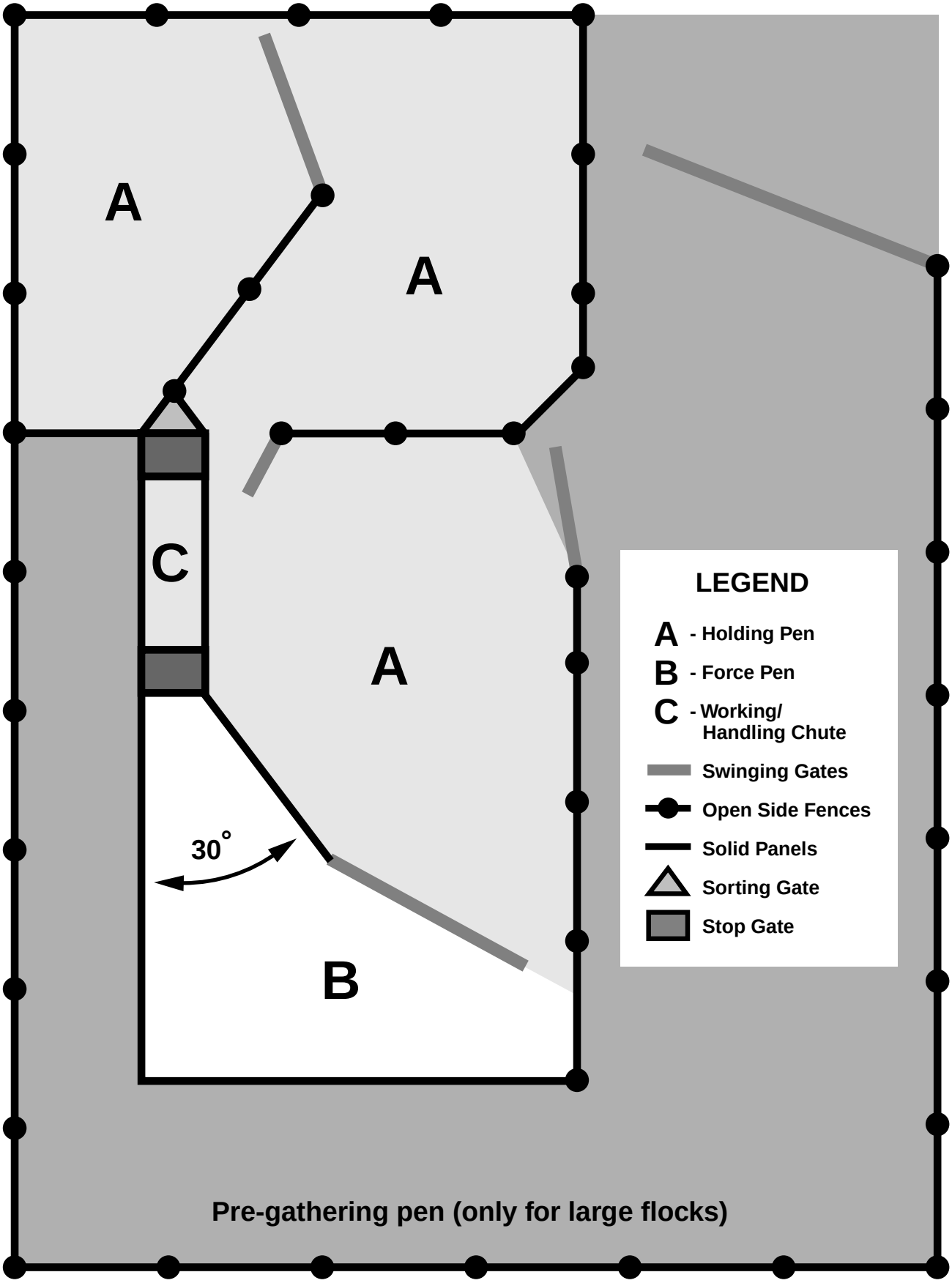


FIGURE 3. Basic handling facility layout for sheep flocks.

TABLE 1: Yard dimensions in centimetres (100 centimetres = 1 metre)

Facility	Range (cm)	Comments
Working Race		
Length	600 – 1,200	Open or closed-in sides.
Width (fixed sides)	60 – 75	
(adjustable sides)	45 – 80	
Height	82 – 90	Keep low if sheep are worked from outside the race.
End Gate Height	110	Sheep usually jump gates rather than sides.
Drafting Race		
Length	300 – 350	Closed-in (solid) sides.
Width	42 – 48	Can be tapered at the bottom or of variable width.
Height	85 - 100	
Fence Heights		
Perimeter Fence	95 – 110	
Internal Fence	90 – 105	
Gates		
Perimeter	300 – 400	
Internal	200 – 300	
Draft	120 - 150	Open sides (see-through).
Loading Ramp to Truck		
Width	70 – 100	Slope not steeper than 1:3.
Length	300 – 500	
Height (fixed)	120	
Height (variable)	70 — 210	

Adapted from Sheepyard and Shearing Shed Design. F. Conroy & P. Hanrahan. 1994

This Factsheet was written by **Anita O'Brien**, Sheep and Goat Specialist, OMAF, Kemptville.

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Controlling Predators

Most sheep producers in Canada have a need to prevent predator damage as sheep are very susceptible to harm from wild animals. It is far easier to prevent a problem than it to try and remove it after predation has occurred.

Prevention

Healthy Flock
Flocks in good health tend to have healthier stronger lambs and may be less susceptible to predation. Orphaned and abnormal lambs are likely to be the initial victims of [predators but once this has occurred remainder of at flock is at risk as well.

Observation
Farms where loses are not noticed right away may find the problem out of control once they detect loses and are able to take action.

Corrals and night confinement
This can help to discourage predators who are wary of well lit areas.

Dead stock disposal
Disposing of dead stock quickly and appropriately can prevent it from attracting predators.

Human presence
Periodically checking the flock can discourage predators. Randomly changing the time can help deter Coyotes.

Novelties
Anything that causes an abnormal sound or reflection can help discourage predators. Bells on sheep, radio, pie plates hung around pasture are just examples.

Guard Animals

Dogs
Dogs are reared with the sheep and are companions not used to work the sheep. Several breeds have been developed in other countries and imported to Canada. **Maremma, Great Pyrenees, Akbash and Anatolian Sheep dogs** are a few. Dogs are able to guard outside of the livestock enclosure which can be an advantage over other livestock.

Donkeys
Guard donkeys have an instinctive dislike of canines which makes them very effective at preventing them from getting at the sheep flock.

Llamas
Llamas bond well with sheep and eat similar food making them a good fit for a guard animal.


Courtesy OFAC Animal Agriculture Photo Library

Fencing
Setting up perimeter fencing can be key to preventing predators from accessing the flock. **Nine wire high tensile fencing** with alternating live versus ground wires means a better shock will be given to an animal trying to cross the fence.

Transporting Sheep

Most 4-H Sheep projects will have to be transported to another location for the achievement program. Here are some tips to help keep the trip as stress free as possible.

1. When lifting sheep onto a truck, be sure to lift by supporting its chest and abdomen and not by the fleece, head, horns, ears or legs.
2. When using chutes and ramps, make sure they are properly designed. There should be good footing, and sides should be high enough to prevent sheep from falling or jumping off.
3. Be patient! Sheep should not be rushed during loading or unloading-gentle encouragement will be more productive than yelling.
4. Make sure the transport vehicle is appropriate for transporting sheep. It should have high sides, a floor with secure footing, be properly ventilated, and have something to absorb urine and feces.
5. Make sure loading areas are well lit, especially inside trailer as sheep do not like moving past or towards shadows.
6. On long trips check sheep within the first hour and every 2-3 hours after that.
7. Special care needs to be taken in hot/humid weather and in very cold weather. When hot make sure the sheep are not crowded, and they have lots of airflow. In cold weather make sure sheep are dry and are well bedded to prevent contact with the cold floor.

Suggested Space Allowance for Sheep During Transport		
Category	Weight (kgs)	Area / Animal m^2
Shorn	Under 55 Over 55	0.2-0.3 Over 0.3
Unshorn	Under 55 Over 55	0.3-0.4 Over 0.4
Pregnant Ewes	Under 55 Over 55	0.4-0.5 Over 0.5

Canadian Sheep Identification Program

In Canada we have a National ID program which helps us to trace livestock from farm of origin to slaughter. This helps ensure the safety of our food supply. Every sheep leaving the farm of origin must be tagged in accordance with these regulations. EVEN LAMBS GOING TO A MEETING OR THE FAIR!

Here are some frequently asked questions about this program.

IS THE PROGRAM MANDATORY?
Yes. The Program is governed by the Health of Animals Act. It is enforced by the Canadian Food Inspection Agency.

DO I NEED TO TAG ALL MY ANIMALS?
Yes. All sheep leaving their flock of origin must be tagged with an official CSIP tag.

WHAT TAGS DO I USE?
There are three tag options:

- Pink steel Ketchum Kurl-Lock # 3
- Pink AllFlex dangle tag
- Yellow AllFlex RFID tag with either a pink Ketchum tag or an AllFlex dangle tag (pink or yellow)

WHERE DO I BUY MY TAGS?
In British Columbia, Alberta, Saskatchewan, Manitoba, Newfoundland and Nova Scotia, producers will purchase their tags from the Canadian Cooperative Wool Growers' Limited (CCWG).

Producers in Ontario, New Brunswick, and Prince Edward Island may purchase their tags from CCWG, farm supply stores or directly from the tag manufacturer.

WHAT RECORDS DO I KEEP?
Producers are required to keep records of all sheep and lambs entering their farm for breeding purposes and all sheep 18 months and older leaving their farm to a destination other than a provincially or federally inspected abattoir.

A Record of Movement Form has been designed to help producers meet this requirement. The form is available at www.cansheep.ca

CAN MY ANIMALS BE TAGGED AT AUCTION BARNS?
No. Producers must tag the animals before they leave their farm. Auction barns are not permitted to receive untagged animals and are not permitted to act as tagging stations under the Program. They are only permitted to replace tags that have been lost.

WHO IS RESPONSIBLE FOR PURCHASING AND APPLYING TAGS?
Generally, producers are responsible for purchasing and applying tags. In a situation, however, where the owner and operator of a farm are two different people, it would normally be the owner of the farm who would buy the tags and the operator who would apply them to the animals.

IS THIS A NATIONAL PROGRAM?
The CSIP provides the minimum national standard for sheep identification in the country. Quebec, however, has designed their own program that exceeds these minimum requirements.

WHAT TAGS DO MY SHEEP NEED IF THEY ARE BEING SHIPPED INTO THE PROVINCE OF QUEBEC?
When shipping sheep to Quebec, all sheep must be tagged with an AllFlex RFID tag and additionally with either an AllFlex dangle tag or a Ketchum Kurl Lock tag.

WHAT HAPPENS TO THE TAGS AT THE SLAUGHTERHOUSE?
This program ends at the point of the slaughterhouse. Here, the tags are left on the animal until the point of carcass inspection or until the animal has been approved for human consumption. Unlike the cattle identification program, tags are not retired at the slaughterhouse.

ARE THERE ANY EXEMPTIONS IN THE PROGRAM?
No. There are no exemptions in the Canadian Sheep Identification Program.

DO PENALTIES FOR NOT COMPLYING WITH THE PROGRAM APPLY ONLY TO PRODUCERS?
The focus of enforcement will be on producers since they are responsible for tagging and record-keeping. However, there are also provisions prohibiting the transportation and reception of unidentified animals.

WHAT IF THE ANIMAL'S EAR BECOMES INFECTED FROM THE TAG?
If the tag is applied according to the manufacturer's instructions, the ear should not become infected. If, however, it does become infected by the presence of the tag to the extent that it becomes a welfare issue, CFIA would not object to the removal of the tag and its replacement with another tag. If the animal was still in its flock of origin, no record would be required although it would be a good practice. If the animal was no longer in its flock of origin, a record would be required of the original tag number and the replacement tag number.

If a producer finds that the Ketchum tags may be causing a level of irritation or infection that is unacceptable to them, they may wish to consider using the AllFlex tags.

WHAT IF A SHEEP OR LAMB DIES IN TRANSIT? DOES THE TAG NUMBER NEED TO BE RECORDED, AND WHO IS RESPONSIBLE FOR KEEPING THE RECORD?
The most relevant provision is subsection 186(3) which states:
"If an animal bearing an approved tag is slaughtered or otherwise dies on a farm or ranch or at an auction barn, the operator of the farm, ranch or auction barn shall keep a record of the slaughter or death of the animal and the number of its approved tag'
No specific reference is made to an animal dying in transit.

IF FAMILY MEMBERS OWN INDIVIDUAL FLOCKS THAT ARE COMMINGLED, DO YOU NEED A SEPARATE SET OF TAGS FOR EACH FLOCK?
If the animals are kept on the same premises, only one set of tags should be used. If the animals are on separate premises and are never co-mingled, then separate sets of tags should be used.

IF I AM MOVING MY SHEEP AND LAMBS BETWEEN PROPERTIES THAT I OWN, DO THEY NEED TO BE TAGGED?
In order to avoid any doubt, the sheep and lambs sh9uld be tagged before they leave the farm of origin.

Section I 76 of the legislation, prohibits the removal of an unidentified animal from its farm of origin. Subsection 177(1) prohibits the transportation of an unidentified animal. The farm of origin is defined in section 172 and is essentially the flock of birth. The interpretation, therefore, is that if a lamb leaves its flock of birth, it needs to be identified.

A sheep producer may have several premises under his ownership but, unless they are contiguous sites, they are not collectively considered to be the flock of origin. The producer who takes his animals a couple miles up the road to other land that he owns or rents, and there is no commingling, should not have a problem due to inspector discretion. The producer taking his animals to any of his premises of any significant distance or time from the farm of origin should ensure that they are identified to avoid being in violation.

IF I HAVE EXTRA TAGS, CAN I SELL OR GIVE THEM TO A FRIEND OR NEIGHBOUR?
No. The tags are registered to you and cannot be transferred.

IF I GO OUT OF BUSINESS WHAT DO I DO WITH THE SURPLUS TAGS?
Producers going out of business or no longer owning sheep can report this fact to the CSF and the Canadian Livestock Identification Agency who will wish to know the number sequence of any tags remaining on the farm. These numbers will be blocked from further use and the tags should be destroyed in a manner that prevents them from being used in the future on any animal. Tag owners cannot be reimbursed for any unused tags nor can they be sold nor transferred.

CAN MY TAGS BE APPLIED TO ANOTHER PERSON'S SHEEP?
Tags may only legally be applied to the sheep and lambs owned by the person buying the tags. Applying tags to another person's sheep is a crime punishable by a major monetary penalty.AII suspected cases will be investigated and enforcement will be rigorous. Tags are easily available to all owners and should be acquired for their singular use.

Courtesy OFAC Animal Agriculture Photo Library

Housing and Transportation Glossary

Hybrid Vigor: The extra vigor strength hardiness and productive capacity that comes from cross breeding animals.

Claiming Pen: Small pen allowing ewe to bond with her new born lambs

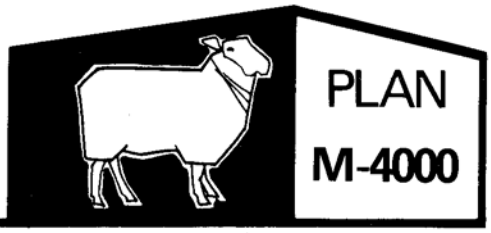
Dry-lot: Area for ewes who are not nursing

Lambing Jug: Area of claiming pens

Predator: Any animal or bird which attacks sheep such as coyotes and dogs.

Self Feeder: Feeders built so sheep can eat free choice

Total Mixed Ration (TMR): A complete ration including mineral, grain and forage chopped and mixed very well.



SHEEP HOUSING

NEW 81:09

Sheep production in Canada is divided between range and farm flocks. Sheep on the range require little protection except during lambing. Farm flocks may be allowed to graze during summer months but some protection is required during winter and lambing periods. They may also be raised in year-round confinement housing. Sheep suffer more from drafts and moisture than from low temperatures. Open-front sheds for protection from wind and moisture are adequate. When lambing occurs during early spring or periods of adverse weather, closed housing should be provided for the ewes and new-born lambs. Plans in this series are suitable for both farm and range production.

LOCATION Buildings and pens for sheep should be located on a well-drained site. A southern slope on well drained soil is preferred. A central location for farm flocks allows for fly control around the buildings as well as providing some protection from dogs and other predators.

Barn roofs should slope away from the feedlot area, or alternately eave troughs should be provided to run water away from the pens.

Buildings should have open fronts protected from or facing away from the prevailing winds. In the dry, windy prairie climate, corral fencing should be of the slotted board type (20% porous) for maximum wind protection. In humid Eastern Canada, solid windbreaks to 3 m height are preferred on the windward sides of the lots.

VENTILATION Buildings used for confinement rearing of sheep or as shelter for farm or range flocks should have adequate provision for ventilation. Eave and ridge openings should be provided in open-front sheds for air movement. Hinged or removable panels should be provided for additional summer air circulation. In totally enclosed buildings thermostatically controlled fans may be used. The building should be adequately insulated to reduce heat loss and to improve ventilation control. A vapor barrier and sheathing on the inside wall will be required to protect the insulation. Supplemental heat may be required during extremely cold winter.

CANADA
PLAN SERVICE

The Canada Plan Service prepares detailed plans showing how to construct modern farm buildings, livestock housing systems,-storages and equipment for Canadian Agriculture.

This leaflet gives the details for a farm building component or piece of farmstead equipment. To obtain another copy of this leaflet, contact your local provincial agricultural engineer or extension advisor.

SHEEP HOUSING

PLAN M-4000

ACCOMMODATION FOR SHEEP

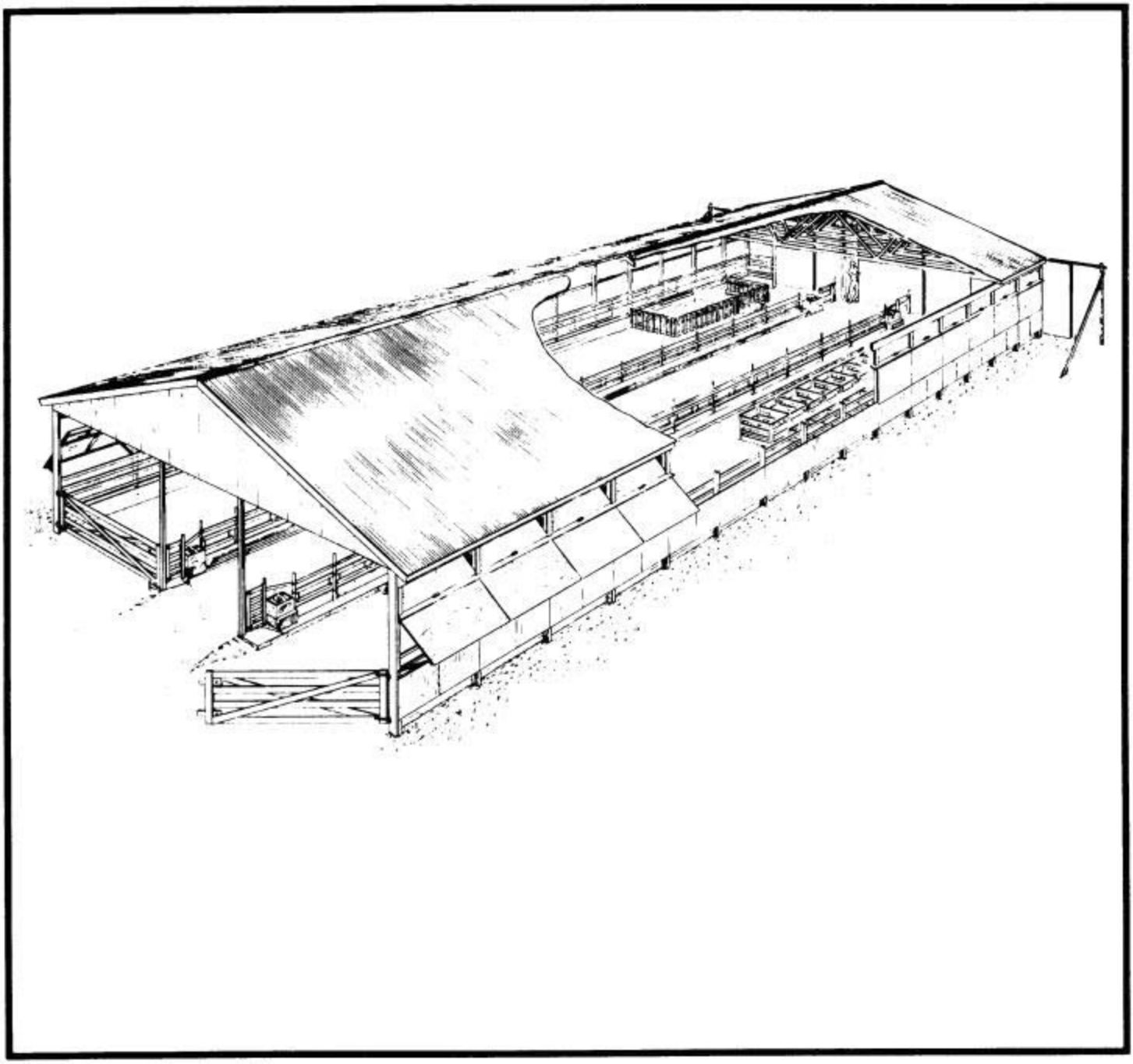
ACCOMMODATION	*EWES AND RAMS*	*FEEDER LAMBS*
Feed Lot		
hard surfaced	1.4 m²/head	0.6 m²/head
soil*	6.5 m²/head	2.8 m²/head
Open-Front Shed		
floor area	1.4 m²/pregnant ewe 0.93 m²/dry ewe	0.6 m²/head
ceiling height	2.7 m min	2.7 m min
Slotted Floors**		
area per animal	0.65 m²	0.4 m²
% slotted floor area	100	100
slot width	19 mm	16 mm
slat width	50 to 75 mm	50 to 75 mm
Lambing Pens (not slotted)		
claiming pen only	1.2 x 1.2 m min	
lambing and claiming pen	1.2 x 1.5 m min	
Feed Rack		
length per head	400 mm group feeding 150 mm self-feed	300 mm group feeding 100 mm self-feed
height at throat	300 mm small breeds 375 mm large breeds	250 mm small breeds 300 mm large breeds
Feed Storage		
hay	1.4 kg/head-day (small breeds) 2.3 kg/head-day (large breeds)	0.9 kg/head-day
grain	0.15 kg/head-day	0.23 kg/head-day (maintenance) 0.45 to 1.13 kg/head-day (finishing)
Bedding Storage	0.34 kg/head-day	0.11 kg/head-day
Water		
surface area	0.09 m²/40 head	0.09 m²/40 head

*Soil surfaced feed lots should be used only where annual precipitation is less than 500 mm. With soil surface, a paved feeding strip should be provided adjacent to each feed bunk. This paved strip should be at least 1.8 m wide, or as wide as the tractor used for cleaning, and the strip should slope at 1:25 away from the feed bunk.

**An alternative to slotted floors, for ewes, rams or lambs is 25 by 50 mm, 4 mm expanded and flattened metal mesh. Expanded metal mesh floors may be covered with a solid panel to retain bedding for lambing.

PLAN 4151

OPEN-END POLE SHEEP BARN, DRIVE-THRU FEEDING



CANADA PLAN SERVICE

The Canada Plan Service prepares detailed plans showing how to construct modern farm buildings, livestock housing systems, storages and equipment for Canadian Agriculture.

This leaflet gives management information and describes one of these detailed plans. To obtain a copy of the Canada Plan Service detailed plan, contact your local provincial agricultural engineer or extension advisor.

OPEN-END POLE SHEEP BARN, DRIVE-THRU FEEDING

PLAN 4151 NEW 4:76

This plan gives details for an eastern confinement sheep barn 44 x 120 ft. The length can be changed in units of 8 ft if required.

Flock Management

The 120-ft length easily accommodates 170 ewes at 21 sq ft of pen space per ewe. This is generous, but the idea is to provide complete multi-purpose housing. At lambing time, for example, part of the pen space is divided into a lambing area, claiming pens, hardening pen and nursing pen. Portable gates are used to form each area and the ewes and lambs are moved around to the designated sections required by the different stages of the lambing cycle. Adjust the size of these special pens to suit the numbers of ewes and lambs at each stage.

For lambing in cold weather, supplementary heating will be required in the 4 x 4 ft claiming pens. In "cold" housing like this, it is more practical to cover the claiming pens with plywood panels and to heat this confined space rather than to insulate and heat the whole barn. Use 250-watt heat lamps safely suspended by chains from eyebolts overhead. Install overhead electrical outlets and use CSA-approved heat lamp receptacles. A round hole in the plywood cover lets the heat lamp shine through.

After lambing, fold the pens and store them until the next lambing season.

Feeding

A 9-ft drive-through feed passage between two fence line feed bunks provides the most versatile feeding system; feed by hand from a wagon, or feed mechanically from a self-unloading trailer, truck or forage wagon.

For conveyor-bunk feeding, a narrower building without the center driveway is preferable; see Plan 4152.

The feed bunks can be adjusted to suit the depth of the manure pack. This is a good feature for operators who use a lot of bedding and clean out manure only once or twice a year, but some sheepmen may prefer a simpler, non-adjustable feed bunk; see Leaflet 4616 or 4617.

As truck clearance in the feed passage determines the height of the roof trusses (9 or 11 ft above the floor), check this before building.

Construction

This barn is framed with pressure-treated poles spaced at 8-ft centers along the walls and clear-span roof trusses spaced at 4-ft centers. Start construction by digging or augering postholes to below frost level, then pour a round concrete footing in the bottom of each hole. Tamp this concrete to a level line exactly 4 ft 6 in. below floor datum; this way the poles can be cut and notched at the top for plates and trusses before the poles are erected. This speeds construction and keeps the building level.

For easier manure clean out, spike pressure-treated 2 x 6 inch tongue and groove splash planking to the inside of the poles. To make the structure wind-safe, bolt trusses securely to the top of the wall-poles. Cross-bracing must be installed between end trusses in case a wind comes up during construction.

Ventilation

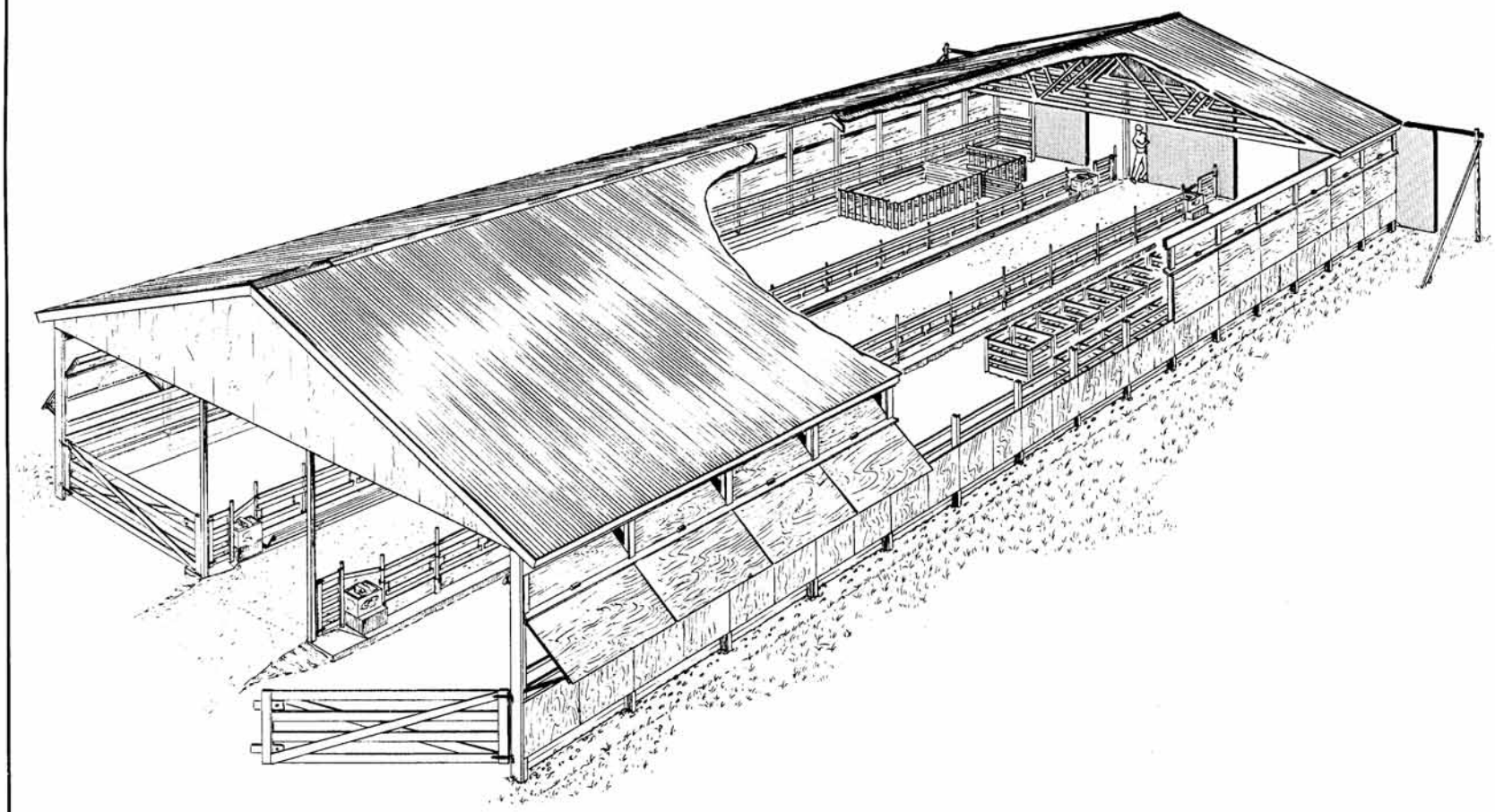
This barn is designed primarily for the mild, wet winters of eastern Canada, where heavy rain and snow can create management and pollution problems in outdoor feedlots. The barn is open at one end, not at the side; this helps to divert rain and snow from the feedlot and the barn interior. Because of their long wool, sheep in confinement generate a lot of moisture but little heat. Do not close this barn too tightly. The use of some insulation such as fiberboard or polystyrene foam is recommended for control of condensation under metal roofing.

The barn is intended to operate cold in winter. The south end is fully open for sunshine and fresh air. Fixed slot openings at the eaves and ridge move air through to control humidity. These slots are designed to minimize snow infiltration; do not make changes without obtaining expert advice.

In milder weather, tilt-in vent flaps at the top of the walls are regulated with a winch-and-cable system to increase ventilation. In summer, larger wall vent flaps can be propped out for maximum shade and cooling.

Protection from Predators

One important advantage of total or part-time confinement is protection from dogs and other predators. If this is a problem, add wire gates and fencing on all wall-openings not protected by doors. Use page-wire fencing or galvanized chicken wire to cover all openings, including those under the summer ventilation flaps.



SPECIFICATIONS

Unless otherwise specified, all cast-in-place concrete is to be at least 3000 psi @ 28 days, 6% air entrained.

All reinforcing steel to be at least 40,000 psi deformed bars; provide 2" concrete cover over reinforcing steel.

All exposed steel to be galvanized or painted to resist corrosion from moisture and manure gases.

All framing lumber is No. 2 (or better), S-P-F species group, unless otherwise specified.

All wood indicated 'pressure-treated' is CCA pressure-treated to a net retention of 0.4 lb/ft^3 (ground contact specification, CSA-080 Wood Preservation).

All nails exposed to treated wood, humid atmosphere or weather to be hot-dip galvanized.

This plan is designed to meet the requirements of the Canadian Farm Building Code.

▶ Notes thus marked indicate where this plan gives structural choices to be selected to meet local climatic loads (wind, snow), soil bearing capacity and other local conditions. The plan user must ensure that these requirements are met. Consult an engineer if you are not familiar with the details required.

ONE SET OF DRAWINGS AND LEAFLETS SHOULD INCLUDE:

CPS no.	sheet no.	Title
4151	-1-	Open-end pole sheep barn drive-thru feeding
4151	-2-	Floor plan and cross-section
4151	-3-	Wall section
4151	-4-	Construction details
	-5-	truss design and spacing to suit local snow + dead load

AND LEAFLETS

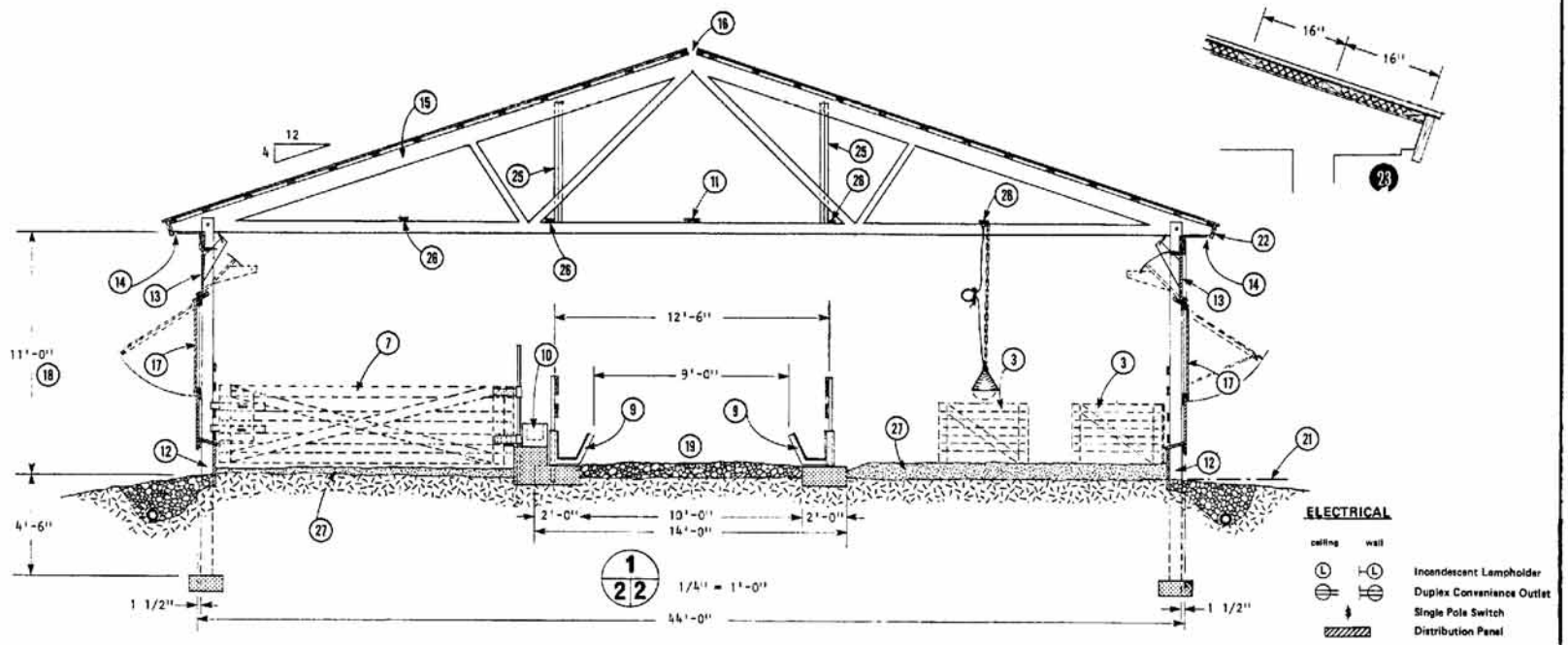
4151	Open-end pole sheep barn, drive-thru feeding
4623	Lamb creep with feeder
4831	Portable claiming pen
9102	Truss erecting and bracing

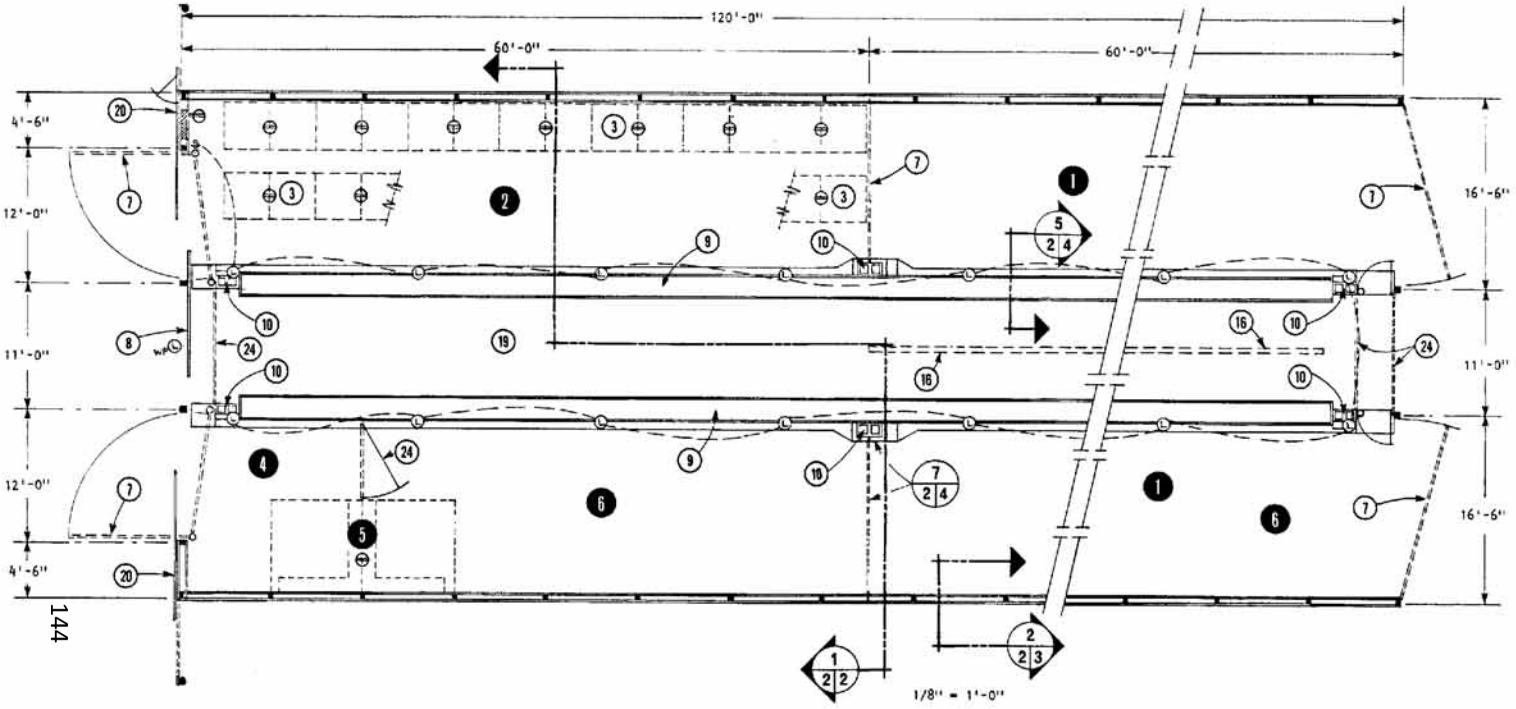
SYM	REVISIONS	CHECKED	DATE	APPROVED
	REVISED & RE-ISSUED	H.A.J.	87-09	J.E.T.

CANADA PLAN SERVICE

OPEN-END POLE SHEEP BARN
DRIVE-THRU FEEDING

DESIGNED J.E.T.	DATE JAN/76	PLAN 4151
DRAWN LEO BLAIS	REVISED	
TRACED	DETAIL NUMBER A, ORIGINATES ON SHEET B, DRAWN ON SHEET C	SHEET 1 OF 4
CHECKED H.A.J.		





1 pregnant ewes go to area (2) just before lambing

2 lambing area, ewes with newborn lambs go to claiming pens (3)

3 claiming pens 4' x 4' (see leaflet 4831); provide additional protection for winter lambing by heat lamp suspended over hole in plywood cover panel over each pen

4 ewes and nursing lambs to hardening pen

5 lambs to creep with feeder (plan 4623)

6 ewes and lambs to nursing pen

7 gate adjusts vertically to rest on manure pack, see sheet 4

8 11' x 10' slide door, track inside poles

9 feed bunk adjusts vertically to suit height of manure pack, see sheet 4

10 heated waterer on concrete base with drain, see (26) sheet 4

11 2 x 8 walk plank continuous

12 pole frame walls, 16' poles @ 8'-0" o.c., see (1) sheet 4

13 tilt-in vent panels; plywood, aspenite or translucent FRP, winch and cable control, see sheet 3

14 2" continuous vent slot

15 trusses @ 4' o.c., 2 x 4 roof purlins, 9/16" fiberboard drip stop, metal roofing (see leaflet 9301 for purlin spacing)

16 3" open ridge slot over (1), trusses soaked with wood preservative where exposed to weather, slot stops 8' from end of roof

17 continuous doors for summer ventilation, see sheet 3

18 this dimension may be reduced to 9'-0" if feeder will clear 8'-6"

19 drive-thru feed passage surface, coarse gravel

20 12' x 10'-6" slide doors, track to poles beyond building, man door at electrical service entrance

21 datum line

22 2 x 8 face board and 3/4" soffit

23 optional roof construction: 5/16" sheathing plywood; polyethylene vapour barrier; 2 x 4 purlins; 1½" insulation; metal roofing

24 portable gates

25 2 x 6 double cross wind bracing between end pairs of trusses, both ends of building

26 2 x 4 truss stiffener, continuous

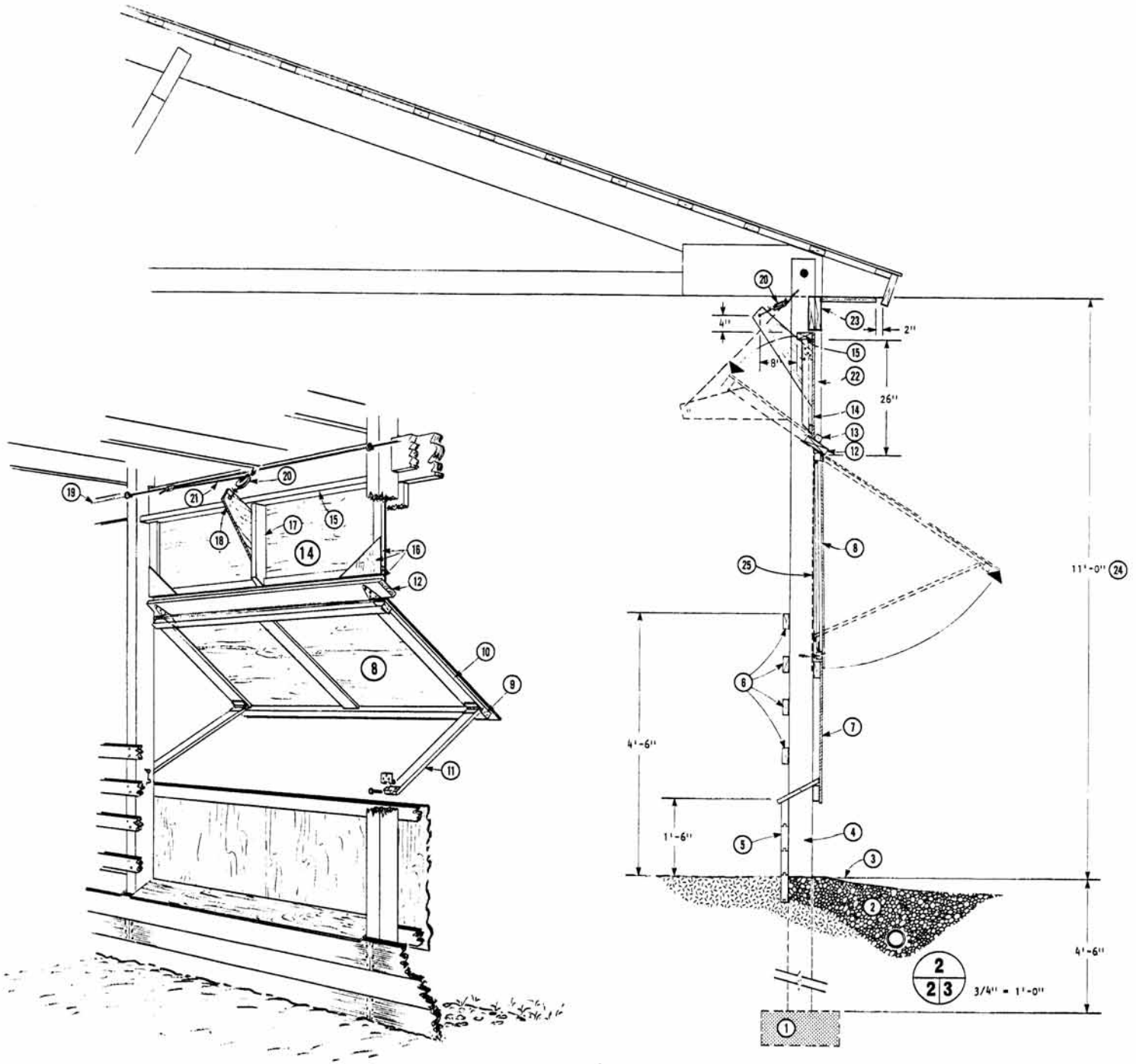
27 bedded manure pack

SYM	REVISIONS	CHECKED	DATE	APPROVED
	REVISED & RE-ISSUED	H.A.J.	87-09	JET

CANADA PLAN SERVICE

FLOOR PLAN AND CROSS SECTION

DESIGNED J.E.T.	DATE JAN/76	PLAN 4151
DRAWN	REVISED	
TRACED	DETAIL NUMBER A, ORIGINATES ON SHEET B, DRAWN ON SHEET C	SHEET 2 OF 4
CHECKED H.A.J.		



1 8" deep x 18" diam. conc. footing based on 38 p.s.f. total roof load, 4000 p.s.f. soil

2 coarse gravel splash pad, 4" tile or perforated tubing to outlet, continuous

3 datum line

4 sawn poles, see pole chart sheet 4

5 2 x 6 x 16' pressure-treated T & G planking, end joints staggered 8' o.c. at poles

6 4 - 2 x 4 guard planks, also acts as fencing when manure pack is up & tilt-out panel (8) is open

7 3/8" x 2'-8" plywood (face grain vertical) or 7/16" aspenite on 2 - 2 x 4 girts, continuous

8 tilt-out panels, 3/8" x 4' x 8' plywood, continuous, for summer ventilation

9 2 x 2 horizontal stiffeners, inside top & bottom

10 3 - 1 x 4 vertical stiffeners

11 2 - 1 x 4 struts per panel (8); bottom end hinged, held open with one part of hinge screwed to strut & other part to pole, remove hinge pin and fold strut up to close; secure with hook and eye

12 2 x 6 x 16' sill notched for poles, continuous

13 2 x 2 x 4" long stop for (14), centered between poles

14 tilt-in panel, 3/8" x 7'-8" x 2' plywood, continuous; for summer ventilation

15 2 x 4 x 7'-8" horizontal stiffener at top

16 1 x 2 framing, gussets at bottom corners

17 1 x 3 centre stiffener

18 3/8" plywood lever, 1" hole at top for (21) fastened to (15) & (17) at a 45° angle to panel

19 3/16" plastic covered marine steering cable, runs from winch (at control) through screw eyes to pulley and counterweight for tension, at remote end

20 2" nylon marine steering pulley hooked to screw eye at each intermediate truss

21 branch cable from clamp on (19) through pulley (20) to lever (18)

22 scab at each pole, stops tilt-in panel (14) and supports outer plate (23), see (2) sheet 4 for nailing

23 double plate, see (2) sheet 4

24 may be 9'-0" if feed truck will clear; adjust wall panel (7) to suit

25 optional galvanized mesh predator fencing

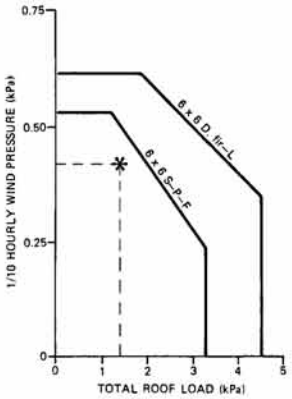
SYM	REVISIONS	CHECKED	DATE	APPROVED
	REVISED & RE-ISSUED	H.A.J	87-09	J.E.T

CANADA PLAN SERVICE

WALL SECTION

DESIGNED J.E.T.	DATE JAN/76	PLAN 4151
DRAWN LEO BLAIS	REVISED	
TRACED B. YANKOWSKY	DETAIL NUMBER A, ORIGINATES ON SHEET B, DRAWN ON SHEET C	SHEET 3 OF 4
CHECKED H.A.J.		

1



EXAMPLE

Determine pole size for Brighton, Ontario (ground snow load 2.0 kPa, 1/10 hourly wind pressure 0.42 kPa).

If the roof is fully exposed to wind, the total roof load is:

0.6 x 2.0 (snow) + 0.2 (dead) = 1.4 kPa

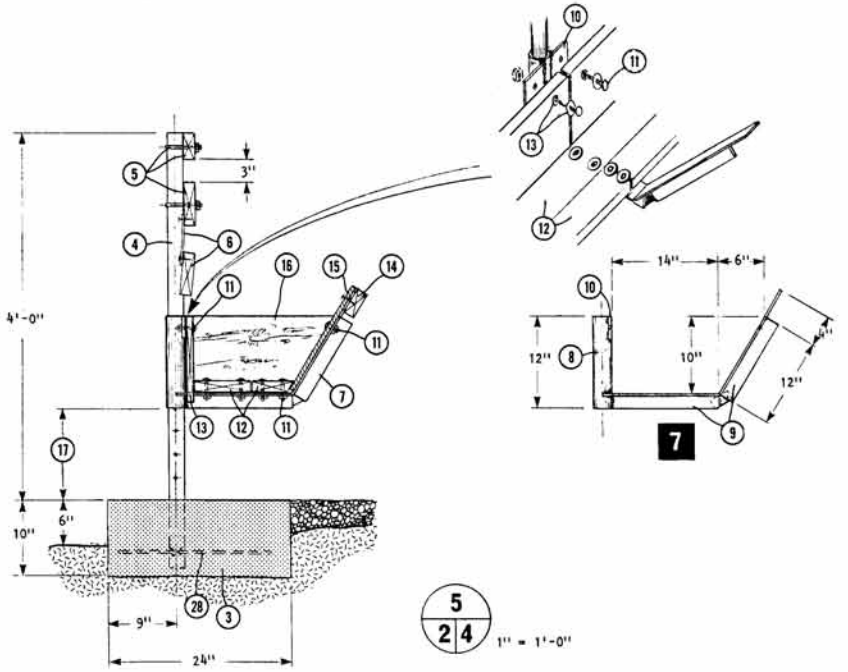
Enter the pole selection chart at 1.4 kPa total roof load and 0.42 kPa wind pressure (see ✱)

6 x 6 S-P-F or D. fir-L poles would be adequate

2

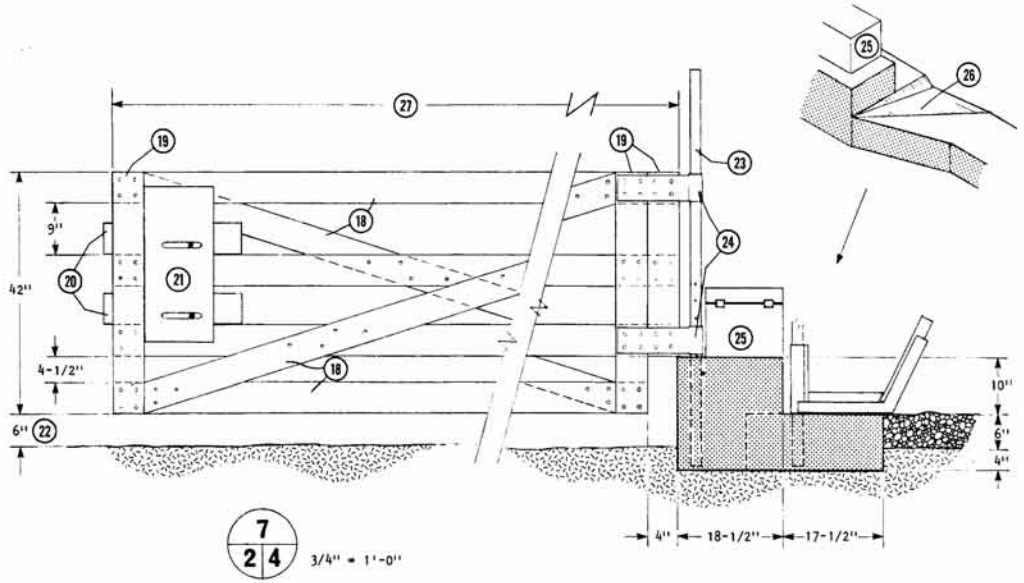
Plate beam safe uniform total roof load, kPa

Plate beam No.2 S-P-F	Truss spacing, inches on centre 48	32	24	Scab size	Scab details # of 5" spiral nails
2 - 2 x 8	1.31	1.11	1.05	2 x 8	15
2 - 2 x 10	1.96	1.59	1.44	2 x 10	23
2 - 2 x 12	2.50	1.94	1.75	2 x 12	29
No.2 D. Fir					
2 - 2 x 8	1.11	--	--	2 x 6	9
2 - 2 x 10	1.66	1.40	1.33	2 x 6	13
2 - 2 x 12	2.24	1.89	1.80	2 x 8	18



5/24 1" = 1'-0"

7



7/24 3/4" = 1'-0"

1 sawn pole selection chart

2 2 - 2 x 10 x 16' plate beam (3 in end spans); joints staggered 8' @ poles; No. 2 Spruce safe to 1.96 kPa total roof load; for truss spacings other than 48" o.c. and/or heavier roof loads, see table (2)

3 concrete feeder base

4 1½" diam. x 4'-9" galv. pipe posts @ 8' o.c.

5 2 x 4 and 2 x 6 headrails; secure to posts with 5/16" U-bolts, slacken nuts to adjust height (see note (17))

6 lamb stop board, 2 x 6 x 3'-6" fastened to headrail (5) with 3/4" welded link chain or belting 8" from each end

7 metal sub-assembly for adjustable feeder

8 2" diam. galv. pipe collar

9 ¼" x 3" x 3" steel plate, welded to (8)

10 2 - ¼" x 3" x 3" steel plate, welded to (8); one each side of (4)

11 5/16" stove bolts and washers

12 feeder bottom, 2 x 8 and 2 x 6 (bevelled) x 16' long, joints staggered @ 8' o.c. to allow for height adjustment

13 keeper, 1 x 12 x 16' notched around (9), drill oversize for (11), oversize washers

14 2 x 4 runner, nailed to (15)

15 ¼" plywood, 16" wide, drill oversize for (11), oversize washers

16 end board at ends of feed bunk

17 variable 0" to 12"; 4 holes @ 3" o.c. in (4), adjust feeder to suit height of manure pack

18 1 x 6 horizontals; 1 x 6 cross braces (one each side of gate)

19 1 x 6 uprights (both sides)

20 1 x 6 slide latch, dowel or bolt flush with plywood face

21 3/8" plywood both sides, cut slot for latch bolt (20)

22 gate rests on manure except when barn is clean

23 1½" diam. x 5'-9" long pipe

24 2" diam. x 4½" long galv. pipe welded to 1/8" x 4" steel strap both sides of gate, 5/16" bolts through gate

25 frost-proof sheep waterer with pan hinged for cleaning (see manufacturer)

26 slope to drain into alley when flushing waterer

27 variable, depending on location of gate, see floor plan , sht. 2

28 #4 x 18" rebar welded to (4)

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	REVISED & RE-ISSUED	H.A.J.	87-09	JEF

CANADA PLAN SERVICE

CONSTRUCTION DETAILS

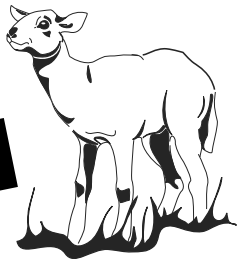
DESIGNED J.E.F.	DATE JAN/76	PLAN 4151
DRAWN B. YANKOWSKY	REVISED	
TRACED	DETAIL NUMBER ORIGINATES ON SHEET DRAWN ON SHEET	SHEET 4 OF 4
CHECKED H.A.J.		

Learning About ANIMAL WELFARE

4-H Ontario

OFAC
ONTARIO FARM ANIMAL COUNCIL

Learning about ANIMAL WELFARE (L.A.W.)



4-H Ontario

Animal welfare is an important topic for most Canadians. 4-H provides great experiences for youth in caring for animals. This meeting topic is suitable for any 4-H club involved with animals, including livestock, poultry, vet, pet or horse clubs.

This meeting topic was produced as a proud partnership of the Ontario Farm Animal Council (OFAC) and 4-H Ontario. This resource was adapted from Alberta's L.A.W. program, with many thanks to Alberta Farm Animal Care and Alberta 4-H.

4-H L.A.W.

Learning about ANIMAL WELFARE

Objectives

In this meeting members will learn about animal welfare issues, examine their own practices with their project animals and develop a strategy for responding to animal welfare concerns.

All Members

Learn about animal welfare and their responsibilities as animal owners or caretakers. Be prepared to talk to the public about their project and be able to explain how 4-H members care for their animals.

Senior Members

Understand the animal issues spectrum, including the difference between animal welfare and animal rights. Establish their personal viewpoint on animal welfare issues and prepare to respond to the questions and concerns of the public.

ROLL CALL:

Name a concern the public may have regarding the welfare of … (your type of project animal).

Possible answers include:

- production practices: neutering, castrating, tail docking, teeth clipping, beak trimming, dehorning, shearing, ear tagging, branding
- housing: confined space, caging, tying, tethering
- shipping, hauling, transportation methods & procedures
- animal handling: use of show sticks, canes, cattle prods
- training of pets and animals
- livestock fairs, rodeo, gymkhanas
- use of animals for recreation or work or food
- exposure of animals to weather, environmental control
- antibiotics, hormones
- veal production
- artificial insemination

Ask the members to consider why people may have those concerns: *Is there a valid concern? Is the issue exaggerated in the media or by special interest groups? Can we do a better job to help reduce public concerns?*

The Creed of the 4-H Animal Caretaker

(Adopted from Alberta's Creed of the 4-H Animal Stockkeeper).

I will: Be kind to my animals. I will not take my frustrations out on animals. I will be patient while training my animal. I will never physically abuse my animal and I will only use low-stress handling methods and tools (ie. paddles).

I will: Provide comfortable and sufficient housing for my animals. I will house my animal with enough space to prevent crowding and fighting. When I tie my animal, I will make sure the rope is not too tight and that there is nothing nearby that can harm the animal. This also means that I will help to prevent my animal from being too hot or too cold, both at home or during transport.

I will: Feed my animal on time each day. I will make sure that I can financially afford to feed my animal the right amount and type of feed every day on a regular schedule. This will provide the nutrition my animal needs and ensure the daily comfort of my animal.

I will: Provide my animals with clean water. Every day I will check that the water supply for my animal is clean, free of ice, easily accessible and working properly.

I will: Keep my animals free from disease and parasites. To ensure the good health of my project animal, I will observe it carefully every day, to see that it is eating and behaving normally. If my animal appears unhealthy, I will see that it receives immediate attention. I will keep accurate and complete records of any health problems that occur. I will never subject my animal to undue suffering.

I will: Learn as much as possible about the best methods of feeding and caring for animals. By learning about different methods, my animals will benefit from new ideas that help to ensure that my animals receive the best possible care. I can explore new animal husbandry ideas through reading, asking questions, attending workshops and participating in 4-H activities.

I will: Strive to improve the breeding and quality of my animals. The more structurally sound, efficient and productive our animals are, the less stress will be placed on them.

I will: Always be a good sport in competition. Events, including Achievement Days, are one way that the public can see how important proper care of our animals is to us. Good manners and a courteous disposition go a long way in presenting a good impression to my fellow members and the public.

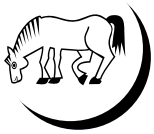
I will: Talk to my 4-H volunteers or fellow members about others who are not following this creed and are not setting a good example of animal care.

I will: Complete my project and take part in all the activities of my 4-H club each year. By taking part in all the activities and completing the project each year, I am allowing myself to learn and experience all that I can about my project. This will help me to improve my understanding of animals and my methods of caring for them.

_____

Signature

LEARNING ABOUT ANIMAL WELFARE



People primarily raise animals for human use or benefit, such as cattle and sheep for food or clothing and horses for entertainment. Farmers and animal owners are morally and legally responsible to care for our animals. We provide them with appropriate food and shelter, and must also ensure our animals are not subjected to unnecessary pain and suffering or excessive stress.

Farmers are responsible for the well-being of the animals in their care and should not tolerate animal neglect or abuse. As farmers and animal owners, we take pride in the fact that we believe in animal welfare because it is the right thing to do and we chose to care for animals.

The **FIVE** Freedoms

Farmers, 4-H members, animal owners and caretakers are all responsible for providing their animals with these five freedoms:

1. **Freedom** from thirst, hunger and malnutrition by ready access to fresh water and a diet to maintain full health and vigor.
2. **Freedom** from discomfort by providing a suitable environment including shelter and a comfortable resting area.
3. **Freedom** from pain, injury and disease by prevention or rapid diagnosis and treatment.
4. **Freedom** to express normal behavior by providing sufficient space, proper facilities and company of the animal's own kind.
5. **Freedom** from fear and distress by ensuring conditions that avoid mental suffering.

As the owner or caretaker of a 4-H project animal you take on many important responsibilities. These responsibilities include:

- Ensuring that you abide by the Code of Practice, Five Freedoms and the Creed of the 4-H Animal Caretaker at all times.
- Understanding the issues around animal welfare, including animal rights. Recognize that the public has various perceptions of animal welfare that may be different than yours.
- Being prepared to respond to the public's questions and concerns and express your views on animal welfare issues with reason, respect and supporting facts.

L.A.W. ACTIVITIES

ACTIVITY 1

Animal Care Resources

a) Review and discuss the *Five Freedoms and the 4-H Animal Caretakers Creed*.

b) Have a senior member find and bring a Code of Practice for the Care & Handling booklet for your type of project animals (if available) to show to other members.

c) Have the members go to these websites to download the Code of Practice and other relevant farm animal welfare resources for their project. It is important that members are aware of the Codes of Practice and what their purpose is.
www.farmissues.com
www.livestockwelfare.com
www.grandin.com

ACTIVITY 2

Caring for my animals

Have members complete the "Animal Care Checklist" (page 5). Encourage the members to use what they checked in the in the "I want to improve" column to set their goals for the year. Discuss with another member what they want to learn and accomplish in this project regarding animal care.

ACTIVITY 3

Code of Ethics or Event Rules

Have your members adopt the "Creed of the 4-H Animal Caretaker" (page 3) or draft their own Code of Ethics. Members can draft wording about animal welfare to be included in Achievement Program rules or other event rules.

Example: All members must show sportsmanship throughout the show. Horses must be kept under control. Cruelty to, or rough handling of, horses will not be allowed and may result in disqualification.

Discuss what to do if there is a situation of animal mistreatment observed at an event or on a farm or at a stable. Refer to the "Animal Care is our Concern" options on page 8. Remind members that 4-H encourages members to respect animals. 4-H can't always control the actions of individual members, but can help to enforce rules to discourage poor animal care practices.

ACTIVITY 4

Everyone Doesn't Think Alike

Review the Animal Issues Spectrum to explain the different viewpoints and 'many shades of grey' on animal issues. Have members match the different quotes with the different viewpoints on the spectrum.

ACTIVITY 5

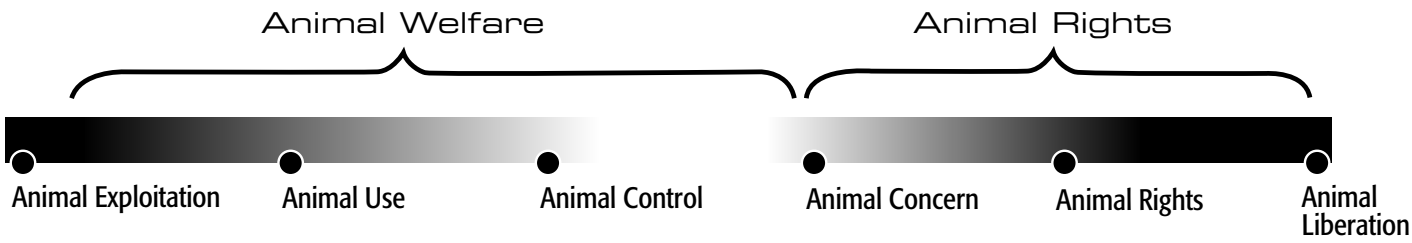
Where do you stand?

Members will evaluate their animal welfare beliefs based on different examples. Put a piece of tape or string (or use your imagination) across the room to represent the animal issue spectrum. Have members physically move to where they believe (ie. extremely for, extremely against, in the middle) on the list of examples below, or make up some of your own. There are no right or wrong answers to these exercises. Encourage the members to discuss their opinions. This will help them understand and defend their own beliefs, while respecting others.

Examples:

- ✓ Dogs for pets
- ✓ Dogs for sport fighting
- ✓ Dogs for helping blind or deaf people
- ✓ Shrimp for food
- ✓ Rabbits for mascara testing
- ✓ Rabbits for testing a cure for cancer
- ✓ Horses for rodeo bronc riding
- ✓ Horses for trail riding
- ✓ Whales in aquariums for entertainment
- ✓ Whales in a research facility for study
- ✓ Cows used for milk
- ✓ Bull calves raised for veal
- ✓ Hens kept in cages for eggs
- ✓ Roosters raised for fighting
- ✓ Mink raised for fur coats
- ✓ Have members come up with their own examples

Points of View Spectrum



Everyone Doesn't Think Alike

Iowa State University Extension, 1991

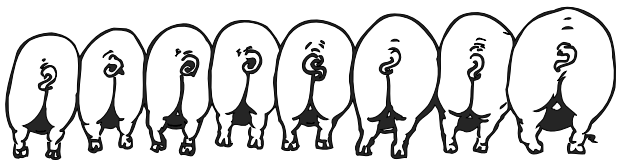
Match each of the viewpoints below to a place on the Points of View Spectrum. Where do you fit on most animal care issues?

- *"Animals are here for our use and abuse"*
- *"Everybody should be required to treat each animal as kindly as possible for the good of the animal"*
- *"Animals have rights just as humans do"*
- *"We are here to enforce the laws and regulations made by our lawmakers"*
- *"We feel so strongly about animal rights we will break the law to make our views known."*
- *"Animals are here for our use, but we must be responsible with them to produce as much as possible"*

ANIMAL CARE Checklist:

Check the things that you are already doing well to care for your animal. Ask yourself honestly and check which ones you can improve on. Make a plan for improving your animal care practices. What are your challenges?

I'm Already Doing	I Want to Improve	?
		Provide adequate housing and bedding.
		Feed my animal daily and on a regular schedule.
		Feed a balanced diet that is right for my animal.
		Provide access to good quality water every day.
		Control internal and external parasites.
		Any invasive procedures (e.g. castration, dehorning, docking) are performed when animals are as young as possible.
		Train animals to lead or be handled at a young age.
		Have a planned health program to prevent disease.
		Observe animals daily and get treatment for sick animals.
		Be aware of the signs that my animal is in pain or suffering.
		Keep feed and treatment records.
		Minimize or eliminate all procedures or circumstances that may cause stress to my animal.
		Take the time to understand the behavioral needs of my animal.
		Sort and load animals safely with concern for them and people involved.
		Treat my animal with kindness at all times.
		Be aware of the importance of good animal care practices at public events.
		Act as a good ambassador for 4-H and animal care at public events.



ANIMAL CARE

Resources & References

The Ontario Farm Animal Council has an extensive library of books and videos and public education displays and resources on the topic of animal welfare, free for borrowing by 4-H Volunteers and members. Contact the OFAC office at: (519)837-1326 or email: info@ofac.org or visit www.ofac.org.

www.farmissues.com: A portal website with lots of information and a photo & video library of farm animals. Virtual farm tours, interactive games, a media centre and a full high school teaching resource make this site worth the visit.

www.grandin.com: Dr. Temple Grandin is a world renowned livestock welfare specialist.

Codes of Practice: There are Recommended Codes of Practice for the Care and Handling of Farm Animals for many species including: dairy, beef, poultry, pigs, sheep and horses. See them online at www.ofac.org under the animal care resources button or order a copy of the booklets from Agriculture and Agri-Food Canada.

More about Animal Rights...

It's important to understand the difference between animal welfare and animal rights. Animal welfare is what most people support – that humans have a right to use animals for their benefit, and a responsibility to care for them. Animal welfare supporters agree that animals should be treated with respect and have the five freedoms met (ie. freedom from hunger, thirst, access to shelter, etc.).

Animal rights is a philosophy that believes it is not acceptable to use animals for human benefit – for food, clothing, entertainment or medical research. Many people support animal rights groups unknowingly by sending them money for animal welfare causes. If you would like to support a group to help animals, be sure to investigate that your money really goes to help animals (ie. such as a local animal shelter).

How do you talk to someone who has a different view than you? The key to a good discussion is to respect others' opinions. Here are a few things to consider… Different animals have different needs: a chicken is different than a horse is different than a bat. A bat chooses to live upside down in a dark cave. That wouldn't be suitable for a cow! As animal caretakers, we have to try and provide our animals with the living conditions that best meet their needs. Animals act out of instinct, they can't choose between right or wrong or be held responsible for their actions. A lion cannot be charged with murder for eating a zebra. Many people forget that humans feel and act differently than animals and can be held responsible for our actions .
We must keep these differences clearly in mind. The more we work with animals the more we learn how their behaviours differ from ours and the ways we may be the same, to help us do a better job of caring for them.

DIGGING DEEPER Activities:

- Moderate a group discussion on the questions posed at the beginning of the articles on page 7: how would you respond?
- Have a few members experience a media interview with the types of challenging questions provided in these articles. One member can act as a reporter and interview the other members in front of the group. After they have responded to a few questions, ask the other members to provide some feedback and ideas on how to improve the responses given.
- Have your members make up a number of questions they have either been asked or think they might be asked by someone who does not understand 4-H or animal care practices. Have each member share their questions and take turns practicing answering them.
- What's online? If online access (with sound) is available at the meeting: have all the members watch the short flash film www.themeatrix.com, list all the issues that are raised in the film and discuss the facts. OR Have each member search a website for information on animal welfare (pro and con) to bring back to the next meeting to discuss. Each member should evaluate the site for content, facts, tone, language and tactics. Suggested examples (Anti-agriculture): www.peta.org , www.hsus.org, www.humanefood.ca, www.vegkids.com Suggested examples (Pro-agriculture): www.farmissues.com, www.ofac.org, www.oafe.org, www.grandin.com
- Presentation or Workshop: Contact the Ontario Farm Animal Council to host a workshop in your region for members to get training on how to answer difficult questions and become better spokespeople.. Workshops are forty-five minute sessions with small group activities and discussions. They can be modified and expanded to a three or four hour workshop if desired. Call the OFAC office (519)837-1326 or email: info@ofac.org to book a presentation.

DIGGING DEEPER...For Senior Members

Read the two articles below to become informed of some of the issues about animal care.

Ask yourself: How do these make you feel? Is this true? Is this what 4-H is about?
How would you deal with this person if they approached you at a 4-H event with these concerns?

All's not fair at the fair

(Vancouver Sun, Sept. 4, 1993, Nicholas Read)

...if you intend to take in the livestock show, the following might be of some help. It's a guide to what you might see - and also what you might miss - at British Columbia's premier agricultural fair.

What you'll see at the dairy exhibit: Clean straw and water buckets; carefully tended animals; hand-drawn posters of cows with names like Bluebell, Marigold and Buttercup; no bulls.

What you won't see at the dairy exhibit: Cows tethered by steel braces in stalls where the excrement and urine is piled to their knees; male calves taken from their mothers when they are only hours old to be raised and slaughtered as veal; veal crates in which the animals are held virtually motionless for four months while they are fed little else but antibiotic-laced milk; slaughterhouses where the calves are killed to provide gourmet meat to supermarkets and restaurants.

What you'll see at the pig exhibit: Clean straw; buckets filled with fresh water three times a day; a mother sow cosily nursing her newborn piglets; healthy, strong animals with coats as smooth and blemish-free as varnish.

What you won't see at the pig exhibit: Filthy, feces-laden straw; open, festering wounds never treated even when the pigs go to auction; limping animals struck with boards by auctioneers; farrowing crates in which mother pigs are separated from their young by steel bars; dirty, concrete floors; transport trucks so crowded that animals can die of suffocation over 24- or even 48-hour journeys.

What you'll see at the beef exhibit: Clean straw; clean water buckets; healthy, calm animals with no branding marks.

What you won't see at the beef exhibit: Castration and de-horning without anaesthetics; hot-iron branding that can leave wounds so deep and serious that they never heal; feedlots in which cattle, knee-deep in muck, are barely able to walk; animals so badly injured in transport that they can no longer stand and have to be dragged off transport trucks into slaughterhouses; ritual slaughter in which the animals' throats are cut so that they can bleed to death slowly without the "kindness" of being stunned first.

What you'll see at the poultry exhibit: Clean straw; cages big enough for one or even two birds to turn around, preen themselves and flap their wings; strong healthy birds with all their feathers intact.

What you won't see at the poultry exhibit: Battery cages into which four or five birds are stuffed so tight that they can't turn around, flap their wings, preen themselves or even stand up; birds under such unrelenting stress that half their feathers have fallen out; commercially useless young male birds thrown alive into meat grinders; debeaking of female chicks at birth and then again at adolescence; the wholesale slaughter of so-called "spent" hens - hens that can no longer meet their daily laying quotas - when they are about a year old...

...What you'll see at the PNE food animal barns: The way things should be for Canadian farm animals. What you won't see at the PNE food animal barns: The truth.

Club teaches children to suppress their compassion

The Aug. 28 Vancouver Sun showed a photograph of a tearful young girl wishing farewell to her pet lamb at the 4-H auction at the PNE. The lamb was headed for the chopping block.

The accompanying article described the trauma of many children adjusting to the "realities" of animal agriculture. After a few years of raising and then killing animals, most children outgrow their childish sentimentality, it seems, and learn how much fun it is to make money in this way.

One mother recalled that when her nine-year old son sold his first lamb at auction he cried for two weeks. Until he got the cheque. "Then the tears were replaced by dollar signs." It seems the function of the 4-H organization is to indoctrinate children into an agricultural system which views animals as inanimate cogs in an economic machine.

The methods of indoctrination are simple: divorce children from their natural compassion for animals, help them "mature" to the point where they can view animals as commercial objects and replace reverence for life with more useful emotion: lust for money.

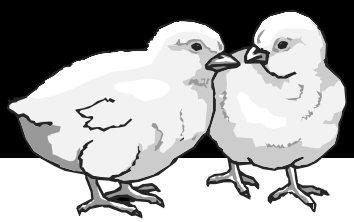
There is no need for meat or dairy products in the human diet - in fact our addiction to these foods has reaped a harvest of cancer, heart disease, and other illnesses. The sooner our society releases itself from this addiction, the better. When that day comes we will no longer have organizations like 4-H training our children to suppress their instincts of compassion.

Letter from The Vancouver Sun, September 13, 1993

Animal Care is Our Concern

Part of practicing good animal welfare is not just looking out for the animals in our care, but looking out for the welfare of all animals. When we see animals that are not having their needs met or are subjected to abuse or neglect it is our responsibility to make sure the animals receive the proper care they need.

What can you do if animals are not being cared for properly?



4-H Ontario

At an Event:

Talk to your 4-H Volunteers or show manager about specific examples of animals being mistreated. Many shows have rules about animal mistreatment, which can include the showperson being disqualified. Animal mistreatment should not be tolerated by 4-H members, volunteers or event organizers.

At a farm or stable:

OFAC Animal Care Helpline: The Helpline is a confidential "farmer helping farmer" service designed for use when farm animal care isn't the best, but no laws are being broken. This service is for the farmers who need help or advice on how to better care for their animals. The Helpline service is for cattle, poultry, and pigs. It is not for emergencies or animal cruelty cases.
Phone: (519)837-1326

OSPCA: The Ontario Society for the Prevention of Cruelty to Animals has the authority to investigate animal cruelty complaints across Ontario. If you suspect animal cruelty or abuse, contact the Ontario SPCA. For all types of animals, including livestock, horses and pets.
Phone: 1-888-ONT-SPCA

Ontario Ministry of Agriculture, Food & Rural Affairs (OMAFRA): If there are dead animals involved on a farm, there could be deadstock law violations. Phone OMAFRA at: 1-877-424-1300

CFIA Livestock Transport Emergency Hotline: The Canadian Food Inspection Agency runs a hotline service seven days a week to help with Livestock Transport emergencies.
Phone: 1-877-814-2342

Conclusion

4-H has always involved animals – that's what often makes it most challenging and rewarding! Animal welfare is an important part of the 4-H program. The 4-H community must ensure that project animals are treated humanely, become informed about animal care issues, and get involved by educating the public about the good news of 4-H and how we care for our animals. This meeting is a great first step in becoming informed and involved. Your club, your farm or stable and you have to decide where to go from here!

About the Ontario Farm Animal Council...

OFAC is the voice of animal agriculture in Ontario, representing livestock and poultry farmers and associated businesses on issues such as animal care, food safety, environment and biotechnology. Find out more at www.ofac.org or www.farmissues.com.

OFAC
ONTARIO FARM ANIMAL COUNCIL

100 Stone Rd. W, Suite 106
Guelph ON N1G 5L6
(519) 837-1326 • Email: info@ofac.org

Marketing

Marketing is an essential part of any business - this is where the producer gets paid. Before starting any business one must know where they intend to sell their product.

In the sheep industry the following are all products that one may be marketing:

- Dairy products-Sheep milk, cheese, yogurt etc
- Custom cut and wrapped lamb
- Live lambs, light or heavy through public auction
- Live lambs to the packer on a live weight basis
- Live lambs to the packer on a carcass weight basis
- Cull ewes and rams
- Breeding stock, Ewes or Rams

One must determine the appropriate location and time to sell the product to get the most money.
For example a breeder with small framed ewes may find the most profit selling light lambs at around 60-65 lbs at live auction especially if they can target the Easter or Christmas markets.
On the other hand large framed slow finishing breeds find it more profitable to market lambs at 100 lbs either to the packer or for the freezer trade.

Sales Barns

In Ontario most lambs are marketed by public auction. Many lambs also come from other provinces to be sold in Ontario due to the location of the ethnic community who favor lamb. Prices at auctions fluctuate from sale to sale and seasonally with the supply and demand. Market reports are available from provincial marketing agencies and can be helpful in researching the trends in volume and price during the different times of the year.

Advantages:	Seller does not have to find buyer Sales barns are often bonded which guarantees the seller will be paid Well finished choice lambs generally may fetch more than a buyer is willing to pay privately
Disadvantages:	There is a great deal of chance at play as number of lambs offered for sale will affect prices and there is no guarantee what the buyers will bid There is a commission fee for the services the sales barn offers

Weight Categories

Sales barns report lamb prices according to weight categories. In Ontario they are divided as follows:

Under 50 lbs
50-64 lbs
65-79 lbs
80-94 lbs
95-109 lbs
Over 110 lbs
Sheep

Prices on these reports are expressed as **dollars per hundred weight ($/cwt).**
The **dollars per pound** is found by dividing by 100.

ONTARIO SHEEP MARKETING AGENCY										
ONTARIO STOCKYARDS INC.										
Sale Date: 4-Feb-2008							Change from last week		Change from last year	
-	# Head	Low $	High $	Avg $	Top $	Avg Wt	Volume	Price ($/cwt)	Volume	Price ($/cwt)
Lambs	1207	-	-	-	-	-	824		313	-
Under 50 lbs	56	174.00	218.00	212.14	218.00	43	34	12.00	28	52
50 - 64 lbs	262	152.50	190.00	174.18	252.50	59	172	-25.18	123	-56
65 - 79 lbs	239	157.00	221.00	184.23	240.00	71	126	-45.73	53	-7
80 - 94 lbs	195	150.00	162.00	156.17	168.00	88	114	-7.92	55	-9
95 - 109 lbs	102	137.00	154.00	148.67	162.00	102	25	-8.37	-94	-2
110 + lbs	353	116.00	129.00	121.68	134.00	121	353	121.68	148	-20
Sheep (all weights)	370	70.00	95.00	82.60	115.00	148	98	6.33	247	17
Total (Sheep & Lambs)	1577	-	-	-	-	-	922	-	560	-

TR496418 4-Feb-08 Mfst: 8577 Mail Page 1
DeJong, Anita & Brian DeJong Acres 201215 Cty Rd. 109 R.R.3 Gran GST No. R136469111

BRED COW SALES
Friday,Mar.7,Apr.25,May ? (to be announced) - 7 pm
ALL VACCINATED STOCKER SALES
Tuesday, Feb.12,Mar.11,Apr.8,Apr.29,May 13 - 11am

No	Description	Mark	Buyer	CD	Weight	Price	Amount
3	Sheep		L & M Meat Distribut	S	295	80.00	236.00
9	Lambs		Sauder, Gordon	S	350	216.00	756.00
12	Lambs		Newmarket Meat Packe	S	530	218.00	1,155.40
6	Lambs		Globe Wholesale Meat	S	325	235.00	763.75
30	Total Head	Avg. Wt: 50	Avg. Pr: 194.08		1,500		2,911.15 *

	TRUCKING	COMMISSION	INSURANCE	CAT ASSN	OSMA	OFP	
	0.00	127.50	9.00	0.00	46.50	0.00	-183.00
GST	0.00	0.00	0.00	0.00	2.33	0.00	-2.33
					**** NET AMOUNT ****		2,725.82 **

ONTARIO STOCKYARDS INC.
BOX 1051, COOKSTOWN, ONTARIO L0L 1L0
TELEPHONE (705) 458-4000 FAX (705) 458-4100
E-MAIL: info@ontariostockyards.on.ca
www.ontariostockyards.on.ca
CATTLE CALVES HORSES SHEEP LAMBS GOATS

MANAGERS:
MURRAY MORRISON RES. (416) 233-1526
WAYNE SMALL RES: (705) 435-1423
WE APPRECIATE YOUR BUSINESS

Above are the prices received by a producer in February 2008. Compare these prices to the prices reported above for the sale that day.

When prices are reported the top 10% and bottom 10% are removed to give an accurate range. The high price is also reported.

Producer Selling to Dealer, Packer or Retailer

A growing percentage of lambs in Canada are sold direct to the packer or a retailer or through a dealer. Direct marketing allows the producer some control over the price his lambs will receive before they leave the farm. Developing a long term relationship with the buyer is advantageous to both parties. The buyer has a reliable source of lambs and the producer knows he has a reliable market.

Buyers will reward the seller for quality carcasses and the buyer receives feedback on carcass quality which allows him to adjust his breeding strategy if necessary.

It is important to keep a careful paper trail of agreements and deliveries incase payment is not received on time.

Disadvantages: This method requires more knowledge, energy and sometimes time on behalf of the producer. They may not be receiving as much money as the top end of the auction especially during seasonal highs. If the buyer is not one you have dealt with it is important to do background checks to ensure you are going to be paid.

Advantages: A consistent price for your lambs is likely if you are able to provide lambs year round which improves the farm's cash flow.

Feed Lots

Feedlots will buy light, recently weaned lambs and finish them for sale direct to the packer. This is more common in Western lambs but is done a little bit in Ontario as well. These lambs are destined for the heavy lamb market which is growing in Ontario since the BSE crisis closed the American border. This is an important market to the future of the lamb industry as these are the lambs needed to provide cuts for the Grocery store market.

Live Weight Versus Dressed Weight

When selling direct to a processor the seller has the option of being paid for the live weight or the dressed weight. Selling by live weight means the lambs are weighed at the plant and the buyers calculations include an assumption of yield, that is how much the carcass will weigh after killing and cleaning. Shrinkage can occur before the lambs are weighed meaning the producer does not know exactly how much loss will occur before their live weight is recorded. When sold by dressed weight the producer is actually paid for the carcass and prices are paid based on a grading scale which rewards the seller for a high meat yielding carcass.

Courtesy OFAC Animal Agriculture Photo Library

Federal Grading Standards

Federal Plants have to follow our Canadian Grading standards. Most plants in Canada however are provincial plants which means they use their own grading grid.

Here is an example of one plant and how they grade the lambs they purchase. This grid is what determines the payment to the producer.

Sunterra Meats publishes on their website the ideal carcass weight, grading rule and muscle conformation, which is based on Canadian government standards. In particular, the following standards are observed:

The **GR** (grade rule) measurement is the total tissue depth of the lamb carcass over the 12-13th rib, 11 cm from the midline (backbone). A deeper GR measurement indicates a fatter carcass. **Optimum GR measurement is 5 to 12 mm.** Less than 4 mm is considered under finished.

Muscle Score is an assessment of the muscularity of the lamb carcass at the shoulder, loin and hind leg. Muscle Scores range from 1 (extremely poor) to 5 (extremely good). The ideal carcass weight of the lamb is **45-60 pounds (or 21-27.2 kilograms)**
(Sunterra Meats, 2006)

Best Baa's Farmer's Market Stall, St. Lawrence Market, Toronto

Producer to Customer

Many producers have built up an established freezer trade an sell their lamb direct to the consumer. This allows them to cut out the middle man and the 2 share the extra money. This method can be time consuming , requiring good organizational skills and customer service. For those who enjoy working with the customer the returns can be very worthwhile.

Breeding Stock

The commercial breeders who are busy producing market lambs also require a source of breeding stock. They will pay a premium for good quality stock with production records, good health status, and strong genetics. It takes time to become established an known as a good producer of breeding stock but it can be a good business as well.

Courtesy OFAC Animal Agriculture Photo Library

When to Market Lambs

Market Data

Examining market data available using the Ontario Sheep Marketing Association website will give you an idea of how prices fluctuate seasonally.

Holidays and Ethnic Markets

Lamb holds a significant meaning in many religious observances and lamb and mutton are dietary staples in many countries. The Islamic faith is estimated to be one of the fastest growing religions in Canada and much of the countries population increase in recent years are due to immigration.

Occasions celebrated with Lamb and type of lamb desired

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 peak during the week before Easter. Numbers of 65-79lb lambs tend to increase during this time as well. Although volume increases are fairly predictable from year to year, price patterns varied considerably during these years.

- March 23, 2008
- April 12, 2009
- April 4, 2010
- March 24, 2011

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 27, 2008
- April 19, 2009
- April 4, 2010
- April 24, 2011

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

- April 20-27, 2008
- April 9-16, 2009
- March 30-April 6, 2010
- April 19-26, 2011

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 :)

Id al Adha: Id al Adha or Eid 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. Id al Adha is a three-day celebration. As with Ramadan the exact dates of the holiday are dependent on moon sightings. The dates listed below are the estimated first day of the holiday.

- December 20, 2007
- December 8, 2008
- November 28, 2009
- November 17, 2010
- November 7, 2011

Ramadan: Ramadan is the most significant of the Islamic holy months. 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 a 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

- September 13, 2007
- September 2, 2008
- August 22, 2009
- September 24, 2010
- September 24, 2011

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.

- October 13, 2007
- October 2, 2008
- September 21, 2009
- October 24, 2010
- October 24, 2011

Taken from the Ontario Sheep Marketing Agency Website - http://www.ontariosheep.org/

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 with help finish lambs properly (See Chapter 7 and the Code of Practice at the end of the binder for details on condition scoring). 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 chose 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.

Dairy Sheep Industry

There is a growing dairy sheep industry in Canada. Those who have chosen to go this route are working hard to establish high producing bloodlines, facilities, markets and processing facilities in order to produce the product.

Many have formed Cooperatives to work jointly marketing their products. Some have successfully marketed their product at farmers markets in cities were their cheeses are in hot demand.

Milking ewes is an excellent way to increase the income from a heard of sheep with out increasing the number of ewes in the flock. There is still income from the lambs. Those that are not sold or kept for breeding stock are finished and sold as market lambs.

Lambs are either removed from the ewe and raised on milk replacer or left on the ewe until weaning when the ewe is then milked.

Breeds commonly used for milking are East Friesien and British milk sheep but many other high producing breeds while not as common can also be milked.

Marketing Glossary

Carcass: The dressed body of a meat animal from which internal organs and skin have been removed.

New Crop: Lambs less than 65 lbs, usually marketed while still on milk.

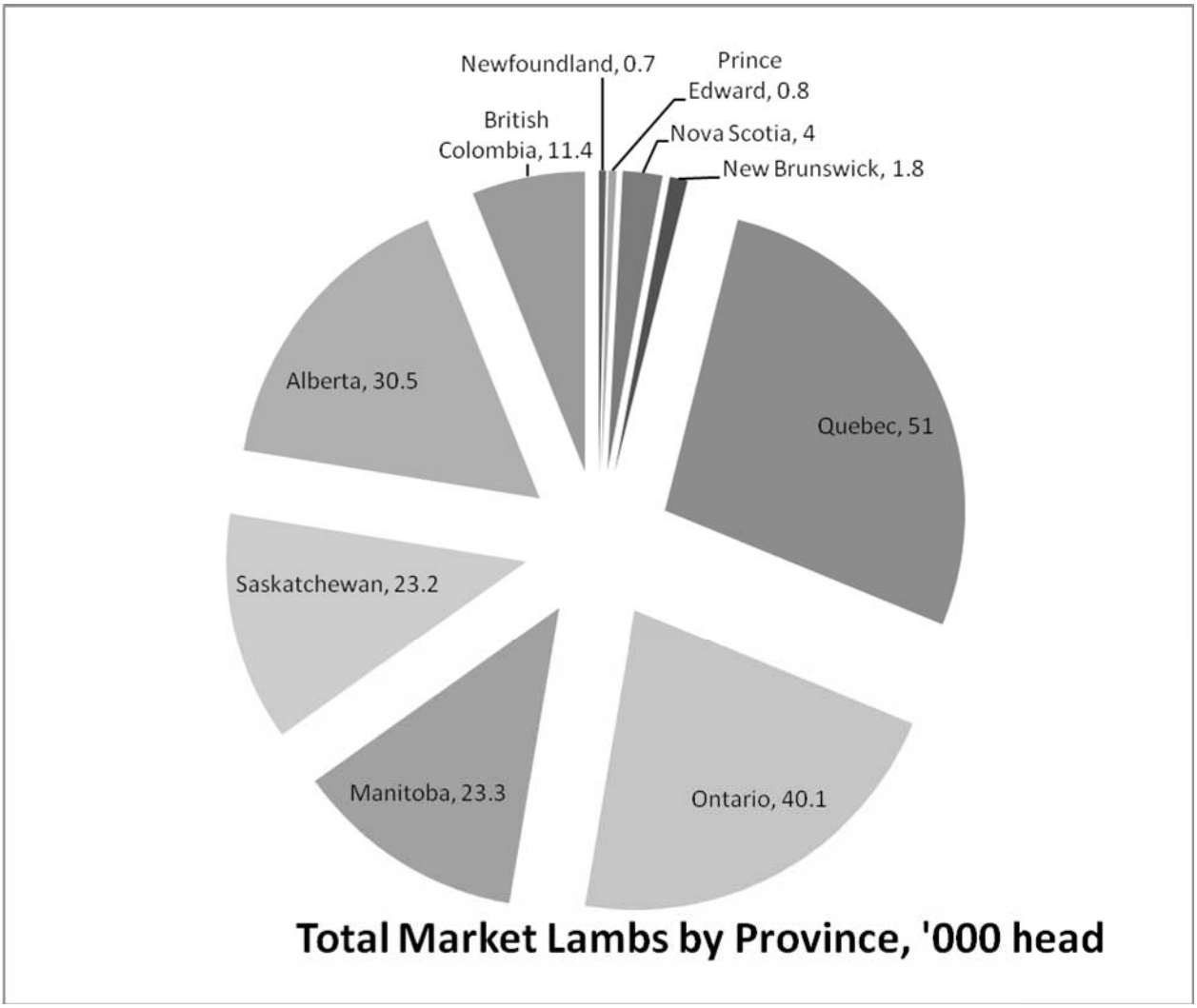
Finish: To fatten lambs for slaughter, or the amount of fat cover on a market lamb

Packer: Purchases market lambs for slaughter, distributes carcasses to butcher shops or grocery stores

Dressed Weight: Weight of the carcass

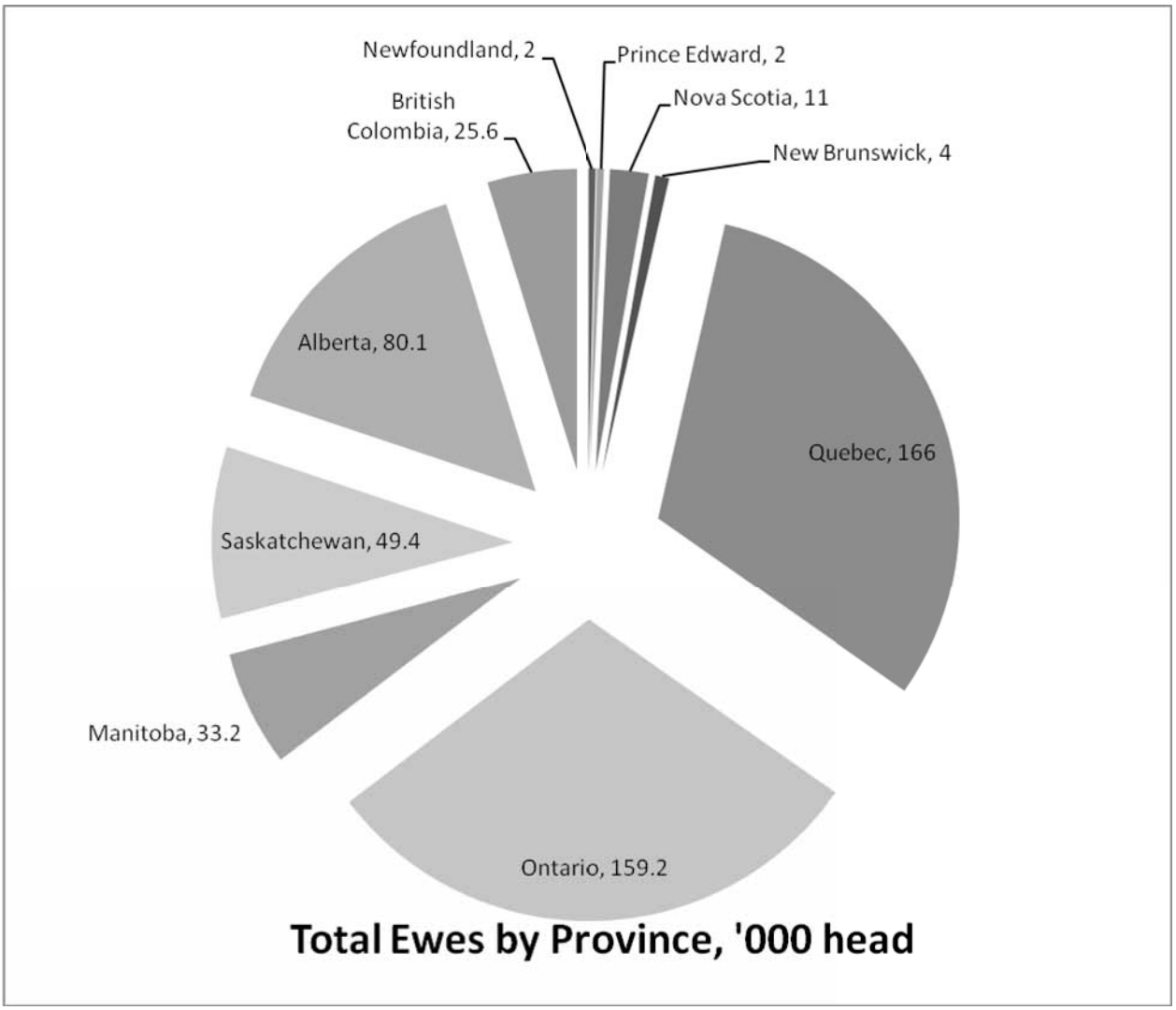
Canadian Sheep Inventories as of January 2008.

Source Statistics Canada.



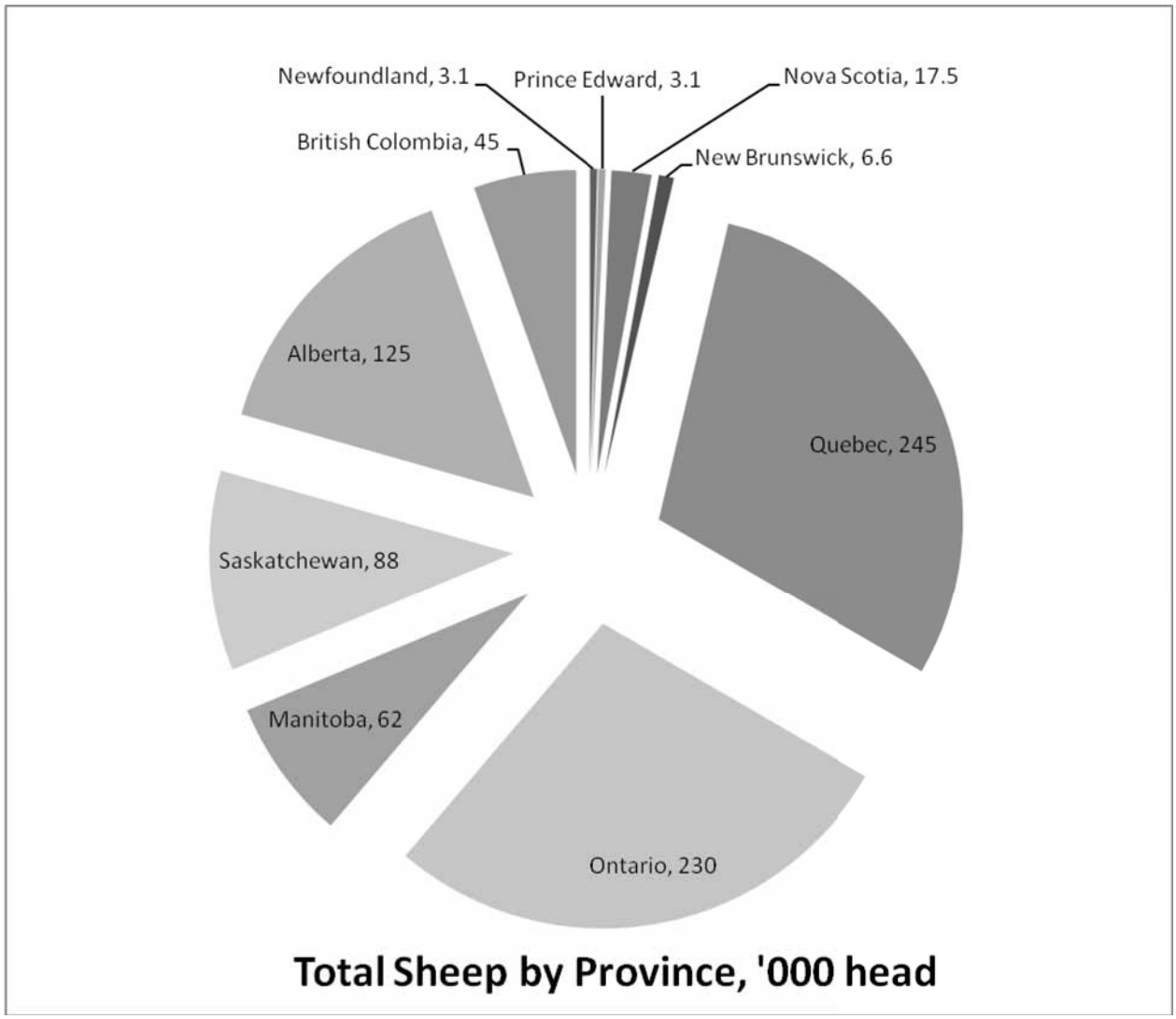
Canadian Sheep Inventories as of January 2008.

Source Statistics Canada.



Canadian Sheep Inventories as of January 2008.

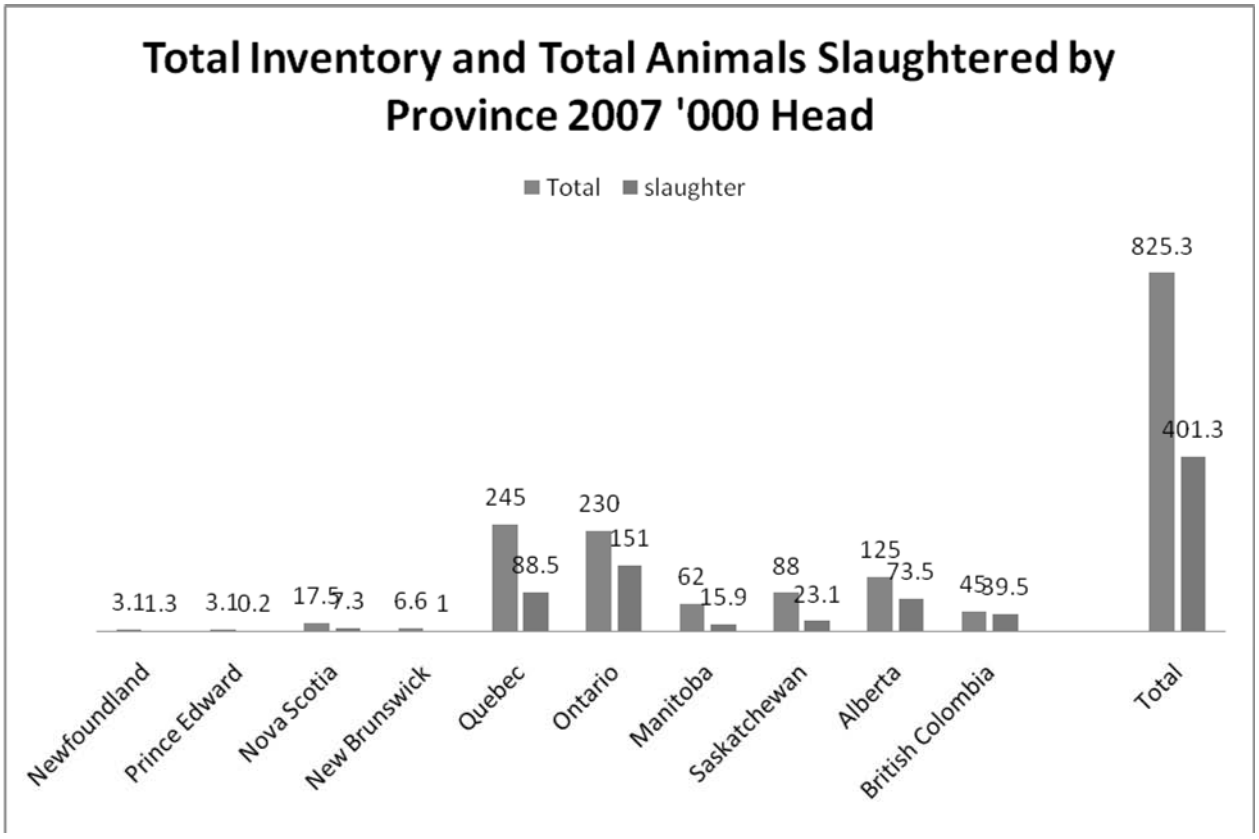
Source Statistics Canada.

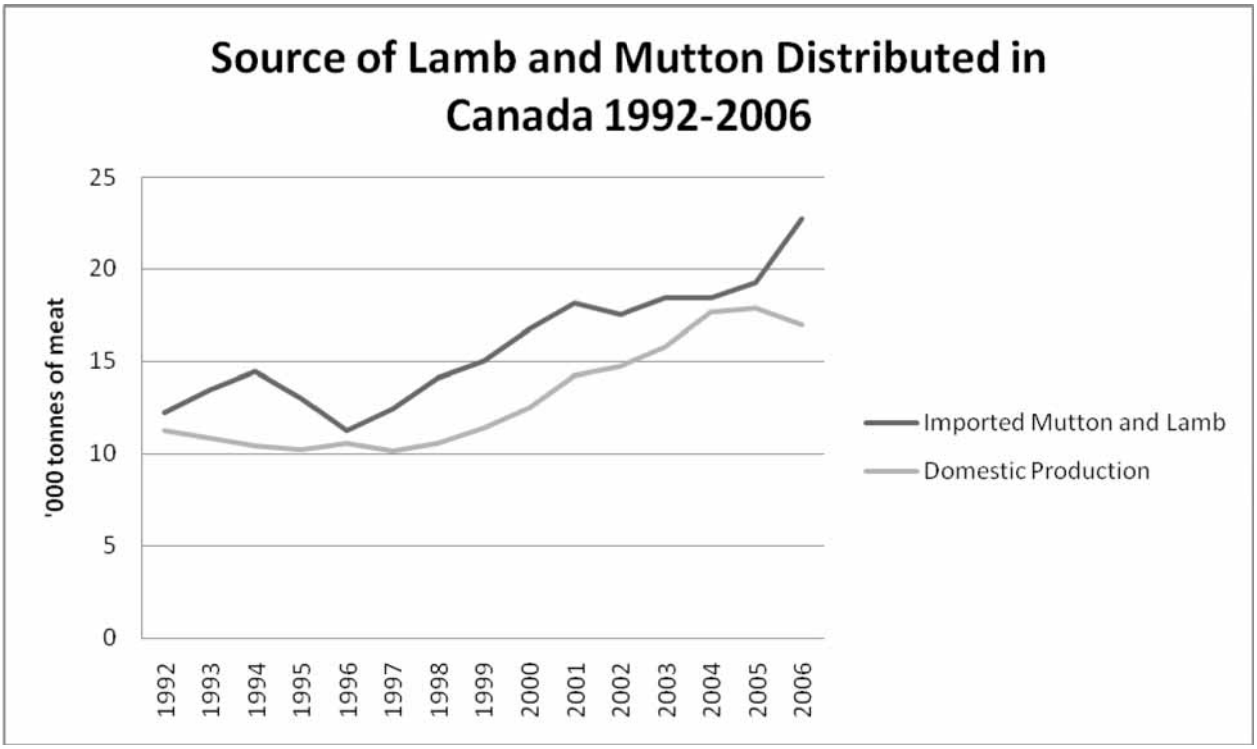


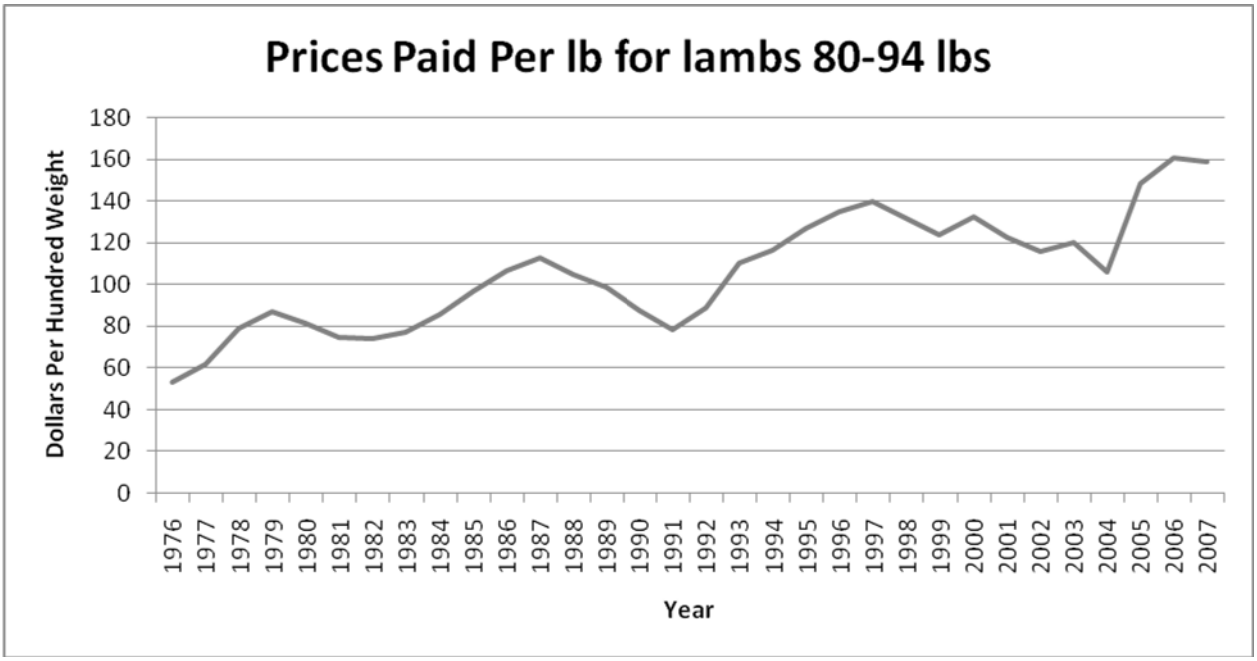
Canadian Sheep Industry Overview

January 2008

Source: Statistics Canada




Source of Lamb and Mutton Distributed in Canada 1992-2006
'000 tonnes of meat
25
20
15
10
5
0
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
Imported Mutton and Lamb
Domestic Production


Prices Paid Per lb for lambs 80-94 lbs
Dollars Per Hundred Weight
180
160
140
120
100
80
60
40
20
0
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
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2000
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2002
2003
2004
2005
2006
2007
Year

ONTARIO SHEEP
ONTARIO SHEEP MARKETING AGENCY

Make the Healthy Choice
How does lamb compare?

Nutrient Comparisons of Lamb Data to Other Protein Foods

(100 grams raw, edible portion)

	Energy			
	Calories	**Kilojoules**	**Protein**	**Fat**
Lamb*				
Leg	148	620	19	8.0
Loin	237	990	18	19.0
Shoulder	214	890	18	16.0
Ground**	146	610	20	7.2
Chicken (meat & skin)				
Breast	176	735	21	9.7
Thigh	245	1024	16	20
Drumstick	189	790	18	13.0
Beef (1/4" trim)				
Sirloin steak	162	675	19	8.9
Prime rib roast	260	1085	18	20.0
Inside top round	133	560	22	4.2
Lean ground beef	215	900	19	15.0
Pork (1/4" trim)				
Leg inside round	131	550	21	4.6
Loin centre cut	182	760	21	10.0
Shoulder butt	243	1015	18	18.0

Notes:
* The fat trim for the lamb cuts was not specified
** Ground lamb prepared with meat from the loin and should would have different nutrient profile

***Source: Canadian Nutrient File, 1997 & Maxxam Analytics 1998**

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ONTARIO SHEEP
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Make the Healthy Choice
Cooking with Lamb

Roasting at 325F Oven Temperature (not preheated)

Cut	Approx Weight	Final Thermometer Reading	Approx Cooking Time
	Lbs	Degrees F	Min. per Lb
Leg	7-9	140F (rare)	15-20
		160F (medium)	20-25
		170F (well)	25-30
Leg	5-7	140F (rare)	20-25
		160F (medium)	25-30
		170F (well)	30-35
Leg, Boneless	4-7	140F (rare)	25-30
		160F (medium)	30-35
		170F (well)	35-40
Leg, Shank Half	3-4	140F (rare)	30-35
		160F (medium)	40-45
		170F (well)	45-50
Leg, Sirloin Half	3-4	140F (rare)	25-30
		160F (medium)	35-40
		170F (well)	45-50
Shoulder - Boneless	3.5-5	140F (rare)	30-35

		160F (medium)	35-40
		170F (well)	40-45

Broiling at Moderate Temperatures

Cut	Approx Thickness	Approx Weight	Distance from Heat	Approx Total Cooking Time
	Inches	Ounces	Inches	Minutes
Shoulder Chops	3/4 - 1	5-9	3-4	7-11
Rib Chops	1	3-5	3-4	7-11
Rib Chops	1 ½	4.5-7.5	4-5	15-19
Loin Chops	1	3-5	3-4	7-11
	1 ½	4.5-7.5	4-5	15-19
Sirloin Chops	3/4 - 1	6-10	3-4	12-15
Leg Steaks	3/4 - 1	11-18	3-4	14-18
Cubes for Kabobs	1-1 ½		4-5	8-12
Ground lamb patties	½ x 4	4	3	5-8

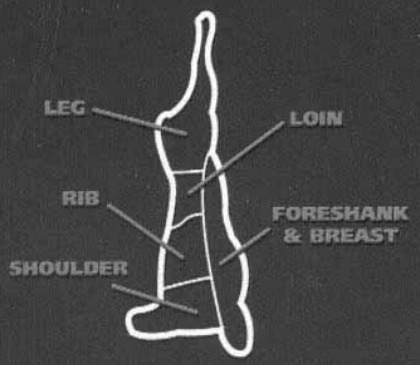
Cooking in Liquid

Cut - Lamb for stew
Average Size - 1 to 1 ½ inch pieces
Approx. Total Cooking Time - 1 ½ - 2 hours

Braising

Cut	Avg. Weight or Thickness	Approx. Total Cooking Time
Neck Slices	3/4 inch	1 hour
Shoulder Chops	3/4 to 1 inch	45-60 minutes
Breast - stuffed	2 - 3 pounds	1 ½ - 2 hours
Breast - rolled	1 ½ - 2 pounds	1 ½ - 2 hours
Riblets	3/4 - 1 pound each	1 ½ - 2 hours
Shanks	3/4 - 1 pound each	1 - 1 ½ hours
Lamb for stew	1 ½ inch pieces	1 ½ - 2 hours

Ontario Lamb



FORESHANK & BREAST

Shank
Braise, Cook in Liquid

Spareribs
Braise, Broil, Roast

Boneless Rolled Shank Roast
Roast, Braise

Riblets
Braise, Cook in Liquid, Broil

OTHER CUTS

Lamb for Stew
Braise, Cook in Liquid

Cubes for Kabobs
Broil, Braise, BBQ

Ground Lamb
Broil, Panbroil, Roast (Bake)

LEG

Whole Leg
Roast

Short Cut Leg, Sirloin Off
Roast

Center Leg Roast
Roast

Center Slice
Broil, Panbroil, Panfry

Shank Portion Roast
Roast

American Style Roast
Roast

Hind Shank
Braise, Cook in Liquid

Boneless Leg Roast
Roast, Broil if butterflied

Sirloin Chop
Broil, Panbroil, Panfry, Braise

Boneless Sirloin Roast
Roast

SHOULDER

Square-Cut Shoulder, Whole
Roast, Braise

Blade Chop
Braise, Broil, Panbroil, Panfry

Neck Slice
Braise, Cook in Liquid

Arm Chop
Braise, Broil, Panbroil, Panfry

Boneless Shoulder Roast
Roast, Braise

RIB

Rack of Lamb
Roast, BBQ

Frenched Rib Chop
Broil, Panbroil, Panfry, BBQ

Rib Chop
Broil, Panbroil, Panfry, Roast, BBQ

Rib Roast
Roast

Crown Roast
Roast

LOIN

Double Loin Chop
Broil, Panbroil, Panfry, BBQ

Loin Roast
Roast

Loin Chop
Broil, Panbroil, Panfry, BBQ

Fresh • Lean • Tender • Mild

ONTARIO • FRESH PREMIUM Lamb
www.lambrecipes.ca

Ontario Sheep Marketing Agency
130 Malcolm Road
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www.ontariosheep.org

ONTARIO SHEEP

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Make the Healthy Choice

Nutritional Analysis Raw Lamb Product

Analysis provided by Maxxam Analytics Mississauga, Ontario - 1998

Nutrition Information: Raw Lamb Loin Chops	
Per 100 g serving (edible portion)	
Energy	237 Cal
Protein	18 g
Fat	19 g
polyunsaturates	1.2 g
monounsaturates	6.6 g
saturates	8.4 g
cholesterol	34 mg
carbohydrate	0 g
Sodium	72 mg
Potassium	261 mg

Nutrition Information: Raw Lamb Shoulder Chops	
Per 100 g serving (edible portion)	
Energy	214 Cal
Protein	18 g
Fat	16 g
polyunsaturates	1.2 g
monounsaturates	5.9 g
saturates	6.8 g
cholesterol	38 mg
carbohydrate	0 g
Sodium	58 mg
Potassium	313 mg

Nutrition Information: Raw Lamb Leg	
Per 100 g serving (edible portion)	
Energy	148 Cal
Protein	19 g
Fat	8 g
polyunsaturates	0.6 g
monounsaturates	2.9 g
saturates	3.5 g
cholesterol	61 mg
carbohydrate	0 g
Sodium	62 mg
Potassium	265 mg

Nutrition Information: Raw Ground Lamb	
Per 100 g serving (edible portion)	
Energy	146 Cal
Protein	20 g
Fat	7.7 g
polyunsaturates	0.6 g
monounsaturates	2.9 g
saturates	3.2 g
cholesterol	60 mg
carbohydrate	0 g
Sodium	53 mg
Potassium	308 mg

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ONTARIO SHEEP

ONTARIO SHEEP MARKETING AGENCY

Make the Healthy Choice

Cooking with Lamb

Purchasing Lamb

When purchasing fresh Ontario lamb, look for a product that is light to dark pink in colour, has a firm and fine-grained texture. Most large cuts of lamb will have a smooth covering of creamy white fat. For lamb purchased at farm-gate, there may be a thin paper-like covering on the fat. This is called the "fell" and should be left on roasts to seal in juices while cooking but removed from other cuts to prevent meat from curling when cooked.

Lamb is an excellent source of protein, iron and B vitamins, thiamine, riboflavin and niacin. Because lamb is a non-marbled meat, it makes the fat easy to trim for the fat-conscious consumer. Lamb is lean - a leg roast contains less than 185 calories per 90g serving.

Serving size depends of course on appetite but as a general rule for each serving you should buy 100-175 g of boneless lamb or 225-350 g bone-in.

Storing Lamb

Fresh lamb can be stored in the coolest part of your refrigerator for up to 3 days when covered loosely with wax paper. For longer storage, wrap lamb airtight and freeze. Lamb keeps well in the freezer - up to 8 months for roasts, 5 months for chops and 3 months for ground lamb and organ meats.

Cooked lamb should be wrapped or covered and stored in the refrigerator within one hour after cooking and can be stored for up to 4 or 5 days.

Spices, Sauces & Seasonings

Ontario Lamb is known for it's versatility and delicate flavour. While it's very good served on its own - it also allows you to use a variety of seasonings and flavours. Spices such as garlic, rosemary, marjoram, basil, mint, thyme, ginger and oregano create flavour sensations. They can be sprinkled on meat before cooking or added to gravies and sauces. Flavourings such as lemon pepper, onion and curry are popular with lamb creations. You may want to consider making slits in tops of roasts before baking and insert slivers of garlic, mint leaves or sprigs of parsley. The Ontario Sheep Marketing Agency has a fantastic recipe for lamb roast prepared this way.

Lamb can be served with traditional mint sauces but consider the possibility of red pepper jelly, sweet and sour, souvlaki and teriyaki, barbeque sauce, maple syrup, cranberry sauce, grape, currant or mint jelly with your lamb dishes.

Consider garnishing with broiled peach or pear halves, pineapple, tomatoes or mushrooms. Use your imagination!

Cooking

Lamb is one of the best meats to cook from a frozen state because it does not get tough or dry.

While cooking times vary for lamb, it should be roasted at 160° C. Internal temperature of lamb roasts should reach 65° C for medium and 75°C for well done. It is important not to overcook lamb - fresh lamb is tender, juicy and delicious when slightly pink in the middle.

Serving

Serve lamb piping hot on warmed plates to best enhance lamb's delicate flavour. When using lamb in salads or serving cold, let it stand at room temperature for 2-4 hours, slice and serve.

Best of all, lamb can be served with white or red wines.

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Record Keeping

Maintaining records on your flock can be one of the most significant and cost effective method of increasing profitability on your farm.

Decisions such as choosing replacements, adjusting feeding programs, buying rams and more require information from the records you keep.

To optimize gains in productivity the performance of individual animals should be tracked. This enables a producer to make culling decisions, select replacement breeding stock and with overall flock management.

Records can be kept manually on paper or cards, in computer spreadsheets or databases or through the use of specially designed sheep management software.

On Farm Identification

Tattooing

- Registered purebred sheep in Canada are identified by tattoo. The tattoo includes the flock letters, the year letter and the number of that animal within the flock.
- A tattoo gun is required as well as tattoo ink.
- The ear must be clean and ink is applied to the ear before and after tattooing.

Tagging

- In addition to the National ID program most producers use an identification tag for lambs that is easily read from birth. Advances have been made in electronic tags that can be read with a hand held reader. These are useful for large flocks when treating, weaning, weighing and so on.
- Different colours and numbering schemes can be used to easily identify groups, ages, different breeds, purebred status and so on. In order to keep proper records all animals need to be tagged.

Records

With this project you will be given a record book. It gives a very thorough sampling of the types of records used by producers.

Records include:

Medications given and withdrawals	Weaning Weights
Lambing	Birth weights
Breeding	Average daily gain
Feed changes or batches	Number of lambs/ ewe- born/weaned
Feed inventories	Market lambs shipped
Flock inventories	Cull stock shipped
Mortality/ Culling	Income and expenses
Pasture/ Crop	Loses to predators

Cash Flow and Budgeting:

The following pages contain some useful cost of production data that can help in creating a cash flow projection for a sheep flock. While it is a few years old most of the information is still fairly accurate. In all situations there are variables in cost and income. Using these pages a producer would determine the possible income from his planned flock and this can help when considering expansion or beginning a sheep flock.

Over time record keeping will allow you to compare your actual costs to this table and make appropriate adjustments.

(Courtesy the Ontario Sheep Marketing Agency)

TABLE 2C
ANNUAL PHYSICAL INPUTS (Per Ewe)

COST ITEM	Spring Lambing	Winter Lambing	Accelerated Lambing
Forage	400 kg	440 kg	550 kg
Grain	27 kg	56 kg	115 kg
Creep Feed	0 kg	20 kg	30 kg
Salt/Minerals/Vitamins	$2.00 - $3.00	$2.00 - $3.00	$3.00
Pasture ($50/acre)	0.2 ac @ $50.00	$5.00	$8.50
Labour	0.75	1.25	1.75
Fuel	5.0 litres	5.0 litres	5.0 litres
Repair & Maintenance	1 x fuel	1 x fuel	1 x fuel
Custom Shearing	$3.00	$3.00	$3.30
- Manure &	$2 + $0.78	$2 + $0.78	$2 + $1.73
Sheep Supplies	$1.13	$1.75	$3.00
Veterinary Services	$1.00	$1.00	$1.00
Veterinary Medicines	$2.00	$2.75	$10.00
Marketing Costs	$1.50		
Bedding	0	1.5 bales per ewe	2.5 bales per ewe
Building and Fence Repair	$1.00 + $3.00	$1.50 + $1.75	$1.00 + $3.00
Predator Control	$300 per 200 ewes	$300 per 400 ewes	$300 per 200 ewes
Predator Control	$1.50	$0.75	$1.50
REVENUE ITEMS			
Lambs Weaned Per Ewe	1.40	1.75	2.55
Wool Produced Per Ewe	6.0 lbs. (@ $0.32/lb.)	6.0 lbs.	5.4 lbs.
Value Added for Freezer Trade			
Value Added for Breeding Stock	$4.50	$4.50	$21.69
Value Added for Forward Contracts			
OVERHEAD ITEMS			
Value of Each Ewe	$150.00	$150.00	$200.00
Value of Each Ram	$350.00	$350.00	$375.00
Ewe $ to Ram $ ratio	50 : 1	50 : 1	35 : 1
Life of Ewes	6	6	6
Life of Rams	4	4	4

TABLE 3A
ANNUAL LAMB BUDGETS* (1998 per lamb)

REVENUE ITEMS	Spring Lambing	Winter Lambing	Accelerated Lambing
Lamb Sales	120.00	120.00	120.00
Wool Sales	1.63	1.30	0.81
Value Added From Breeding Stock	3.21	2.57	8.60
Value Added From Freezer Trade			
Value Added From Stabilization			
Value Added From Forward Contracts			
Total Revenue	**$124.84**	**$123.87**	**$129.41**
COST ITEMS			
Forage	25.71	22.65	19.36
Grain	2.71	4.55	6.53
Creep Feed	0.00	3.99	4.12
Salt/Minerals/Vitamins	1.79	1.43	1.18
Pasture	7.14	2.86	3.31
Hired Labour	4.29	5.69	5.56
Fuel	1.61	1.29	0.89
Equipment Repair & Maintenance	1.61	1.29	0.89
Custom Shearing	2.14	1.72	1.30
Custom Manure Cleaning	1.43	1.14	0.79
Custom Ultrasound	0.55	0.45	0.71
Sheep Supplies	0.80	1.00	1.18
Veterinary Services	0.71	0.56	0.38
Veterinary Medicines	1.43	1.57	3.98
Marketing Expenses	1.07	0.86	0.59
Bedding	0.00	1.14	1.37
Building Repairs	0.71	0.86	0.39
Fence Repairs	2.14	0.99	1.13
Predator Control (dogs)	1.07	0.43	0.59
Predator Control (other)	1.07	0.43	0.59
Ewe Cost - Depreciation	5.36	4.29	6.23
Ewe Cost - Interest	7.29	5.83	4.80
Ram Cost - Depreciation	0.63	0.50	0.57
Ram Cost - Interest	0.12	0.10	0.11
Total Costs	**$71.38**	**$65.62**	**$66.55**
Net Contribution Margin	**$53.46**	**$58.25**	**$62.86**

* All values are on a ***per lamb to weaning, per year*** basis.

TABLE 3B
ANNUAL EWE BUDGETS* (1998 per ewe)

REVENUE ITEMS	Spring Lambing	Winter Lambing	Accelerated Lambing
Lamb Sales	168.00	210.00	306.00
Wool Sales	2.28	2.28	2.05
Value Added From Breeding Stock	4.50	4.50	21.69
Value Added From Freezer Trade			
Value Added From Stabilization			
Value Added From Forward Contracts			
Total Revenue	**$174.78**	**$216.78**	**$329.74**
COST ITEMS			
Forage	36.00	39.60	49.46
Grain	3.80	7.92	16.19
Creep Feed	0.00	6.98	10.46
Salt/Minerals/Vitamins	2.50	2.50	3.00
Pasture	10.00	5.00	8.50
Hired Labour	6.00	10.00	14.00
Fuel	2.25	2.25	2.25
Equipment Repair & Maintenance	2.25	2.25	2.25
Custom Shearing	3.00	3.00	3.30
Custom Manure Cleaning	2.00	2.00	2.00
Custom Ultrasound	0.78	0.78	1.73
Sheep Supplies	1.13	1.75	3.00
Veterinary Services	1.00	1.00	1.00
Veterinary Medicines	2.00	2.75	10.00
Marketing Expenses	1.50	1.50	1.50
Bedding	0.00	2.00	3.50
Building Repairs	1.00	1.50	1.00
Fence Repairs	3.00	1.75	3.00
Predator Control (dogs)	1.50	0.75	1.50
Predator Control (other)	1.50	0.75	1.50
Ewe Cost - Depreciation	7.50	7.50	15.83
Ewe Cost - Interest	10.20	10.20	12.20
Ram Cost - Depreciation	0.88	0.88	1.43
Ram Cost - Interest	0.17	0.17	0.27
Total Costs	**$99.96**	**$114.78**	**$168.87**
Net Contribution Margin	**$74.82**	**$102.00**	**$160.87**

*All values are on a ***per ewe, per year*** basis.

Roll Calls & Activities

Roll Calls:

A roll call is an important part of the meeting that allows all members to contribute. Every member needs to have an opportunity to answer. Make sure to positively enforce each answer. Use the date column to record the date on which each role call was used to avoid duplication.

Date Questions or Topic

_____What is one trait that is important to you when selecting a 4-H lamb?

_____Name a breed that can be used as a maternal breed

_____Name a breed that is considered a terminal breed

_____Name a breed of sheep and one of its characteristics

_____Name one part of a sheep

_____Name one part of a sheep's digestive system

_____Name one thing that is bad for a sheep to eat

_____What is a sign that a sheep is sick?

_____Describe the symptom of an illness and a medication that may be used to treat it

_____What breed of sheep is your favorite and why

_____Name one trait in a flock that you may choose to improve

_____How might a producer use market information to help him make decisions?

_____Name one basic need of sheep that a farmer must provide

_____Identify a tool and how it is used in handling or treating sheep

_____Name something that might be found in a lambing kit

_____What is one thing that needs to be considered when planning a farmstead?

_____What are some of the positive things about sheep farming versus other types of livestock (or with)?

_____What are some reasons sheep may need to be sorted or handled?

_____What are some techniques for preventing predator damage?

_____What are your plans for your project lamb after the achievement program?

Activities

Social Recreation Activities

Social Rec is an important part of your meetings, as it allows the members to interact and get to know each other.

Here are few activities that can be used with the sheep project. For more see the Fun Pack and the Quality Equation available through the National Resource Network.

Choosing Partners

- Put members into partners by using the following activities:
- Find the first person wearing the same color as you
- Put up your hand and wave-Now find the first person waving the same hand as you
- Say your favorite flavor of cake, Chocolate or Vanilla match up with the first person saying the same flavor
- Say Mountain or seashore- Match up with someone saying the opposite

Ba Lamby Ba

Materials: Blind Fold
Time: 15 minutes

Members stand in a circle, and one is blindfolded. The blindfolded person must move around the inside of the circle and stand in front of someone. They say 'Ba Lamby Ba'. The person they stop in front of must say 'Baa' three times. The blindfolded person must guess who it was they stopped in front of. They switch places and the next person repeats.

4-H Clover Tree

Materials: Clover shapes cut out for each member
Time: 15 minutes

Have each member write on the clover why they joined this 4-H club. Post on the wall and have each member present theirs.

Two Lies and A Truth

Materials: Note pads and pencils
Split group into partners.

Have the members interview each other and record three things about each other.
One point will be true, the other two are fabricated. The partners will introduce each other. The other members will attempt to guess which point is true.

Developing Sportsmanship

(From The Quality Equation 4-H Club Pack, Manitoba 4-H, 2003)

Promoting sportsmanship in clubs can be done both through the adults role modeling sportsmanlike behavior, and by stating clear expectations as to what is considered appropriate behavior.
On the following page, there are pairs of role-plays. Each pair showcases a sportsmanlike and an unsportsmanlike behavior. Each requires 2 - 3 people -each card states how many people the role play requires.

Select the topic(s) of sportsmanship that you would like to focus on from the six offered:

1. Conduct
2. Courtesy
3. Fairness
4. Competition
5. Honesty
6. Graceful Acceptance of Results

Depending on time available, you may choose to do all topics in one meeting or pick one topic each for a series of meetings. Assign groups of members to each set of role-plays. If you have a small club, have the group of 2 or 3 do both role-plays. If you have a larger club, have a group of 4 or 6 assigned to the pair of role-plays and each member will only act in one role. Assigning the same role play to two groups of people will usually produce different results.

1. Role-play and discuss good and poor sportsmanship qualities. Use the opportunity to set clear expectations of appropriate behavior in your club.

Conduct 2 people	**High Standards of Behaviour** One member acts as the person registering people for the event. Another member demonstrates how you should act wehn you arrive at teh event and approach the registration area. Be pleasant, ask questions politely, and say please and thank you.	**Poor Behaviour** One member acts as the person registering people for the event. Another member demonstrates how you should NOT act when you arrive at the event and approach the registration area (fuss about how your parents made you late, complain that the line is too long, start a quarrel with your sister, argue about where you're supposed to set up your display, etc.)
Fairness 2 people	**Showing Sportsmanship Through Fairness** One member acts as a news reporter. Another member demonstrates how you should act in explaining to a news reporter what members in your project category did in their projects. Explain the project requirements and explain what the judges are looking for. Talk about the projects and other participants fairly.	**Poor Sportsmanship: Being Unfair** One member acts as a news reporter. Another member demonstrates how you should NOT act in explaining to a news reporter what members in your project category did in their projects. Brag about the work that the kids in your club did, but make fun of what kids from other kids did. Or complain that you didn't have as much time to work on your project as the others did (when in fact eveyone had the same 24 hours per day, 7 days a week).
Honesty 2 people	**Showing Sportsmanship Through Honesty** One member acts as the judge. Another member demonstrates how you should act in explaining honestly to the judge what you did in your project.	**Poor Sportsmanship: Being Dishonest** One member acts as the judge. Another member demonstrates an example of cheating or dishonesty in explaining to the judge what you did in your project. For example, 'borrow' someone else's project and try to pass it off as your own. Or show something that's obviously made from a kit or purchased, and tell the judge not only did you make it, but you even designed the pattern and made the material yourself! Or cheat in little ways, like saying that you're 12 so you can compete in a junior clasas when you're actually 14. Better yet, think of a way that someone might actually try to cheat in your project category, and act it out for your group.
Competition 2 people	**Showing Sportsmanship in Competition** Two members role play sitting side by side in a competition as it should be done. Have anice conversation with each other. Explain waht you did in your project, compliment each other's exhibit, and make helpful suggestions for how you might improve.	**Showing Poor Sportsmanship in Competition** Two members role play sitting side by side in a competition as it should NOT be done. Have a mean-spirited conversation with each other. Try to convice the other person to change something about his / her exhibit that would actually make it look worse to the judge.
Courtesy 2 people	**Showing Sportsmanship in Relating to Others** One member plays a spectator who wants to talk with a participant about the junior fair program. Another member plays a participant who shows sportsmanship in responding to the spectator's questions and excusing yourself when it's time to be judged.	**Being Unsportsmanlike in Relating to Others** One member plays a spectator who wants to talk with a participant about the junior fair projgram. Another member plays the part of a participant who LACKS sportsmanship in responding to the spectator's questions. Sarcastically tell the person if they read the local newspaper once in a while they'd know the answers to their dumb questions..tell him / her you're just too busy to bother with somebody who isn't a judge, etc.
Graceful Acceptance of Results 3 people	**Showing Sportsmanship in Accepting Results as a Family** One member plays an announcer of winners. Another member plays a responsible parent. Someone else plays a competitor show shows sportsmanship in accepting results. when the winners are announced, the 'parent' shows concern with a statement such as, 'I hoped YOU would win this year...I wonder why they picked those other kids?' The 'competitor' responds with comments that show acceptance such as 'they had a nice project', 'I talked with them... they had really studied and knew their stuff', or 'I don't know, but the judge's questions were thorough...I bet they did better in their interviews than I did in min', etc. The 'parent' responds with appropriate comments such as 'maybe so',...''next time, would you like me to quiz you on the project?', and 'I'm proud of you for realizing that no one can always be the best'.	**Showing Poor Sportsmanship in Accepting Results as a Family** One member plays an announcer of winners. Another member plays a parent who thinks his / her main job is to be a nadvocate for his / her child. Someone else plays a competitor who lacks sportsmanship in accepting results. When the winners are announced, the 'parent' shows concern with a statement to the 'competitor' such as 'I hoped YOU would win this year...I wonder why they picked those kids?' The 'competitor' responds with unsportsmanlike coments that downplay the results such as 'I don't know, but nobody could have studied harder than me...They probably cheated...I was ripped off!', 'It's not fair! After I didn't know the answer sto those two questions, the judge didn't ask me anything else, and she spent ten minutes each talking to the kids who won!', and 'If I had spent as much money as the winners, I could have won too!' The 'parent' gets all riled up, marches the participant up to the announcer to protest the results in a fit of anger.

Safety Charades or Pictionary
From The Quality Equation 47

Materials needed:
Attached “phrases”, hat or pail to draw phrases from, chalk board or paper, timer, scissors.

Producing a safe and wholesome food product is very important. In order to produce safe, high quality products, animal owners and food producers are responsible to follow certain rules. Safe rules must be followed to ensure good health.

Cut out the phrases on the following page and place them in a hat. Decide if the group is going to play charades, phrase game or pictionary. Once they use these phrases - have them make up and try some of their own.

1 . Charades
- Divide the members into two teams
- Have one team member come up and pull a phrase out of the hat.
- He / she has 30 seconds to act out that phrase (no talking, just gestures)
- The other teammates try to guess the phrase.
- If they do not guess correctly, the other team gets a chance to guess but no more acting can be done at that point.
- After each phrase is guessed, have a brief discussion.

2. Phrases
Same as charades but the person must use words to get the teammates to guess the phrase, e.g. it has four legs and baas. (It is a sheep)

3. Pictionary - The same as charades but the clues are drawn out (on a chalkboard or blank paper)
Adaptation:

Develop phrases on different topics, e.g. meeting management to create a different game.

Safety "Phrases" for Charades, Phrase Game or Pictionary	
Test Smoke Detectors	Do NOT play in grain
Wear hard-toed shoes when working with animals	Do not shout around animals
First Aid Kit in barn	Do not stand between cow and calf
Always lower tractor loaders	Wash hands before eating
Have shields on augers	Do not wear loose clothing around augers.
Restrain animal when giving medications.	Read label before giving medications
Always lock up your feed especially grain	Do not wrap a lead rope around your hand.
Don't hit animals	Always have clean floors in the barn
Bruised Carcass	Broken needles
Dark Cutters	Lesions
Keep meats refrigerated or in cold storage	Stop, look and listen

Topic Specific Activities

The following activities can be used to complement specific topics.

Showing and Fitting Activities

Trimming Feet Technique Activity

Materials: 6 month old lambs, 1 per every 4 members, hoof trimmers

Time:

Show members proper method to turn lamb. Show them how to properly trim feet.

Allow each member an opportunity to turn a lamb on their own and trim a foot.

Knot Tying

Materials: Rope or halters to practice with

Show members the proper way to tie knots so they can use a quick release knot when tying up lamb at home.

Showing and Fitting Quiz

Divide members into groups and have a quiz - read the following questions aloud rather than printing out the quiz. Allow each member to only answer once and then they have to step aside until all members have answered a question.

1. How do you hold your lamb in the show ring?
Grasp Lamb under chin with left hand and place right hand on the dock

2. On what side of the lamb are you in the show ring?
The side opposite the judge, usually on the left.

3. What does bracing your lamb mean?
Holding the lamb with its brisket against you knee so that it holds is back rigid when the judge presses on the back.

4. Should Long wool breeds be washed before showing?
No

5. What does carding a lamb's wool do?
Straightens the wool fibers for trimming

6. What is a blocking stand used for?
Restraining a lamb on a raised surface to allow for easier washing and trimming

7. Who will you not find in a show ring during a showmanship class -An exhibitor, a clerk, a judge or a shearer?
A Shearer

8. How long before the show should your lamb be sheared?
6-8 weeks

9. Should a lamb have their feet trimmed the morning of the show?
No

10. Why Not?
They may be sore and appear lame if trimmed to short

11. What questions might the judge ask you about your lamb?
Birth date, breed, sire, feeding program

12. What is one piece of equipment you might need on show day? (More than one member can answer)
Bucket for water, shade for sun, card, blanket, hand shears

13. Who should you congratulate after the class?
The winner or if you are the winner the reserve

14. When is it okay to be late for your class?
Never

15. What is the task of the showman when exhibiting an animal?
To show it off to its best advantage

16. What is the dress code for showing sheep?
Black pants and white shirt

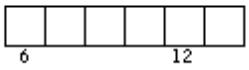
17. When the judge is in front of the lamb you change sides of the lamb by stepping over the lamb or moving around the head of the lamb?
Always move around the head of the lamb

18. Should you be spending more time watching the judge or your lamb?
Your attention should be evenly divided between the two

19. After the judge moves the lamb off balance what steps do you follow?
First reset feet, second reset wool where judge touched

Selection and Evaluation Word Scramble

RYTIPE



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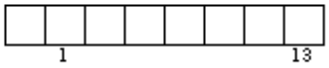

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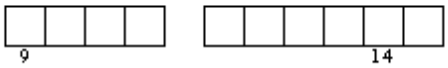

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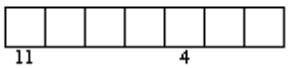

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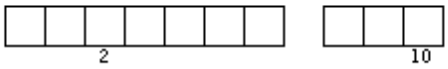

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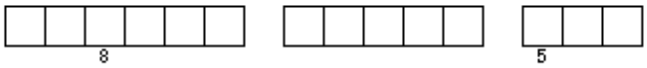
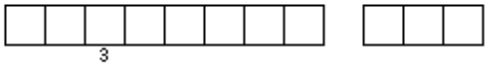
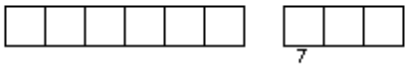


SRNOETRG POT



FEURLL GEL



Unscramble each of the clue words.

Copy the letters in the numbered cells to other cells with the same number.

Word Scramble Solution (on the previous page):

Typier
Smoother
More Finish
Thicker
Shallow Rib
Neater Front End
Stronger Top
Fuller Leg

Selection and Evaluation Activities

Match the Breeds

Materials: Cards and Markers

Make enough cards for each member (there can be more than one member with the same breed). On half of the cards, write breeds that are considered maternal breeds, and on the others, write breeds that are terminal breeds.

Allow the members to mingle until they find someone that is a good match.

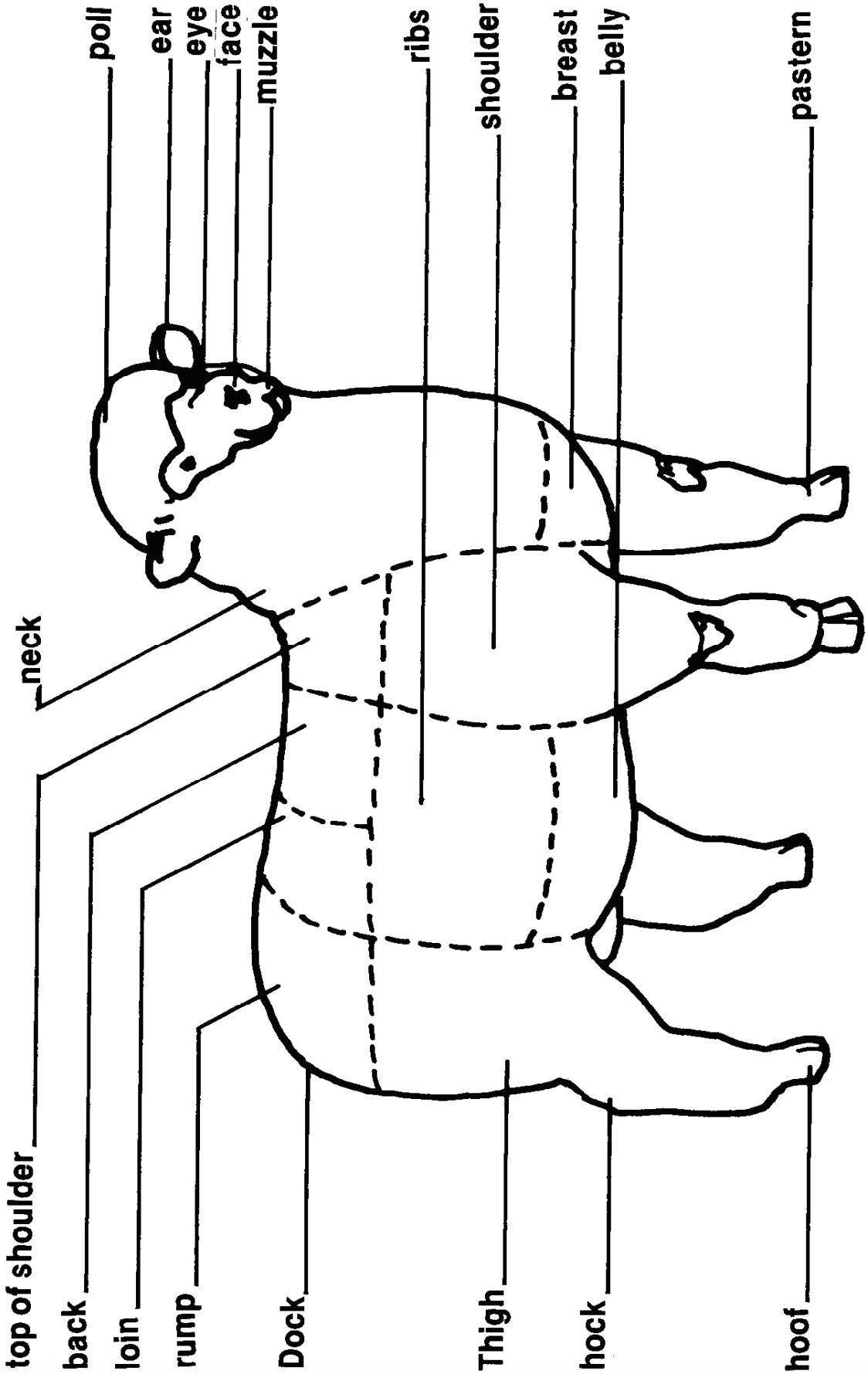
Terminal	Maternal
Texel	Rideau Arcott
Suffolk	Dorset
Charollais	Outaouais Arcott
Hampshire	Romanov
Oxford	Polypay
Columbia	British Milk Sheep
Ile de France	East Friesian
	Cheviot
	Romanov

Identifying Parts of a Sheep

A) Cut up the parts of the sheep and put in a hat. Have each member pull them out of a hat and find on a picture of a sheep.

Materials: Picture of sheep that can be projected on wall or give copies to teams to work together. Members can match parts with the diagram. An example is included on the next page - and is also saved separately on the project CD in jpeg format.

PARTS OF A SHEEP



Selecting a Project Lamb

Materials: 2 or 3 lambs (More for senior members)

Let the members select a lamb they would choose as a project lamb.
Ask them to give reasons for their choice.
Provide information they would have available when buying lambs:

- Birth dates
- Birth type (single, twin etc)
- Birth weight
- Price
- Pedigree if purebred

Judging

Materials: Class of 4 or 6 lambs of similar age, score cards from Selection section, reasons template.

- Line up the lambs and number left to right 1-4 (or6)
- Outline the main traits to look for in the class according to the scorecard for the appropriate class.
- Let members know what the class is called.
- Give each member and opportunity to give reasons either in front of the group or individually. Offer constructive comments for next time.
- Have a guest or senior member present official reasons for the class

Reading Teeth to Determine a Lamb's Age

Materials: How to read lambs teeth reference page from Selection and Evaluation , lambs of different ages.

Have a variety of lambs/yearlings for the members to check teeth. See if they can accurately guess age of lambs. Have birth dates available to cross reference.

Health Activities

Vaccinating

Have members consult with a local veterinarian about types of vaccinations and have them come up with a schedule for vaccinating either their own flock or a neighbor's. Ask them to record brand, dosage per ewe, how many injections are necessary, cost per ewe and what the vaccine protects the sheep against.

Members can compare the different products they have researched and the different costs.

Demonstrate Pregnancy Ultra Sounding

Materials: Guest ultrasound technician, pregnant and non pregnant ewes to demonstrate scanning on.

Show members how the scanning is done and explain some reasons why it is an economical thing to do. Explain importance of setup prior to technician arriving. Show costs, explain how ewes will be managed differently as a result of the scanning. Example sorting by multiples for special feeding,

Treating a Chilled Lamb

Show members the methods used to treat a chilled lamb including how to do a peritoneum injection, how to tube feed a lamb, how to warm a lamb

How to Needle an Animal

Materials: Orange, pantyhose or nylons, Needles and syringes, water and foo coloring

Put the orange in the pantyhose. Show members how to inject with a needle under the panty hose for a subcutaneous injection and into the orange for an intramuscular injection. Cutting the Orange open will show how the subcutaneous injection spreads in the muscle.

Processing a Lamb after Birth

Materials: needles, syringes, selenium vitamin Elastics, elasticator, tagger and ear tags, lamb record book

Show members the steps that are involved in processing a lamb a day or two after birth.

Refer to the TINT your lamb section in the resource manual.

Taking the Temperature, Pulse and Breathing Rate of a Ewe

Materials: Stethoscope and thermometer

This is a great opportunity to invite a Veterinarian Guest to your meeting.
Show members (or have the veterinarian do it) how to take the temperature and check pulse and breathing rate of a ewe.

Autopsy Demonstration

Have a veterinarian assist in the demonstration of how to do an autopsy. Can use parts from an abattoir. Sometimes condemned carcasses can be obtained from an abattoir or plant.
An other option is to euthanize a sick or disabled animal.

Stocking the Medicine Cabinet

Show the members the various items, tools and medications that make up a medicine cabinet. Explain what some of the treatments are commonly used for.

Examining a Fecal Sample

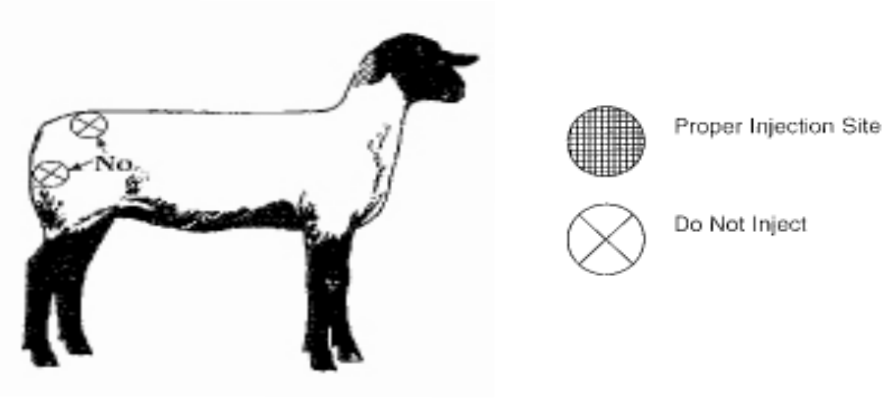
Ask a veterinarian to acquire a fecal sample that can be checked for parasites. The Veterinarian can explain the reasons why a producer might want to take a sample to be examined and how to do so.

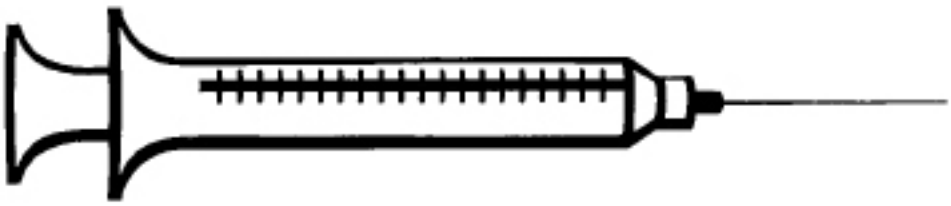
Pin the Needle on The Ewe

(From The Quality Equation 4-H Club Pack, Manitoba 4-H, 2003)

Most vaccines and antibiotics are given to animals as injections. It is important to give injections properly and in the correct "location" for several reasons. Generate discussion regarding what the reasons are, including:

- Certain medications must be injected in a particular way (subcutaneously, intramuscularly, or intravenously) in order to be effective.
- Carcass quality can be affected if injections are made incorrectly. Improper injection sites can cause damage to prime areas of the carcass.
- An inadequate withdrawal period for a medication can lead to rejection of an animal at slaughter time.
- The group is going to play a game similar to Pin the Tail on the Donkey but using a picture of a ewe and a cutout of the syringe.
- Have the group (or do ahead of time) draw a poster size picture of their animal. It doesn't have to be exact or perfect - that's not the point of this activity. Cut out the syringe on the next page and put tape or sticky tack on the back.
- Blindfold the participants, turn them around three times (or more). Have them try to "stick the syringe" on to the proper injection site. For reference, see the proper injection sites below.





Nutrition Activities

Feed Analysis

Materials: Samples of hay, grain or silage taken in advance. Have some testing results from a lab available so members can compare and see the results. Have a nutritionist explain what is meant by the reports.

Feed Evaluation

Have a class of hay, grain or silage for members to judge. Score cards are available from your resource contact.

Explain to members the importance of evaluating feed samples when selecting feed for your flock.

Let's Make a Feed

Materials: Deck of Cards on following page (can be photocopied or written onto cards).

Time: 30 Minutes

You will need one full deck for each 6 members - 6 of each; protein, macro mineral, micro mineral, stored Vitamins, Non Stored Vitamins, water, 12 energy cards and one Super sheep and one dead sheep. The object of the game is to be the first member with 50 points.

A complete feed hand consists of: (this may be posted for members to see)

2 x Energy
1 Protein
1 Macro Mineral
1 Micro Mineral
1 Stored Vitamins
1 Non Stored Vitamins
1 Water

To run this activity:

- Prepare a score sheet
- Select a dealer
- The Dealer shuffles the cards and deals out until all the cards are handed out.(Some members may have an extra card)
- Members sort their cards looking for cards that will make a complete feed. Members will want to trade cards that they don't need and try to get cards they need.
- The dealer will announce "The Pasture Gate is Open"
- Players start trading by holding out the number of cards they with to trade and announcing the number – 'two-two-two' or 'three-three-three'. They must find a member who wants to trade the same number. This continues until someone announces "I've made a feed" . Super sheep is a wildcard that can be used in place of any one of the needed cards.
- The person who made a feed gets 10 points
- If they used super sheep they get 10 additional points
- Who ever holds Dead Sheep loses 10 points
- If someone holds super sheep and did not make a feed they loose 10 points
- Play continues until someone reaches 50 points or you can set a time limit.

Let's Make a Feed!

Let's Make a Feed!

Let's Make a Feed!

Let's Make a Feed!

Let's Make a

Let's Make a Feed!

Let's Make a Feed!

Let's Make a Feed!

Let's Make a Feed!

Let's Make a Feed!

Energy	Energy
Protein	Macro mineral
Micro Mineral	Stored Vitamins
Non Stored Vitamins	Water
Dead Sheep	Super Sheep

Mineral Web

Materials required:

Cards with the names of the following minerals written on them:
Calcium
Phosphorous
Potassium
Magnesium
Sodium
Sulfur
Copper
Iodine
Iron
Zinc
Selenium
Manganese
Cobalt
Vitamin D
Vitamin B 12, Biotin and Thiamin
Chlorine
Molybdenum

1 ball of yarn
(For a very large or very small group this can be done by labeling the outside of a circle on chart paper and drawing lines instead of throwing the yarn.)

1. Give each mineral to a member and have them stand in a circle.
2. The ball of yarn starts at Calcium. As you read the description of each mineral the ball of yarn is passed to any mineral in bold and underlined. As the ball is passed to the next member the one holding it hangs on to the yarn so the ball is unraveled.
3. As the description continues a web will form. For the best effect have members not stand in the order the minerals are listed.

Calcium (Ca) Most abundant mineral in the body, 98% is found in the bones and teeth. Functions in blood clotting, membrane permeability, muscle contraction,, nerve function, cardiac regulation and enzyme activation Vitamin D is required for active absorption. As dietary Ca intake increases, absorption is reduced. Cereal grains (corn, oats, milo, wheat, barley) are low in Ca.

Phosphorus (P) The most deficient mineral throughout the world. Must be supplemented to livestock grazing native forages in order to meet requirements, Eighty percent of P in the body is found in the bones and teeth. Functions with Calcium in bone formation, is essential for cell growth, energy utilization, maintaining acid:base balance, is a component of DNA and is required by rumen microbes for optimal growth and activity. The greatest bang for the buck in mineral supplementation is generally associated with providing P. Oilseed meals are an excellent source of P. Palatability is low.

Potassium (K) The third most abundant mineral in the body. Essential for the maintenance of osmatic and fluid balance in the body. Cereal grains and mature, weathered forages have low K contents. Oilseed meals and green, growing forages are an excellent source.

Magnesium (Mg) Sixty-five to 70% is found in the skeleton. Functions in carbohydrate and fat metabolism and is a catalyst in over 300 enzyme systems. Like phosphorus, Mg is bitter and is sometimes used to limit consumption of mineral supplements.

Sodium (Na) Usually considered with chlorine (Cl). Sodium chloride (NaCl) is salt. Both are critical electrolytes in body fluids. Sodium functions in amino acid and glucose transport and muscle contractions. Chlorine is a component in hydrochloric acid formation and activation of amylase, a starch digesting enzyme.

Sulfur (S) Two amino acids (methionine, cysteine) and two B-vitamins (biotin, thiamin) contain S. Also functions in maintaining bone, cartilage, tendon and blood vessel integrity (contained in chondroitin). Note: Rumen microbes are capable of synthesizing all of the sulfur containing compounds from inorganic S. High S levels in the diet antagonize the use of copper and molybdenum

Microminerals

Copper(Cu) Copper is second only to phosphorus in severity of deficiency throughout the world. Copper is involved in hemoglobin formation, enzyme systems, nervous and immune system function. Copper interacts with iron, zinc, sulfur and molybdenum in antagonistic relationships. Sheep are very susceptible to copper poisoning as dietary Cu levels approach or exceed 20 ppm.

Iodine (I) Primarily involved in the thyroid hormones that regulate rate of metabolism. Deficiency usually not a problem except with goitrogenic forages or feedstuffs like turnips, kale rape, white clovers. Cottonseed and soybean meal have some goitrogenic properties. Use of iodized salt has eliminated deficiency problems.

Iron (Fe) Involved in cellular respiration and oxygen transport via hemoglobin. Fifty percent of the body's iron is involved in hemoglobin. Can antagonize copper and zinc availability.

Zinc (Zn) Important in stress management, immune response, enzyme systems and protein synthesis. Second only to Cu on the list of likely micromineral deficiencies.

Selenium (Se) Involved in the prevention of white muscle disease. The requirement for Se is very close to its toxicity level.

Manganese (Mn) Cofactor in several enzyme systems.

Cobalt (Co) Component of vitamin B12.

The web formed demonstrates the interactions between all the micro and macro minerals needed in the sheep's diet. A scientifically formulated complete mineral supplement for your area is essential to ensure the proper levels to allow the necessary interactions to happen.

Nutrition Word Search

C M O L Y B D E N U M E N Y T
P N Y Z S O X R G P A N O Q H
Y H I M P O L M O X N I R J Q
S Z O Z U X D T P D G R I W G
Y L I S U I A I X Z A O R I S
N K I M P S N A U V N L N U Z
K K J O S H W E Q M E H B C O
X Z B I U X O A L E S C Y O C
U W U E Y X V R M E E O M P T
N M C O B A L T U Z S U S P Q
M U I S E N G A M S I U A E J
E N I D O I O N N C L R V R O
B I F P W I G X L F B W L C J
J Y S E F X P A U T C P T W J
H L L S C Q C R Q I Y H C V F

CALCIUM
CHLORINE
COBALT
COPPER
IODINE
IRON
MAGNESIUM
MANGANESE
MOLYBDENUM
PHOSPHORUS
POTASSIUM
SELENIUM
SODIUM
SULFUR
ZINC

Nutrition Word Search Solutions

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C M O L Y B D E N U M E N + +
P N + + S + + + + P A N O + +
+ H I M + O + + O + N I R + +
+ + O Z U + D T + + G R I + +
+ + + S + I A I + + A O + + +
+ + + + P S N + U + N L + + +
+ + + + S H + E + M E H + C +
+ + + I + + O + L + S C + O +
+ + U + + + + R + E E + M P +
+ M C O B A L T U + S U S P +
M U I S E N G A M S I U + E +
E N I D O I + + + C L + + R +
+ + + + + + + + L F + + + + +
+ + + + + + + A U + + + + + +
+ + + + + + C R + + + + + + +
```

(Over,Down,Direction)
CALCIUM(7,15,NE)
CHLORINE(12,8,N)
COBALT(3,10,E)
COPPER(14,7,S)
IODINE(6,12,W)
IRON(13,4,N)
MAGNESIUM(9,11,W)
MANGANESE(11,1,S)
MOLYBDENUM(2,1,E)
PHOSPHORUS(1,2,SE)
POTASSIUM(10,2,SW)
SELENIUM(11,10,NW)
SODIUM(5,2,SE)
SULFUR(13,10,SW)
ZINC(4,4,NW)

Lambing Activities

Newborn Lamb Colostrum Challenge:

Copy the following either onto chart paper to work on as a group or on 8 ½ by 11 paper for small teams to answer together. Take up as a group. The answer table follows on the next page.

Colostrum is essential to newborn lambs because it supplies …	…very temporary ability to absorb the antibodies in colostrum(up to 18 hours)
Colostrum is also high in….	…ewes with lots of milk for freezing for later use
The shorter the time between…	…energy for warmth and antibodies to protect against the germs in the environment
The small intestine of a newborn lamb has a …	…bottle or stomach tube should be fed about 55 ml of colostrum every 2 hours
A new born lamb should have …	…colostrum within 2 hours of birth
A lamb that is too weak to suck on…	…vitamins (especially vitamin A) and protein, as well as being a mild laxative to help pass the meconium, the first stool after birth
Frozen colostrum may be slowly warmed until…	… birth and receiving colostrum, the better the chances of lamb survival
Frozen Colostrum must be warmed…	… the ewe or a bottle may be fed colostrum by stomach tube.
Lambs being fed by…	…Very slowly or it will clot.
A supply of colostrum may be milked from…	…body temperature and bottle fed.

Answers to the Lamb Colostrum Challenge

Colostrum is essential to newborn lambs because it supplies …	…vitamins (especially vitamin A) and protein, as well as being a mild laxative to help pass the meconium, the first stool after birth
Colostrum is also high in….	…energy for warmth and antibodies to protect against the germs in the environment
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Frozen Colostrum must be warmed…	…very slowly or it will clot.
Lambs being fed by…	…bottle or stomach tube should be fed about 55 ml of colostrum every 2 hours
A supply of colostrum may be milked from…	…ewes with lots of milk for freezing for later use

Lambing Time Bingo

Materials required:
One card below for each member
Bingo dabbers, markers, or playing pieces to mark off called spots

For each member's card, write a selection of the words on the following page into the squares provided. Each card should be different. Then, write the words on the following page on slips of paper. Put the slips into a hat or other container. Call out each word as it is randomly drawn from the hat. Instruct the members to cross / mark off their squares as the words are called out, if they appear on their cards. The first member to get 5 in any direction is the winner!

		Wild Spot		

Orphan
Chilled
Thermometer
Stomach tube
Nursing
Claiming pen
Creep feeder
Towels
Foster
Warming box
Mothering
Twins
Tag
Needle
Syringe
Sire
Lamb
Records
Vaccines
Dam
Iodine
Vitamin E
Selenium
Elasticator
Tagger
Lactation
Docking
Crutching
Castrate
Draft Free
Colostrum

Pearson's Square Activity

Have a nutritionist attend a meeting and explain to members how to create a ration. Usually computer programs are used but it is still good to understand the math.

Sample Pearson square:

Dried Grain Corn 9% Protein — 30 parts corn (44-14=30)

14% protein desired

Soybean 44% protein — 5 parts Soybean (14-9=5)

The result of this example is for every 35 kg of feed 30 kg of corn mixed with 5 kg of soybean meal will equal a 14% protein ration.

Housing Activities

Watering Systems

Ask each member to bring a picture of a method of watering sheep. They should present the picture, how it works and what the cost is of setting it up. As a group discuss the pros and cons of each system.

Design a Farmstead

Model farm buildings or cut outs of buildings for a sheep operation include a pond, well and house.

Ask members how they would arrange them including prevailing winds and road.

Handling Facilities

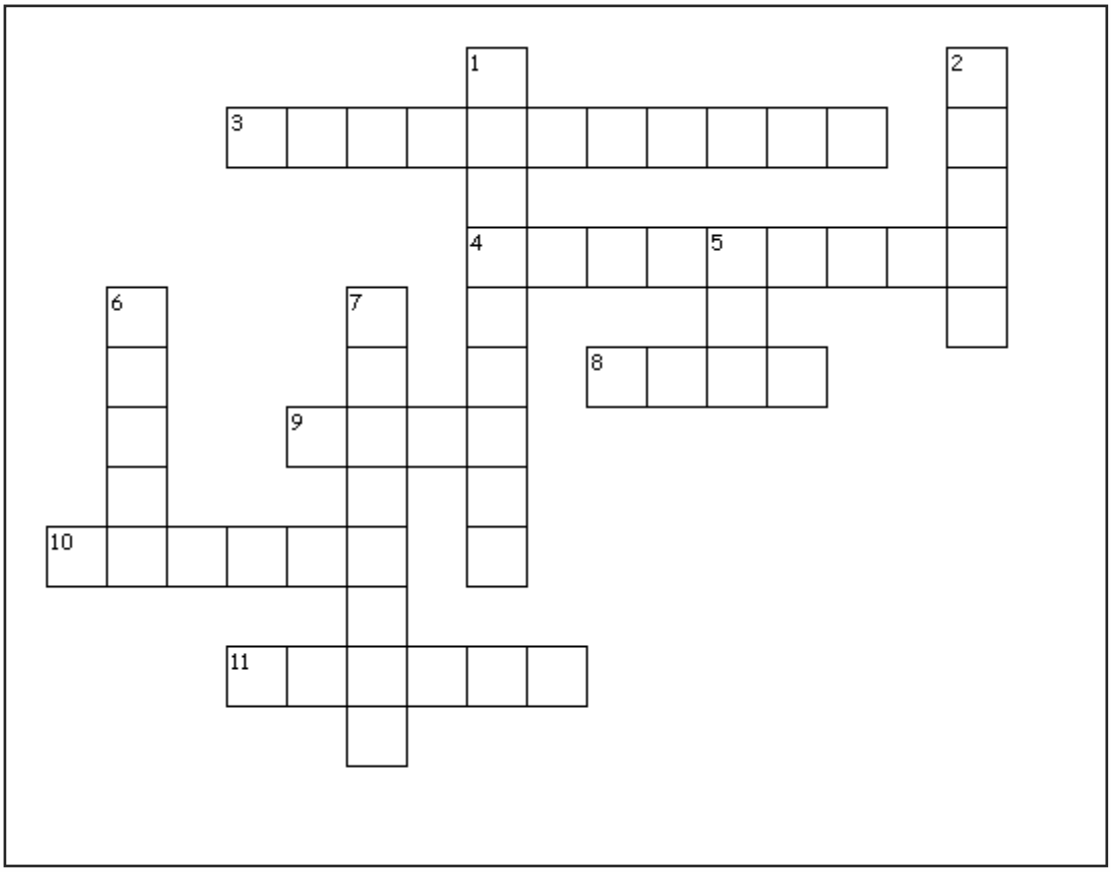
When at a farm have members pretend to be sheep in a handling facility. Have someone move them through the chute and sort them.

Predator Control

Break the club into smaller groups, Ask the group to develop a ‘Novelty technique’ of deterring predators. Examples used are pie plates around perimeter of pasture or radios.

Give members extra points for resourcefulness!

Housing Criss-Cross



Across
3. Allows fresh air into barn and exhausts stale humid air
4. Requirement of lambing facilities
8. Type of structure that allows a tremendous amount of light into building
9. Type of barn framed around posts in the ground
10. Should be high enough to prevent manure from mixing with feed
11. Needs to be stored where run off will not contaminate ground water

Down
1. Required by Ewes being wintered outside
2. There needs to be a fresh supply at all times
5. Type of feed created by vigorous mixing
6. Part of a handling facility
7. Usually cement or earth

Criss Cross Solutions

Feeder Should be high enough to prevent manure from mixing with feed

Water There needs to be a fresh supply at all times

Flooring Usually cement or earth

Windbreak Required by Ewes being wintered outside

Pole Type of barn framed around posts in the ground

Tarp Type of structure that allows a tremendous amount of light into building

Draftfree Requirement of lambing facilities

Ventilation Allows fresh air into barn and exhausts stale humid air

Manure Needs to be stored where run off will not contaminate ground water

TMR Type of feed created by vigorous mixing

Chute Part of a handling facility

Marketing Activities

Market Reports

Have members collect market graphs or reports for a specific season.

Have them compare to those collected by other members.

Farm Visit

Visit a farm before lambs are shipped. Have the producers explain the reasons for selecting the lambs ready for market. Note their size, amount of finish and where the animals will be sold. Follow up by checking the market reports after the lambs are sold.

Follow The Lamb

(From The Quality Equation 4-H Club Pack, Manitoba 4-H, 2003)

Materials needed: Cutouts (on next page), scissors, glue, sticky tack or tape, blank sheet of paper.

There are many steps in the production of food. Many times you hear the expression from gate to plate. The gate part is the farm and the plate is of course the consumer. There are, however, many steps in between. This exercise follows a market lamb from the gate all the way to the plate.

Have the members cut out the pictures on the reverse (you may want to photocopy the back page so you don't lose your activity!). Put the cutouts in order by pasting on to a blank sheet of paper.

The correct order is: (steps are not all used every time)

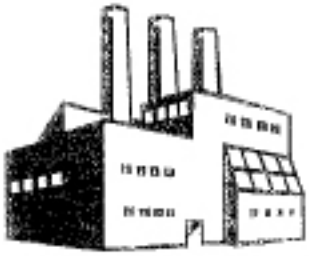
1. Beef Animal
2. Farm Yard
3. Transportation
4. Feed Lot
5. Auction Market
6. Slaughter / Packing Plant
7. Butcher
8. Cooking - Food Preparation
9. Home or Restaurant

It is important to recognize there are many steps in the production of our food - from farm to plate. Safe food production is important to us all, every step of the way .

Paste the Cutouts in Order

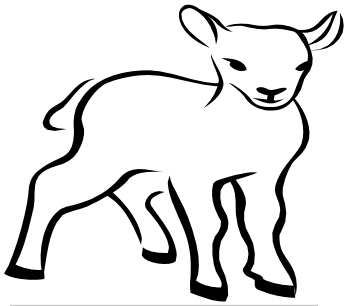
Farm Yard

Transportation



Slaughter/Packing Plant

Cooking



Market Lamb

Auction Market

Butcher

Food Lot

Restaurant

Guest Speakers

Guests are extremely valuable to the 4-H program and can be a wonderful addition to a 4-H meeting. They can be experts in certain fields or even producers who are able to introduce different view points and ideas from your own. Following are some examples of guests you can invite. Remember the following points when inviting a guest to a meeting and don' be afraid to delegate these responsibilities to a member:

- Invite them well in advance of the meeting so they have time to prepare and mark the meeting on their calendar,
- Confirm within a week of the meeting to ensure they remember and have appropriate information about the meeting location, and time.
- Clarify the expectations and what they expect to cover
- Introduce the guest
- Be prepared with questions for the speaker incase the members are to shy to speak up
- Have a small gift or thank you card ready to present after their presentation
- Ask a 4-H member to thank the guest
- If the guest has arrived save any social rec or club business for after presentation so they are free to leave when completed
- Remember to thank any guests in press releases sent out after the meeting

Guest speakers might include:

- Veterinarian or Vet student
- Nutritionist
- Local sheep producer
- Farm builder or designer
- Someone who attends local Farm Markets
- Butcher
- Ministry of Agriculture Representatives regarding production, engineering, forages, nutrition and more
- Fencing specialist
- Nutrient Management expert
- Banking advisor
- Shearer
- Soil and Crop Advisor
- Agricultural College Representative
- Provincial Marketing Association Representative
- Representative of a Producer Cooperative
- Showmanship judge to help with learning to show
- A confirmation judge or experienced breeder to act as official for judging classes

These are just a sampling - use your imagination, and community connections!

Tours

Tours are very exciting and informative for members and volunteers and are a wonderful way to enhance the project.
When planning a tour the following tips may be useful to consider:

- Decide early in the year, when planning the 4-H meeting schedule. This allows you to make sure members are informed of time, location and directions well in advance.
- Planning ahead also allows you to cover appropriate material in earlier meetings to help prepare your members for the visit
- Remember to inform the facilities of the age range of the members, how many might be expected to attend and what type of information you would hope they would garner from the visit.
- Ask what their expectations are as far as safety or biosecurity. When visiting farms you should provide plastic boots for your group to wear. Often farm supply companies will donate this type of thing to your club. Members should be told before tours not to wear clothing soiled by manure.
- Have member ready to thank any tour guides or hosts. A small gift or thank you card would be appropriate.
- Remember to thank your host in any Press releases prepared after the meeting.

Examples of sites to tour:

- Abattoir
- Wool mill
- Tannery
- Farmers Market
- Stockyards
- Feedlot

- Sheep Farm
- Grocery store featuring lamb or butcher shop
- Dairy Sheep Farm
- Sheep Cheese maker
- Feed Mill
- Farm with a unique breed of Sheep
- Sheep show or consignment sale
- Farm equipment dealership (sheep tools, handling, facilities, tip tables etc).

If you aren't able to visit an actual farm, visit the Ontario Farm Animal Council website at http://www.ofac.org/ and follow the links to their **Virtual Farm Tours**. If you don't have access to a good Internet connection, you can also request the tour on CD by contacting OFAC, by phoning 519-837-1326

Senior Member Activities:

These projects can be used for Senior Members, Youth Leaders or as a project for members unable to participate in an achievement program

- Develop a Shepherd's Calendar for a flock. Indicate the management processes and when they need to be done.
- Develop a cash flow for starting a new flock. Indicate predicted expenses and income. State number of ewes, predicted lambing percentage and any other information that will affect you profitability
- Select a lamb recipe and prepare a dish for the members of your club. Present nutritional information, costs, preparation and survey members for their reaction.

Farm Visits

- Observe and analyze fencing options and handling facilities.
- Do a Lamb consumer Survey, do this in the public, at school or amongst friends and family. Then create a summary and follow up report on your survey to present to your club.

Project Summary and Feedback

For members and parents to complete at the end of the project.

I joined this club because_____

_____

I really enjoyed the meeting where we _____

_____

My least favorite activity was when we_____

_____

Something I learned this year that I did not know before was_____

_____

Something I would like for us to do next year is_____

_____

Next year I would like to improve_____

_____

Parent/ Guardian comments

This year I learned_____

_____

Next year I would like to see_____

_____

Leader Comments

This year you did a great job of_____

_____

Additional Comments_____

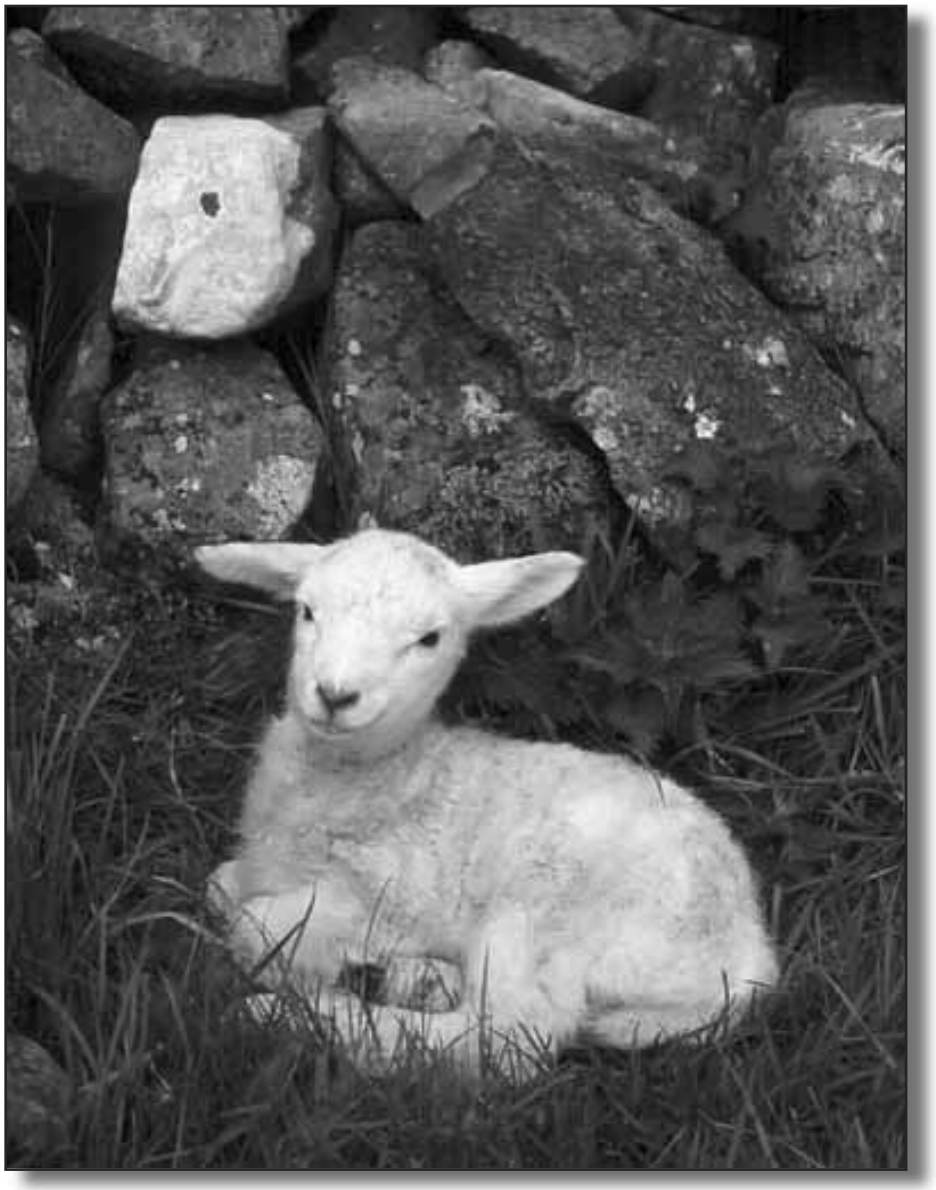
_____

Sheep

Congratulations on successfully completing this 4-H Project

Leader's Signature

Date



Basic Care Guide for Lambs

Basic Care Guide for Lambs

Caring for your project lamb is a great responsibility. Caring for livestock can be very rewarding and a great skill building experience.

This section will indicate the initial needs of your project lamb. You will learn more through the course of your 4-H project.

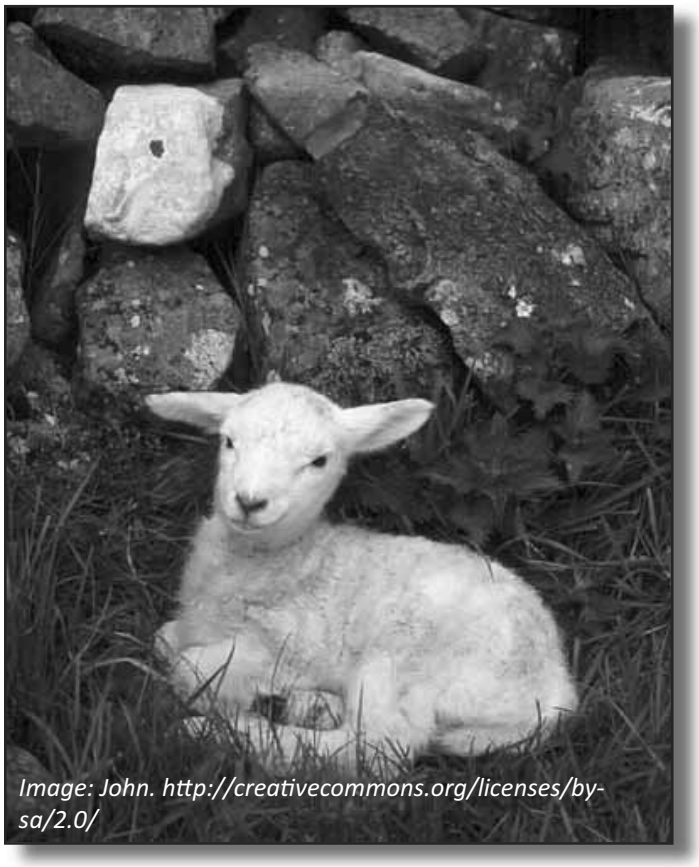


Image: John. http://creativecommons.org/licenses/by-sa/2.0/

Choosing a Lamb

It is helpful to first determine the type of lamb you wish to buy or select.

Your plans for your lamb after achievement day will affect your decision. If you are starting a ewe flock you will need a breeding ewe lamb.

If you wish to enter the lamb in a market auction or sell it as a freezer lamb a market ewe lamb or wether (castrated ram) is what you need.

A crossbred lamb will be cheaper and can sometimes exhibit more desirable traits due to the effect of heterosis . However if you wish to show your ewe lamb in the open breed shows you will need a registered purebred.

Where to Buy a Lamb

Local flocks and neighbours will often sell lambs and are handy for advice if needed.

Purebred Sheep Breeders' associations can provide you with a directory of breeders who have breeding stock to sell. Some Associations hold breeding stock auction sales which can be a good opportunity to purchase stock as well. Make sure you know what prices should be before attending so you are not tempted to spend more than you should.

Housing

Lambs are capable of living outside but require a small shelter. Keeping sheep contained in a shed or small lit yard at night can help prevent predator attacks.

A **fenced paddock or pasture** will encourage exercise and allow them to graze which is an excellent cost effective feed source. Fencing can be **page wire mesh fencing, electric fencing strands or electric net fencing**. Electric fence is easy to move as the grass is eaten.

Make sure that the indoor areas lambs use are **well bedded** to keep them clean and dry.

If lambs are kept inside in a pen, it needs to be big enough to allow them adequate **exercise** and excellent **ventilation**.

Feed

#1 most important is fresh water at all times. If the container holds more than the lamb drinks in a day or two, or the water becomes soiled -dump it out and replace it with fresh water. Keeping the water in the shade helps keep it cool and prevents algae growth.

- Good quality feed will maximize the growth and health of the lamb.
- Hay or good pasture and a grain supplement are needed.
- How much you feed will depend on whether you are growing a lamb for market or breeding, and how much condition (fat) the lamb is putting on.
- Lambs should have as much hay or pasture as they can eat. This may be approximately 1.4kg or 3lbs per day per lamb.
- Whole grains such as corn, barley or oats can be fed at approximately .68kg or 1.5 lbs per day.
- Lambs also need small amounts of a sheep minerals premix and loose cobalt iodized salt which can be fed free choice to lambs on whole grain and hay or pasture.
- Rather than feeding separate whole grain and minerals complete feeds can also be purchased. They are balanced to provide a consistent level of protein energy and minerals.
- They are to be fed with hay or pasture and do not require a mineral to fed in addition to the complete feed. Ask your local feed store what you should be feeding and don't forget to tell them you are feeding a 4-H lamb. Often they will give you a discount on supplies for 4-H projects.
- It is better to split the daily feeding for lambs in two and feed in the morning and at night (if you are able it is even better to feed them 4 times a day). This will allow their stomachs to digest a consistent amount of feed throughout the day, rather than all at once.

Health

Bluefaced Leicester Lambs. Photo: Paul. http://creativecommons.org/licenses/by/2.0/

A healthy lamb is alert and active. They will frisk and run and jump with other lambs.

Wool should be thick and fluffy. A long open fleece on a small lamb indicates the lamb is older and poorly grown. Wool lacking in sheen or which looks grimy indicates poor health. Patchy wool is also a sign of parasites or a fever.

When lambs appear unwell or in poor health the first thing to do is check their temperature. Normal temperature for a lamb is 38.3-39.4 degrees Celsius (100.9-103.0 degrees Farenheit). A high temperature indicates an infection and a low temperature indicates metabolic disorder. When you call a vet they will want to know this information.

All lambs should be vaccinated when they are over 30 days of age. Before that the immunity they have received from the ewe will prevent the vaccine from working.

The vaccine should protect against the clostridial diseases such as pulpy kidney, and tetanus which are

common in areas of Canada.

All lambs should be dewormed (consult the Health section of this project for more information on deworming) which will kill any internal and external parasites. Ask your vet which wormer to use. If the wormer is not effective against external parasites you will need to identify and treat for them separately. Examples of these types of external parasites are lice and keds.

Handling and Training

While the process of training the lamb is explained in more detail in Fitting and Showing Your Lamb you should start with the basics as soon as your lamb is selected.

When you want to catch your lamb crowd them into a small area. Do not chase them around in a large area. Always move slowly and gently when handling livestock. By treating them gently you are reassuring them that they are not going to be hurt and therefore they do not need to be afraid of you. A good way to start is to feed them out of your hand or by holding the bucket while they eat. Eventually as they eat get comfortable you can touch them while they eat and even start handling their feet and legs.

A halter is handy for working with your lamb whether you are needling, checking its temperature or training.

Tying the lamb up with its head tight teaches them to respect your control later when you are showing, even though you do not show with a halter on the lamb.

However, never leave a lamb alone when it is tied up, they can easily hang themselves or be injured. This is also a great opportunity to train it to set its feet up quickly and easily.

Fitting & Showing Your Sheep

4-H CANADA®

Fitting & Showing Your Sheep

Setting The Stage

Training your lamb is an important part of the preparation for showing. Lambs are easily trained if they are treated properly during the project.

You must work with your lamb until it is gentle before you can start training it. Start visiting your lamb two to three times a day for a week. Sit and watch it as it moves about. During the second week, pet the lamb while it eats. During the third week, pat the lamb now and then and handle it as you would in a judging class. By the end of a month the lamb should be ready to train.

Sheep Tricks-As Easy as 1,2,3

Step 1 - Moving Your Lamb

To move the lamb, stand on its left side, grasp it under its chin with your left hand and put your right hand on its dock. Guide the lamb with your left hand and move it by pressing on its dock with your right hand. Never work your lamb for long periods of time or it will become restless and stubborn.

Step 2 - Setting Your Lamb Up

In the showing, the lamb should stand quietly with the front and hind legs wide apart. The head should be held up. Always work on the side of the lamb opposite to the judge. In general, you will be working on the left side (from the rear of the lamb) of your lamb. Occasionally you will have to move your lamb on the right side. Set the lamb by moving its feet into proper position with your hands. Practice this often for short periods of time.

Step 3 - Bracing a Lamb

Bracing is a term that means having the lamb hold its back rigid when someone presses on it. Stand in front of your lamb and cup its chin in your hands. Pull downward with your hands and apply enough backward pressure to cause the lamb to arch or bend its back. Do not choke the lamb or grasp so hard that you hurt the animal.

First Impressions Count

You may not be able to judge a book by its cover but in the showing general appearance is the first thing a livestock judge notices. The first impression is important.

Grooming Your Lamb

Short Wool Breeds

Shearing	Shearing is done six to eight weeks before show time. This will eliminate most of the work of cutting wool to proper length by trimming.
Washing	Wash your lamb one week before a show. This makes trimming easier.
Trimming	About three hours work is required to trim market lamb if it was shorn early in the project.

Wool Breeds

Shearing	Wool breeds are not shorn, they are shown in full fleece.
Washing	Long wool breed lambs should not be washed because oils in the fleece are a natural form of protection.
Trimming	Full fleeced lamb should be dampened, and chaff picked out and locks separated. Part wool down the center of the back. Trim dock, chest and wool tips.

Trimming the Feet

Trim the feet of your lamb as needed during the feeding period so they will not require excessive trimming before the show. Trimming your lamb's feet just before a show may cause him to walk improperly or go lame because there won't be enough time for the feet to fully heal.

In trimming the feet, set the lamb on its rump with all four feet off the ground. Tilt it back and to the side slightly. Hold it in position by pressing your knees firmly into its side. The hooves can be trimmed by using pruning shears or a hoof trimmer. Each hoof should be carefully trimmed in the following manner:

1. Clean manure and dirt from the bottom of the foot and between the toes.
2. Slowly and carefully remove the outer wall of the hoof until it is level with the sole or the bottom of foot.
3. Do not trim to the point that the hoof bleeds.
4. Trim the dewclaws if necessary.

If you are not sure about what you are doing, ask an adult for assistance or for a demonstration of the proper technique.

NOTE: It is a good idea to trim the hind feet first; as it is less dangerous to get kicked by an untrimmed foot (they are not as sharp).

Washing Your Lamb

Your lamb can be washed in a tub of warm soapy water or by placing it on the trimming stand. Wash using either a shampoo or mild soap and a stiff brush, and rinse well using a hose. Hold the end of the hose next to the skin and move in a circular scrubbing motion. Pay special attention to the belly, under the legs and the crotch. Use livestock shampoo or clear mild dishsoap.

Remove excess moisture from the fleece with your hand or with a flat surface such as the back of a wool card. Dry the fleece with a terry cloth towel or carefully with your hair dryer or beef blower. Keep the hair dryer moving — it will BURN the skin if held too long in one spot.
Keep the lamb in a clean, well bedded pen filled with plenty of clean, dry straw until show time. Cover the lamb with a blanket to keep the straw out of the fleece.

Blanketing

Blanketing your lamb helps to distribute the natural oil throughout the fleece and helps to keep your sheep clean. Before blanketing your lamb, use a curry comb or brush to remove surface dirt. A blanket can be made from a clean burlap sack or pillow case. Open a sack down one side almost to the corner, leaving 15-25 cm fastened together at the corner to fit over the sheep's brisket; then open just enough of the end for the sheep's head and neck. Put the sheep's head through the hole in the bottom of the sack. A twine loop or cotton string for the rear legs will hold the blanket in place.

Carding

The card is used for straightening the wool fibers so they can be trimmed evenly. Hook your thumb around the handle of the card with your fingers placed solidly along the back of the card.

Catch the top of the fleece with the hooks on the card and pull out. Do not catch too deep as this makes for hard work and is painful for the sheep. Do not catch too shallow or you will not do a good carding job.

Practice until you can card with a rolling motion of your hand and wrist. Set the heel of the card in the fleece first; then push the top side of the card into the fleece and bring the heel up and out of the fleece at the same time. Go slowly at first until you get the feel of it.

When the card fills with wool, it should not be cleaned by pulling one card over the other. Use a small rake which you can make by putting a ninety degree bend in the prongs of a discarded dinner fork.

How to use the wool card in fitting your lamb: (1) and (2) pat card into fleece; (3) roll card out of fleece. Never try to rake the card through the fleece.

The purpose of trimming a lamb is to remove fleece over the entire body to a desired length of about 0.75 to 1 cm. The last trimming should be done carefully so the fleece is smooth and ready for show. You will only need to dampen, card and trim off the rough edges the day of the fair.

The fitting or grooming should be done in a manner which displays the natural contour of the body when viewed from the rear. The wool is rounded over the rump to the dock and down each side to blend with the leg. Trim outward on the leg to blend with the side and over the rump. Flatness and squareness is associated with overly fat lambs, so avoid this shape.

Sufficient wool should be trimmed off the leg to make it handle easily and look good. The thigh region should be the widest on a structurally correct, well muscled lamb. Trim the sides smooth and blend the top and sides while following the natural contour of the forelegs.

Carefully cut the wool from around the eyes and blend with the jaw and neck. Have an adult help you with this step is you are uncertain about what to do. Roll and blend the neck and chest. Dip the wool card in water and pat the fleece all over. This will smooth the surface and pack the wool.

Follow this procedure when you trim your lamb:

1. Keep the fleece damp while working with it until you fine trim it. It is easier if lamb is soaked and rubbed until damp. Don't trim wool that is very wet.

2. Use a curry comb or wool rake to drag the fleece. This breaks the crimp and makes for a smoother look. Card the wool after dragging.

3. Starting on the top, trim off the tips of all carded wool using the shears in such a manner that a uniform, even cut is made.

4. Place the shears flat on the surface to be trimmed and tilt slightly up.

5. Move the shears forward so the bottom blade glides slowly and smoothly. Do not move your thumb when trimming.

6. As the bottom blades move forward, clip the fleece by repeatedly pulling the top blade back to the bottom blade and releasing it.

7. As you trim, stop often and dip the shears in water to clean them. Always keep the blades damp when trimming.

<u>What Equipment Do You Need?</u>

A trimming stand is useful but not absolutely necessary. You can restrain the lamb in a halter. The lamb's head should be held at the most desirable height or position for showing when you are doing the trimming.

A small tool box can be used as a tack box to keep your equipment in. This keeps all tools in one place and your display area will look tidier at show day.

Items For Your Tack Box

1. Bucket
2. Hoof trimmers
3. Wool card
4. Curry comb or wool rake
5. Rags and scraps of cloth used to clean shears or dry fleece
6. Brush
7. Trimming shears and whetstone
8. Blanket
9. Sheep halter

Showmanship Etiquette

1. Be sure you and your clothes are **neat and clean**. Check the show guidelines or standards for specific clothing requirements. Do not chew gum.

2. Be **alert, polite and courteous** to the judge and other show people. Always be on time for a show.

3. You should appear keen but relaxed regardless of where you are placed, accepting the judge's decision in a **sportsmanlike manner.** Remember that the class is not over until the class exits the ring. Keep showing until you are out of the ring.

4. Keep your animal **under control at all times** and make frequent glances at the judge to watch for his/her directions.

5. **Be prepared to lead** any animal that the judge designates.

6. Be prepared to **answer questions** that would normally be asked by a judge about a lamb such as birth date, breed line, diet.

7. **Avoid grandstanding** or showing off. Don't be sidetracked by members of the audience.

8. **Always shake hands** with the champion and the reserve champion. Sportsmanship is a big part of the show!

SHOWMANSHIP SCORECARD

A. FITTING 20 points

1. Condition
2. Cleanliness
3. Trimming and/or grooming
4. Condition of hooves

B. TRAINING AND SHOWING ANIMAL 40 points

1. Evidence of previous training
2. Handling of project animal
3. Posing the project animal
4. Project animal's response to exhibitor's movements
5. Indication of good knowledge of animal's faults and habits

C. RING MANNERS AND APPEARANCE OF SHOWMAN 40 points

1. Clothes neat, clean and suitable to occasion
2. Full attention given to the job at hand
3. Is on time, alert and aware of the judge, responds to judge's request
4. Courteous, and polite to other exhibitors and judge
5. Knowledge of project animal's pedigree, care and management program

TOTAL POINTS 100 points

Showing Technique

The art of exhibiting a sheep rests on the exhibitor's ability to keep his/her animal under perfect control. With this as a basis, control under different situations should be as follows:

1. Sheep being posed with the judge at its rear and viewing from a distance. You should be facing your sheep with a hand grasping each cheek. You should be standing, and sheep should be posed with feet moderately spread, but tucked under enough so the back does not sag. Sheep should be on the level or the front feet on slightly rising ground. You may bend your knees to brace yourself against a sudden movement of the sheep, but may not kneel on one or both knees. Do not place your hands at any other place on the sheep, such as over the shoulders or neck or back of the head.

2. Sheep being posed but legs out of position. Front feet may be best placed and spread by quick lift and drop while you maintain the same grasp as in (1) above. Lift strongly enough to clear the ground with both feet. Front feet can also be positioned by lifting by hand. Hind feet may be placed in either of two ways.

    a) By pushing or pulling toward or away from the wrongly positioned foot, using the same cheek grasp.

b) By lifting the off-positioned foot by hand. Use the hand opposite to the particular hind foot to move the foot i.e. right hand moves left foot.

3. Judge approaches rear of sheep to handle it. The same grasp (at the cheeks) should be maintained. Bending your knees and a slight downward pull on the sheep's head will serve to control it. The show person should put their knee against the brisket to prevent bolting when the judge is handling the sheep.

4. Judge views sheep from its right side. You should now stand at sheep's left side, near its head and slip your left hand under the sheep's jaw (well out toward the muzzle). The right hand should not touch the sheep except to rub the belly if needed. Sheep's head should be at normal level, not too high or too low.

5. Judge moves to the front of sheen for view of head. Same position, standing at the left of the sheep's shoulder (as in (4)) should be maintained. Do not move too far to the rear and stretch at arm's length to hold the sheep's head. If sheep has changed its front leg position, the quick lift and drop by a cheek grasp can best correct it. If the lamb is very large it may be easier to lift each foot by hand. Do not worry too much about hind feet being slightly out of position.

6. Judge now moves from head-on view to left side of sheep. You are correct in moving between the judge and your sheep to the opposite (right) side around the sheep's front end. (Never stretch around rear end or step over the sheep's back. In either case you can lose control of your animal.)

7. Judge asks you, the exhibitor, to move sheep. You should be on the opposite side of sheep from judge. If you are on the sheep's left side, your left hand should be under the sheep's chin, well out towards muzzle, not choking him off in the throat. Your right hand, with fingers closed, should be on the sheep's dock. It would be considered very poor showmanship to grasp the wool with an open-fingered hand at any time. While it is fairly "showy" to move the sheep without touching its dock, this often results in loss of control and would not be considered good showmanship. The sheep should move at a fairly slow and even pace with its back level and head in normal position.

8. Judge requires sheep to be turned and returned to line-up after walkout. You should turn the sheep so that its head remains close by your belt. Do not turn too sharply, or you will cause the sheep's hind legs to buckle. Simply change hands under the chin and reverse the sheep. You remain at its head so that for the return trip you will end up on the opposite side of the sheep from the judge. Do not make the turn so that its head faces away from your belt during the turn as it has a good chance to bolt away. Upon return to line-up, immediately place sheep in position. This is I easiest accomplished by the quick lift and drop of fore-quarters and hand-placing of hind feet.

9. The Judge requires sheep to be turned over and set on rump for inspection of belly and hooves. Here are two methods that give you good control of the sheep and are fairly easy to do.

(a) For a large exhibitor with a small sheep: While still holding the sheep's head, step over to straddle the sheep's back (facing toward the back of its head). Slip the right arm down under its breast (just back of the front legs), then do the same with the left arm and lift the front end tightly against your chest. Then stand up fully, make sure the sheep's hind feet clear the ground in the one lift attempt. Then let it slide down to a sitting position, tilted back on its dock.

(b) For a medium-sized exhibitor with a fairly large sheep: From a position close against the left side, twist the sheep's head to the right and back onto its neck while catching the right rear flank in the right hand. Twist and lift strongly at the same time to set the sheep on its rump.

10. Judge requires sheep to be returned to standing from rump position. Tip the sheep sharply forward with a loose hold on chin. A too slow and casual tipping may cause the sheep to simply lie down, in which case turning loose. the head, holding and pinching the dock is correct procedure to cause it to rise.

11. Dusting off shavings and straw after sheep has risen should be done only as soon as judge has indicated he is moving onto the next sheep. Get the sheep posed first, then dust it off.

12. In the line, or at any time the sheep is being viewed by the judge, calmness and control are far more important than showy gesturing and arms-length posing which allow the possibility of losing the sheep. Watch the position of the sheep more than you watch the judge. Keep the sheep "showing" at all times without excitement.

13. If the sheep should bolt away, do not run after it and tackle it in a football fashion. Follow the sheep as quietly as possible to a corner or position where you can catch it quickly. As soon as the sheep is caught (under the chin), lift its head up, and then it cannot bolt so easily.