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CANADA'S ENHANCED FEED BAN

By Jennifer Fleming (CSF Executive Director) and Dave Tiller (Ontario Independent Meat Producers)

Canada's Enhanced Feed Ban, which will be implemented on July 12, 2007, builds on the current ban which was implemented in 1997, and has been designed to help eliminate bovine spongiform encephalopathy (BSE) from Canada. The primary goal of the ban is to eliminate more than 99 per cent of potential infectivity from entering the feed system.

The current feed ban prohibits "...protein-based materials, including meat and bone meal, derived from defined mammals, to be fed to ruminants such as cattle." The Enhanced Feed Ban, builds on this to include the prohibition of specified risk material (SRM) from being used in all livestock feed, pet food and fertilizer.

SRM tissues include the skull, brain, the nerves attached to the brain, eyes, tonsils, spinal cord and the nerves attached to the spinal cord, from cattle aged 30 months or older. Also included is the distal ileum (portion of the small intestine) from cattle of all ages.

While by definition SRM tissues do not include any material from ovines, the ban will affect sheep producers and processors. Unfortunately though, the extent of the affect is still unknown and will depend on several factors. That being said, there are serious implications:

- Specified Risk Material (SRM) must be separated in separate containers, marked with ink, and labeled SRM. This includes heads, spinal cord and associated nerves of OTM cattle and a portion of the small intestine of cattle of any age including veal.
- Small plants have no way to hold segregated material, particularly heads, for any length of time that would make logistical sense and many will stop processing over thirty month cattle.
- Carcasses of condemned cattle and cattle dead stock of any age are considered SRM.
- The regulatory amendments will result in an increase in waste management costs. The costs have not been defined as yet but will include transportation costs and tipping fees for SRM material. The industry is waiting to see what these costs will look like.
- We expect that some abattoirs will close because they will not be able to or do not want to accommodate the new regulation. (Space constraints, building constraints, land availability etc.)

Feed Ban continued

The impact of this initiative on industry is extreme and it warrants close attention by all involved in ruminant processing. Rendering and disposal costs will increase to levels that some abattoirs will not be able to absorb.

The CFIA and industry representatives from provincial plants, federal plants, and rendering companies have been meeting regularly to try to minimize the impact of the new enhanced feed ban regulations. In addition, funding to assist plants in meeting the requirements of the regulation has been announced. (While all provinces will receive federal and provincial support, not all of them have announced funding yet).

Since sheep are not considered to have SRM, the impact could be minimal in terms of operational constraints at the abattoir. The impact on sheep and lamb slaughter will depend on how the abattoirs implement solutions to SRM management. Multi species abattoirs that choose to stop processing OTM cattle may have more processing time for other species. That being said, if some abattoirs close then the distance to the next abattoir will be greater resulting in higher transportation costs.

While dead sheep and lambs are not technically considered SRM, they will most likely be handled as such since they are not permitted to be used in the manufacturing of livestock feed. Waste from sheep and lambs that are processed in plants could be processed as non SRM, however, due to the high costs of a recall, rendering companies will require assurances regarding adequate segregation of non SRM from SRM and, will most likely, only agree to pick up non SRM waste from sites that have full-time, on-site inspection. Waste from plants without full-time, on-site inspection will likely have waste classified as SRM that will be picked up by rendering companies only as SRM, regardless of the source of the material.

Provincial organizations and producers are encouraged to speak to the operator of their abattoir to find out what they be doing with their waste and how it will be classified.

On an up note, on farm pick up of dead sheep and lambs may become a possibility once again with the advent of the new SRM stream.

Sheep Industry Loses Another Pioneer

John "Jack" Thomas James passed away peacefully at his home in Russell, Ontario, on Saturday, April 21, 2007 at the age of 57, with his wife Lois and daughters Shanna and Jenna at his side.

Originally from Lanark, Ontario, Jack leaves behind an extensive family, to whom he was committed and a network of friends across the agricultural community. Jack will be remembered for his many contributions to the sheep industry. Jack was a tremendous competitor and consummate showman, at home in show rings across the country as an exhibitor of Jame-shaven Dorsets and much sought after as a judge. He devoted much time to local and regional 4H clubs passing his knowledge on to succeeding generations of sheep breeders.

Jack also worked tirelessly in the years leading up to the formation of the Ontario Sheep Marketing Agency. He realized that the industry needed a professional voice to advocate for the industry and to market lamb on a year round basis to consumers. As the first Chair of the newly formed OSMA, he worked to publish the results of the first ever marketing study indicating the incredible potential for Canadian sheep producers in connecting strong consumer demand and farm production of a continuous supply of lamb. He operated a successful lamb production and wholesaling business in the Ottawa market in those formative years of the industry, proving that it could be done.

Jack also worked with industry leaders from across the country on the Canadian Sheep Council. When it failed, Jack worked toward the creation of the Canadian Sheep Federation. He also made significant contributions to the development of a national industry development report called "2001 and Beyond", A Strategy for the Canadian Sheep Industry (July 1989) which became the foundation for national and provincial initiatives in the years leading up to the new century. Jack was also an early contributor to the Code of Practice for the sheep industry which continues to serve the industry well.

Jack was at home with people. His sly smile, quick wit and very social nature created legions of friends and acquaintances wherever he went. His friends and colleagues in the sheep industry extend sincere condolences to his wife & family.

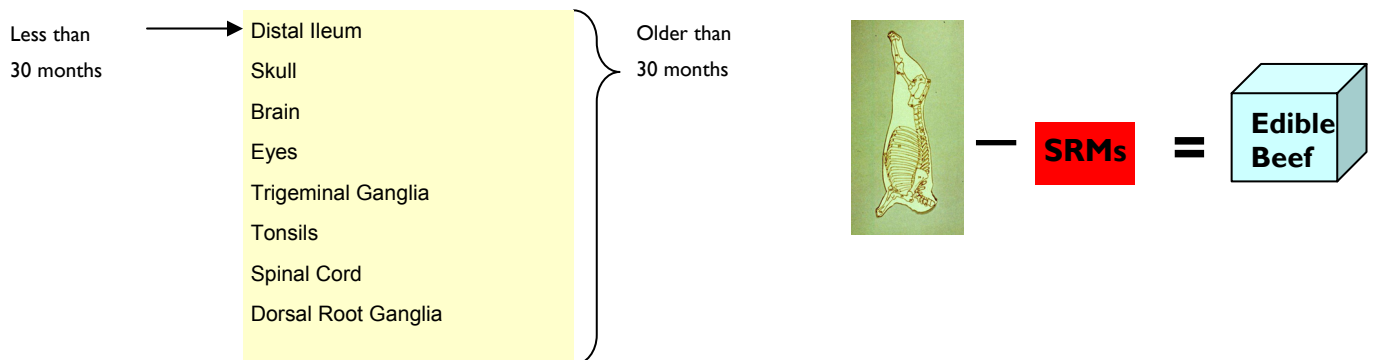
ENHANCED SAFEGUARDS AGAINST BSE COME INTO EFFECT AS OF JULY 12th 2007

By France Lanthier, On-Farm Food Safety Coordinator

On July 12th 2007 the safeguards announced by the Canadian Food Inspection Agency (CFIA) in July, 2006 to enhance animal health protection from bovine spongiform encephalopathy (BSE) will come into effect. As of July 12th, not only will cattle producers who handle, transport or dispose of cattle remains have to abide by new requirements, all producers feeding livestock will have to abide by new feed record keeping requirements.

If you handle, transport or dispose of cattle remains

In infected cattle, SRM are tissues capable of transmitting BSE. For those transporting cattle carcasses; in **cattle younger than 30 months of age**: if the distal ileum or entire intestinal tract has been removed, the carcass or partial carcass no longer contains SRM and can move without staining or a permit. If moving the carcasses of **Animals older than 30 months of age**: the skull, brain, trigeminal ganglia (nerves attached to the brain), eyes, tonsils, spinal cord, and dorsal root ganglia (nerves attached to the spinal cord) as well as distal ileum are considered SRM. The vertebral column of carcass sides and quarters must be stained with edible ink. For whole carcasses, a stripe of ink must be placed down the spine, from neck to tail.



For [information about handling or disposing of SRM](#), contact the CFIA at 1-800-442-2342 or visit www.inspection.gc.ca/bse.

What does the enhanced Feed Ban regulations mean for sheep producers?

The 1997 Feed Ban regulations will continue to apply. While cattle SRM have been banned in ruminant feeds since 1997, SRM are being banned from all animal feeds, pet foods and fertilizers as of July 12, 2007 to further enhance animal health protection from BSE.

Health of Animal Regulations: PART XIV - FOOD FOR RUMINANTS, LIVESTOCK AND POULTRY

164. No person shall feed prohibited material to a ruminant.

162. (1) In this Part, "prohibited material" means anything that is, or that contains any, protein that originated from a mammal, other than: (a) a porcine or equine; (b) milk or products of milk; (c) gelatin derived exclusively from hides or skins or products of gelatin derived exclusively from hides or skins; (d) blood or products of blood; or (e) rendered fats, derived from ruminants, that contain no more than 0.15% insoluble impurities or their products

If you mix feed on-farm:

171. (1) Every person who manufactures animal food for ruminants, equines, porcines, chickens, turkeys, ducks, geese, ratites or game birds shall keep records that contain: (a) the formula for the animal food, including the name and weight of each ingredient used for each lot of the animal food; (b) a mixing sheet that shows that each lot of the animal food has been produced in accordance with the formula referred to in paragraph (a); (c) information as to whether or not the animal food contains any prohibited material; (d) the date of preparation of the animal food; (e) any information used to identify each lot of animal food; and (f) the name and address of any person to whom any animal food is distributed or sold and a description of the food, including the name and quantity.

If you purchase any feed:

171 (3) Every person who owns or has the possession, care or custody of a ruminant shall keep copies of all invoices for animal food that contains prohibited material. Canada's enhanced feed ban will enter into force on July 12, 2007. In terms of record keeping requirements, feed mixing records will have to be kept for a period of 10 years and feed purchase invoices will have to be kept for a period of 2 years.

ENHANCED FEED BAN CONTINUED

The Canadian Sheep and Lamb Food-Safe Farm Practices Program

Below are examples of Good Production Practices (GPP) and Record forms found in the Canadian Sheep and Lamb Food-Safe Farm Practices producer manual that will help you assure that you are in compliance with Feed Ban and SRM regulations if you are mixing feed on the farm or if you are purchasing feed.

GPPs – Found in Section A: On-Farm Food Safety Practices for Sheep Producers

GPP 2.1.18: All non-ruminant feed storage areas are to be clearly labeled and separate from ruminant feed storage. This includes feeds for dogs and other species.

GPP 2.1.19: When receiving feed, bedding and other supplies, ensure what you received is what you ordered and acknowledge that you did this by initialing the bill of sale.

GPP 2.2.3: Refuse to accept any bulk or bagged feed that does not have a proper label, tag or product description, that is in accordance to the Feed and Health of Animals Regulation. This is especially important for medicated feeds.

These practices insure that all feeds are properly identified and labeled when they enter the farm. Currently “all feed containing materials prohibited by the feed ban is required to carry a statement to warn producers about appropriate use.” This will remain in effect.

Record Forms – Found in Section C: On-Farm Record Keeping Forms

RECORD 6: INCOMING FEED AND BEDDING INVENTORY *RECOMMENDED RECORD*

(It is recommended that all non-medicated feed and bedding purchases be noted on this Record).

Date Received	Source of Feed	Description	Quantity	Storage Bin	Sampled Y/N	Initials of Person Handling
05/02/03	Company A	Hay	100 square bales	Hay shed	Y	JD

RECORD 8: MEDICATED FEED MIXING AND BATCH WATER MIXING RECORD, MUST-DO MANDATORY RECORD

IF YOU MIX ANY MEDICATED FEED ON-FARM NOTE BOTH THE MEDICATED AND NON-MEDICATED RATIONS, AND SEQUENCE OF MIXING THE RATIONS ON THIS RECORD.

Date Mixed	Type of Feed OR Water	Name of Medication	Medication Withdrawal Period (Days)	Amount Added	Total Amount of Feed Mixed OR Water	Line Flushed/ Equipment Cleaned	Storage Location of Feed	Initials of Person Mixing
05/02/03	Lamb feedlot ration	Drug A	14	0.20 kg/ tonne or 200 gm/tonne	2 tonnes		Bin 5 – Purple lid	JD

For more information on the Canadian Sheep and Lamb Food-Safe Farm Practices Program visit: www.cansheep.ca or call 1-888-684-7739. The Food-Safe Farm Practices producer training workshop is available online (free of charge) at: <http://fsfp.cansheep.ca>

Burger King Shifts Policy on Animals

In what animal welfare advocates are describing as a “historic advance,” Burger King, the world’s second-largest hamburger chain, was cited as saying yesterday that it would begin buying eggs and pork from suppliers that did not confine their animals in cages and crates.

The company said that it would also favor suppliers of chickens that use gas, or “controlled-atmospheric stunning,” rather than electric shocks to knock birds unconscious before slaughter. It is considered a more humane method, though only a handful of slaughterhouses use it.

Burger King was cited as saying that the goal for the next few months is for 2 percent of its eggs to be “cage free,” and for 10 percent of its pork to come from farms that allow sows to move around inside pens, rather than being confined to crates. The company said those percentages would rise as more farmers shift to these methods and more competitively priced supplies become available.

Food marketing experts and animal welfare advocates were cited as saying yesterday that the shift would put pressure on other restaurant and food companies to adopt similar practices.

Bob Goldin, executive vice president of Technomic, a food industry research and consulting firm, was quoted as saying, “I think the whole area of social responsibility, social consciousness, is becoming much more important to the consumer. I think that the industry is going to see that it’s an increasing imperative to get on that bandwagon.”

Wayne Pacelle, president and chief executive of the Humane Society of the United States, was cited as saying Burger King’s initiatives put it ahead of its competitors in terms of animal welfare, adding, “That’s an important trigger for reform throughout the entire industry.”

Temple Grandin, an animal science professor at Colorado State University, was cited as saying Smithfield’s decision to abandon crates for pregnant sows had roiled the pork industry and that decision was brought about in part by questions from big customers like McDonald’s, the world’s largest hamburger chain, about its confinement practices, adding, “When the big boys move, it makes the entire industry move.”

Steven Grover, vice president for food safety, quality assurance and regulatory compliance at Burger King, was quoted as saying, “We want to be doing things long before they become a concern for consumers. Like a hockey player, we want to be there before the puck gets there.”

Mr. Grover was further cited as saying the company would not use the animal welfare initiatives in its marketing, adding, “I don’t think it’s something that goes to our core business.”

Source: New York Times, Andrew Martin

RARE FORM OF SCRAPIE FOUND IN SHEEP

The Wyoming Livestock Board says a sheep from a flock in the north-eastern corner of the state has tested positive for a rare form of the disease scrapie, the first time the particular strain has been found in the United States.

The USDA Animal Plant Health Inspection Service notified the state Friday that the ewe tested positive for a form of scrapie consistent with the Nor98 strain, first diagnosed in Norway in 1998.

The livestock board said it doesn't expect the strain of the disease to become a major problem for the Wyoming sheep industry. State and federal officials intend to monitor the remainder of the flock, near the Black Hills, to make sure the disease doesn't become established.

According to a release from the livestock board, the ewe was slaughtered in Michigan as part of the USDA's regular scrapie slaughter surveillance program and traced back to the Wyoming flock.

The release states that the Nor98 strain of scrapie is rare even in Europe, with fewer than 300 cases diagnosed since it was identified in 1998.

Scrapie is a transmissible disease similar to chronic wasting disease found in deer and elk. Scrapie is limited to sheep and goats and takes years to affect an animal after it has been infected. There are no known human health risks associated with scrapie.

“This provides evidence that the surveillance program is working,” said Bryce Reece, executive director of the Wyoming Wool Growers Association. “It also indicates that the program is on the cutting edge of science to detect such a rare disease during standard surveillance.”

An epidemiological investigation is ongoing.

Introducing OnTrace Agri-food Traceability Inc.

Brian Sterling

OnTrace Agri-food Traceability Inc. (“OnTrace”) is a new, not-for-profit corporation that will have a leadership role for agriculture and agri-food traceability programs and initiatives in the province of Ontario. As such, it will link together information from other responsible organizations in forming a national agri-food traceability system.

Traceability continues to gain global acceptance and credibility as a tool in assisting with the preparation for and management of agriculture and animal health emergencies. It is also becoming an essential component for addressing trade issues and for supporting credence attribute claims. Ultimately, the vitality and viability of the agriculture and agri-food industry is dependent upon buyer and consumer confidence in the safety and quality of its products.

Recognizing this, OnTrace has a mandate to lead food traceability information and related management solutions. Its goal is to support processes that will enable the agriculture and agri-food industry in Ontario to become more innovative and competitive, while strengthening the capacity of government and industry to respond to emergencies related to agriculture and agri-food welfare and public safety.

In order to achieve its objectives, OnTrace intends to leverage existing traceability programs and solutions in Ontario and elsewhere to build a multi-stakeholder approach to traceability. OnTrace will deliver information to industry customers and government in response to two critical areas: Capitalizing on innovative business opportunities where verifiable information can help support label claims, accelerate market access, and raise supply chain efficiencies; and strengthen the province’s capacity to plan for and respond to emergency situations.

There are three fundamental pillars to traceability: knowing what the product is; knowing where it is; and knowing when it moves to another location. OnTrace is committed to delivering effective traceability that builds on these pillars. Its first order of business, as referenced at last June’s Federal-Provincial-Territorial Agriculture Ministers’ conference, will be to support the proposed National Agriculture and Food Traceability System applicable to all livestock and poultry.

“Our first major initiative” said Brian Sterling, Chief Executive Officer, OnTrace “will be the Ontario Agri-food Premises Registry. OnTrace was asked to deliver the infrastructure for premises identification by December 2007. At the same time, it is critical to emphasize that OnTrace is not redoing or overriding others’ efforts; we will be taking a consultative approach with industry and government partners to find solutions that minimize cost and duplication of information. But time is of the essence.”

The Corporation is in the process of creating its first full Board of Directors and expects to shortly move into its corporate offices in Guelph. More information about OnTrace will soon be available at its new website: www.ontraceagrifood.com

WHY RAISE SHEEP IN SASKATCHEWAN?

The Saskatchewan Sheep Development Board and Saskatchewan Ag and Food will tell you why. They have teamed up to promote the growth of Saskatchewan's sheep flock.

"Saskatchewan is a leader in Canada in terms of the innovation, entrepreneurial spirit and drive of producers," said Tara Jaboeuf, Livestock Development Specialist with SAF. "The new sheep brochure is about those characteristics, and the kind of support that has been provided to the industry here."

The brochure notes that Saskatchewan's vast land resources and relatively low livestock density are distinct assets for sheep producers, providing a strong foundation for continuing expansion of the sector. It points out that land here is not only available, but also affordable. It quotes land prices of \$139 to \$225 per acre in Saskatchewan, compared to costs of \$248 to \$345 per acre in Manitoba, and \$438 to \$627 per acre in Alberta.

"The sheep industry has maintained its numbers and is poised on the edge of exceptional growth," Jaboeuf said. "The industry is ready for this growth, and the Saskatchewan Sheep Development Board is anticipating it." Information on the SSDB in the brochure describes it as a highly organized and productive association. The brochure also outlines the board's involvement in the industry, including market development, research, promotion, extension and education. There is also discussion of the board's marketing system, which connects with buyers and brokers across Canada.

In Saskatchewan, there is financial support for sheep producers from government, including the Livestock Loan Guarantee Program and Feedlot Construction Loan Program, which are intended to give sheep producers the opportunity to start and/or expand their flocks with loan guarantees. SAF also funds the Livestock Predation Program, which assists all livestock producers in the management of losses from predation. The program is administered by the SSDB. Saskatchewan Environment also funds the Guardian Dog Program, which assists producers in purchasing guardian dogs to protect their livestock.

"We are the only province to start a value-added lamb processing business to promote lamb products," noted Jaboeuf. Canadian Prairie Lamb Inc. was created to facilitate processing of lamb in Saskatchewan, and to add value to the meat by developing new products for the global retail market. The company currently offers eight different products, including seasoned lamb kabobs, two kinds of meatballs and a variety of sausages.

The new "Why Raise Sheep in Saskatchewan?" brochure is available from the SSDB website at www.sksheep.com, or from SAF.

Will you be in attendance? The 5th annual event, organized by the Saskatchewan Forage Council, is happening June 13th and 14th in Saskatoon.

"It's geared towards producers and grazing managers," said Janice Bruynooghe, Executive Director of the Saskatchewan Forage Council. "This forum allows them to gain practical knowledge and expand their management skills through a combination of seminars, hands-on exercises, and pasture tours." Attendance at the Pasture School is limited to 50 participants.

"At least 50 per cent of our time is spent in the field on pasture tours," said Bruynooghe. "We try to keep our numbers small, because when we're in the field, we like to have enough resource people so that we can break up in small groups and have lots of one-on-one interaction."

This year's agenda includes sessions on Calculating Stocking Rates, Matching Grazing Animal Requirements to Forage Quality, Herd Health Concerns on Pasture, and a Producer's Perspective on Grazing Legumes. According to Bruynooghe, the school is very interactive.

SASKATCHEWAN SHEEP CON'T

"We start at the basic level of discussing how grass grows, as well as some of the basic management principles. Then we put pencil to paper in practical exercises. Next, we hop on the bus and get out to do a bunch of pasture tours," she said.

"We encourage people to get on their hands and knees and do things like plant identification, and to ask lots of questions about how the things they're seeing pertain to their own operations."

Through social events, producer presentations, and panel discussion, the Pasture School also provides plenty of opportunity to exchange views.

"The other important learning that goes on is the peer to peer interaction," Bruynooghe said. "Talking to your neighbour or someone who has a grazing operation in another part of the province, you learn about things that have worked for other producers."

The 2007 Saskatchewan Pasture School will be held at the Best Western Inn and Suites in Saskatoon. Registration is \$132.50 for the first registrant and \$106 for any additional registrants from the same operation. The fees are pre-approved for Canadian Agricultural Skills Service eligibility. The agenda and registration form are available online at www.saskforage.ca

The Pasture School is a joint project of the Saskatchewan Forage Council, the Western Beef Development Centre, Saskatchewan Agriculture and Food, Ducks Unlimited, the Saskatchewan Watershed Authority, and Agriculture and Agri-Food Canada/Prairie Farm Rehabilitation Administration.

NEW AUSSIE HALAL BRAND LAUNCHED IN MIDDLE EAST

Meat & Livestock Australia has launched a new Halal brand for Australian red meat in the Middle East aimed at reinforcing Australia's strict Halal standards in one of the world's largest Muslim markets.

Under Islamic law, for meat to be permissible for consumption, it must be Halal (lawful) and animals must be slaughtered by a Muslim in accordance with the Islamic 'Shariah' laws.

MLA's regional manager for the Middle East and Africa, Ian Ross, says the development of the new Australian Halal brand is an important development in reinforcing the integrity of Australia's strict Halal meat processing systems.

"This new Halal brand, which will appear on retail meat packs and point of sale, is the Australian red meat industry's guarantee that the meat it exports has come from an animal that has been slaughtered according to the strict Islamic Shariah," Mr Ross said.

"Australia is the only non-Muslim country in the world that underpins the integrity of Halal animal slaughter through government legislation, and this is something we will be strongly promoting in the Middle East.

"Australia has the most robust Halal meat processing system in the world and Muslim consumers need to know, and more importantly need to trust, that the lamb, mutton or beef they are purchasing is Halal.

"We hope this level of trust can give us a distinct competitive advantage in key Muslim markets like the Middle East."

MLA says competition in the Middle East's red meat market is increasing, prompting it to find a competitive advantage for Australian product.

"The new Halal brand shows that the Australian red meat industry is culturally aware and that we respect the laws of Islam," Mr Ross said.

In Australia the Halal process is regulated through the Australian Government Muslim Slaughter (AGMS) program by government employees and is supervised by independent Islamic organisations.

All Australian Halal meat is labelled as having passed through the AGMS program and this certification is only allowed to be placed on meat that has been processed at a registered Halal certified abattoir.

SOURCE: Meat Livestock Australia

Lakeland Carcass Sire Project — Spring Update

1. The new barn was finished (or close enough) in time for the first lambs born on Feb 20. One hundred and sixty two ewes lambing during the first cycle, dropping 304 lambs. We were surprised at the prolificacy of these range ewes - they produced 20 sets of triplets and two set of quads! The remaining 65 are due in the next cycle, starting March 26.
2. Cliff Metheral sheared the ewes Feb 13, just a week before lambing. This was to save space in the barn and so the ewes were more comfortable in the claiming pens. Cliff did an excellent job tidying up the ewes, carefully shearing their woolly faces and legs.
3. The ewes had ideal body scores at shearing and were in excellent shape going into lambing. Credit for this goes to Darrell Hickman, the new farm manager at Lakeland College. Darrell found some great sheep-quality hay this winter, and the result has been good flesh on the ewes and big healthy lambs at birth. Average lamb birth weight this year is about 12 lb., which is four lb. heavier than last year.



4. Joanne Dickson, the shepherd at Lakeland College, has done an extraordinary job of lambing under very difficult conditions. She's working with a new barn, new students, new college staff and a new sheep flock that are full of surprises!
5. Lakeland College students in the Sheep Production class were in charge of lambing again this year; checking the lambing barn around the clock, processing lambs and providing any medical treatment required, under the supervision of Dr. Brenda Hymanyk. The new ewes came from range flocks and have been a challenge to handle. A handling system will be set up in the new facility once the frost is out and the ground dries, which should make routine catching and handling much less stressful for sheep and humans alike.
6. A PowerPoint presentation about the Lakeland Project was developed in January for the new staff and agriculture students at Lakeland College. The presentation covered the "who, what, when and why" of the project, along with photos from 2006 and a global perspective on lamb carcass quality. Tracy Hagedorn also gave the presentation to Animal Science students and staff at Olds College.
7. The project has been approved for a third year, with funding from ACAAF (Advancing Canadian Agriculture and Agri-Food Canada) and DLFA (Diversified Livestock Fund of Alberta). Funding for research depends on industry support, so many thanks to the stakeholders and industry organizations that make this project possible.

Susan Hosford
Project Manager
(780) 679 - 5170

CLIMATE CHANGE SHIFTS

SHEEP SHAPE

Soay sheep live on a remote island in the Outer Hebrides. Climate change could have an impact on animal evolution and ecology, scientists believe.

A 20-year study of Scottish sheep found weather patterns were driving changes in body shape and population size. Harsh winters led to larger sheep, which brought about changes in population size, yet in milder winters this effect was not seen.

The team says the study, published in the journal *Science*, is the first to connect these different factors. "Until now, it has proven really quite difficult to show how ecology and evolutionary change are linked, but we have developed a way to tie them together," said Tim Coulson, an author of the paper and a scientist at Imperial College London.

Dr Coulson and colleagues did this by examining a population of Soay sheep on the island of Hirta in the Outer Hebrides. "The reason we looked at these sheep is they have been studied in enormous detail. Where they live is like a natural laboratory - it is a really simple system - there is just sheep and grass on the island," Dr Coulson explained.

The scientists also looked at data recorded since 1985, analysing sheep population sizes and body measurements. "To determine how ecology influences evolution and vice versa, an important step is to be able to see how population dynamics are influenced by traits such as body size or eye colour that are, in part, controlled by genes."

The researchers discovered body size was linked to animal numbers: when lots of large sheep came into the population, the numbers tended to fluctuate quite widely, possibly because body size is linked to reproductive success. During harsh winters, bigger sheep were favoured.

But the researchers also discovered the sheep's body size was in turn influenced by their environment. "We used a measure of how bad the winters were in Scotland, and this has been changing over the duration of the study," said Dr Coulson.

During the harsher winters in the 1980s, the data showed big sheep were genetically favoured, he said. "But over the years, winters have been getting a little bit better; and as winters have got better, we have found there is not as much natural selection for large animals as we saw in the past, as there is less advantage to being big."

He said the study revealed how environmental factors were driving evolutionary and ecological change, and predicted that as the climate changed, and winters became less frequently harsh, the sheep would get smaller and the population size would be more stable.

"People have argued for a long time that climate change is leaving an ecological legacy, but we have shown it will leave an evolutionary legacy too," he added.

Source: <http://news.bbc.co.uk/2/hi/science/nature/6453615.stm>

LUCRATIVE ORGANIC LAMB

Erratic wool markets and a decline in the live sheep trade have seen some Australian sheep producers looking to diversify, adopting African breeds targeted for the organic sheepmeat market.

Well-established markets such as North America and Europe provide Australian organic lamb with profitable opportunities, with the Asian market continuing to grow.

The African sheep breeds are reported to be efficient meat growers, producing twice as many lambs even in harsh conditions.

Desirable qualities of the exotic sheep are their ability to use their tails as a drought reserve, with farmers receiving premiums of 25-30pc for the lamb.

Organic farming practices are also favourable, being environmentally sustainable which protects the diverse range of native vegetation.

Export potential in the US, UK and Asia is growing, although current demand for organic lamb abroad outstrips supply.

Organic meat sales in the US were at US\$292million in 2005, with lamb specific statistics not reported (Agricultural Marketing Resource Centre).

Europe is currently Australia's key organic export market.

New Zealand is expecting organic lamb production to be more significant in the next 10 years, with an intention to target the UK, which is the third largest organic food market in the world.

SOURCE: MLA Market News

A FALL LAMBING PROGRAM MIGHT WORK IN YOUR OPERATION AND RETURN BENEFITS

By DALE HILDEBRANT, *Farm & Ranch Guide*

NEW GENERAL MANAGER FOR OSMA

The Board of Directors of OSMA is pleased to announce that a new General Manager has been hired.

Ms. Norma Collett will assume the office in early June. Ms. Collett brings a wide variety of livestock experiences with her from her native Newfoundland and Labrador. She has been Manager of the NL Livestock Council, and has been the backbone and inspiration of their marketing, promotional and advertising activities. She has managed several sheep projects and has been the On-Farm Food Safety provincial delivery agent for the sheep, beef and pork programs. Norma brings an enthusiasm and dedication to our industry that is rare to find in any one person.

The Board looks forward to working with her for many years to come.

Allan Burn, Chair
OSMA Board of Directors

For more information please contact the Ontario Sheep Marketing Agency office:

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Sheep producers in this region are generally locked into a spring lambing program because of the climatic conditions and day length, according to Justin Luther, NDSU Extension Sheep Specialist. But there are ways that this natural cycle can be overcome, thus resulting in lambing in both the spring and fall of the year, which could bring financial rewards to the producer.

During a recent sheep producers' workshop at the NDSU Carrington Research Extension Center, Luther addressed three basic questions concerning the timing of lambing:

Why do we see seasonal reproductive activity in the ewe?
What are the advantages of overcoming seasonal reproduction in the ewe?
What methods can be used to overcome this seasonal reproduction?

The reasons for seasonal reproduction in sheep: Two main factors are responsible for the seasonal reproduction pattern in sheep - climate and day length, Luther noted. Sheep in a temperate climate with a cold winter and warm summer tend to be seasonal and it is natural for them to lamb when the food is plentiful in the spring.

The day length is also important, since there is a direct relationship between the amount of light and the amount of melatonin the sheep produces. During times of decreasing daylight in the fall of the year, the melatonin production in the sheep's brain is increased, which stimulates the reproductive tract into action. The ewe is then bred and lambs during spring which is the traditional lambing time of the year.

As the day length increases, melatonin production is suppressed, the reproduction activity of the ewe is diminished and she actually enters an ovulatory stage, which continues until the fall, when the secretion of melatonin is again enhanced and the reproductive cycle starts again.

Advantages for overcoming seasonal reproduction in sheep: According to Luther, when producers overcome the seasonality of lambing they realized two benefits - they can make better use of their facilities and resources and they will have lambs to market all year long, thus being able to capitalize on stronger markets at times of the year when lamb sales are lower.

Lambing in the spring and again in the fall will make more efficient use of lambing barns. Instead of having empty barns nine months out of the year, the structure will be used for an additional three months. In addition, the implementation of a fall lambing program will allow for taking advantage of fall forage during the late gestation and early lactation period and there is likely to be better weather conditions in the fall for new-born lambs.

Finally, the producer will have more time to get lambs to a high market weight for the higher market prices in the spring, which are due to the low supply of lambs at that time and a high demand for lamb at the market because of Easter

Fall lambing continued

Overcoming seasonality in ewes: Now that it's been established that sheep have a seasonal reproductive pattern and it would be beneficial to overcome the seasonal pattern, the question remains - how do we overcome the seasonality in ewes?

Luther notes there are two methods that can be employed to overcome the seasonal reproduction pattern in ewes - a natural program and one that uses artificial methods.

Natural method: This regimen involves getting the ewe to produce the hormones that start the reproductive cycle in a natural way involving the ram effect and selection of animals. In using this process, the ewe needs to be completely isolated from the ram for 60 days. Once the ewes are exposed to a viable ram, the ewes will start releasing gonadotropins, which will induce estrus.

Selection part of the equation comes into play because the seasonality of ewe is partially genetic. Therefore, any ewes bred out of season are more likely to have ewe lambs that will do the same, according to Luther.

This selection process is done in two phases, a challenge phase and a clean-up phase. The challenge phase is when the ewes are challenged to become pregnant during out of season and lamb in October and November. The replacement ewe lambs from this lambing are kept in the herd.

The clean-up phase covers those ewes that didn't become pregnant during the challenge phase. They will probably lamb in January or February and the ewe lambs from this lambing period are not kept in the herd.

Both parts of this natural technique offer some advantages, but there are also disadvantages. The ram effect is cost effective but it isn't always effective on all ewes. The ewe lamb selection part of the program is also cost effective, but it might take several breeding seasons to build up a flock.

Artificial method: This program involves treating a ewe with the hormones that are normally seen during her reproductive cycle. A flock owner uses a combination of progestin and gonadotropins that cause the ewe to cycle reproductively and make her receptive to pregnancy.

The advantages of the artificial program are:

- Some products are cost efficient
- It offers the ability to synchronize lambing for better management of time
- Effective at increasing pregnancy rates out of season

The disadvantages of the artificial method are:

- More costly than natural method
- Time consuming
- Some products have limited availability or are awaiting Food and Drug Administration approval.

In conclusion, Luther noted, "Working to overcome the seasonality of the ewe can enhance the profitability of the producer, but the process does require time, strict management and some initial costs."

Source: Farm and Ranch Guide



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