Manitoba Sheep Association November 2018

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Relevant Articles from last SheepSense

To review articles in our August issue of SheepSense, click here. Articles include:

- *Medicating Animals*
- *Water Quality*
- *Feed Efficiency*
- *Ethnic Calendar*

Manitoba Sheep Association

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Executive Director's Report

Submitted by: Kate Basford

It has been a busy fall and I don't know where the time has gone since the MSA Show and Sale in August. This year, the MSA made a few changes to the Show and Sale - it really looked great and it was well received by consignors and buyers. The prices of animals were better than last year and the trade show grew with some new vendors, something for everyone. I would like to take this opportunity to THANK the people who worked so work to put it together, volunteers like Cathleen Martins and all of our sponsors; Lakeland, Huber Ag equipment, Zubolt Welding, Tony & Simon Atkinson, CCWG & Total Farm Supply.

This September, the MSA Executive - Sheri Bieganski, Morgan Moore and I met with Ag Minister Ralph Eichler (see photo below). It was a very positive meeting, where we discussed the Manitoba sheep industry, MB AG collaborating with MSA, a designated sheep specialist and Ag Action Manitoba funding for sheep producers.

From left: Morgan Moore, Kate Basford, Sheri Bieganski, Minister Ralph Eichler

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Continued from Page One: Executive Director's Report

A welcome goes out to MSA's new Board members elected by producers at the recent round of District meeting. Wendy Church from the Interlake region, Tracy Stykalo for the NW region, Simon Atkinson for the Western region join the Board while Ralph Borst was elected in the Central region (Ralph served as a board appointee last year) and Guy Bouchard was re-elected in the Eastern region. Sheri Bieganski, Morgan Moore and Colin Hunter are mid-way through their 2-year term. I look forward to working with the new board. A special thank you goes to Angela Viola for her time on the board. The District meetings went well, good attendance, some great discussions. A good opportunity for sheep producers and MSA to get together and touch base.

MB Sheep Association Mission:

To initiate, support, and conduct programs and activities designed to stimulate and improve the economic wellbeing of all segments of the Manitoba sheep industry

The sheep team of Wray Whitmore and Linda Fox provided presentations on Nutrition and new immunology research. Most Districts had resolutions to go forward to the MSA AGM on November 17th held in conjunction with the Sheep Symposium. This year, MSA is also having a Sheep Bytes workshop on November 16th. Hope to see you there. Please register and note the resolutions posted on the website.

This year MSA has had a record number of new producers (127 as of September 30th), proof that the Manitoba sheep industry is growing and a truly viable industry. Last week, MSA had its first Starting Sheep Workshop, presented by Gord Schroeder of the SSDB and attended by 15 sheep producers. The 2 days were filled with the A- Z's of sheep production. The small group enable lots of discussions and by the evaluations everyone walked away with lots of good information that they could apply on their operation.

As mentioned, the MSA sheep symposium and AGM are coming up and there is a great line up of speakers. Dr. Paul Luimes of the U of Guelph is conducting the sheep bytes workshop on Friday the 16th. This will be another small group event enabling much one on one time and lots of time for questions and practical experience formulating rations in sheep bytes. Dr. Luimes will also be giving a couple of nutrition talks as well as presenting on his research project on sheep fiber requirements that MSA has provided some funding at the Symposium. Also, Chris and Jen Vervoort will be discussing how they have adopted induced lambing to manage lambing several times a year and their busy lives. Please register with our MSA Office to attend!

MSA 2018 PLATINUM SPONSOR
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MSA Executive Director, Kate Basford can be contacted at ed@mbsheep.ca or by calling 204-421-9434.

Sheep Immunology 101

Submitted by: Wray Whitmore, Sheep Team - Manitoba Agriculture

This article is based on the American Sheep Industry webinar 'Getting the Most out of Your Vaccination Program' by Dr Bret Taylor, USDA, ARS, Dubois, Idaho.

Sheep and humans are protected from disease by their immune system. Humans are born with a mature immune system because our mother's antibodies are able to cross the placenta and we have them in us when we are born; new born humans can be vaccinated if necessary. When we are exposed to an infectious organism, our immune system is activated and it helps us fight off the organism and stops us from getting sick. In ruminant animals (sheep, cattle and goats), antibodies can't cross the placenta and this is why colostrum or first milk, is so important. Newborn lambs need to drink colostrum within the first 12-24 hours of being born in order for the antibodies in the colostrum to be absorbed. The newborn's gut is not able to absorb the large protein molecules after time has passed and the beneficial effects from antibodies within the colostrum are lost. This is why proper nutrition in late pregnancy and a timely vaccination schedule of pregnant ewes is important for high quality colostrum for newborns.

Many different layers of protection are involved in a disease prevention strategy within a sheep flock such as;

1. Management and husbandry – nutrition, shelter and exercise.
2. Physical barriers – skin, mucous membranes and digestive secretions.
3. Immune system – Activated when physical barriers are broken. We can strengthen and build upon this protective layer.
4. Disease treatment – timely assessment and diagnosis as well as appropriate delivery of medication.

Vaccinations are the injection of a killed or modified microbe in order to stimulate the immune system to protect the body from the microbe which in turn, prevents disease. Vaccinations or immunizations work by stimulating the natural disease fighting system of the body. Vaccination is a tool to leverage "nature" to prepare your animals for an upcoming disease.

There are 3 different stages for vaccinations and these are;

1. The PRIMARY injection.
    a. This is the initial exposure of the animal to the vaccine or antigen.
    b. Critical for the cell to be exposed so that it is able to produce an 'effective' antibody.

2. The SECONDARY injection.
    a. The follow up exposure.
    b. Critical for initiating mass division of cell line (multiplication) and their corresponding antibodies.
3. The BOOSTER injection.
    a. The annual or repeated exposure to the vaccine.
    b. Critical for maintaining the effective cell line as cell death can occur over time.

Continued on page 8

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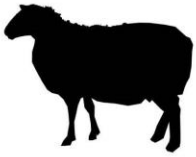

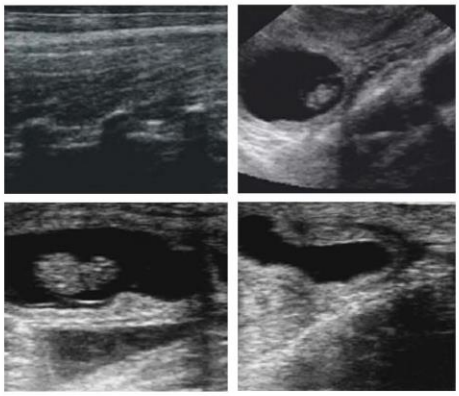

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MSA COMING EVENTS

Watch for details through eblast and website

SHEEP BYTES WORKSHOP - NOVEMBER 16th

Stride Place, Portage la Prairie

- With Paul Luimes, University of Guelphg & MB Ag Sheep Team
- Learn to develop rations using Sheep Bytes and have nutrition questions answered for your flock

Additional Details:

- 10:30 a.m. – 3:30 p.m.
- Lunch provided
- Click here for more details
- $50.00/person; $75/couple
- **Deadline to register is November 12th**
- Contact the MSA Office to register at mb@mbsheep.ca

MSA SYMPOSIUM & ANNUAL GENERAL MEETING - NOVEMBER 17th

Stride Place, Portage la Prairie

- Speakers include:
  - Paul Luimes, University of Guelph – Efficient Production by Utilizing Nutrition Effectively – *see additional info on Paul on page 27*
  - Chris & Jen Vervoort – Induced Lambing (more info on page 18)

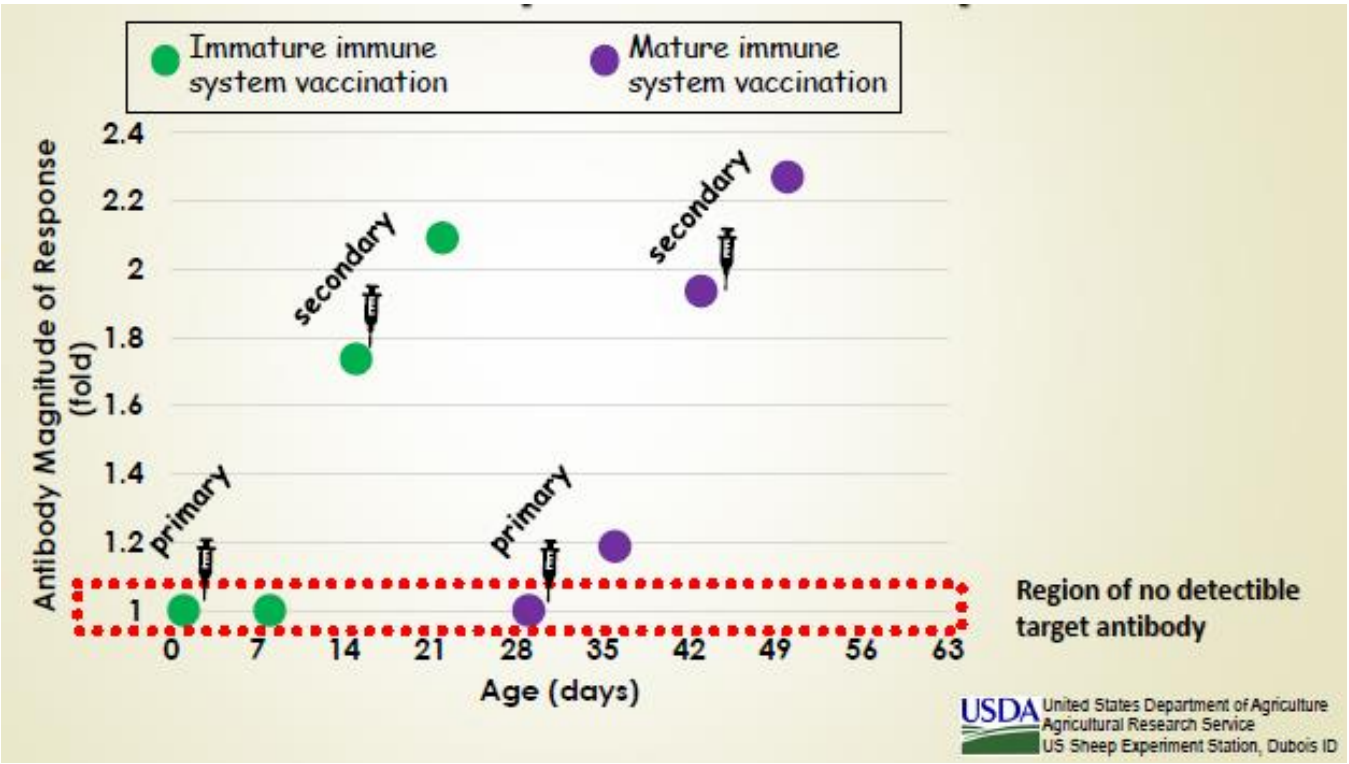
For a Full agenda, click here.

Additional Details:

- 9:00 a.m. – 4:30 p.m.
- Lunch provided
- $50.00/person; $75/couple
- Contact the MSA Office to register
- **Deadline to register is November 12th**
- If attending both the Sheep Bytes Workshop and the Symposium, cost is $75.00/person or $125.00/couple

Continued from Page 5 – Sheep Immunology

Work has been done on to measure the effectiveness of vaccinating new born lambs even though they have an immature immune system and the results are interesting, see chart below. New born lambs were given a primary vaccination on the day they were born and then given a vaccination at 14 days and 21 days of age of age. The antibody response of these vaccinations times was compared to lambs that were vaccinated at day 28 and then at day 35 and 42. As expected, the lambs vaccinated at the older age had a better response to the secondary vaccinations. The vaccination of day old lambs resulted in a slightly lower antibody response compared to the older aged lambs, below.



There are practical implications to this result. Many sheep producers' process lambs in the lambing jug on day one and then the ewe and lamb are put in a mixing/hardening pen on day 3-4 depending on the need for lamb jugs. Many sheep producers then catch the lambs at day 28 for their primary vaccination to be followed with the secondary vaccination at day 42 and this can be challenging. Small healthy lambs are hard to catch. Dr. Taylor pointed out that vaccinating new born lambs could be a considerable labor-saving step on a sheep operation that comes about at relatively low cost. The lambs given the early primary and secondary vaccinations did present with a slightly lowered immune response when compared to the lambs that were vaccinated at an older age. However, giving the primary vaccination to newborn lamb(s) that are easy to catch may make sense for your operation and should be considered.

Feeding Your Flock

Submitted by: Wray Whitmore, Sheep Team - Manitoba Agriculture

Sound nutrition is essential for normal health, growth and reproduction. It has been estimated by sheep producers and sheep scientists that a proper nutrition program is doing 85% of the work to ensure a healthy and productive flock. It is important to realize that many sheep diseases are due to nutrition problems, i.e. polio, white muscle disease and ketosis. A vaccination program along with an internal/external parasite program will cover much of the rest. Sheep utilize nutrients (not feeds) to meet their nutritional needs. A wide variety of feeds can be used to provide the needed nutrients. Proper feeding will avoid these problems. When designing specific feeding programs several factors should be considered.

1. Nutrient content- feed analysis is the best and most specific means of determining nutrient content. The nutrients we need to be concerned with are; protein, energy, vitamins, minerals and water. The most important nutrient is the one that is in the shortest supply in a feed. Usually the critical nutrient is energy and a deficiency of energy is seen as thin or skinny sheep and body condition score is how to monitor energy intake in animals.

2. Voluntary intake- the fibre content of forages and grains is an indication of expected intake. Chemical or Infrared analysis of feeds is used to estimate the energy content or the Dry Matter Intake (how much feed an animal will eat).

3. Cost per unit of dry matter of individual feeds. When you want to compare buying energy or protein in two different feeds make sure to remove the effect of water and compare the price of each on a Dry Matter basis. If you have questions, contact your nutritionist, MB Ag office or Sheep Team member for help.

4. Nutrient requirements- The Nutrient Requirements of Small Ruminants NRC (2007) should be consulted for requirements of the sheep you are feeding.

5. Separation of sheep with different nutrient requirements into compatible groups, i.e. pregnant ewe lambs should be in a separate group which allows them access to better quality feed. Ewes raising singles can be separated from ewes raising twins so they aren't over fed. Grafting another lamb onto a ewe with a single should be mandatory if possible. The feed costs needed to raise twin lambs compared to a single lamb aren't huge but the financial returns from the twin lambs is 100% better than a single. Ewes raising triplets need access to the best feed on the farm and a creep feeder needs to part of the management system for triplets.

6. Feed waste- well designed forage and grain feeders will save money and allow more precise feeding.

7. Body condition score – using the body condition scoring system is one way to monitor the success of your feeding program. This is critical to the management of a sheep flock. The intent is to have all animals in a similar body condition; you don't want excessively fat (non-producers) or thin animals (potential disease issue). This is important before lambing, ewes should be in a body condition of 3.5 – 4.0 (out of 5) so they are not over conditioned for lambing and they have the body reserves that can be utilized for milk production when they can't eat enough feed to meet their nutritional needs in early lactation. A ewe in a body condition score of 3.5 before lambing will produce good quality colostrum containing the immunoglobulin's that lambs need to thrive.

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Bottom line: The proper feeding of your flock is probably the most important management tool you have for your sheep flock. A proper nutrition program allows you to control feed costs (which are a significant part of a flock expense), eliminate or avoid nutrition health issues and increase growth and production in your flock. Properly fed sheep are productive and they do the work which means you can concentrate on other things. Always look at and condition score your flock to make sure everything is working; nutrition problems don't often happen overnight and they occur over time and they are much easier to avoid than treat.

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Mule nannies are used in Italy when grazing animals are moved from high pastures down to the plains. Newborn lambs are unable to make the journey own their own, so they ride in pouches of a specially-made saddle. At rest stops, lambs are returned to their mothers for a meal and some nuzzling.

Are Genetic Evaluations Only for Purebred Breeders?

Submitted by: Amélie St-Pierre, AHTY, GenOvis program, CEPQQ
Cathy Thériault-Landry, GenOvis program, CEPQQ

Have you ever asked yourself:

- Why should I use a genetic program?
- What can a genetic program bring me?
- Is a good investment putting time in data collection and pay annual membership?

You say to yourself:

- I know my flock and I can identify easily my good ewes.
- I can take as good management decisions based on data collected in my barn (as number born/average daily gain…) as if I used genetic values (EPDs).
- The breeding values are only good on paper; they do not reflect my production reality.

Are you sure? Will your best ewes transmit traits of interest to their daughters you plan to retain for breeding? Does your selection based on raw data allow you to optimise the genetic potential of your flock? And what about if breeding values could bring your more than you think...

Collecting data on lambing and growing lambs is already a good start in knowing where the flock is and setting targets to make the business profitable. But WARNING, decisions based on the use of raw data can be biased. A double born lamb does not automatically mean that his mother is more prolific than another single born lamb. Different environmental or management factors may explain better or worse performance.

- A lamb can be born double, because his mother has been given hormonal treatment.
- A lamb can be born simple because its mother is a ewe-lamb or has been bred during a hot period during summer.
- The ADG (average daily gain) of an animal may have been influenced by external factors (heat, coccidiosis, mold, hay).

Should we select the ram born double with the higher daily gain?

Twin - 600 g/day

Sire:
400 g/day- Single

Dam:
400 g/day - Twin

Grand-sire P : 450 g/day - Single
Grand-dam P : 250 g/day - Single
Grand-sire M : 350 g/day - Single
Grand-dam M : 280 g/day - Twin

Single - 450 g/day

Sire:
650 g/day - Twin

Dam:
450 g/day - Twin

Grand sire P : 650 g/day - Twin
Grand dam P : 575 g/day - Triplet
Grand sire M : 625 g/day - Twin
Grand dam M : 480 g/day - Twin

The GenOvis program takes into account the performance of an animal, but also those of all subjects related to it.

The GenOvis program calculates genetic evaluations based on data collected from an animal, but also its relatives and offspring. The more information available, the more accurate the genetic values will be.

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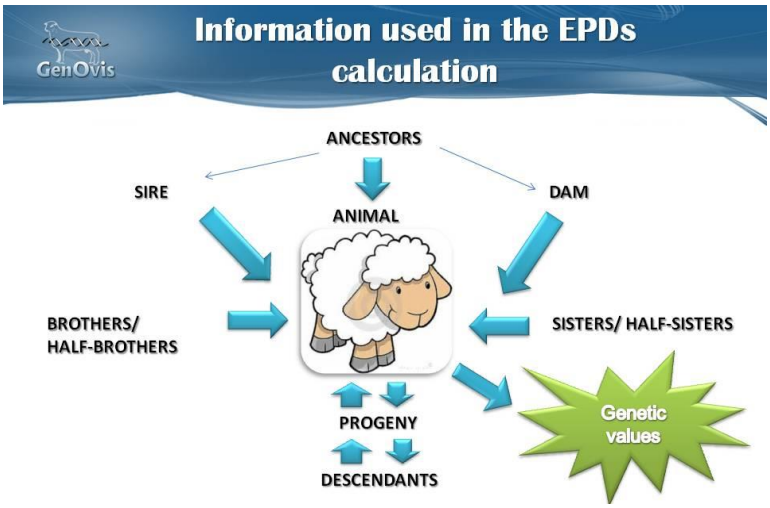

The performance of an animal is compared to the performance of other lambs raised in the same management group. When generating breeding values, the program takes into account differences in performance between lambs, but also all information collected on their relatives.

Importance of Management Group

$$P = G + E$$

P : Performance
G : Genetic factors
E : Environmental factors

The management group is a group of lambs that will be born in the **same environment**, in the **same period** and will **be raised similarly** (same building, feeding, ventilation, ...) whose dams were bred in the same period and using the same technique.

The management group is the basis of a good genetic evaluation. It makes it possible to evaluate the differences in performance between lambs all having the same chance to perform (isolate the effects of genetics compare to environmental effects) and thus obtain a more accurate genetic evaluation.

Lambs that have not had the same treatment (e.g. different feeds, crowding vs. sufficient space, raised in cold barn vs. warm barn, ...) should be placed in different groups as their environment will be partly responsible for performance differences observed. How then to determine the genetic potential of these lambs in relation to the effects of the environment?

And finally, the same applies if CIDR were used for some ewes while the others were bred in natural ... The differences in prolificacy can be explained by the use of hormone and not by the genetic potential of these ewes. Lambs from these ewes should be evaluated in two separate groups.

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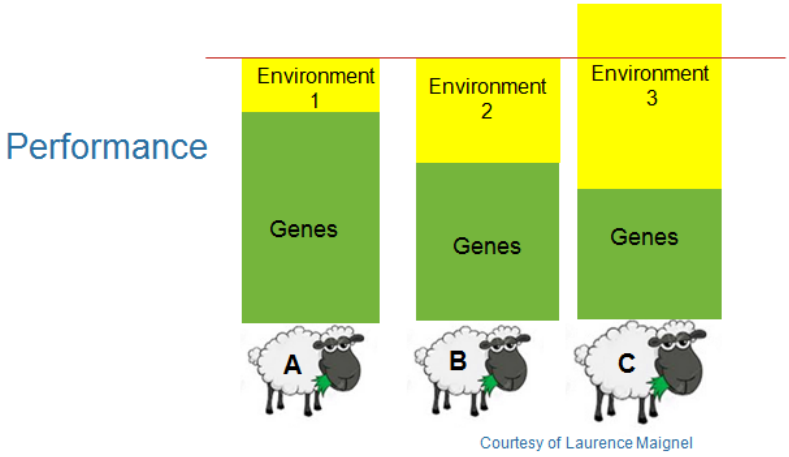
AND THE GENETIC EVALUATION IN ALL?

The GenOvis program analyzes farm-collected data to assign genetic merit to subjects evaluated on their performance, those of their relatives and those of their offspring. It will also calculate the effect of genetics compare to environmental effects on the animal performance.

Let's take an example. You have below the performance of three rams. Ram C has the better performance (better average daily gain). Rams A and B have similar performance. Which one should you select to produce fast growing market lambs?



Courtesy of Laurence Maignel

If we are looking only the performance, Ram C seems to be the better choice to get fast growing lambs.

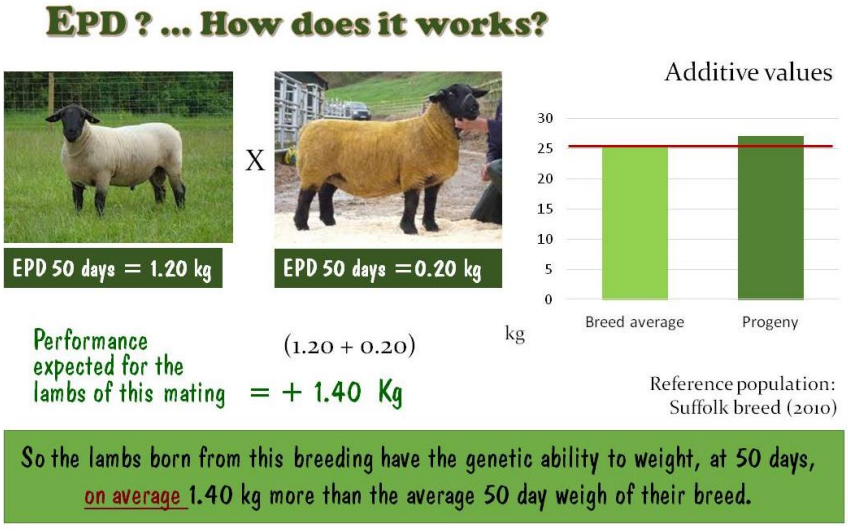
Perhaps, the genetic program determinates that the performance of that ram is due to environmental effects more than by his own genetic. This means he has a good performance because he has better hay or more concentrate or more space... but he will not transmit it to his offspring. If you select that ram, you may be disappointed regarding his offspring growth rate.

Regarding Rams A and B, they have similar performance, but Ram A have higher genetic ability to produce fast growing lambs than Ram B. Ram A performance is mainly based on his genetics compare to Ram B whose performance is due in large part to environment.

The GenOvis genetic values will be expressed in the same unit as the trait (EPD weight 50d (kg), EPD born (number of lambs), EPD lambing interval (days)).

Are you aware that?

By summing the genetic potential of the parents (sum of the EPDs - Expected Progeny Difference - for a trait), you will obtain the expected genetic potential of the lambs from this cross. An EPD value is therefore what the animal will transmit to its offspring.



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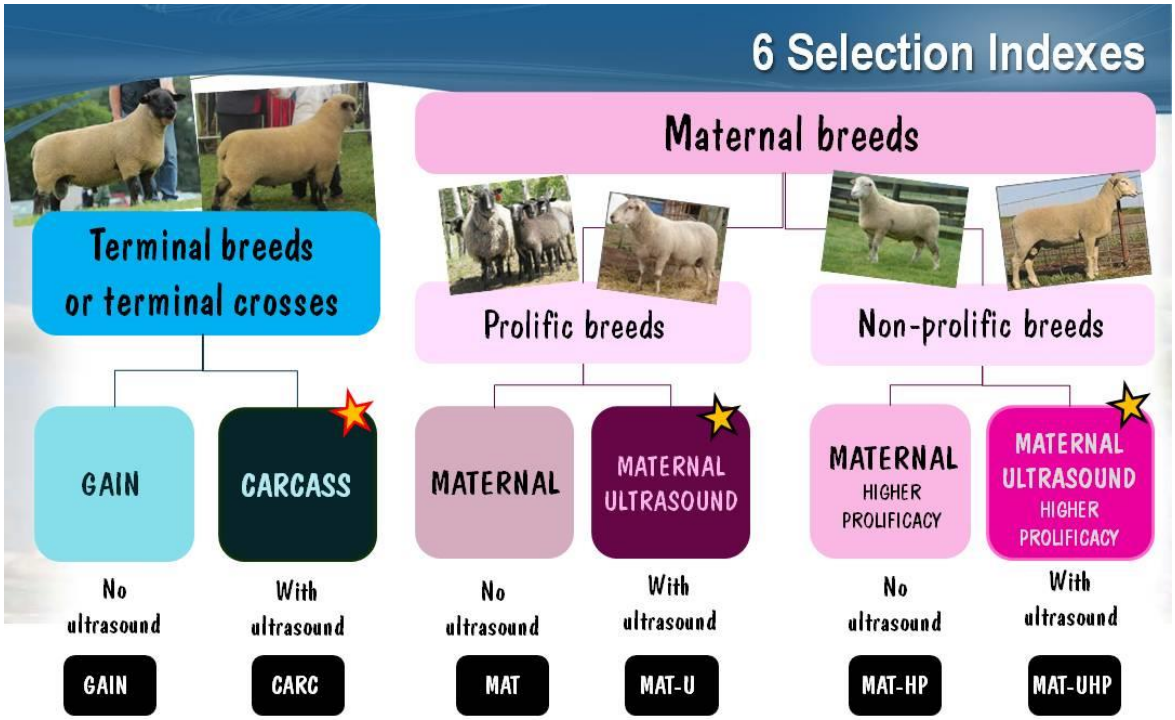
In addition, there are genetic links between the **15 traits evaluated** (EPDs) that are taken into account when calculating genetic values.

> For example, fat thickness and growth have an unfavorable genetic correlation. This means that by selecting the animals only on the growth rate, you get fatter subjects.

You must therefore make sure that you use the right selection tools to obtain an improvement on several characters at a time.

To prevent breeders and commercial producers from trying to consider different traits of interest when they make their selection, while keeping in mind the positive and negative links between traits, the GenOvis program generates **6 genetic indexes** that combine different traits of interest (EPD).



The selection is then more efficient, more complete and the genetic progress will be faster on all of the traits, because the indexes make it possible to quickly identify the individuals able to improve several characters of interest at the same time. There is thus no danger of regressing on one trait when selecting on another specific trait of interest.

Moreover, the program ranks the subjects in the breed according to their index value. Thus, the percentile is a value, expressed from 1% to 99% which makes it possible to rank an animal within its breed or breed group. The average is 50%: subjects below 50% are below average, while those above 50% are improvers. Subjects that are in the 90% are the elite of the breed and are mainly used to increase the genetic improvement of the breed. All subjects between 50% and 99% have the genetic potential to perform better than the average of the breed.

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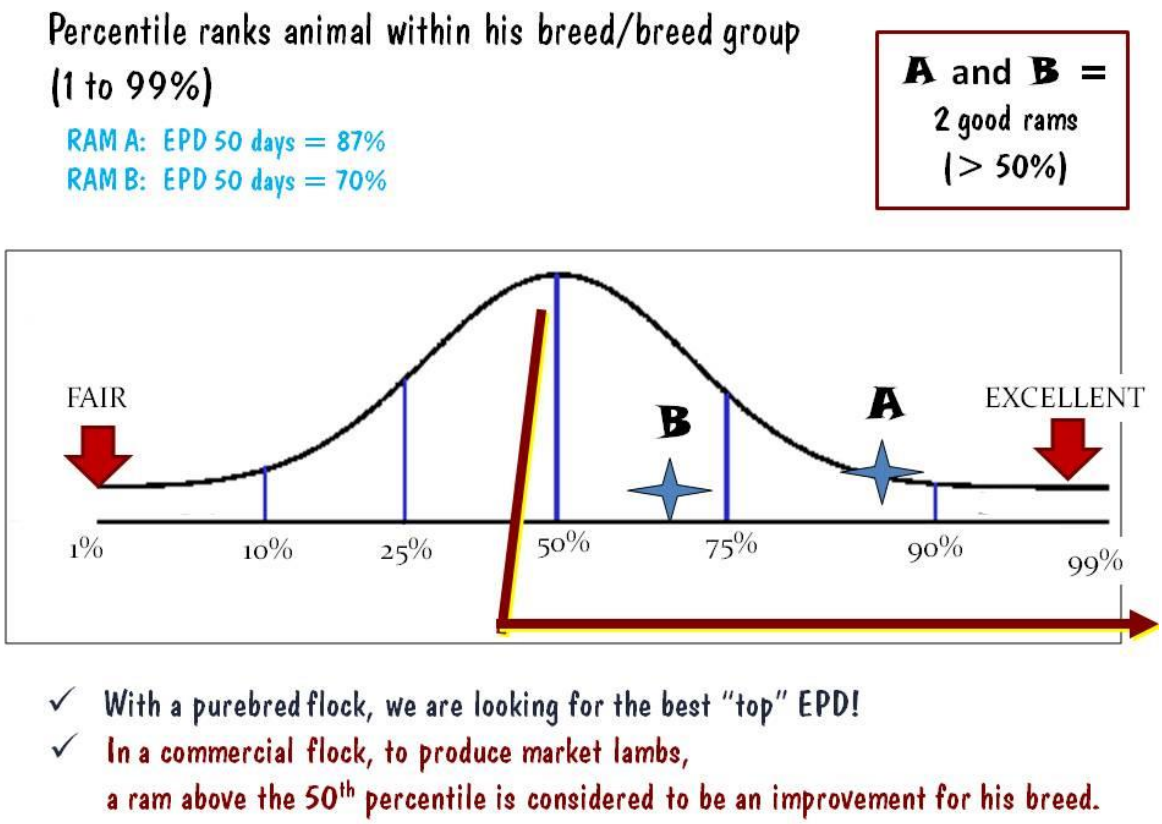

Testimonial:

I always thought that the best sheep in my flock was the one that always gave me triplets. When I started using GenOvis, I did not understand why this ewe did not have good breeding values until I realized that she was producing me three little lambs. My other sheep gave me two beautiful lambs with excellent growth. I realized that the ewes who gave me fast growing twins were more profitable for my business and that I should not select only on raw data like prolificacy. The values calculated by GenOvis allow me to select the best ewes of my flock.

Steve Ernewein, RI breeder, Ontario (winner of the flock with the greatest overall improvement in genetic indexes between 2015 and 2016 at the Ontario GenOvis Awards 2017)

Would you like to learn more about what genetic evaluation can do to improve your profitability?

If you are interested in joining GenOvis or having more information please contact us at 418-856-1200 ext. 221 or by email genovis@cepoq.com.

MSA Producers – Interested in being part of a Genovis Workshop? The MSA is looking at running a workshop in Spring 2019 if there is enough interest from members. Please contact the MSA Office to indicate your interest at mb@mbsheep.ca or at 204-421-9434.

Sheep Mineral…What it's all about

Submitted by: Kate Basford, MSA Executive Director

With many commercial sheep mineral products being available, the question asked is which should be purchased. All commercial mineral mixes are formulated to meet the basic sheep mineral requirements. The simple answer is to provide a good sheep mineral at all times, that meets your sheep nutritional requirements.

Some mineral mixes are formulated for breeding, gestation and lambs on a higher grain diet. Feed regulations states that the tag on a mineral product must contain guaranteed values of various minerals included in the product and Information about other minerals included may be displayed. A list of ingredients will also be displayed. If a product contains a feed additive, it will say "Medicated" on the label, and the approved purpose for that additive will be stated.

There are 16 minerals divided into macro and micro minerals that are deemed nutritionally essential for sheep. The macro minerals are sodium, chlorine, calcium, phosphorus, magnesium, sulfur, potassium, and micro minerals, including cobalt, copper, iodine, iron, manganese, molybdenum, zinc, and selenium. Trace mineralized salt provides an economical way to provide micro mineral and to prevent deficiencies of sodium, chlorine, iodine, manganese, cobalt, copper, iron, and zinc.

In the big picture, producers need to understand their sheep and lambs mineral needs, have an indication of the mineral abundance or deficiency on their farms, water sources and feed. This is obtained through water tests, feed test and even soil testing to get a true picture of mineral availability and meeting nutritional requirements of your sheep through the production cycle.

This nutritional need changes throughout production cycle as seen in the table below.

		Class of Sheep and Their Requirements (in diet Dry Matter)		
		Mature Ewe		Young Lamb
	Nutrient	Early Pregnancy	Nursing Twins	Fast Gain
Macrominerals	Calcium, %	.25	.4	.55
	Phosphorous, %	.2	.3	.25
	Potassium, %	.5	.8	.6
	Magnesium, %	.12	.18	.12
	Sulfur, %	.15	.25	.15
	Sodium, %	.10	.15	.10
Microminerals	Iron, PPM	40	40	40
	Copper, PPM	10	10	10
	Manganese, PPM	40	40	40
	Zinc, PPM	30	30	30
	Selenium, PPM	.3	.3	.3
Vitamins	Vit A, IU/lb DM	1000	1200	500
	Vit D, IU/lb DM	100	100	100
	Vit E, IU/lb DM	7	7	7

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Macrominerals are required in larger amounts and expressed as a % of the diet or as grams per head per day. Macro minerals vary in feed stuff, so supplementation may be required always, sometimes and some never. Calcium is often in adequate amounts in forages, and legumes have higher levels than do grasses. Grains and grain crop silages have very low levels of Calcium. Phosphorous is just the opposite. It is high in grains and low in forages, often because soils are low in phosphorous fertility levels. Because Phosphorous is important to reproduction and growth, it is often included in minerals for the ewe flock year around and lambs on a high grain diet may only need calcium to be supplemented, as the grain will provide all the phosphorus needed. Too much phosphorus in the lamb's diet can actually impair performance.

Microminerals or trace minerals are needed in very small quantities and expressed in milligrams per head per day or in parts per million. Just as with the Macrominerals, some are adequate, others are deficient, and several are marginal.

Micro mineral requirements (mg/d) and Toxic levels (ppm of diet DM) for Sheep

Source NRC, 2007 Nutrient requirement of Small Ruminants, sheep, goats

Mineral	Requirement range mg/d	Toxic levels (PPM of DM)
Iodine	0.3-4.2	50
Iron	6.0-10.4	500
Copper	2.7-28.2	15b
Molybdenum	a	5
Cobalt	0.08-1.06	25
Manganese	11.0-83.0	2000
Zinc	13.0-204.0	300
Selenium	0.02-0.92	5C
a - Daily requirements for molybdenum is not reported. a general requirement of 0.5ppmDM is estimated		
b- Provided diet contains molybdenum and sulfur levels		
c- Lower levels are necessary to avoid excessive accumulation in edible tissues		

Zinc, Copper, and Selenium are all important in many physiological functions, including the immune response and disease-fighting ability. Our soils are often deficient in Selenium, making forage grown on those soils also deficient. Consequently, most mineral mixes and prepared feeds include Selenium for sheep of all ages. With the maximum levels of Se for sheep, are 0.3 Parts per Million (PPM) in the total diet or 0.7 mg per head per day.

Because Selenium is not stored in the body for very long, frequent intake or dosing of Se is critical, but at the same time needs to be at the right levels. The difference between required levels and toxic levels is very minimum. It often is stated as a percent. To convert % to PPM, move the decimal 4 places to the right. Thus, a product with 60 PPM would be stated to include 0.006% Se.

An abundance of copper (Cu) can be toxic to sheep. But it plays an important role in the body functions and is a required minera. Excess amounts are concentrated in the liver rather than being excreted, for this reason mineral mixes have a very low copper contained and most soils contain enough effect copper to meet sheep requirements. Caution should be used when using mineral mixes formulated for cattle and goats as their requirement are much higher and the copper levels in trace mineral salts as various products have different copper levels.

Continued on next page

Continued from previous page – Sheep Mineral

It is important to know your levels of all minerals provided and available, as well as, interactions amongst each other such as a high molybdenum levels in the soil will bind the copper and making the copper unavailable to animals. Water can contain dissolved minerals, Sulfates greater than 900 ppm interfere with copper availability and is also associated with thiamine deficiencies; higher nitrate levels decreases the availability of Vitamins A & E, iodine and phosphorus, also high levels of Total Dissolved Solids (TDS) 5000 - can cause diarrhea and digestive upset. Iron is often added to minerals (iron oxide or ferric oxide on the tag), to give minerals the typical reddish-brown color. However, iron can interfere with the uptake of other minerals that are not in large amounts, such as zinc. Thus, it is recommended that iron not be included/added to complete minerals for ruminants.

Why are certain vitamins included in the mineral mixes? Most commercial minerals for sheep designed for free-choice feeding will contain added Vitamins A, D, and E. Under idea situations and the right feed stuffs, sheep can make vitamins from the raw materials consumed in their diet with their ruminant digestive system, as with all the B- Vitamins unless there is digestive upset. Vitamins A and E are made from compounds found in green forage. Vitamin A can be stored in the liver for 2 or 3 months after sheep have been eating green forage for several months. So, when eating fresh pasture or well-made hay no supplemental vitamins A and E are needed.

However, when sheep are eating forage that is old, weathered, mature, or otherwise low in Vitamin A precursor, then this Vitamin should be added to the mineral mixture. Other feeds that will result in inadequate Vitamin A levels are corn silage, corn stalks, and straw. Vitamin D is made from exposure to sunshine. For sheep housed indoors for more than 2 to 4 weeks, such as lambs being finished in confinement, Vitamin D should be included in the diet.

Let's look at mineral intake, sheep do not eat the same amount of mineral throughout the year. They have a craving for salt and will consume a complete mineral to get salt. Some ingredients, such as dicalcium phosphate and especially magnesium oxide, are not very palatable; thus intake may be lower when these ingredients are included. Often artificial flavor enhancers are added to mineral mixes to encourage higher intake or the mineral is added to grain ration or salt is added to increase consumption.

Intake is higher in early spring, when the grass is very lush and drops off as the grass becomes mature in late summer and with hay consumption. More mineral will be consumed if it is kept close to a water source and also higher if mineral feeders are located in shady areas or along paths frequently traveled by sheep.

Producers should monitor intake periodically. Put out a known amount of mineral and keep track of the number of days a group of sheep takes to consume it. Divide by the number of head to calculate the intake per head per day. This should be an average of ½ to 2 ounces per day.

Minerals and salt products are available in loose, granular form and in block form. Loose mineral mixes are the recommended form of mineral for sheep. It is difficult for sheep to get enough mineral from licking blocks, because of the shape and mechanics of their tongues, unlike cattle. Also, it is not unusually for sheep to have broken teeth, trying to chew the blocks to get the required amounts. With few mineral block having the complete mineral profile to meet nutritional requirement. Loose minerals must be put in a covered feeder of some type to keep rain out so they don't cake and become hard and always have mineral available for your sheep.

Additional chart on page 29 – Signs of Mineral Deficiency

The Vervoort Family & their Controlled Lambing Program

Submitted by: Kate Basford

We will all agree, lambing is an exciting but exhausting time. Typically, lambing results in several weeks of late nights, early mornings and a lot of intense work.

To manage the labour load, some farmers have adopted a synchronization and induction program to tighten the lambing window to just two days. Chris and Jen Vervoort are extremely busy, first-generation young farmers running over 400 ewes, a veal calf venture, a hoof trimming business, a full-time off-farm job and raise three kids under the age of seven.

At the MSA symposium, Chris and Jen Vervoort will explain how the adoption of induced lambing was the answer to their decision to lamb several times a year with their busy lives. Hear how the Vervoort have adopted this program on their farm and the many benefits to managing lambing this way.

On the Vervoort farm, the program is designed that the ewes lamb on day 145 on a Saturday and that is all that they do that day and by Monday morning, ewes and lambs are loose in the barn, ready to grow.

The adoption of induced lambing was the resolve for their decision to lamb several times a year. With everything the Vervoorts had on their plate conventional lambing practices was not feasible. It was running them ragged, so they decided to adopt a lambing induction protocol, hire an employee to help get set up, and grow from there.
Yes, there is an added cost — about $15 in supplies, plus labour — but it meant Jen can continue to work off-farm while they build their farm business. It means that they can access extra help during lambing. It means two sleepless nights per lambing cycle (they lamb six groups a year) vs 12 or more, and, perhaps most importantly, they can better care for their ewes and lambs.

"Animal welfare is definitely important to us. We can be there for our ewes if they need us, and we can be there for those new lambs when they need it," Chris says. They consider anything above 5% mortality of lambs a management problem and aim to keep their losses to 4%. Zero death loss is achievable, he says.

Using a fully-housed system, Vervoorts move ewes and lambs into claiming pens as they lamb. This keeps the barn organized and has significantly decreased mis-mothering.

Because all the ewes are lambing at once, they've had good success fostering lambs on to another ewe when necessary. Within the first 24 hours, lambs are numbered (to match their dam, and colour-coded for multiples), tagged, and tails are docked on replacement ewe lambs.

Continued on next page

Continued from Previous Page – Controlled Lambing

Working with groups of about 100 ewes, the Vervoorts insert CIDRs in the ewes on Day One. CIDRs are a small, progesterone plastic inserts that stop the ewes from cycling. In 14 days, the CIDRs are removed and the ewes are given a dose of PMSG to induce ovulation. Within 24 hours, rams are introduced to the ewes (in six-hour increments, usually in a 1:5 ratio) and remain with the ewes for four days, after which time the rams are removed. Ewes are scanned at day 50 to 60 for pregnancies and multiples and open ewes are moved to the next breeding group. Then, on day 143 (around 8 to 9 pm on a Thursday for Vervoorts system) ewes receive an injection of dexamethasone 5 to induce lambing. Saturday morning (day 145) around 5 am, the lambing begins and is usually done by Saturday night.

Click here to view Guidelines for Estimating Lamb Production Costs 2018 in Manitoba

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Carcass Bruising by Grabbing Fleece

Submitted by: Kate Basford

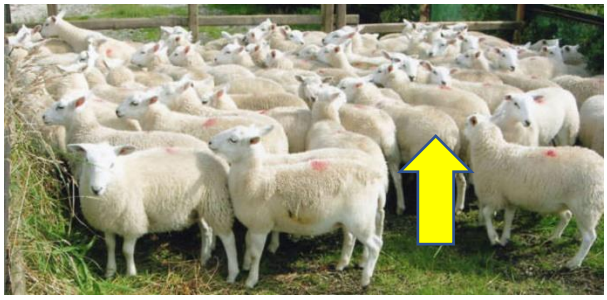
Producers need to realize that any "grabbing" of the wool will result in significant bruising to the carcass. Bruising frequency was higher in fleeced lambs than in shorn lambs.

Over 11% of all potential bruising events observed were due to wool-pulls. Another study at an abattoir concluded that 26% of bruising was attributed to handling and behavioral problems. Of this 26%, 1/3rd of bruising was caused by wool-pulling. Handlers used wool-pulls and tail-pulls to change the direction of sheep, to restrain them, and to pull individuals from a group.

Wool fibers are imbedded in the skin follicles, grabbing the fleece causes significant subcutaneous damage and results in broken blood vessels on the surface of the muscles.

Proper Way to Handle Sheep

Always approach sheep calmly and slowly. Never chase sheep! The more you chase sheep, the harder it is to catch them, causes stress and a negative experience for the next time. The smaller the catch pen, the easier it will be to catch the sheep. Always catch sheep from a group that has been cornered. Don't try and catch the sheep that is not in the group, allow them to return to the group.



Cup your hand under the jaw of the sheep you want. Grab the bony part of the jaw, not the throat. Point the sheep's nose upward to stop its forward motion. If you keep the sheep's head up, you will be able to maintain control of it. Sheep have a lot more power when their head is down.

If you cannot get close enough to the sheep to grab it under its jaw, you can reach for its hind leg. Reach for the hind leg above the hock, then move your other hand up to control the head as soon as possible. Watch, adult sheep are able to kick strongly, so it is better to grab the rear flank. A leg crook can also be used to catch a sheep by the leg. The leg crook is especially useful in open areas. You should never catch a sheep by its wool. Not only is it painful to the sheep, but it can cause bruising to the carcass.

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Why 4-H?

Submitted by: Clayton Robbins, Executive Director, MB 4-H Council Inc.

Have you ever considered enrolling your kids in the 4-H program to complete a sheep project? 4-H Manitoba had 24 sheep/lamb projects registered in the 2017-18 4-H year and we would like to see that number grow as our 2018-19 year begins, especially at such a positive time in the sheep industry. There has been renewed interest in some parts of the province to potentially resurrect sheep clubs and the Manitoba 4-H Council welcomes any interest from MSA families who have children of 4-H age (6-25) who would be interested in joining the program. A sheep project can be done as part of a 4-H club which is solely sheep-based (existing or new) or as part of another club like beef, equine or multi-purpose (life skills), subject to that club being willing to take on members with sheep projects.

For those who are unfamiliar, 4-H in Canada was founded in Roland, Manitoba, in 1913. The 4-H program is a club-based format which focuses on positive youth development via mentored learning in a variety of skills, either through project topics or club-related activities. Under the leadership of caring adults, youth aged 6-25 develop attributes which enable success throughout their entire lives. Rooted in agrarian origins, the program now offers almost 90 project topics ranging from fitness to crafts, while nurturing citizenship and a sense of belonging in those who will become tomorrow's leaders. For more information on 4-H in Manitoba and the opportunities we provide, please go to our website at www.4h.mb.ca or call the office at 204-726-6136. 4-H Manitoba strives to ensure a safe, positive learning environment for our members by requiring training and strict screening protocols for all our registered volunteers.

If you are a 4-H Alumnus, there are many things about the 4-H program in Manitoba which will be very different but also some which will be quite familiar to you. One of the biggest changes is that Manitoba 4-H Council is now responsible for the administration and delivery of the 4-H program, duties once shared with Manitoba Agriculture which have been transferred over exclusively to Council in recent years. Manitoba Agriculture continues to be an important partner and significant supporter of the 4-H program but all front-line services for clubs and families now fall to Council staff. Project-specific books and other resources are available to all members and leaders, local, regional and provincial events and activities abound, communications and other competitions are still prevalent and numerous travel and award opportunities are still offered. Additionally, several unique and interesting programs/activities are made available by 4-H Canada to clubs across the country and, in Manitoba, over 50% of our clubs, members and families take advantage of these initiatives each year, with very positive feedback as to their experiences.

There is so much more to the 4-H experience in Manitoba than just club meetings and project work and it is all available with the $75-member registration fee. Insurance coverage is also included for everyone involved in the program and is supported by this fee.

If you, or anyone you know, is interested in what 4-H has to offer your family, as it is truly a family-based program, please reach out to one of our Club Support Coordinators. In eastern Manitoba please contact Ms. Lynn Silver at lsilver@4h.mb.ca or 204-573-4308 and in western Manitoba please contact Ms. Shannon Carvey at scarvey@4h.mb.ca or 204-573-4829. Lynn and Shannon provide assistance to individual members and leaders, families and clubs, as well as to the regional Area Council executive. They also lend their expertise and support in helping new clubs and Head Leaders get up and running.

TRANSPORTING ANIMALS

Understand your obligations and know all animals are subject to inspection by CFIA, under the Canadian Health of Animals Regulations (C.R.C., c296)

See Transportation regulations: https://laws-lois.justice.gc.ca/eng/regulations/C.R.C., c. 296/page-16.html#h-70

Having Issues with your CSIP Tags?

Shearwell has some advice to improve your tag performance…

How should I store SET tags?

Like medicine and feed, ear tags need to be stored correctly if you expect them to perform. Protect your SET tags from the weather– not broiling in the sun on the dash of the pickup; not forgotten out by the chute in a pail full of rain water or left to enjoy all four seasons of the year on a shelf in the lambing barn.

Correct storage for SET tags:

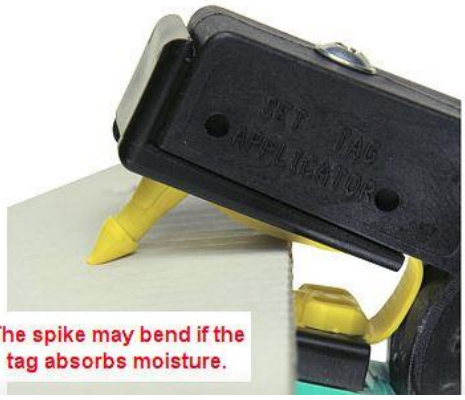
- In their original zipper-lock bag, with the top sealed.
- Inside a plastic food container with a sealable lid, kept closed.
- Out of direct sun.
- In a warm, dry place. If the room is comfortable for humans, it's comfortable for tags.

Why are storage conditions so important for SET tags?

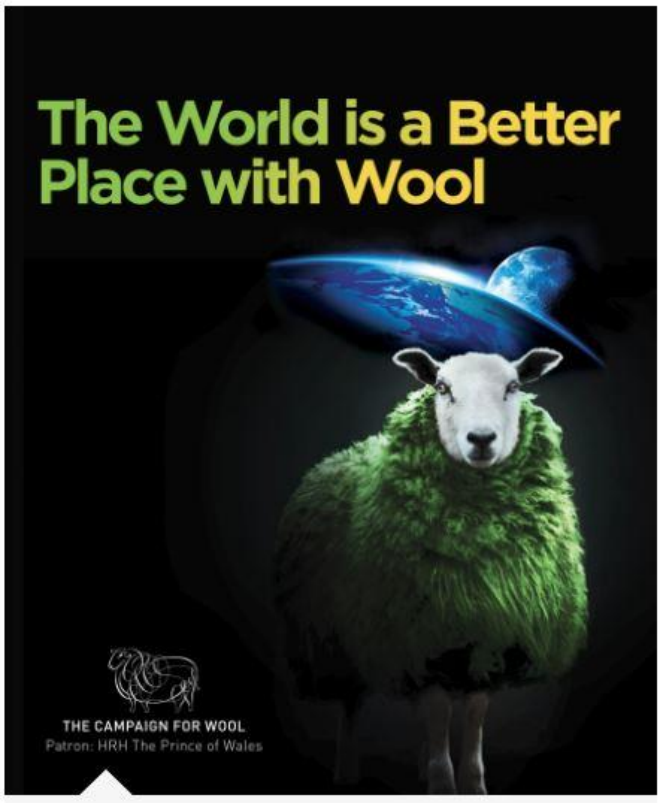
Each strip of SET tags is made in a mould. The plastic is a nylon compound, with additives for colour and laser marking. As part of the curing process, the plastic needs to absorb a small amount of moisture to become supple enough to use.

During application, the spike must be rigid enough to pierce the ear, but the tag must also be flexible enough to bend at the hinge. As the applicator is squeezed, the tip of the spike is forced through the hole at the other end of the tag. The hole must expand a little, and the spike must compress a little, as the tag is closed.

Problems can develop after manufacturing if the plastic gains or loses too much moisture. Correct storage instructions are supplied with every pack of tags. Tags stored in humid conditions can absorb too much moisture, become soft and flexible and more difficult to apply.



The spike may bend if the tag absorbs moisture.



Fibre Festival Recap

Submitted by: Margaret Brook

The sixth annual Manitoba Fibre Festival (September 14 & 15 at Red River Exhibition Place) attracted over 1500 people with a keen interest in fibre and fibre crafts. Over 80 vendors from Manitoba, Saskatchewan and B.C. supplied a wide range of raw materials, tools, and finished products for shoppers.

Stacey Rosvold demonstrated sheep shearing this year, with the commentary provided by Brian Greaves. Our live animal display -- always popular with the visitors -- included ten different breeds of fibre sheep plus two types of alpaca.

We were pleased to add the "Wool Judging Level 2" course this year, and to have Shannon Martin, MLA for Morris present the 12 graduating students with their certificates.

The wool show again highlighted a diversity of high-quality fleeces, and sales were good. It's very satisfying to see shoppers coming back year after year to seek out more fleeces from their favourite farms, and to discover new ones too. Congratulations to the Bouchard's of Green Pastures Farm for winning in the Medium Wool category in their first ever wool show. The Green Pastures Farm display of wool duvets was a welcome addition to the vendor market this year. With the opening of a new wool processing mill at Long Way Homestead in Ste Genevieve we are thrilled to see yarns for sale from wool grown and processed in Manitoba. Judging by how quickly they sell out this is definitely a positive trend. We also added a fashion show this year, featuring the work of our talented vendors. The Festival has an amazing team of volunteers and craft demonstrators that make this all possible. If you haven't had a chance to see it for yourself yet, please join us in September 2019.

The Manitoba Fibre Festival is very grateful to the Manitoba Sheep Association for your ongoing financial support and encouragement. Thank you!

MSA Symposium Keynote Speaker & SheepBytes Demonstrator - Dr. Paul Luimes

Livestock Nutrition, College Research Professor, U of Guelph

Are you a sheep farmer who is interested in learning more about the nutrition and well-being of your flock? Do you think it might be possible increase profitability while at the same time improve the health of your animals? Dr. Paul Luimes, U of Guelph, should help to answer these questions and more. He will provide farmers with the basic tools to optimize the balance between feed, eat quality and profitability. Topics covered include:

Feed Types, Nutrients, Digestive Physiology, Nutrient Requirements, Ration Formulation, Feed Management

Dr. Luimes research work focuses on investigating applied nutritional and management opportunities to improve production efficiency. His research focuses on sheep nutrition. He is interested in finding and quantifying opportunities to decrease feed costs for ewes and lambs. Dr. Luimes is currently working on a research project looking into the fiber requirement of sheep, that MSA has provided funding for. He teaches the Agriculture Diploma program at Ridgetown Campus at the University of Guelph.

Continued from page 19 - Signs of Mineral Deficiency

SIGNS of MINERAL DEFICIENCY	
Salt	Decreased feed consumption and water intake.
Calcium	Abnormal bone development, tetany, urinary calculi.
Phosphorus	Abnormal bone development (rickets), depraved appetite, unthrifty appearance listlessness.
Magnesium	Tetany, frothing at mouth, profuse salivation.
Potassium	Decreased feed intake, reduced gains, listlessness, stiffness.
Sulfur	Loss of appetite, reduced gains, reduced wool growth, shedding wool.
Cobalt	Lack of appetite, severe emaciation, decreased estrous activity
Copper	"Swayback" in lambs, "steely or "stringy" wool in adults.
Iodine	Thyroid enlargement (big neck), lambs born without wool.
Manganese	poor growth, lethargy, anemia, increased respiration rate
Selenium	"White muscle disease", unthriftiness, early embryonic death.
iron	Impaired growth, skeletal abnormalities, incoordination of baby lambs. -
Zinc	Decreased appetite, retarded growth, "parakeratosis", reduced reproductive ability.
SIGNS OF VITAMIN DEFICIENCY	
Vitamin A	Growth retardation, retained placenta, bone malformation, degeneration of the reproductive organs, night blindness.
Vitamin D	Rickets in young lambs, osteomalacia in adult sheep. -
Vitamin E	"white muscle disease", stiffness, arched back
Vitamin B (Thamine)	Poliencephalomaicia

Featured Recipe – Moroccan- Spiced Lamb Appetizer

Pastry-wrapped bites of ground lamb seasoned with Moroccan-style spices, fresh mint and parsley and served with a dipping sauce of Greek yogurt and mango chutney make a delicious, easy appetizer.

INGREDIENTS:

- 3/4 lb ground lamb
- 2 large shallots, finely chopped
- 2 cloves garlic, finely chopped
- 1/3 cup fresh mint leaves, chopped
- 1/4 cup fresh parsley, chopped
- 1/2 teaspoon salt
- 1/8 teaspoon freshly ground black pepper
- 1/2 teaspoon ground cumin
- 1/2 teaspoon ground coriander
- 1 sheet frozen puff pastry dough, thawed
- All purpose flour
- 1 large egg, lightly beaten
- 1/3 cup plain Greek yogurt
- 1/4 cup mango chutney
- Pinch of cayenne

INSTRUCTIONS:

1. Place the lamb, shallots, garlic, mint, parsley, salt, pepper, cumin and coriander in a bowl. Combine thoroughly – using your hands works the best.
2. Unfold the pastry sheet onto a lightly floured flat surface and roll out gently to smooth the creases and stretch the sheet to a 10 x 12-inch rectangle. Slice the pastry into 3 strips (10 x 4-inch) and brush with beaten egg.
3. Place 1/3 of the lamb mixture lengthwise down the middle of each strip of pastry. Fold the long side of the pastry over the filling as tightly as possible and press to seal. Place each roll, seam side down on a piece of plastic wrap. Wrap tightly and refrigerate for at least 1 hour.
4. Preheat the oven to 425°F and line a baking sheet with parchment. Unwrap the pastry rolls and, using a sharp knife, slice them into 8 pieces each. Arrange in a single layer on the prepared baking sheet and brush each piece with beaten egg. Bake for 20 minutes, or until golden brown.
5. Combine the Greek yogurt, chutney and cayenne in a small bowl and serve as a dipping sauce.

Prep Time – 15 minutes, Cook Time – 20 minutes, Yield – 24 pieces