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In This Issue

Merinos: King of Sheep

by Susan Schoenian

The Merino is the most important breed of sheep in the world. It is estimated that fine-wooled sheep (Merino ancestry) account for more than 50% of the world's sheep population. You can't visit Australia and New Zealand (which I recently did) and not expect to see a lot of Merino sheep.

The modern Merino was developed in Australia, and the country has the most advanced wool industry in the world. Though declining in numbers, Merinos still comprise more than 50 percent of the Australian national flock. New South Wales is the main wool-producing state. Australia is the world's largest exporter of wool. Most of their clip is destined for China (~65%), but the best quality fiber goes directly to the (high) fashion industry in Italy.

While only 10% of New Zealand's sheep are Merino, they are the third largest exporter of Merino wool (South Africa is second). New Zealand's Merinos are raised in the High Country, the elevated pastoral lands of the Southern Alps. The Icebreaker® brand is based in New Zealand's High Country.

So, what's so special about Merinos and their wool? Where do I begin? Merino sheep originated in Spain during the Middle Ages. Spain's wealth was based on fine-wooled Merino sheep. Merinos were a protected resource, so valuable that it was a capital offense to export a single sheep. It wasn't until Napoleon invaded Spain that the world gained widespread access to these incredible sheep.

The first Merinos were imported to the US (to Vermont) in 1802. By 1837, Vermont's flock had grown to more than a million head. The flock peaked at 1.68 million in 1840, but collapsed soon thereafter, due to the boom-bust cycle of the wool market. A second wave of "Merino mania" struck in 1860 during the Civil War, as wool was needed for military uniforms. But, by this time, Vermont faced tough competition from sheep farms further west. Today, Vermont has fewer than 20,000 sheep.

As a sheep, Merinos are medium in size: ewes, 125-180 lbs.; rams, 175-235 lbs. Merino rams have long spiral horns that curve around their faces. Horn growth is suppressed in ewes and wethers. Down Under, Poll Merinos are gaining in popularity. There is also a trend to make Merinos more of a dual-purpose (wool + meat) animal. The breed is known for its longevity and strong flocking instinct. Merinos breed out-of-season, and there is speculation that the

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Merino: King of Sheep (continued from page 1)

a seasonality of Dorset sheep is derived from the Merino, as Merinos inhabited Southern England at the same time the Dorset evolved.

Merino wool is the softness, finest in the world. Fine means the wool fibers have a small diameter, usually less than 22 microns. Superfine and ultrafine Merino wool is even finer, less than 15 microns. The finer the wool is the less likely it is to itch. Clothing made from Merino wool can be worn close to the skin, though even Merino wool varies in its "comfort factor" (a measurable trait). It is even possible to buy Merino underwear!

While Merino sheep are still raised in the US, the Rambouillet is more popular. In many respects, it is the American version of the Merino, having been derived entirely from the Spanish Merino, via exports to France and Germany. Compared to the Merino, the Rambouillet is a larger, more dual-purpose sheep. Rambouillet wool is similar to Merino wool.

The Rambouillet is still the most important commercial breed of sheep in the US, especially Texas and the Intermountain West. The Rambouillet and its crosses (Columbia, Targhee, Polypay) are suitable for many different production environments. Sometimes, Merinos are crossed with Rambouillets to improve wool quality.

No Buck Test In 2017

The Western Maryland Pasture-Based Meat Goat Performance Test will not be held in 2017. The test was held for 11 years at the University of Maryland's Western Maryland Research & Education Center in Keedysville, Maryland.

The test was initiated in 2006 to evaluate the post-weaning performance of meat goat bucklings consuming a pasture-based diet with natural exposure to internal parasites, primarily the barber pole worm (*Haemonchus contortus*). The primary goal of the test was to identify bucks that were resistant and resilient to internal parasites, while still maintaining above average growth (ADG).

During the 11-year period of the test, 736 bucks of various breeds (but mostly Kiko) were tested. The bucks were consigned by 100 breeders from 20 states: DE, GA, IL, IN, KS, KY, MS, MD, MO, NC, NJ, OH, OK, PA, SC, TX, TN, VA, VT, and WV. The past three years of the test generated the most interest, with 337 bucks being consigned. Bi-weekly progress reports and other information was shared via a blog (http://mdgoattest.blogspot.com).

In 2014, test consigners started the Bluegrass Performance Invitational (Premier Buck & Doe Sale). The original intent of the sale was to limit doe consignments to participants in the Maryland test and to limit buck offerings to top-performing bucks from the Maryland test. This year's sale will be held September 1-2 at Lakeview Park in Frankfort, Kentucky.

If you're looking to purchase breeding stock from a performance tested herd, be sure to contact a breeder who has participated in the Maryland test. For a list of consigners go to http://mdgoattest.blogspot.com.

No Maryland Wool Pool In 2017

Emily Chamelin, manager of the Maryland Wool Pool for the past several years, has stepped down from her role. There will be no Maryland Wool Pool in 2017.

The Maryland Wool Pool has existed for 59 years. It has had many different managers. The pool has always provided a market outlet for wool growers of various sizes. It was especially beneficial to small producers, who could bring any number of fleeces to the pool.

The Maryland Wool Pool was always innovative. It instituted wool classing and baling before other pools. It hosted several ASI wool classing schools. There are still wool pools in neighboring states: Virginia, West Virginia, and Pennsylvania. There are also buyers of wool.

Some wool producers may want to consider having their wool processed into yarn, roving, or batts. Maryland has two fiber processing mills: the Mill at Meadowlands in Marriottsville (http://www.themillmeadowlands.com/) and Singleton Fiber Processing in Walkersville (http://www.singletonfiber.com/).

Junior Sheep & Goat Skillathon

The deadline to register for the 2017 Junior Sheep & Goat Skillathon to be held May 7 at the Maryland Sheep & Wool Festival is April 28. Teams and individuals should register online at https://form.jotform.com/70254820764961.

As Susan (Schoenian) is on sabbatical, this year's skillathon is being run by Chris Anderson. Chris is the Youth Animal Science Specialist for University of Maryland Extension. You can reach Chris at the Maryland 4-H Center, 8020 Greenmead Drive, College Park, MD 20740, phone: (301) 314-7187, fax: (301) 314-7146 or email: canders2@umd.edu.
The skillathon is held in the dining hall at the Howard County Fairgrounds in West Friendship, Maryland. Registration starts at 8 a.m. The contest runs from 9 a.m. to 12 noon. Lunch (pizza) is provided. Donations are appreciated. Awards are given after lunch.

The Maryland Sheep Breeders Association provides premiums and ribbons for the top 10 individuals in each age category. Youth compete according to their age as of January 1, 2017: junior, 8-10; intermediate, 11-13; and senior, 14-18. Members of the top 3 teams in each age category receive festival t-shirts. Team scores are the combined scores of 3 individuals. If 4 individuals comprise a team, the top 3 scores are tallied.

Hold The Date - Saturday, December 9, 2017
Delmarva Small Ruminant Conference

The Delmarva Small Ruminant Conference will be held Saturday December 9, 2017, at Delaware State University in Dover, Delaware. The all-day conference will focus 100 percent on gastro-intestinal parasites (worms). The program will include general and concurrent sessions and a separate program for youth, ages 8-18.

Speakers for the conference will include members of the American Consortium for Small Ruminant Parasite Control: Dr. Kwame Matthews, Delaware State University; Dr. Nelson Escobar, University of Maryland Eastern Shore; Dr. Dahlia O'Brien, Virginia State University; Susan Schoenian, University of Maryland Extension; and Dr. Niki Whitley, Fort Valley State University.

The American Consortium for Small Ruminant Parasite Control (ACSRPC) is a group of veterinarians, scientists and extension specialists devoted to developing novel methods for sustainable control of gastro-intestinal nematodes in small ruminants and educating stakeholders in the small ruminant industry on the most up-to-date methods and recommendations for control of gastrointestinal nematodes.

Gastro-intestinal parasites are the primary health problem affecting small ruminants in warm, moist climates. The barber pole worm (*Haemonchus contortus*) is the most common and pathogenic species. Control of parasites has become increasingly difficult due to the growing resistance of the worms to dewormers.

Feedlotting GOATS

Source: WormBoss (Australia)

Dairy goat owners have few options for treating goats for worms and many drench labels state they should not be used in goats whose milk is used for human consumption. Small backyard goat keepers often can't rotationally graze their goats with other livestock and/or high stocking levels will create problems with worms from heavily contaminated paddocks.

Consider zero-grazing or feedlotting your goats as an alternative that will eliminate the need for ongoing worm control measures. The following information refers to feedlotting with zero grazing, not to feedlotting situations where the goats have occasional access to pasture.

If goats already receive a lot of supplementary feed, e.g. hay and grain daily and/or they are milking goats that are kept to produce milk for sale, then well-designed goat yards and feeders can solve goat worm problems. There must be absolutely no grazing or no grass in the yards and the feeders must be designed so that no manure contamination of the feed is possible. Feeders must also prevent goats' feet from contaminating feed as dirty hooves can transfer worm eggs or larvae. Fence-line feeders are ideal.

Quarantine drench

When bringing goats into a feedlot, where possible, give them a quarantine drench to remove existing worms. If this is not possible, such as with dairy goats producing milk for human consumption, roundworms in the goats will eventually die over many months. However, liver fluke can live for some years.

If worms remain in the goats in a feedlot, worm eggs will be produced. These eggs may successfully hatch in the feedlot area if there is sufficient warmth and moisture (just as if they were in the paddock), but without pasture plants for the larvae to wriggle onto, very few larvae will be ingested by the goats. Even without the use of drenches, the number of worms will decline until they are negligible or disappear completely.

Worm Egg Count testing

It is recommended that after goats are inducted into the feedlot with a quarantine drench, that you conduct a Worm Test 10–14 days later. If worm eggs are still present at 10–14 days, the drench was not fully effective. However, provided the egg count is well below drenching thresholds (see the Drench Decision Guide) and the animals are to stay in a zero-grazing situation, a further drench should not be needed. If the count at 10–14 days was positive, continue testing at 6 weekly intervals (for a few months generally) until counts are below 50 epg.

If a drench upon entry was not carried out, do a worm egg count now and use the Drench Decision Guide (under test & tools at wormboss.com.au) to determine whether drenching is needed. Continue to test at 6 weekly intervals to ensure the worm egg counts reduce to (or close to) zero. Once counts are close to zero, it may be wise to monitor periodically each 3–6 months (or earlier if signs indicate worms) to ensure that worms are not being introduced.

Other considerations

Dairy goats that are drenched must have their milk disposed of in a manner that does not allow for human consumption for the required withholding times stipulated by the label or veterinarian's prescription. This is a significant economic cost if milk is being sold that could help fund the additional feed costs to compensate for the lost grazing.

Feedlotting can also protect against dog attacks and paralysis ticks; common problems in goats kept in peri-urban areas. Feedlotting is also a recognized management technique to prevent the spread of Johne's disease.

Feedlots can be small and low cost as long as feeders are well de-

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FEED LOTTING GOATS (Continued from page 4)

signed. For feedlots to work there must be no grass at all. Grass should be killed with chemicals and then gravel, pine-bark or similar materials can be added to muddy areas. Special attention should be paid to areas around water troughs, as small amounts of grass can grow around them and can become heavily contaminated with worm larvae and can also present an increased risk of coccidiosis.

Play equipment should be provided in the feedlot area to encourage exercise. Feedlots should be cleaned out regularly and the old hay and manure composted in an area where drainage does not go back into the feedlot or onto browse or crops that will be cut for goats. Previous pasture areas that will no longer be needed can be planted to fodder crops or permanent browse plants such as leucaena, mulberry, hibiscus, tree lucerne or bamboo for cutting for backyard goats.

Any feed to be used in the feedlot should be free of worm larvae. Green chop and cut pasture that has been grazed by sheep or goats in the 6 months before it was cut is likely to be contaminated by worm larvae. Hay and chaff is generally suitable. If browse or fodder crop is cut from above half a meter (~ 39 inches) height there should be no worm larvae as few larvae can wriggle up to above 20 cm (~8 inches).

Calculating Adjusted Weaning Weights

Sheep and meat goat producers can improve their flocks and herds by selecting superior replacement females and by culling inferior, low-producing females. In order to do this, records are needed, and the records need to be "manipulated" so that you are selecting genetically superior animals, not just the ones that perform well because of environmental advantages.

Record keeping starts with individual animal identification, usually an ear tag. Increasingly, microchips are being used to identify livestock. Lambing and kidding data needs to be recorded: sire, dam, date of birth, type of birth and rearing, etc. Lambs/kids should be weighed at birth and weaning. Post-weaning weights are also recommended.

Contemporary Groups

Once you have the data, it's important to use it properly. First of all, you need to compare animals in the same contemporary group. A contemporary group is a group of animals, of the same breed or type, that have similar birth dates and have been fed and managed the same. For example, kids born in January would not be in the same contemporary group as kids born in April. Creep-fed lambs would not be in the same contemporary group as lambs that are not creep fed.

Environmental Effects

Once you've identified contemporary groups, the next step is to account for environmental effects. For example, triplet offspring aren't expected to grow as fast as singles. To make proper comparisons, weights need to be adjusted for type of birth and rearing (single vs. twin vs. triplet). Offspring born to yearlings usually do not grow as fast as those born to mature females. So to compare them properly, weights need to be adjusted for age of dam. There are also adjustment factors for the sex of the offspring.

For sheep, a single-born ewe lamb born to a 3 to 6-year-old ewe is the standard to which other lambs are compared. In meat goats, a single-born buck kid out of a 3+ year old doe is the standard for comparison. Lambs from ewes over the age of 6 receive an adjustment, whereas kids out of older does do not.

Ideally, lambs and kids should be weighed within 24 hours of birth. If birth weights are not recorded, it is possible to use "standard" birth weights for calculations. There are adjustment factors for birth weights for meat goats, but not sheep.

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More Information On Sheep & Goats Can Be Accessed At:

http://www.sheepandgoat.com/	http://www.acsrpc.org or wormx.info	http://mdgoattest.blogspot.com
http://www.sheep101.info/	https://www.facebook.com/MDSmall	http://issuu.com/mdsheepgoat
http://mdsheepgoat.blogspot.com	https://www.youtube.com/c/MarylandExtensionSmallRuminantProgram	

CALCULATING Adjusted Weaning Weights (continued from page 5)

Weaning

Lambs and kids are weaned at different ages. Weaning age depends upon the production system. However, weaning weights are usually determined at 60, 90, or 120 days of age. For early-born, creep-fed lambs, 60 day weaning weights are common. For pasture-raised or range lambs, 120-day weaning weights are common. 90-day weaning weights are most common for meat goats.

The primary purpose of a weaning weight is to get a measure of the dam's producing ability, as there is a strong maternal influence on weaning weights. Post-weaning weights are usually determined 60 days after weaning. 120 or 150-day weights are most common. Post -weaning weights are more indicative of the sire's influence on growth.

Calculating Adjusted Weaning Weights

Step 1: correcting for age

Lambs/kids are usually weighed on the same day and not necessarily when they are exactly 60, 90, or 120 days of age. Consequently, the first calculation you need to do is correct the weights to a common age (usually 60, 90, or 120 days). The result is called a corrected weaning weight. To calculate a corrected weaning weight, the first step is to calculate the lamb or kids pre-weaning average daily gain (ADG). To do this, birth weight is subtracted from weaning weight; then, divided by the age in days.

Sample data

Date of birth: January 1
Birth weight: 10 lbs.
Day of weighing: March 10
Actual weaning weight: 70 lbs.

ADG calculation

ADG = (70 lbs. - 10 lbs.) ÷ (March 10-January 1)
ADG = 60 lbs. ÷ 69 days
ADG = 0.87 lbs. per day

To determine the lamb's corrected 60-day weighing weight, we multiply ADG by 60 and add the birth weight back in.

Corrected weaning weight calculation

Corrected 60-day weaning weight =
(0.87 x 60 days) + 10.0 lbs.
Corrected 60-day weaning weight = 52.2 lbs. + 10 lbs.
Corrected 60-day weaning weight = 62.2 lbs.

Adjusting for environmental factors

The next step is to adjust the weaning weight for fixed environmental factors including sex of offspring, type of birth and rearing, and age of dam. For sheep, the adjustment factors are combined into one table (table 1). For goats, there are separate adjustment factors for sex, type of birth and rearing, and age of dam (table 2). The adjustment factors are generic and can be used for any breed. When/if possible, it is better to use breed-specific adjustment factors. The National Sheep Improvement Program (NSIP; via EBVs) has enabled the developed of some breed-specific adjustment factors. For example, different adjustment factors are available for Katahdins.

To calculate an adjusted weaning weight, all you do is multiple the (age) corrected weight by the adjustment factor. In the example above, let's assume the lamb is a wether, born and raised as a twin, out of a 2-year-old dam. Looking at table below, we can see that this lamb would have an adjustment factor of 1.23.

Table 1

Sex	Age of dam	Type of birth and rearing						
		1, 1	1, 2	2, 1	2, 2	3+, 1	3+, 2	3+, 3
Ewe	1	1.14	1.30	1.27	1.37	1.36	1.46	1.56
	2	1.06	1.21	1.18	1.27	1.26	1.36	1.45
	3-6	1.00	1.14	1.11	1.20	1.19	1.28	1.37
	7 +	1.04	1.19	1.15	1.25	1.24	1.33	1.42
Ram	1	1.04	1.18	1.15	1.24	1.23	1.33	1.42
	2	0.96	1.10	1.07	1.16	1.15	1.23	1.32
	3-6	0.91	1.04	1.01	1.09	1.08	1.16	1.25
	7 +	0.95	1.08	1.05	1.14	1.13	1.21	1.30
Wether	1	1.11	1.26	1.23	1.33	1.32	1.42	1.51
	2	1.03	1.21	1.14	1.23	1.22	1.32	1.41
	3-6	0.97	1.11	1.08	1.16	1.15	1.24	1.33
	7 +	1.01	1.15	1.12	1.21	1.20	1.29	1.38

Table 2

Effect	Level	Adjustment Factor
Sex	Buck	1.00
	Doe	1.11
	Wether	1.08
Type of birth and rearing	1-1	1.00
	1-2	1.14
	2-1	1.04
	2.2	1.18
	3-1	1.08
	3-2	1.23
	3-3	1.27
Age of dam (years)	1	1.10
	2	1.09
	3+	1.00

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CALCULATING Adjusted Weaning Weights (continued from page 6)

Adjusted 60-day weaning weight calculation
62.2 lbs. x 1.23 = 76.5 lbs.

Producers can calculate adjusted weaning weights by hand or by programming the calculations into a spreadsheet. Two universities have developed Excel spreadsheets (free) that will automatically calculate adjusted weaning weights for sheep and meat goat producers.

Oklahoma State University's meat goat record keeping program calculates adjusted 90-day weaning weights based on the data you input. Mississippi State University has developed spreadsheets for lambing records. There is a spreadsheet for hair breeds and one for other breeds. The only difference between the two workbooks is the adjustment factors. In addition to calculating adjusting weaning weights, the spreadsheets also calculate performance ratios and indexes and allow sorting of data.

Oklahoma State University Meat goats:
http://agecon.okstate.edu/meatgoat/record.asp

Mississippi State University Sheep:
http://www.oces.okstate.edu/livestock/Lamb_workbook_2007.xlsm

Mississippi State University Hair sheep:
http://www.oces.okstate.edu/livestock/HairSheep_workbook_2007.xlsm

It is very important to correct weaning weights to a common age and adjust them for the different environmental effects. The table below shows how age, sex, type of birth and rearing, and age of dam would affect the adjusted weaning weight of a ewe lamb that weighs 60 lbs. at the time of weaning.

Litter weight (pounds of lamb or kid weaned) is a composite trait and probably the most important trait in sheep and meat goat production. Ewes/does that wean the most pounds of lamb/kid should be retained for breeding and will make the most money. Similar calculations should be done in order to compare ewes/does for this trait. The weights of all lambs should be combined and adjusted for sex and age of dam.

Adjusted weaning weight	Age at weighing (days)	Sex of lamb	Type of birth/ rearing	Age of dam
60 lbs.	**60**	**Ewe**	**1-1**	**3-6**
70 lbs.	50	Ewe	1-1	3-6
53 lbs.	70	Ewe	1-1	3-6
55 lbs.	60	Ram	1-1	3-6
72 lbs.	60	Ewe	2-2	3-6
82 lbs.	60	Ewe	3-3	3-6
82 lbs.	60	Ewe	2-2	1
87 lbs.	60	Ewe	3-3	2

Need help weighing your lambs or kids?

Lack a scale? Want help weighing your sheep and goats ? Contact Susan Schoenian at sschoen@umd.edu. A scale is available for use on "nearby" farms.

Mastitus Is Udder Madness

Mastitis is the term for a bacterial infection in the udder. It is a common problem in sheep and goats, especially those that are intensively or semi-intensively managed. Heavy milking females and those nursing multiple offspring are most commonly affected.

Two bacterial species (*Staphylococci*) are responsible for causing most of the cases of mastitis in sheep and goats. Soremouth can be another cause, as nursing lambs/kids transfer infection to the teats. Poor milking technique and hygiene can be the reason for mastitis in dairy females.

OPP (ovine progressive pneumonia) and CAE (caprine arthritic encephalitis) are viral diseases that can cause a similar disease condition. In the case of OPP and CAE, the udder is usually firm and shapely, but it produces little to no milk. If both halves of the udder are affected, it is often OPP or CAE. If only one half is affected, it is usually mastitis.

There are two forms of mastitis: clinical and sub-clinical. Sub-clinical may be difficult to identify. However, it causes significant economic loss, as affected females produce less milk, sometimes not enough for all their offspring to do well. Elevated somatic cell counts (SCC) affect marketability of milk.

In clinical mastitis, the infection progresses to a point that symptoms are noticeable and usually require attention. Early symptoms might include limping and a reluctance to allow lambs/kids to nurse. Eventually, affected females will become feverish and go off feed. There may be physical changes to the milk and udder.

While most producers make a diagnosis based on observation of clinical signs, mastitis, especially subclinical, can be diagnosed with a micro-biologic culture of the milk. A milk culture can also identify the causative organism and appropriate course of treatment.

Spoiled Udder

Udder Problem

Providing good nutrition and a clean environment, especially during birthing and lactation, are the keys to preventing mastitis. Rations should be balanced to ensure that the nutrient requirements of females are being met, but not exceeded. Both underfeeding and overfeeding have been implicated as causes of mastitis. Proper management at weaning (drying off) is also important. Good udder conformation will help to reduce the incidence of mastitis. Females with pendulous, low hanging udders should be culled.

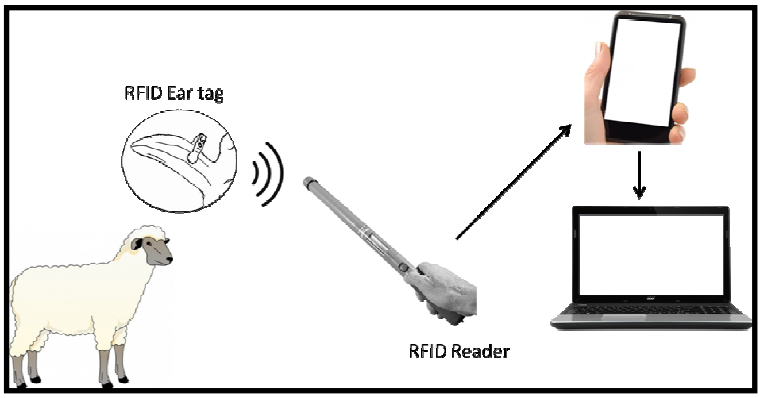
Mastitis is usually treated with antibiotics and anti-inflammatory drugs. The sooner treatment is initiated, the more likely it will be successful. No treatment protocols are FDA-approved for treating mastitis in sheep and goats; therefore, producers need to work with their veterinarians on developing and implementing treatment plans.

While a ewe or doe is being treated for mastitis, it is often necessary to bottle or tube-feed her offspring. In some cases, the lambs/kids will have to be removed for artificial rearing. Females which suffer permanent damage to their udders should not be kept for breeding.

Females that only produce milk on one side of their udder should not be retained. Females with lumpy udders should be culled. Mastitis is often a confounding problem that worsens each year. When culling a female that you have treated for mastitis, be sure the drugs have cleared her system before taking her to market or slaughtering her for meat.

Electronic Identification (EID) of Sheep and Goats

There are many reasons to identify sheep and goats: record keeping, registration, proof of ownership, and disease traceability. There are many forms of identification: ear tags (many kinds), ear notches, neck chains, brands, and tattoos. RFID is becoming an increasingly popular method of identifying livestock.



What is RFID?
Radio-Frequency Identification (RFID) is the use of radio waves to read and capture information stored on a tag attached to an object. A tag can be read from up to several feet away and does not have to be within line-of-sight of the reader to be tracked. RFID technology has been available for more than 50 years. Its roots can be traced back to WWII when the Germans were using it to identify their planes.

How does it work?
An electronic animal ID system includes four components: 1) a transponder (usually an ear tag); 2) a transreceiver (or reader); 3) a data accumulator; and 4) software (a data management system). Optional components include electronic scales and handling systems.

The transponder comes in different forms. It is usually an ear tag: a one-piece tag or two-piece button or flag-shaped tag. The tags are designed to last for the lifetime of the animal. The part with the electronics is put on the inside of the ear. The transponder can also be a collared tag, microchip, or (rumen) bolus. Microchips can be implanted under the skin of the animal, usually the neck area of sheep and goats. It is common to microchip pets. Some goat registries require microchipping. Rumen boluses are another option. They have a higher retention rate than tags, but must be retrieved at the time of slaughter.

There are many manufacturers of RFID for livestock. Several meet the requirements for official scrapie ID. Shearwell seems to have the most cost-effective tags for sheep, with a low infection rate and a high retention rate.

The microchip contained in the tag, implant, or bolus contains a 12-digit individual animal identification number, along with a 3-digit country code. The 3-digit code for the US is 840. Matched pair tags are a set of tags consisting of an electronic tag and a visual tag. The visual tag can be used for breed registration and everyday use; it will always be paired with the 15-digit number in the electronic tag. You can also use the numbers imprinted on the electronic tag for visual ID.

Most RFID tags (for livestock) are passive, meaning they have no battery or power source of their own. The tags are activated when they pass within the transmission field of a reader (transreceiver). The tag then absorbs power from the reader and returns its unique 15-digit number back to the reader.

There are two basic kinds of readers: portable handheld and stationary panel devices. The handheld readers can be powered by a rechargeable battery or plugged into a wall outlet. Handheld readers are usually the most economical for producers. Stationary readers are designed for packing plants, feedlots, and marketing facilities. They can also be installed in raceways and scale boxes.

The read range for a handheld reader is about 6 inches. This allows a tag to be read without the animal being handled or the tag being cleaned. It eliminates the possibility of human error. It is quicker. Stationary (panel) readers have a longer read range, up to a meter.

The data accumulator can be a scale head, smart phone, tablet, or computer. The data accumulator contains software that allows communication with the reader. Some readers may contain software or a portion of the software for communications between the reader and data accumulator. Shearwell's Stock Recorder has a built-in RFID tag reader. You can use it to record breeding, births, weights, treatments, and movements. TGM Software Solutions has a similar device for reading RFID ear tags and recording data. Numerous cell phone apps will accept RFID numbers.

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Featured APP and Web Resources

Featured App: Livestocked

From their web site:

Livestocked is a better way to manage your livestock business online. With a business first approach to livestock record keeping and farm management, we understand you would prefer be in the paddock and not in front of the computer. Our intuitive mobile interfaces help you manage your herd, semen & embryo inventory, sales and financials from your desk or out in the paddock! Enjoy multi-species and multi-breed herd management through our mixed enterprise solution. Manage your cattle, sheep, goats, pigs, alpacas & llamas through one easy to use app.

Livestocked is available in multiple formats: iOS (iTunes), Android (Google Play), HTML (web), and Windows (Microsoft).

Livestocked's Basic Plan (free) includes animal registry, event recording, genetic inventory, and financial record keeping. The Essential Plan ($49/year) adds animal photos, analytics, reporting, and multi-users. The Premium Plan ($119/year) includes a hosted web site.

Featured Web Resources

https://www.youtube.com/user/SheepUSA1

Visit the YouTube Channel of the American Sheep Industry Association (ASI). ASI is a federation of 45 state sheep associations representing the interests of more than 88,000 farm and ranch families nationwide with a common goal to promote the well-being and profitability of the U.S. sheep industry.

http://yqca.org/

Youth for the Quality Care of Animals (YQCA) is a national multi-species quality assurance program for youth ages 8 to 21 with a focus on three core pillars: food safety, animal well-being, and character development. YQCA certification is being accepted by many livestock shows and fairs that require youth quality assurance certification. View the list here, but always check the entry requirements of each show for complete details.

http://sanangelo.tamu.edu/files/2011/11/AngoraGoatsAShearDelight_1.pdf

Angora Goats: Shear Delight is an educational package for those interested in raising Angora goats. The 12-page publication is aimed towards new landowners interested in keeping a livestock enterprise, and persons who have inherited land and want information to re-enter the business.

https://www.facebook.com/FVSUAnimalScienceExtension

Fort Valley State University's Animal Science Extension Facebook Page is maintained by Dr. Niki Whitley, Animal Science Extension Specialist. Dr. Whitley works primarily with small ruminant production. She held similar positions at the University of Maryland Eastern Shore and North Carolina A&T State University before returning to her home state of Georgia.

https://www.facebook.com/DSUSmallRuminantProgram

Delaware State University's new Facebook page for small ruminants is maintained by Dr. Kwame Matthews, the new Small Ruminant Specialist. Dr. Matthews has a split appointment between research, teaching, and extension. He received part of his education on Delmarva, before going to Tuskegee University (in Alabama) to get his doctorate.

Electronic Identification (EID) of Sheep and Goats (continued from page 7)

As part of their national animal identification requirements many countries already require livestock to be identified with RFID. The UK and Canada require RFID in sheep and goats. Victoria was the first state in Australia to require RFID (in sheep and goats). In Maryland, all cattle and swine exhibited in 2017 will be required to have RFID. While mandatory RFID is often met with resistance, many producers choose RFID for the many benefits it offers.

Pros and cons of electronic ID

Pros	Cons
Automatically read tags Quicker to read Eliminates human error Integrates with software and apps Also provides visual ID Is approved for official scrapie ID Choices: tags, underskin implants, rumen bolus Is the future	Tags are more expensive. You need a tag reader.

Upcoming Events

May 6-7
Maryland Sheep & Wool Festival
Howard County Fairgrounds, West Friendship, MD
Info: http://sheepandwool.org or office@sheepandwool.org

May 7
Junior Sheep & Wool Skillathon
@ Maryland Sheep & Wool Festival
Howard County Fairgrounds, West Friendship, MD
Contact: Christopher Anderson at (301) 314-7187 or canders2@umd.edu

June 2-3
West Virginia Sheep & Goat Show & Sale
Tri-County Fairgrounds, Petersburg, WV
Info: http://www.sheepwv.org/WVPSBA.html

July 27-29
Katahdin Hair Sheep International Expo & Sale
Hancock County Fairgrounds, Greenfield, IN
Info: www.katahdins.org

August 5
Pennsylvania Performance Test Ram & Buck Sale
PA Livestock Evaluation Center, PA Furnace, PA
Info: http://www.livestockevaluationcenter.com/

August 26
Virginia Performance Tested Ram Lamb Sale
Shenandoah Valley Research & Education Center, Steele's Tavern, VA
Info: http://www.apsc.vt.edu/extension/sheep/va-ram-program/

September 1-2
Bluegrass Performance Invitational
Premier Buck & Doe Sale
Lakeview Park, Frankfurt, KY
Info: http://www.bluegrassperformanceinvitational.com

September 22
Southwest AREC Ram Test Sale & Field Day
Southwest Agricultural Research & Education Center, Glade Spring, VA
Info: http://www.apsc.vt.edu/extension/sheep/swarec-ram-program/

Festival To Charge Admission For The First Time

For the first time in 43 years, there will be an admission fee to attend the Maryland Sheep & Wool Festival. The admission fee is $5 per person and applies to adults only. Everyone under 18 will be admitted free. Parking remains free. The Festival is always held the first full weekend of May at the Howard County Fairgrounds in West Friendship, Maryland. There is a myriad of events for sheep and fiber enthusiasts.

Festival tickets may be purchased in advance at https://sheepandwool.eventbrite.com.

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