

Wild & Woolly

Maryland's Sheep & Goat Producer Newsletter



Volume XV
Issue III
Summer 2016

In This Issue

72 Youth Compete	2
In Jr. Sheep & Goat Skillathon	
Increasing Lamb Crop	3
Twilight Tour & Tasting	4
In TX Hair Sheep Sell at a Discount to Woolled Lambs	5
Goat Nutrition Software Now Available	5
Disease Focus: Polio	6
What Do Worm Counts Tell Us?	7
Featured Apps	8
Understanding the Sheep & Goat Markets	9
Largest Goat Test Ever	10
Goat Performance & Carcass Contest	10
Upcoming Events	11

Special thanks to the Jacob Sheep Breeders Association for granting permission to use images from their web site (www.jsba.org)

Jacobs: A Rare Breed with Distinction

Jacobs are a very old breed of sheep. There are many stories as to their origin, including stories that claim that they are direct descendants to the spotted sheep mentioned in the Bible. Jacobs used to be called Piebald heep. Jacob comes from the Old Testament: Jacob and his spotted sheep. Another story has them washed ashore from shipwrecks during the attempted invasion of the Spanish Armada during the reign of Elizabeth I. Their exact origins remain unknown.



Jacobs are a British breed. All the animals in the US are the result of a few importations. They are a relatively rare breed of sheep in the US. The Livestock Conservancy lists their status as "threatened."

The most striking characteristics of Jacob sheep are their horns and spotted fleece. They are a multi-horned or "polycerate" breed. Most animals have two or four horns, though six horns also occur. Both sexes are horned, and the rams can have horns of impressive size and shape. Ewe horns are usually smaller and more delicate than ram horns.



The Jacob fleece is white with black spots. Preference is for a sheep that is 60% white and 40% black. The black wool, which grows out of black skin, is shorter than the white wool. The wool is of medium grade. It is soft and open and light in grease. Typical fleeces weigh only 3 to 4 pounds.

The Jacob is considered to be an "unimproved" breed, meaning there has been little breed improvement. Most Jacob owners have focused on improving the fleece of their animals. Jacob sheep have a primitive body type. They are fine boned. Ewes are slight of build, weighing only 100 to 120 pounds. Rams weigh from 120 to 180 lbs.

According to the breed registries, Jacob sheep excel in hardiness, mothering ability, and lambing ease. They produce a lean carcass with little body fat. Little has been done to change them to meet the needs of the commercial market.

Jacobs are popular among small flock owners, who can sell breeding stock, freezer lambs, tanned pelts, hand spinners' fleeces, and horns for walking ticks or buttons from their handsome sheep.

(Continued on page 5)

To learn more about Jacob sheep, go to :
<http://www.jsba.org/> or <http://www.jacobsheepsociety.co.uk/>.

72 Youth Compete In JR. Sheep & Goat Skillathon

Seventy-two (72) youth from five states competed in the Junior Sheep & Goat Skillathon, held May 8 at the Maryland Sheep & Wool Festival. Three young ladies from Maryland took home top honors. Taryn Schwartz from Howard County was the top junior. The top intermediate was Lizzy Miller from Montgomery County. The top senior was also from Montgomery County: Lauren Dallas.

Mary Rose from Virginia was the second place junior. Edden Molder, also from Virginia, placed third. Jordan Kelly from Virginia was the second place intermediate. Anna Clemmer from Howard County placed third. In the senior division, Rebecca Herriotts placed second. Jennifer Brigante placed third. Both are from Howard County.

The first place junior team was from Virginia. Team members included Mary Rose, Eddyn Molden, Kolten Vincent, and Kelly Jackson. The second place team was the Queen Anne's County team composed of Aubrey Clark and Madison and Hannah Branham.

The first place intermediate team was from Virginia. Team members included Jordan Kelly, Hayley Seabright, Berkeley Frank, and Quinna Molden. Frederick County had the second place intermediate team. Team members included Kallam Latham, Kariana and Kiandra Strickhouser, and Jessica Martin. The third place intermediate team was from the Lower Shore (Maryland). Team members included Cole Olsen, Jordan Webster, and Cassie Knight.

The top senior team was from Montgomery County. Team members included Trevor Magaha, Sara Lechlinder, and Ashley Hobbs. The second place senior team was from Virginia. Team members included Cyle Dehaven, Bobby Slater, Courtney Walls, and Mikayla St. Clair. The third place senior team was from Anne Arundel County. Team members included Jacqueline Bowen, Kelsey Winters, Josiah Tice, and Monica Ogilvie.



(From left to right, Lauren Dallas top senior, Taryn Schwartz top junior and Lizzy Miller top intermediate.)

The Maryland Sheep Breeders Association provided ribbons and premiums for the top ten individuals in each age division and t-shirts for the members of the top three teams in each age division.

Special thanks to everyone who helped with this year's skillathon.

The Junior Sheep & Goat Skillathon is held in conjunction with the Maryland Sheep & Wool Festival. The Festival is always held the first full weekend of May at the Howard County Fairgrounds in West Friendship. There is no entrance fee and parking is free.

Increasing the Lamb Crop

The American Sheep Industry Roadmap Project established productivity improvement as one of four goals which must be accomplished in order to strengthen the short- and long-term competitive advantage of the American Lamb Industry. Increasing the reproductive efficiency of US sheep flocks is considered a priority.

While percent lamb crop (number of lambs produced per ewe exposed) varies by farm and state, the national average is only 1.1, and it has remained relatively unchanged for many years. In fact, it is less than 1 for the group of states of which Maryland is included for the purpose of agricultural statistics.

According to the Roadmap Project, the current US lamb crop will need to increase to 1.5 to meet the anticipated demand for lamb in 2020. Marketing 1.5 lambs per ewe will also significantly improve profitability. Failure to increase the size of the national lamb crop will result in more imported lamb being consumed. The US goat industry faces a similar challenge.

The US Sheep Industry is in the process of developing a set of twelve Lamb Crop “Productivity Best Management Practices” recommendations (and fact sheets), which focus on increasing the US lamb crop. The twelve best management practices include:

1) Optimal nutrition; 2) Breed ewe lambs at 7 to 9 months of age; 3) Select prolific genetics; 4) Use crossbreeding; 5) Cull underperforming ewes; 6) Reduce lamb loss; 7) Test for pregnancy status; 8) Disease prevention and treatment; 9) Match reproduction to management; 10) Test rams; 11) Manage for seasonal changes in reproduction; and 12) Accelerated lambing cycles.

Because production practices vary across the US and among producers in the same production system, not all of these “best practices” will be applicable to all operations. But it is suggested that all sheep producers identify at least three best management practices that they can implement on their farms. While the fact sheets are being written for sheep production, the information is mostly the same for meat goats.

Before determining which best management practices to implement, producers first need to put numbers to their own operations. If you don’t measure it, you can’t manage it. Key indicators of reproductive efficiency include percent dry ewes, percent

12 Lamb Crop Best Management Practices

- 1) Optimal nutrition
- 2) Breed ewe lambs
- 3) Select for prolific genetics
- 4) Use crossbreeding
- 5) Cull underperforming ewes
- 6) Reduce lamb loss
- 7) Test for pregnancy status
- 8) Disease prevention and treatment
- 9) Match reproduction to management
- 10) Test rams
- 11) Manage for seasonal changes in reproduction
- 12) Accelerated lambing cycles

lambs born or docked, lamb losses, lambs weaned, and ewe lambs lambing.

The next step is to establish goals for each of these indicators. The goals may differ among production systems, e.g. high input vs. low input. Then, determine which key indicator(s) to improve; you can’t necessarily improve all of them at once. Finally, refer to the Lamb Crop Best Management Practices and determine which practices will allow you to reach your flock goals and thereby increase your profitability.

The Lamb Crop Best Management Practices Fact Sheets will be available at the Lamb Resource Center at lambresourcecenter.com. The United States Lamb Resource Center was created by the American Lamb Board using check-off dollars.

On August 30, there will be a Let’s Grow webinar about the Best Management Practices to Increase Your Lamb Crop. The presenter will be Dr. Reid Reden from Texas A&M University. Let’s Grow Webinars are hosted by Dr. Jay Parsons from Optimal Ag.

Key indicator	Low input	High input	My flock - current	My flock - goal
Dry ewes	<10%	<5%	<5%	<5%
Lambs born	150%	200%	180%	200%
Lamb losses	<15%	<10%	<10%	<5%
Lambs weaned	125%	175%	160%	180%
Ewe lambs lambing	50%	75%	75%	100%

Twilight Tour & Tasting: Everything Sheep & Goat



A Twilight Tour & Tasting was held July 8 at the Washington County Agricultural Education Center in Boonsboro, Maryland. The purpose of the event was to celebrate everything sheep and goats. Attendance was capped at 100.

A local chef Todd Morren prepared six dishes made from lamb and chevon (goat meat) and one dish made from cheese (sheep milk): roasted goat tacos, Middle Eastern lamb, sesame meatballs (goat), meatballs (lamb) with dill dipping sauce, shepherd's sweet potato pie (lamb), curried goat, and brandied cheese (sheep milk cheese). The meats were sourced locally.

Local small ruminant dairies offered cheese for sampling and purchase. Shepherd's Manor Creamery is Maryland's first and only sheep dairy. Sprigg's Delight Farm is one of handful of goat dairies in Maryland. Budding Creek Farm showcased the fiber aspect of small ruminants. Dr. Joe Fiola, viticulturist and small fruits specialist, was on-hand to offer wine for sampling and discuss matching wine with meats and cheeses.

There were wagon tours to the University of Maryland's Western Maryland Research & Education Center. Tour stops included the Western Maryland Pasture-Based Meat Goat Performance Test (11th year) and the Goat Performance & Carcass Contest (1st year).



Featured Recipe: Sesame Meatballs

425°F | Bake 7-10 minutes | 48 small meatballs

- 1 small chopped onion
- 1 large garlic clove, chopped fine
- 1 1/2 teaspoons olive oil
- 1/2 teaspoon dried mint leaves
- 1/2 teaspoon salt
- 1/2 teaspoon cinnamon
- 1 pound ground lamb or goat
- 1 cup bread crumbs
- 1 large egg
- 2 tablespoons currants
- 1/2 cup sesame seeds, lightly toasted
- 2 cups plain yogurt
- 1/2 cup fresh mint, washed and finely chopped
- 1/2 teaspoon salt

Heat olive oil in large pan. Brown garlic and onion. Remove from heat and allow to cool. Place in large bowl, along with all ingredients, up to the plain yogurt. Mix well and form into balls and roll in sesame seeds. Place on baking sheet and bake at 425°F for 7 to 10 minutes.

To make minted yogurt sauce, mix yogurt and fresh mint together. Add a bit of salt to taste and allow mixture to sit for at least 1/2 hour for the flavors to develop.

In Texas Hair Sheep Sell at a Discount to Woolled Lambs

Texas A&M University compared the prices of wool lambs, primarily Rambouillet, with the prices of hair lambs, primarily Dorper, sold at Producers Livestock Auction Company in San Angelo Texas, the largest live sheep market in the US. The data set included 286,764 lambs sold in 25,916 lots from 2010 to 2014.

The results indicated an overall discount of $\$3.42 \pm \0.33 per hundredweight (cwt) for hair lambs. The largest discount was in 2011 ($\$30.74 \pm \0.41 per cwt). The discount relative to wool lambs increased as lamb weight increased.

In 2012, the price for hair lambs was $\$9.62 \pm \0.62 per cwt higher for hair lambs. Hair lambs sold for $\$3.18 \pm \0.83 per cwt more than wool lambs in the 40-50 lb. weight class, whereas wool lambs sold for $\$9.09 \pm \0.68 per cwt more than hair lambs in the 90-100 lb. weight class.

Prices Increased as lot size increased. Wool lambs sold for a larger premium in the larger lot sizes. Wool lambs sold for $\$8.59 \pm \0.39 per cwt more than hair lambs when there were 35 or more lambs in the lot. The difference in price between hair lambs and wool lambs varied across years, months, weight class, and lot size.

Source: Sheep & Goat Research Journal.

Jacobs: A Rare Breed with Distinction (continued from page 1)



Jacob sheep are playing a key role in helping scientists find a cure for deadly Tay-Sachs disease. Tay-Sachs disease is a rare genetic disease that causes progressive deterioration of nerve cells. It affects mostly infants and results in death, usually by the age of 5. There is no cure. A form of the disease has been found to exist in Jacob sheep (and cats). Tay-Sachs is caused when the body does not produce enough of an enzyme (HexA), which recycles toxins from the body. The Tay-Sachs gene in Jacob sheep is an 86 percent DNA match with the human HexA gene.

Using Jacob sheep (and cats) as models, scientists have developed a gene therapy for treating Tay-Sachs disease. The gene therapy, which uses a re-engineered virus to introduce the gene that produces HexA, has extended the lives of affected sheep by 50 percent. It has extended the lives of cats from 4 to 18 months. Some cats have lived 2 years. Researchers hope to begin human trials soon.

Goat Nutrition Software Now Available

As the popularity of raising goats continues to increase, those who choose to enter the business need accurate information on nutrition needs and diet formulation for their animals. Garland Dahlke with the Iowa Beef Center at Iowa State University has developed new software that uses guidelines from the National Research Council.

"This new software has two modules with one for growing animals and the other for mature animals, and includes an extensive feed library for all ages," Dahlke said. "Producers can use this software for all goats—dairy, meat and mohair—and for all ages."

The software is Excel-based and can be used by any version of Excel on Windows or Mac computers that are capable of opening an .xls file. Reports from the program can be printed as .pdf files for sharing with others.

The \$100 cost is a one-time price for the program, and that includes any future updates and assistance. A documentation/help file is available to download at no cost. Download this help file, and purchase and download the software from the ISU Extension and Outreach online store.

"People are welcome to call or email me with questions or comments," Dahlke said. "I think this program would be a great addition to management tools for today's goat producers."

Contact Dahlke at (515) 294-9910 or garland@iastate.edu.

Source: High Plains Journal

Disease Focus: Polio

Polioencephalomalacia (PEM), cerebrocortical necrosis

Polio is most commonly diagnosed in 2 to 6 month old lambs and kids that are being fed high concentrate diets. However, it can occur at any age and with other diets. Polio usually only affects a few animals in the flock. It is not infectious. It is different from polio in people.

Cause

The primary cause of polio in sheep and goats is a thiamine (Vitamin B1) deficiency or a disturbance in how the body uses thiamine. In ruminant animals, ruminal bacteria normally produce sufficient thiamine to meet their requirements. Feeding high-grain diets to ruminants can predispose them to polio because it slows thiamine production in the rumen and increases mechanisms that degrade thiamine produced in the rumen.



Overdoses of thiamin analogs, such as amprolium (Corid®) can also cause polio in sheep and goats. Another cause of polio is elevated levels of sulfur in the diet. Some alternative feeds, such as distiller's by-products, contain high levels of sulfur. Water containing high levels of sulfur can also be problematic. Some plants (e.g. bracken fern and horse tail) contain enzymes that can cause polio.

Clinical signs

Clinical signs include blindness, isolation, wandering, star-gazing, depression, incoordination, head pressing, and recumbency. Severely affected animals become comatose and die. Differential diagnoses include other diseases that affecting neuro-muscular systems: CAE, pregnancy toxemia, grain poisoning, plant poisoning, enterotoxemia, listeriosis, rabies, and tetanus.

Diagnosis and treatment

Diagnosis is usually based on clinical signs and response to treatment. According to Sheep & Goat Medicine (D.G. Pugh, 2002), treatment involves thiamine replacement at a dosage of 10 mg/kg. The initial dose is given IV, followed by IM or SC injections every six hours for the first day of treatment. Many affected animals exhibit significant improvement within 24 hours. Blindness can be permanent in severely affected animals.

Ask-a-Sheep-Vet (G.F. Kennedy, 2013) recommends 5 cc of fortified B-Complex. If given immediately, it usually results in response within several hours. This dosage can be repeated every 12 hours and then daily until animal no longer shows symptoms. According to Dr. Kennedy, fortified B contains 100 mg of thiamine per cc that fulfills the recommended dosage of 0.5 grams of thiamine.

Prevention

Polio can be prevented by avoiding sudden changes in the diet (especially to higher energy feeds), providing free access to a good quality mineral salt, avoiding excess dietary sulfur (in feed and water), and providing free access to good quality forage. Supplemental thiamine can be added to high-grain rations to prevent polio. Feed and water should be analyzed to determine sulfur levels.



What Do Worm Egg Counts Tell Us?

by William Shulaw, DVM
Extension Veterinarian (retired)
The Ohio State University

What is a worm egg count?

A fecal worm egg count (FEC) is done on manure to look for worm eggs. It is quantitative versus qualitative in that the result is expressed as the number of eggs per gram (epg) of manure as opposed to "positive" or "negative" or "+, ++, or +++" results that are often given from simple flotation procedures. A quantitative result gives us a means to quantify changes over time or in response to a treatment.

What are we measuring?

The worms we are most concerned about are in the roundworm family and live in the stomach and intestines of sheep and goats. The ones of most importance in our region are in the trichostrongylid family and all have similar life cycles. Adult worms expel eggs that pass outward in feces (manure). These eggs hatch into larvae on pastures under favorable conditions of moisture and temperature. When the worm larvae are ingested by sheep and goats, they develop into adult worms in the gastrointestinal tract and begin the cycle all over again.

What can we use worm egg counts for?

There are three main uses for worm egg counts. They are to detect dewormer resistance, to monitor pasture contamination, and to select animals for their genetic ability to resist worms.

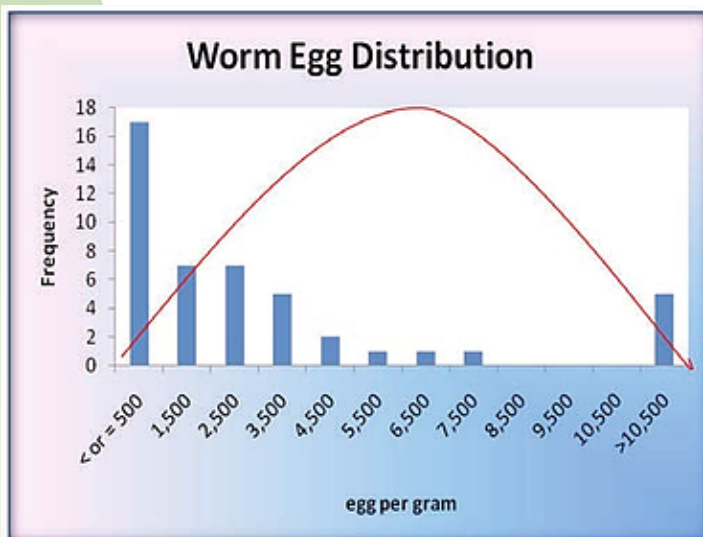
What are some of the limitations of worm egg counts?

First off, FECs are estimates. There is some day-to-day variability in counts even in stable worm populations. The count can also be influenced by the type of forage the animals are eating with respect to its digestibility and its water content. Very loose stools are somewhat diluted, which causes some underestimation of the actual egg count. In addition, there are different ways of performing quantitative egg counts, and the method can influence the magnitude of the result. Therefore, people should be very careful in comparing their results with those from other laboratories.

Secondly, FECs are a snapshot in time. They reflect the degree of egg shedding and pasture contamination at that point in time, but without other information, they are not very predictive. Mature *Haemonchus contortus* females may produce (depending on the author) 3,000-10,000 eggs per day. However, immature worms may not produce many eggs, but they still suck blood. As the immature worms age over a couple of weeks, their egg production increases. Depending on the level of pasture contamination, FECs can rise considerably in a short time. For example, during the course of an on-farm project in 2010, two groups of lambs comprised of 20 lambs each were removed from a light to moderately contaminated pasture after grazing it for three weeks and then were placed on experimental forage plots (worm larvae-free) on August 30. Their average FECs were about 600 epg.

On September 14, the FECs for both groups averaged about 2,800 epg. Over those two weeks of grazing, both groups gained acceptably well, and their red blood cell counts were still in the normal range. Moreover, the September 14 FECs still weren't reflecting eggs from worms lambs acquired in the last week of grazing the contaminated pasture because it takes about 19–21 days from the time infective larvae are ingested until they produce eggs in the manure. On heavily contaminated pastures, FECs can rise explosively such that lambs can initially appear normal and then begin dying within a two-week period. Average FECs in such situations can reach 10,000 epg of manure (two to three lamb-sized manure pellets weigh about one gram).

(continued on page 8)



More Information On Sheep & Goats Can Be Accessed At:

<http://www.sheepandgoat.com/>

<http://www.acsrpc.org> or wormx.info

<http://mdgoatquest.blogspot.com>

<http://www.sheep101.info/>

<https://www.facebook.com/MDSsmall>

<http://issuu.com/mdsheepgoat>

<http://mdsheepgoat.blogspot.com>

<https://twitter.com/MDSheepGoat>

What do Egg Counts Tell Us? *(continued from page 7)*

In another project, weekly FECs were obtained on a group of March-born lambs maintained continuously on pasture from birth. FECs averaged 0; 42; 89; 1,050; and 1,950 egg from May 14 through June 11. This dramatic change was the result of the following: 1) the lambs' gradual increase in consumption of infective larvae as they got older and consumed more forage; 2) the buildup of worm larvae on the pasture as a result of the prolific egg producer, *Haemonchus*, becoming the predominant worm species; and 3) the time needed for ingested larvae to become egg-laying adults. It is also characteristic of what happens on many Ohio pastures in a typical summer. Therefore, a single egg count for a group of lambs or ewes taken out of context with other information is not predictive of what is going to happen nor is it always a good measure of the worm burden the animals are carrying. Nevertheless, FECs do give us some information about what is happening at the time the samples are taken and can be generally reflective of worm burdens.

How many animals do I need to sample?

If FECs are to be useful, they have to reasonably reflect the makeup of the group of interest, whether that be lambs/kids or ewes/does. Research and observations over the last 50-60 years consistently show that egg counts from a group of individuals, as well as worm

numbers, are not "normally" distributed across a typical bell-shaped curve. Usually only a few individuals have very high counts, and even when severe parasitic disease is present in a group, there frequently are animals in that group with very low FECs. For example, in an investigation of ivermectin resistance, where lambs were actually dying from parasitism, the average FEC for a group of 46 lambs was 3,800 egg of feces. However, two animals had FECs of zero, and the lowest 21 were each less than 1,000 egg. The top five animals had counts of 13,800; 20,050; 23,950; 25,000; and 29,250 egg. If you wanted a reliable estimate of the average count for the group, would samples from three animals, or even five, be enough? Not likely.

Generally speaking, you need samples from at least 15 animals to get a reliable estimate of the group average. For those of you reading this that are statistically inclined, you are probably thinking "Yes, but using a simple numeric average for populations like this is flawed!" You are correct; however, for reasons beyond the scope of this discussion, a simple group average is an accepted measure used by parasitologists the world over.

Source: VME-27 What do fecal worm egg counts tell us? Ohio State University Extension

Reprinted with permission.

Featured APPs for Sheep and Goat Producers

"App" is short for "application" - which is another name for a computer program. Normally, when people talk about apps they are almost always referring to programs that run on mobile devices, such as smartphones or tablet computers.

Goat and Sheep Weight Calculator

Goat & Sheep Weight Calculator allows the user to calculate the approximate weight of goats and sheep by using a cloth measuring tape to determine the girth of the animal's heart and the length of the animal's body. You simply enter in the measurements to calculate the weight of goats and sheep in pounds. This easy-to-use calculator is useful for veterinary medicine, vocational agriculture, farmers, and ranchers. It is available for IOS and Android devices and is free.



Livestock Weights and Expenses

Livestock Weights and Expenses is an app that allows users to monitor and manage the weight of their livestock, so when Fair Day comes, they are ready! This app will support Steers, Swine, Sheep and Goats and takes the guessing out of having animals ready for weigh in. It will also help you manage expenses. The app is available for IOS and Android devices and sells for \$2.99.

Pearson Square

The Pearson Square is a simplified method for solving a two variable simultaneous equation. It provides an easy way to calculate mixtures of two ingredients. It is useful in the fertilizer, feed, and sausage industry. The Pearson Square app is available for IOS and Android devices and is free.

The apps can be purchased from iTunes (IOS) or Google Play (Android). For an A-Z list of apps for sheep and goat producers, go to <http://www.sheepandgoat.com/#/apps/cohj>.

Understanding the Sheep & Goat Markets

The two most important markets in the US for sheep and goats are New Holland Sales Stables in New Holland, Pennsylvania, and Producer's Livestock Auction in San Angelo, Texas. The market in San Angelo handles the largest volume, whereas New Holland usually boasts the best prices. At the same time, New Holland is the biggest sheep and goat market in the eastern half of the US.

Lamb prices are usually reported according to the top three USDA quality grades: Prime, Choice, and Good. Quality grades relate to the eating quality of the meat. Prime lambs are the fattest and fleshiest whereas Good lambs are the thinnest. In the past, 98% of lambs graded Choice or better. Prices are also reported according to yield grades. Yield grades predict carcass cutability. In lambs, they range from 1 to 5, with Yield grade 1 lambs being the thinnest and 5 being the fattest. Most lambs grade 2 or 3 (average back fat of 0.25 inches).

As sheep meat pays a significant role in the observance of various Christian, Jewish, and Muslim holidays, lamb prices tend to peak before certain holidays. The first peak of the year usually occurs in advance of Eastern Orthodox (or Greek) Easter. However, sometimes, prices go up after Easter, as producers have flooded the markets with lambs in anticipation of higher prices. It is important to note that there are two Easter celebrations (each observing a different calendar) and that there is a greater demand for lamb at (Eastern) Orthodox Easter than Roman (Western) Easter.

In more recent years, the highest lamb prices of the year have usually been observed prior to the Muslim Festival of the Sacrifice (Eid al-Adha). Ramadan and the festival that marks the end of fasting (Eid ul-Fitr) seems to have less of an influence on lamb prices. This year's Festival of Sacrifice is predicted to begin September 12. Muslim holidays move forward 11 days each year, as the Muslim religion utilizes a lunar calendar. The Muslim markets tend to be growing whereas Easter seems to be a more mature market.

The type of lamb demanded at each holiday varies. A smaller (<60 lbs.) lamb, fleshier and preferably milk-fed, is preferred for Easter, whereas Muslims generally want older, heavier (> 60 lbs.) lambs with less fat. Sheep breeds also differ in their suitability for these markets. For example, while Katahdin and Suffolk lambs are well-suited to Eid, they don't usually make desirable hot house lambs.

The price (\$/cwt) for lighter weight lambs (especially at Easter) almost always exceeds that of heavier lambs, but there is a trade-off between price and weight in terms of profitability. Each producer needs to determine at which market weight he/she can make the most profit. It may differ from year-to-year.

If lambs can be fed economically, it often pays to finish them

to heavier weights, as there often isn't a huge price difference between 70 and 100 lb. lambs. Depending upon breed and genetics, heavier weights may also improve the grade of the lamb. There are significant price differences for Prime, Choice, and Good grade lambs, with Prime-Choice lambs bringing higher prices, sometimes significantly higher than the thinner lambs.

In addition to the holidays, sometimes the highest prices of the year are achieved towards the end of the year and after the first of the year. While there is usually an increased demand for lamb at Christmas, it is mostly a supply and demand issue. Few lambs are left from the spring lamb crop and there aren't many fall-born lambs for marketing. It may pay to hold late-born lambs until Christmas or after the first of the year.

While some consumers choose goat meat for their holiday meals, goat prices do not tend to fluctuate much throughout the year. If fact, adding trend lines to price graphs reveals little price differences. Among ethnic consumers, goat meat tends to be consumed more year-round than lamb. The bigger difference in goat prices seems to be between grades.

The USDA grades for (live) goats are Selection 1, Selection 2, and Selection 3. The grades denote differences in muscling and predicted yield of meat. Selection 1 goats are the heaviest muscled and predicted to have the highest yield of meat. Selection 2 goats have average muscling, while Selection 3 goats have the least amount of muscling. Grades are supposed to be independent of breed and fat. There are no quality grades for goats, as the eating quality of goat meat doesn't seem to differ among goats.

At New Holland (PA), there tends to be a fairly consistent price difference between Selection 1, 2, and 3 goats. Using 70 lb. kids as an example, there is an approximate difference of \$50 per head between Selection 1 and Selection 3 goats. The greatest difference is usually observed between the Selection 2 and 3 grades. While breed and genetics certainly play a role, nutrition also has a large impact on grade (muscling).

The pen vs. pasture studies we conducted at the Western Maryland Research & Education Center (2011-2014) showed that pasture-raised meat goats often don't meet their genetic potential for muscling; thus, grade. In our studies, as compared to pen-fed goats, pasture-raised goats had smaller rib eyes and a lower percentage of muscle. With the price differentials observed in the market place, it may pay to put some feed into goats. Better nutrition will not only increase their weight gain, but may improve USDA grade; thus, price (profit)

Largest Goat Test Ever



One hundred and forty-two (142) goats were nominated to the 2016 Western Maryland Pasture-Based Meat Goat Test. Nominations were reduced to 100. Ninety-seven (97) goats were delivered to the test site on June 23-24. Ninety-six goats started the test on July 7-8.

The mostly Kiko bucks were consigned by 36 consigners from 17 states, including Alabama, Georgia, Illinois, Indiana, Kansas, Kentucky, Maryland, Missouri, New Jersey, North Carolina, Ohio, Tennessee, Vermont, Virginia, and West Virginia. Kentucky was the state with the most goats and most consigners. There are two consigners and eight goats from Maryland. There are fourteen new consigners to this year's test.

Upon arrival, the goats were sequentially dosed with dewormers from each drug class (albendazole + moxidectin + levamisole). The purpose of the sequential deworming is to reduce fecal egg counts to (near) zero, so that differences (among bucks) observed in the test are a result of genetics and not environment. Identifying parasite resistant bucks is one of the major goals of the test.

After a 13-day adjustment period, starting weights were determined on July 7-8. They ranged from 32.4 to 78.8 and averaged 49.6 lbs. Every two weeks, the bucks will be weighed. FAMACHA®, body condition, coat condition, dag, and fecal consistency scores will be determined bi-weekly. Every two weeks, a fecal sample will be collected from each goat to determine individual fecal egg counts. The test will last for 84 days.

Half-way through the test, a pooled fecal sample will be submitted to the University of Georgia for a DrenchRite® test. The DrenchRite® test determines resistance to all anthelmintics classes simultaneously from a single pooled fecal sample. The last DrenchRite® test (done on the sheep flock that grazes the test site) showed the worm larvae to be susceptible to moxidectin (Cydectin®) and levamisole (Prohibit®) and resistant to benzimidazoles (e.g. SafeGuard®) and avermectins (e.g. Ivomec®). Pooled samples, collected three times during the test also identify worm larvae. *Haemonchus contortus* has always accounted for a very percentage of the worm load.

At the end of the test, the ten top-performing bucks will be identified and recognized. Selection criteria will include growth performance (ADG), parasite resistance (fecal egg counts), and parasite resilience (FAMACHA® scores and treatment need). The bucks will also be evaluated for carcass muscling (via ultrasound), structural correctness, and reproductive soundness.

No sale will be held in conjunction with the Western Maryland Pasture-Based Meat Goat Performance Test; however, bucks may be purchased via private treaty. In addition, the Bluegrass Performance Invitational Premier Buck & Doe Sale (September 2-3, Frankfort, Kentucky) will feature bucks from previous tests, along with does consigned by consignors

Goat Performance and Carcass Contest

Fifteen Kiko bucks were entered in the first-ever Goat Performance & Carcass Contest. Their starting weights were determined on July 7-8 and averaged 53.9 ± 10.6 lbs. with a range of 34.0 to 71.0 lbs. The contest goats gained an average of 6.9 ± 2.8 lbs. during the 13-day adjustment period. They will be weighed every 4 weeks to determine average daily gain (ADG).

The contest goats are housed in a 16 ft. x 16 ft. pen, with a three-sided shelter and environmental enrichment. They are being fed a hay-grain diet, which usually consists of 2 lbs of hay (good quality mixed grass-legume) and 1 lb. of whole barley. At the end of the 84-day feeding period, they will be harvested to collect carcass data. The purpose of the Performance & Carcass Contest is to recognize producers whose goats excel in lean growth and carcass merit.

Get Your Goat

Anyone interested in obtaining goat meat may purchase one of the contest goats. They will be slaughtered on October 3rd and their meat will be available for pick-up soon thereafter. The goats will be processed at an inspected facility in Pennsylvania.

Upcoming Events

August 4-6

Katahdin Hair Sheep International Expo
Tennessee Tech University, Cookeville, Tennessee
Info: www.katahdins.org

August 6

Pennsylvania Performance Tested Ram Lamb & Buck Sale
Pennsylvania Livestock Evaluation Center,
PA Furnace, Pennsylvania
Info: <http://www.livestockevaluationcenter.com/Default.aspx>

August 20

West Virginia Performance Tested Ram and Buck Sale
WVU Animal Science Farm, Morgantown, West Virginia
Info: <http://sheepandgoats.wvu.edu/>

August 23-25

US Sheep Experiment Station 100th Anniversary
Dubois, Idaho
Info: <https://d1cqrq366w3ike.cloudfront.net/http/DOCUMENT/SheepUSA/100thAnniversary.pdf>

August 27

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

August 30

ASI Let's Grow Webinar: Best Practices to Increase Your
Lamb Crop (Dr. Reid Redden)
Info: <http://www.optimalag.com/>

September 2-3

Bluegrass Performance Invitational Premier Buck & Doe Sale
Lakeview, Park, Frankfurt, Kentucky
Info: <http://bluegrassperformanceinvitational.com/index.html>

September 23

Sheep Field Day & Ram Lamb Sale
Southwest Virginia Research & Education Center,
Glade Spring, Virginia
Info: <http://www.apsc.vt.edu/extension/sheep/swarec-ram-program/index.html>

December 1-4

North American Dairy Sheep Association Annual
Symposium
Cornell University, Ithaca, New York
Info: <http://www.dsana.org/>

January 25-28

American Sheep Industry (ASI) Association Annual
Convention
American Goat Federation (AGF) Annual Meeting and Pro-
ducers' Seminar
Denver, Colorado
Info: <http://www.sheepusa.org>

February 17-19

National Goat Conference
Tuskegee University, Tuskegee, Alabama
Info: web site

Wild & Woolly, is published quarterly by the University of Maryland Extension. It is written and edited by Susan Schoenian, Sheep and Goat Specialist, at the Western Maryland Research & Education Center (WMREC), 18330 Keedysville Road, Keedysville, MD, tel. (301) 432-2767 x343 or 315, fax (301) 432-4089; e-mail: sschoen@umd.edu or Pamela Thomas, Administrative Assistant, pthomas@umd.edu. The cost of receiving the newsletter by mail is \$10 per year, payable to the University of Maryland. The newsletter can be accessed for free on the Internet at <http://www.sheepandgoat.com>. Subscribers to the newsletter listserv will receive an e-mail message when a new newsletter has been posted to the web. To subscribe, send an e-mail message to listserv@listserv.umd.edu. In the body of the message, type subscribe sheepgoatnews.

Comments and suggestions regarding the newsletter are always welcome. References to commercial products or trade names are made with the understanding that no discrimination is intended and no endorsement by University of Maryland Extension is implied.

Articles and photographs may be reprinted with permission.

The University of Maryland Extension programs are open to any person and will not discriminate against anyone because of race, age, sex, color, sexual orientation, physical or mental disability, religion, ancestry, national origin, marital status, genetic information, political affiliation, and gender identity or expression.

UNIVERSITY OF
MARYLAND
EXTENSION
Solutions in your community

University of Maryland
Western Maryland Research and Education Center
18330 Keedysville Rd
Keedysville MD 21756