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United States Department of Agriculture, University of Arkansas, and County Governments Cooperating

Arkansas Sheep and Goat News

Newsletter for the Arkansas Sheep and Goat Industry

Vol. 1, No. 1 Jan.-March 2009

Contents

Arkansas Is Our Campus

Visit our web site at:
http://www.uaex.edu

Upcoming sheep and goat educational meetings (other events are at http://www.southeastarkansasgoatproducersassociation.com/es.html):

April 4, Berryville, Arkansas, Carroll County Fairgrounds
April 18, Ferndale, Arkansas, Arkansas 4-H Center

Sheep and Goat Markets

In choosing a market for sheep and goats, always consider factors such as costs of hauling, marketing fees and convenience. Selected Arkansas markets are at http://www.uaex.edu/Other_Areas/publications/PDF/FSA-3094.pdf.

Prices of sheep and goats are given below for two markets. Additional markets reported to USDA personnel can be found at http://www.ams.usda.gov/AMSv1.0/ams.fetchTemplateData.do?template=TemplateP&navID=MarketNewsAndTransportationData&leftNav=MarketNewsAndTransportationData&page=LSMarketNewsPageGoats.

Diamond, Missouri – White's Monthly Sheep and Goat Auction for 02/05/09

All prices are per hundredweight.

Slaughter Lambs: Choice 1-2 wooled and shorn 70-80 lb 129.00-131.00; 80-90 lb 83.00-99.00; 90-100 lb 90.00-99.00; 100-133 lb 91.00-95.50.

Goats Slaughter Classes:
Kids: Selection 1 40-50 lb 139.00-151.00; 50-60 lb 150.00-160.00; 70-90 lb 137.50-151.00; 90-100 lb 81.00-100.00; Selection 1-2 60-70 lb 140.00-160.00; Selection 2 40-50 lb 120.00-137.50; 50-60 lb 115.00-148.00; 70-80 lb 118.00-145.00; 80-90 lb 107.50-111.00; Selection 2-3 60-70 lb 101.00-130.00; Selection 3 50-60 lb 87.50-125.00; 70-80 lb 68.00-73.00.

Highlandville, Missouri – CRS Sale's Co. Monthly Sheep and Goat Auction for 02/19/09

Slaughter Lambs: Wooled 1-2 100-121 lb 86.00-111.00.

Hair Lambs: 30-60 lb 132.50; 105-131 lb 80.00-92.50.

Goat Slaughter Classes:
Kids: Selection 1 60-70 lb 150.00-160.00; Selection 1-2 50-60 lb 153.00-159.00; 90-100 lb 106.00-118.00; Selection 2 40-50 lb 142.50-157.50; 60-70 lb 116.00-149.00; 70-80 lb 107.00-139.00; 105 lb 100.00-105.00; Selection 2-3 50-60 lb 150.00-157.50; Selection 3 40-50 lb 112.50-117.00; 60-80 lb 90.00-112.50.

Meat Production Calendar

As with any other animal enterprise, it is important to keep good records and to have a plan to follow when managing your goat herd.

Using a production calendar for managing your herd not only gives you a schedule to follow for production but also allows for timely breeding of does and management for specific markets. The calendar also allows for successful parasite and disease control on a consistent and regular basis. It should be combined with a comprehensive record system so you know what you have done as well as what is to be done in the future.

A meat goat production calendar from Extension can be found at http://www.uaex.edu/Other_Areas/publications/PDF/FSA-3098.pdf.

January 1, 2009 Arkansas Goat Inventory: On January 1, 2009, Arkansas meat and other goat inventory totaled 47,000 head, up 4 percent from the previous year. The January 1 Arkansas milk goat inventory totaled 4,900 head, down 4 percent from 2008.

Utilizing Pasture for Sheep and Goat Production

Much of the land in Arkansas is quite suitable for sheep and goat grazing. Sheep prefer forbs (weeds) and goats prefer browse. Managing forage production for grazing sheep and goats can supply 80 percent of the yearly nutritional requirements. The differences in grazing preferences of sheep and goats provide information producers can utilize, depending on what is available on the farm(s). Oak and hickory trees are in abundance in the northern half of the state as well as other browse plants goats prefer. Goats, as well as sheep, graze on cool-season grasses.

Research conducted at Lincoln University with goats having access to four major browse plants (two multi-flora rose and blackberry briars along with warm- and cool-season grasses) showed various preferences depending on the time of year and available plants. Students clocked the time spent grazing all available forages and browse. The first preference by goats in the spring was hop clover. The goats switched within a day to other plants, obviously depending on the taste and flavor of what was available. The warm-season grass grazing season was short, from late June through early August. Other research has shown that the performance of goats is improved when browse and/or forbs is provided to goats when they are on an improved pasture, which indicates that goats should have access to brush, trees or branched weeds even when on "good" pasture. Sheep will do well on improved pasture only.

Counting the number of days sheep and goats graze per acre in a particular pasture counts sheep/goat days as the number of animals per acre in a pasture that will support the number. For example, 350 sheep/goat days for wheat means that an acre will support 10 sheep and goats for 35 days.

Many acres in Arkansas are unimproved pastures and, in some cases, may merely serve as "weed killers." Under these conditions, the sheep/goats' performance and profit may be low; however, cattle performance and profit would be low as well grazing these pastures. Often, it is more economical to graze goats with cattle or horses so that goats eat the browse, forbs and some grass while the cattle or horses eat the grass.

Cattle, sheep and goats grazing unimproved pastures are selective, with cattle grazing grass, sheep preferring forbs (weeds) and goats preferring browse. However, the pastures may not have an abundance of all three, and sheep and goats will compete with cattle but select other plants, making good use of all plants. Improving pastures suited for improved forage production will result in increased profits from sheep and goats. A pasture of 30 acres of land can be suitable for the needs of 100 ewes or 120 goats.

A year-long pasture calendar can be developed. Forages for a year-round program are included below:

1. Tall fescue – winter and spring grazing
2. Orchardgrass – spring and fall grazing
3. Bromegrass or timothy – early summer grazing
4. Birdsfoot trefoil – mid-summer and early fall grazing
5. Kentucky bluegrass – spring and fall grazing
6. Lespedeza – mid-summer and early fall grazing
7. Wheat – early fall and early spring grazing

8. Oats and broadleaf rape – spring grazing prior to turnip seeding
9. Turnips – October through December grazing (seeded in July)
10. Sudangrass – temporary mid-summer grazing
11. Forage-producing annuals – mid-summer until frost; i.e., California blackeye #5 cowpeas – grows 8 feet in length

Management of grasses and legumes is critical to reduce the detrimental effects of grazing with sheep and goats. Mixed grass and legumes cut down on bloat as opposed to grazing straight legumes. Talk to your county agent or extension agronomist about developing improved pastures for sheep and goats to take advantage of an improved grazing system.

Adapted from *Sheep and Goat Newsletter* 25 (2); 6-7, editor: Helen A. Swartz, Lincoln University, Jefferson City, Missouri, with reference to J.B. Outhouse, K.D. Johnson and C.L. Ryhkerd, Purdue University, West Lafayette, Indiana.

Preparing Does for Kidding Season and Avoiding Crisis Management

Terry Hutchens, Extension Specialist, University of Kentucky

Preventive Health Program

Late fall and early winter is an ideal time to begin getting does ready for the winter and spring kidding season. Refer to your breeding records or begin counting back from the estimated breeding date and closely estimate the herd's overall stage of gestation. The average length of gestation is 152 days, so for convenience and easy calculation, divide the gestational period into three 50-day periods. These periods are then identified as 1st, 2nd and 3rd trimester.

At the onset of the 2nd trimester, the second 50-day period, it is a good idea to get the does up, weigh them and determine the body condition score (BCS) of each doe. See the following information and learn to BCS YOUR DOES: http://www.uky.edu/Ag/AnimalSciences/goats/presentations/BCS%20pamphlet%20-%20letter.pdf.

Does having low body weight and condition scores averaging 1.0 to 2.0 need to gain weight during the second 50 days of pregnancy. The weight gain can be as little as 0.25 lb per day (7.5 lb/month) or 10-12 lb for the 50-day period. This would be approximately one BCS. As a result, by the end of the 2nd trimester the doe should be in a body condition of 3.0 to 3.5. It is important to note that the BCS should not exceed 4.0 in the last stages of gestation. Body condition scores are delineated into a 1 to 5 scale. (Another scale for body condition scores ranges from 1 to 9.)

Modest gains of 0.25 lb per day can easily be achieved with good quality hay (grass and legume hay) or grass hay with a grain supplement fed at a rate of 0.5 to 1 percent of the original body weight of the doe. This additional fat stored on the doe will give the female access to additional energy that will be needed during kidding and early lactation. Note the increase in TDN, or energy, needed during the 2nd and 3rd trimesters, and don't let the does get too thin before kidding.

Next trim the feet of each doe, and check the feet for signs of foot scald and foot rot. If only a few animals have problems, spot treat feet with an antibiotic product; if a number of animals have problems, trim and run each animal through a foot bath of zinc sulfate or copper sulfate. Mix 1 lb of product per each gallon of water in the bath. It is a good idea to force the does to stand in the solution for 3 to 5 minutes. Check feet again before kidding.

Most dewormers must be administered by mouth, with the exception of injectable Cydectin. Dosages are typically 1.5 to 2 times the dose for cattle/sheep. Products like Levasole and Cydectin have been found to be more effective than other dewormers. Avoid whole-herd deworming with one exception: deworm all does at or just before kidding. Follow dosage levels as recommended by your veterinarians. For additional information see this site: http://www.uky.edu/Ag/AnimalSciences/goats/goatHealth.html.

Does should be on a coccidia-stat product like Rumensin or Deccox in order to reduce loafing and feeding area contamination with coccidia during and following kidding. Make a note: If anemia is apparent in doe FAMACHA readings, the cause may not be internal parasites but may likely be external parasites, such as lice and mites.

Treat each animal for external parasites by applying a pour-on product to the back of each animal. Again, check with your veterinarian for product information. The following suggestions have been made by UK Extension Veterinarian Patty Scharko. Two Ivermectin-type products are commonly used in the cattle, sheep and goat industry. They are the generic Cowmectin pour-on, an Ivermectin to be applied to the back of the animal twice at 14- to 21-day intervals at a total cost of $0.12/head, and Ivomec, the original Ivermectin pour-on to be applied one time but at a cost of $0.50/head. Finally, a pour-on insecticide, Cylence

is often recommended and should be applied twice at 14-day intervals at a cost of $0.26/head.

Check each doe for caseous lymphadenitis or CL at the neck, front and back flank and udder area. Lance and drain abscessed areas when they are soft to the touch when lightly palpated. Catch all of the white extruded liquid into a paper towel and quickly dispose or burn the paper towel and extruded liquid material. Remember to wear latex gloves, and avoid all contact with the extruded material. Wash the lanced area with a disinfectant; isolate the doe for a few days because the infected area may weep.

If CL is a significant problem in the herd, vaccines may give some protection from new infections. Avoid using the vaccines if only a few infections are seen annually. The results of vaccination may be seen over a two- to three-year period. Consult your veterinarian before using a vaccine, and ask to see if he recommends culling of does with CL.

Clostridial vaccines, *Clostridium perfringens* type (C&D) and *Clostridium tetani* (T), should be given 14 to 21 days prior to kidding in order to pass the immunity temporarily to the new kid crop. Kids should be vaccinated at 30 days and 60 days of life. Following initial vaccination, does are vaccinated annually. Products of choice are Bar Vac CD/T (Boehringer Ingelheim), Essential 3+T (Colorado Serum Company) and Vision CD/T (Intervet).

Pneumonia is becoming the second most prevalent health problem in goats. The bacteria species most commonly isolated in the Lexington Diagnostic Lab are *Mannheimia haemolytica* and *Pasteurella multocida*. These bacteria are susceptible to most antibiotics; however, resistance to tetracycline and sulfa drugs has been seen. Furthermore, diseases are commonly associated with zinc and selenium mineral deficient conditions.

Prevention is the key to reduction in incidences of pneumonia. Housing should be dry, draft free but with good ventilation. Poor ventilation is associated with winter and spring pneumonia. Reduce stressful conditions at mid-summer weaning. Provide weaned kids with a clean environment, have the kids on a good plane of nutrition at least one week prior to weaning and provide clean fresh water and adequate shade. Keep all classes of animals on a good nutritional plane and provide a good quality mineral. Expect at least a 10 percent reduction in consumption of a mineral block over a loose free-choice mineral.

When pneumonia is a particular problem, pneumonia vaccines may help. Colorado Serum Company offers a new vaccine for *Mannheimia haemonlytica* and *Pasteurella multocida* bacteria. Timing of vaccine is important; give an annual vaccination to does 30 days before kidding in winter and vaccinate the kids 30 and 60 days. Or if at weaning time pneumonia is a problem, vaccinate the kids 30 days before weaning and again at weaning.

Final Doe and Kid Care

Research has indicated that fecal egg counts rise shortly after kidding, so deworming at kidding is a good way to help reduce contamination of a pasture where the young and most susceptible animals are located. It is also a good time to trim feet on the does because you are able to handle them a few at a time. Pasture for does with kids should have been prepared. Start moving does on this pasture a couple of days after they kid. The does will need good nutrition and should receive the highest quality hay you have if green pasture is not available.

Keep a close watch on the does and kids for any problems. Kids that show signs of illness or do not appear to be as active as other kids need to be checked. Use your records to identify the doe for these kids and check her milk supply. Kids will go from looking healthy to near death quickly, so it is important to treat them as quickly as possible.

Kid Diseases: Floppy Kid Syndrome and Polioencephalomalacia

Floppy kid syndrome (metabolic acidosis without dehydration in kids) was first reported in the spring of 1987. This unique condition was first recognized in herds on the west coast and in Canada. It has more recently been recognized throughout the United States. With the increase in popularity of Boer and other meat goats, there has been an apparent increase in reports of floppy kid syndrome in Texas and other states where meat goat numbers are increasing.

The affected kid is normal at birth and develops a sudden onset of muscular weakness (flaccid paresis or paralysis) or ataxia at 3 to 10 days of age. Cases tend to occur most commonly late in kidding seasons. Affected kids are depressed and cannot use their tongues to suckle but can swallow and have marked paradoxial metabolic acidosis (anion gap HCO_3, normal chloride). There are no signs of diarrhea, respiratory disease or other signs.

The clinical signs of paresis/paralysis/ataxia in 3- to 10-day-old kids and supporting blood chemistry value are diagnostic features. The causative agents have not been identified. However, infection and endotoxemia could likely be the cause. Differential diagnoses include white muscle disease, abomasal bloat, colibacillosis, septicemia or enterotoxemia.

Early detection and correction of a base deficit as well as good supportive care are critical. Since the etiologic agent is not known, no preventive or treatments, aside from correction of electrolyte imbalance and supportive care, are recommended. Less severe cases are most commonly treated by owners with oral bicarbonate or peptobismol at the onset of signs. Kids may need to be fed milk by stomach tube. More severe cases may require blood chemistry and intravenous fluid. A mixture of 2 teaspoons of baking soda and ½ teaspoon salt in a quart of water has been used successfully. Give 4 ounces of this mixture by mouth every 4 hours. Recovery has been seen in 12 hours.

Polioencephalomalacia (thiamine deficiency) in goats is increasingly recognized under intensive management conditions when goats are fed more concentrated feed to encourage accelerated growth or increased production. The cause of this disease is either a thiamine deficiency or an inhibition of thiamine activity. In goats, the disease typically targets animals that are two months to three years of age. The condition has also been seen in young goats consuming thiamine-deficient milk replacers. Sudden changes in diet, the use of horse feed high in molasses, the feeding of moldy hay, the dietary stress of weaning, deworming with levamisole and thiabendazole, some species of a fern and overdosing of amprolium have all been associated with cases of caprine polioencephalomalacia.

Clinical signs may occur acutely or slowly over several days. The initial signs are depression, anorexia and(or) diarrhea with gradual expression of a neurological dysfunction over a period of one to seven days. Early neurological signs include excitability, elevation of the head while standing, drowsiness, circling, ataxia, muscle tremors and apparent blindness. As the disease progresses, rigidity, recumbency, nystagmus and convulsions are observed. If there is no therapeutic intervention, goats will usually die between 24 to 72 hours after onset of clinical signs.

Diagnosis is primarily based on the history and observation of clinical signs under field conditions. Other diseases with similar signs such as enterotoxemia and pregnancy toxemia should be ruled out. The critical nature of this disease demands swift intervention by a veterinarian. Goats that are diagnosed during the early stages of polioencephalomalacia respond well to parental administration of thiamine. The vitamin can be given at a dose of 10 to 20 mg/kg intramuscularly or subcutaneously three to four times, for 24 hours. Thiamine hydrochloride is more frequently used. If only multiple B vitamins are available, be sure to dose according to thiamine content. Some cases may require intravenous fluids and tranquilizers.

Common control measures include an increase in roughage feeding with a concomitant decrease in concentrate feeding, avoiding moldy feeds and feeds containing a large amount of molasses such as horse feed. Weaning procedures should be reviewed to ensure that kids are obtaining adequate roughage before weaning. In problem herds, supplementation of the grain ration with thiamine (50 to 60 mg per animal daily) or brewer's yeast may be initiated.

Source: Mobini, S. 1999. *Herd Health Management Practices for Goat Production.* Pages 13-22 in *Proc. 14th Ann. Goat Field Day,* Langston University, Langston, Oklahoma. http://www.luresext.edu/goats/library/field/herd_health99.htm.

Corn Gluten Feed for Goats and Sheep

Corn gluten feed is used by goat and sheep producers, primarily in the pelleted form as a substitute for corn, and is purchased in single bags. It is a by-product from the manufacture of cornstarch and corn syrup and is often used as a source of both protein and energy in the diet of lactating or heavily pregnant does. It is a medium quality feed, which contains almost the same energy as barley and less than corn. The protein in corn gluten feed is degraded relatively rapidly in the rumen so it functions best with a diet that is adequate in soluble energy. Since it is low in some nutrients, especially calcium, it is important to provide a high-quality mineral mix.

Corn gluten feed has medium palatability and may be included in the ration at up to 1 pound per head of goats and 1½ pound per head of sheep. It can also be mixed with other feeds to decrease the costs of the ration. In most cases, forages are less

expensive than grains and corn gluten is less expensive than most other concentrate feeds. Corn gluten is used for convenience when extra nutrition is needed to supplement the forages in the diet.

In summary, corn gluten feed is commonly used as a medium-quality protein and energy source. It may be used with both mature and growing goats and sheep. It is most economically used for convenience when fed in relatively small amounts to the goats and sheep.

Typical Analysis of Corn Gluten Feed

Dry matter	90%
Crude Protein	18.0%
Fat	03.5%
Crude fiber	08.0%
Neutral Detergent Fiber	45.0%
Acid Detergent Fiber	13.0%
Calcium	00.3%
Phosphorus	1.00%
Total Digestible Nutrients	83.0%
Net energy – Lactation	0.87 Mcal

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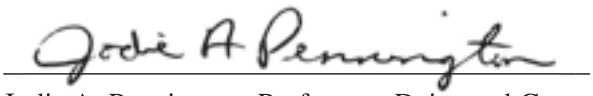

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