

SINCE



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SMALL RUMINANT EDITOR
August 2023



1929



SINCE

MANAGING PARASITES WITH GOOD NUTRITION

WE ALL KNOW THAT IF WE EAT BETTER, WE FEEL BETTER.

For many years, we have also known that protein nutrition can affect a sheep's resilience to gastrointestinal parasites and it can also reduce the consequences of parasite infections. Therefore, as sheep producers it is important to pay close attention to what our sheep are eating.

To better understand how nutrition can affect parasitism, we need to take a closer look at what happens within growing animals and reproducing animals. One of the first signs that we see is the reduction in feed intake. Research by Sykes et. Al., 1988 and Coop et al., 1982 found that feed intake is often reduced by as much as 15 to 20%. Another problem that is occurring internally is the loss of protein and tissue damage within the digestive tract. This relates to decreased efficiency in the utilization of feeds. Both of these cause production losses through decreased growth, decreased milk production and to some extent decreased reproductive efficiency.

Numerous research studies have looked at how to improve production and growth without the use of anthelmintic (dewormer) treatments. These studies found that increasing the metabolizable protein in the diet during times of protein scarcity enables sheep to become more resilient to parasite infections and may also contribute to developing immunity to infections. Research looked at a number of different protein supplements including soybean meal, fish meal, cottonseed meal, urea and dried distillers grains with solubles (DDGS). Many of these studies have also found a reduction in fecal egg counts over a long term period when dietary protein levels were increased.

As animals react to parasite infections and the scarcity of nutrients, they tend to allocate how they will use their feedstuffs. Coop and Kyriazakis, 1999, state a possible ordering of priorities to the animals. Young, growing animals will tend to focus on maintaining body protein, then acquiring immunity to parasites, followed by protein gain and then maintaining body lipids or body condition. For reproducing animals, they state that maintenance of body protein is the priority followed by pregnancy or lactation, then expression of immunity and body condition.

So, how can we as sheep producers use this information for our flocks? Certainly, looking at nutrition and protein in particular can be useful in an integrated approach to internal parasite management. Protein supplementation during times of the year when sheep consume lower quality feed would certainly help sheep to better manage parasites. Increasing metabolizable protein by as much as 20 to 25% was indicated in research by Datta et. al., 1998, Donaldson et. al., 2001 and Houdijk et. al., 2003.

The benefits of increasing protein levels are especially seen with ewes rearing multiple lambs when they are in relatively poor body condition and with young growing lambs that have the genetic potential for fast growth. Further research is needed to determine the best protocol for protein supplementation to develop immunity and resilience to gastrointestinal parasites. For now, producers should monitor protein levels in rations throughout the year to ensure that feeds are meeting the national resource council's recommendations.

Penn State Extension

FOUR TIPS TO SUPPORT SHEEP FERTILITY IN THE FALL

SHEEP PRODUCERS CAN SUPPORT BREEDING SUCCESS THROUGH HIGH-QUALITY NUTRITION.

The transition from green to brown pasture is a key indicator that forage quality is on the decline. Providing your flock with supplement before forages turn and throughout the fall and winter ensures ewes receive the nutrition they need to support breeding and reproduction.

Reliance on grass as the sole nutrition source can take a toll on everything from ewe body condition to breeding and reproduction. Adding supplement to the diet, even in the short-term, can positively impact the flock's productivity and

Augusta Co-op Solutions

Co-Op, 28% Sheep & Goat Block, 25 lbs.

A supplement block for sheep and goats older than 60 days of age that are maintained on pasture. Adds protein and energy to the diet. Provide one block per 20 head of animals along with adequate pasture or hay. Consumption should be 2 to 3.5 ounces per head per day.



Crude Protein min 28.0%

Crude Fat min 1.0%

Crude Fiber max 9.5%

SKU - 624



For item details,
scan the QR code.

continued on page 2

your profitability.

MAXIMIZE FALL FORAGES AND SUPPORT SHEEP FERTILITY WITH THESE FOUR NUTRITION TIPS:

1. MAKE MINERAL THE FOUNDATION

The foundation of any sheep nutrition program is a high-quality mineral. It ensures ewes have all the nutrients they need to support a healthy pregnancy, parturition and more.

Even the highest quality forages can fall short in providing ewes with necessary mineral nutrition, specifically calcium, magnesium, cobalt, vitamins A and E and selenium. It's important to remember pasture quality can change on a dime and forages that contained ample mineral levels last week might not today.

Consider offering Purina® Wind and Rain® Sheep Mineral year-round so ewes have adequate mineral reserves when they need it most – like after breeding, during gestation and at parturition.

2. ACT QUICKLY WHEN FORAGE CONDITIONS CHANGE

Quality forage will contain somewhere between 18 to 21% protein. When that grass starts to go dormant, protein can drop to around 5%.

Ewes would have to consume more forage to make up for the steep drop in protein value, which isn't feasible or cost-effective in most real-world scenarios.

Feeding a mineral and protein supplement can help provide additional nutrients needed to support sheep fertility, especially when forage quality and quantity decline. A good rule of thumb is to start supplementing protein 30 to 45 days before grass starts to visually decline.

3. MAKE THE MOST OF YOUR FORAGES

A key to profitability for nearly any sheep operation is using their home-grown or purchased forages as efficiently as possible. Maximizing forages are especially important as many producers face persistent drought.

That's where strategic supplementation comes in. Selecting a supplement with intake modifying properties can help ewes get more out of the forages they consume. Purina® Accuration® Hi-Fat Block was designed so sheep only consume what they need and nothing more.

As forage quality declines, Purina® Accuration® Hi-Fat Block supplement consumption will rise. Conversely, if forage quality is good, ewes won't consume as much.

4. MONITOR SUPPLEMENT CONSUMPTION

Once you set out supplement, check in and ensure ewes are hitting target consumption on a weekly basis.

Don't forget supplementation is an ongoing process. It's important to keep an eye on consumption to make sure ewes receive the full benefits of supplementation.

Keep consumption on track with these best practices:

- Set out one supplement tub of Purina® Accuration® Hi-Fat Block per 20-25 head.
- Monitor consumption, it should be approximately a half pound to one pound per ewe per day.
- If consumption is too low, move tubs to frequently trafficked spots like loafing areas, next to the water source, near shelter and underneath sheds.
- If consumption is too high, spread tubs out and move them further away from heavy traffic areas.

Investing in a high-quality sheep nutrition program before forages start to decline is an investment in your flock's overall productivity. Contact your nutritionist to get started today.

Purina Mills

Augusta Co-op Solutions

Purina Wind & Rain Sheep Mineral 50 lbs.

Purina® Wind & Rain® Sheep Mineral is formulated with our patented and proven Wind & Rain® technology to help reduce clumping, therefore reducing waste while saving you time and money. Now contains Availa® zinc and manganese to support hoof health and reproductive efficiency.



SKU - 3003807

Augusta Co-op Solutions

Purina Accuration Sheep & Goat Hi-Fat Tub, 200 lbs.

Purina® Accuration® Sheep & Goat Hi-Fat Block is a premium, weather-resistant, protein block with fat, vitamins and minerals added to balance nutrient deficiencies in fair quality forages. Designed specifically for sheep and goats, Purina® Accuration® Sheep & Goat Hi-Fat Block provides convenience and peace of mind for your entire herd.



SKU - 3004804-634

FEEDING MARKET GOATS FOR SHOW

HELPFUL TIPS ON MAKING SURE THE GOAT RECEIVES APPROPRIATE PROTEIN, ENERGY, AND MINERALS. ADDITIONALLY, DETAILS ON ADDITIVES IN CONCENTRATE FEEDS, ROUGHAGES, AND MORE.

Providing proper nutrition to your goat kid is important for that kid to reach its full potential at the market goat show. Making sure that the goat receives appropriate protein, energy, and minerals allows the goat to not only grow to reach market weight, but also ensures that the goat develops muscle and reaches an appropriate fat cover for show day. Proper nutrition begins by selecting appropriate concentrates, roughages, and minerals for your goat and providing good-quality water daily.

CONCENTRATES

Concentrates is another name for grains. Most grain mixes range from 14%–18% protein, with many exhibitors feeding a 16% grain mix. Many grain mixes also add a fat source to provide additional energy for developing fat cover. Three to five percent fat is very common in commercial feeds. Start by feeding a small amount of grain, ¼ –½ lb. per feeding two times per day, and over a week to ten days gradually increase the amount until the kid consumes all the grain in 10–15 minutes. This varies by weight as explained in the table below. Many commercial goat feeds are a complete feed, which means that the grain mix also includes a fiber source for rumen development.

ADDITIVES IN CONCENTRATE FEEDS

Commercial concentrate feeds often include two additives to maintain goat health. The first additive is a coccidiostat that prevents coccidiosis, an internal parasite that causes diarrhea. If severe, coccidiosis can result in death. The feed label on commercial feeds intended to control coccidiosis will indicate that the feed is medicated with either Rumensin or Deccox. The second additive is ammonium chloride. Ammonium chloride is fed to prevent urinary calculi, which blocks the urethra in show wethers. When the urethra is fully blocked, the animal is unable to urinate. Urinary calculi can also result in death of the animal.

ROUGHAGES

Most show animals are fed hay to provide the roughage portion of the diet. Goats should receive a handful of hay each feeding to keep the protozoa in the rumen functioning well for digestion. The goal with feeding hay is to prevent the rumen from becoming too acidic. This causes an issue called acidosis, which results in the animal eating less than desired. Some exhibitors will provide free-choice access to baking soda to neutralize the acidic environment in the gut.

WATER

Always provide clean and fresh water. Be sure to scrub water buckets on a regular basis to encourage water consumption. Poor-quality water or not enough water can affect feed intake. Reduced feed intake will affect animal growth.

VITAMINS AND MINERALS

Commercial feeds are formulated to meet the vitamin and mineral requirements of animals when fed as directed. Therefore, you do not need to provide additional vitamins and minerals if you are feeding according to the label. However, some custom grain mixes do not include minerals. In these cases, be sure to provide access to a high-quality salt and mineral mix formulated for meat goats.

HOW MUCH DO I FEED?

Market goats should be consuming 2.5%–3.0% of their body weight daily in dry matter. Dry matter is the amount of feed the animal should consume without any water in it. All feeds have a portion of their weight as water. Most feeds typically are 88%–90% dry matter. Below is a table to help you with feeding amounts at 2.5%–3.0% body weight.

| GOAT WEIGHT | DAILY DRY MATTER INTAKE, LB. | DAILY FEED DELIVERED, LB. |
|-------------|------------------------------|---------------------------|
| 40 | 1.0-1.2 | 1.1-1.3 |
| 50 | 1.25-1.5 | 1.4-1.7 |
| 60 | 1.5-1.8 | 1.7-2.0 |
| 70 | 1.75-2.1 | 2.0-2.4 |
| 80 | 2.0-2.4 | 2.25-2.7 |
| 90 | 2.25-2.7 | 2.5-3.0 |
| 100 | 2.5-3.0 | 2.8-3.4 |

For more information contact your Augusta Co-op sales representative or veterinarian.

Augusta Co-op Solutions

Augusta, 17% Show Goat, Medicated, Textured, 50 lbs.

A grain mix for goats being fitted for showing. Now includes Actigen, an all-natural product that improves digestive health and animal performance. Contains Rumensin for the prevention of coccidiosis caused by *Eimeria crandalis*, *Eimeria christenseni*, and *Eimeria ninakohlyakimovae*. Contains Monensin (as Monensin sodium) 20 grams/ton.



SKU - SHOWGOAT



For item details, scan the QR code.



AUGUSTA CO-OP

| | AUGUSTA STOCK FEEDS | | | AUGUSTA SHOW FEEDS | | | | |
|-------------------|---------------------|--------------|-------------|--------------------|----------------|------------------|-----------|---------------|
| | Lamp Creep | Sheep & Lamb | Goat Grower | Show Lamb | Show Lamb Plus | Show Goat Pellet | Show Goat | Augusta Sheep |
| SKU | 40101 | 40161 | GOATGROW | SHOWLAMB | SHOWLAMBPLUS | SHOWGOAT PLAIN | SHOWGOAT | SHEEPMIN |
| | Pellet | Texture | Pellet | Texture | Texture | Texture | Texture | Mineral |
| BULK | X | X | X | X | X | X | X | |
| BAGGED | X | X | X | X | X | X | X | 50 lbs. |
| PROTEIN, % | 16.0 | 12.5 | 16.0 | 18.0 | 16.0 | 16.5 | 17.0 | |
| FAT, % | 2.0 | 2.5 | 2.5 | 3.5 | 2.5 | 4 | 4.0 | |
| FIBER, % | 6.5 | 4.5 | 16.0 | 12.0 | 12.0 | 10 | 10.0 | |
| BRAND | AUGUSTA | AUGUSTA | AUGUSTA | AUGUSTA | AUGUSTA | AUGUSTA | AUGUSTA | CARGILL |

Featured products only. Additional feed and mineral options are available. Please contact your local store or sales representative with questions.

SHEEP & GOAT LINEUP

| MINERALS | | | | BLOCKS | | | | |
|---------------|--------------|-----------------|------------------|--------------|-------------|-----------|-----------|----------|
| Supreme Sheep | Supreme Goat | Blue Print Goat | Blue Print Sheep | Sheep & Goat | Accuration | Sheep-lyx | Goat-lyx | RB07273 |
| 96297 | 96216 | 67148 | 67379 | 624 | 3004804-634 | 7248 | 749B60 | RB07273 |
| | | | | | | | | |
| Mineral | Mineral | Mineral | Mineral | Block | Tub | Tub | Tub | Tub |
| | | | | 25 lbs. | 200 lbs. | 60 lbs. | 60 lbs. | 125 lbs. |
| 25 lbs. | 25 lbs. | 50 lbs. | 50 lbs. | | | | | |
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| | | | | | | | | |
| TFC | TFC | HUBBARD | HUBBARD | TFC | PURINA | CRYSTALYX | CRYSTALYX | TFC |



AUGUSTA
SHOW FEED
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ALL
 AUGUSTA
 SHOW FEEDS
 CONTAIN
 CHROMIUM

PREVENT PARASITES THROUGH GRAZING MANAGEMENT

GRAZING MANAGEMENT AND GENETIC SELECTION CAN HELP YOUR FLOCK MINIMIZE THE IMPACT OF PARASITES.

Parasites continue to plague many sheep and goat producers throughout the grazing season. Internal parasites decrease growth rates and in high levels can even cause death. However, sheep and goat producers can follow several practices to minimize the impacts to their flock or herd. These practices center on grazing management, but can also include genetic selection principles.

Livestock pass internal parasite eggs in their manure. These eggs then hatch and go through several larval stages until they reach an infective stage. This can take as little as six days to go from egg to infective stage. Therefore, producers can use grazing rotations to stay ahead of this cycle. A key is to subdivide fields so that the animals have enough to eat for four to five days. Fields can be subdivided using temporary fencing such as poly-wire or electric net fence. These smaller areas allow sheep or goats to graze the forages present in the field more evenly. Rotate animals into a new field within five days in order to stay ahead of the parasite life cycle. In other words, the parasite larva reach the infective stage after the sheep or goats have moved out of that field.

Larva can survive for long periods, even as long as 120 days, when weather conditions are cool and moist. However, when the weather is hot and dry, those parasites can die very quickly. Therefore, the challenge comes when producers balance between these weather patterns to ensure that infective parasite larva are no longer present in the pastures. This can be much easier to write about than accomplish because the goal is to keep fields lush and growing, which creates a more ideal environment for the parasites. Harvesting fields for hay is one way to open up those areas to heat and sunlight in order to kill parasite larva. Another option is to have long rest periods so that the parasites die before the sheep return to that field to graze.

Parasites can also go into a hypobiotic or dormant state inside sheep or goats. Parasites can remain in this state until environmental conditions improve. Sheep and goat producers often see problems when this occurs during the summer. Animals graze pastures short during extended hot and dry weather conditions. Then, when weather conditions improve following a rain, a sudden parasite “bloom” occurs. Parasites that remained inside animals as well as parasites that remained in the egg stage develop very quickly to an infective state. This leads to very large numbers of infective parasites. Therefore, adequate rest periods of 65 days or more between grazings can be critical during the summer!

Multi-species grazing also contributes to breaking the parasite life cycle. While sheep and goats share many of the same parasites, cattle and horses do not. Cattle and horses grazed with sheep and goats help to break parasite life cycles because the sheep and goat parasites cannot survive in those other species. Sheep and goats can graze fields at the same time as cattle or horses, or they can graze in a leader-follower system. The leader-follower system allows one species to graze and then after an adequate rest period and forage regrowth, the other species grazes the field.

Another option to prevent parasite infections is to leave at least four inches of forage in the fields when animals move to the next field. Some producers will rotate sheep or goats at taller heights. Most parasite larva are found in the first two inches of forage growth, so the goal is to move the sheep and goats out of a field before they graze down to levels where parasite larva will be ingested.

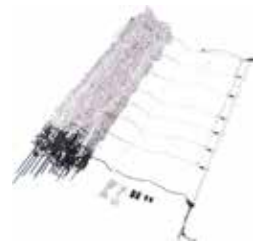
A final option is to consider the genetics of the sheep and goats. Producers should keep records that identify when they treat animals for parasites. This information should include who was treated, date treated, and product used. Producers should also track withdrawal dates to ensure that no medication residues are present when sheep or goats go to market. Producers should cull animals that they consistently treat more often than most animals in the flock or herd. This allows producers to develop genetics that are more resistant to parasite infections. The parasites will still be present, but the animal’s immune system can better withstand the infection.

Penn State Extension

Augusta Co-op Solutions

Gallagher Electric Sheep Netting 35 in x 164 Ft

A portable netting fence that has 9 horizontal twines (8 conductive); is 35” tall installed and has large white plastic vertical struts every 12”. White PVC posts are built into the mesh every 12.5’. When energized, it is nearly an impenetrable mesh to sheep, goats, coyotes and dogs. The black and white colors provide 24/7 visibility to both humans and animals against light and dark backgrounds.



SKU - G201000

EVENTS / CALENDAR

TO VIEW ALL CALENDAR EVENTS,
SCAN THE QR CODE.



SMALL ENGINE OPEN HOUSE

Friday, August 25 | 8AM - 5PM &
Saturday, August 26 | 8AM - 1 PM

1205B Richmond Ave. | Staunton, VA 24401

Come in to speak with knowledgeable staff members/vendors and secure savings on select Husqvarna, STIHL, and Oregon equipment!

FALL BOOKING

Monday, August 14 - Saturday, August 26

All Store Locations

Take advantage of the best prices of the season on all of your animal health, equipment, and farm supply products! Contact your local store or sales representative for a full sale list and to place orders.

AUGUSTA CO-OP EQUINE, WINE & DINE

Wednesday, September 13 | 5 PM - 8 PM

Lexington Horse Center

487 Maury River Rd. | Lexington, VA 24450

Augusta Co-op has secured the best prices of the year on fencing, equine supplies, supplements, animal health items, feed, equine related farm equipment and more! Vendors will be on site. This organized event, works similar to a 'pre-order', or 'booking' and is not available in-store. Plus, hear from industry leaders on innovation & technology during your complimentary dinner and wine sampling. Door prizes, free goodie bags and more!

RSVP required to Allison Bagley

ABagley@AugustaCoop.com

BACK TO SCHOOL SALE

Monday, September 11 - Saturday, September 16

Staunton Location only.

1205B Richmond Ave. | Staunton, VA 24401

25% off all clothing, boots, and accessories!

In-stock items only. Exclusions Apply. See store for details.

FLOCKTOBER CELEBRATION

Monday, October 2 - Tuesday, October 31

Augusta Co-op – ALL LOCATIONS

Celebrate all things poultry during Flocktober! Visit any Augusta Co-op store during the month of October for deals on a variety of poultry products & feed.

ROAD TO THE RING

Wednesday, November 1 | 5:30 PM - 8:00 PM

Blue Ridge Community College – Plecker Center

1 College Ln. | Weyers Cave, VA 24486

A hands on experience designed for all 4-H/FFA Livestock Showmen. Presenters will inspire you to obtain the skills and techniques needed for success in the show ring! Become a better livestock showman, marketer, herdsman and learn the latest in nutrition and overall animal health.

RSVP required to Allison Bagley

ABagley@AugustaCoop.com. Dinner will be provided.

Please note: Road to the Ring will be hosted at a NEW location this year.

SHENANDOAH VALLEY BEST 2023 WINNER

Thank You for Your Support!
Voted Best Feed & Farm Supply, Seed Dealer, & Outdoor Equipment!

Farm Supplies • Feed • Home & Garden • Clothing • Pet • Hardware

Everyone can shop Augusta Co-op!
Visit us in Fairfield, Staunton, Weyers
Cave & Scottsville or shop online at
AugustaCoop.com

