

TIMELY TOPICS

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Prepare Rams for Breeding Season

Barry Whitworth, DVM, Area Food/Animal Quality and Health Specialist for Eastern Oklahoma

The breeding season for most sheep breeds in the northern hemisphere normally runs from August through December. Most sheep producers will introduce their rams to the ewe flock beginning in late August or early September. For the sheep operation to be profitable, 95% of the ewes must become pregnant during the breeding season. To have high pregnancy rates, several husbandry practices need to be managed throughout the year. One critical factor for a successful breeding season is developing and managing rams.

Managing rams for the breeding season is a yearlong process. The process begins with selecting breeding prospects for the flock. Most rams are selected based on physical appearance. Obviously, an animal needs to have physical characteristics that are appealing, but producers should also consider genetic information. Sources of genetic information for the prospect come from reproductive records of the sire and dam, or in the form of Expected Breeding Values (EBVs). EBVs are heritable traits that can be measured. More information about EBVs can be found at National Sheep Improvement Program ([nsip.org](https://www.nsip.org)).

Since physical condition plays an important role on reproductive potential, nutrition needs to be emphasized. Onset of puberty is influenced by age and weight. Puberty starts when young rams reach a weight of about 65% of their mature body weight. This will require young rams to be fed a high-quality diet. For rams to perform at their reproductive best, they should start the breeding season in a body condition score (BCS) from 3.5 to 4 (1=emaciated and 5=obese). This requires rams to be body conditioned scored a few months before the breeding season. Rams that score below 3 will need to be fed a good plain of nutrition to ensure a BCS of 3.5 to 4 before being turned out. Also, rams that are in poor body condition often fail breeding soundness evaluations.

Another important tool in improving reproductive efficiency in the flock is a Breeding Soundness Evaluation (BSE). Sheep producers sometimes bypass a BSE due to time, labor, and cost. However, rams that pass a BSE will improve the overall production of the flock with increases in the number of lambs born, lambing rates, and other economic parameters. The evaluation has two components, a physical exam and a semen evaluation. The physical exam should inspect the mouth, teeth, and eyes. Age should be determined for the animal. Confirmation of the animal needs to be checked. There should be no issues with mobility so special attention should be given to legs and feet. The ram should be assigned a body condition score. The external reproductive organs (prepuce, penis, testicles, epididymis, scrotum) should be inspected. The scrotum should be measured and be at least 30 cm in diameter for ram lambs and 32 cm for older rams. The testicles should be palpated for abnormalities. Once the physical exam is completed, the ram should be collected and the semen evaluated. At least 50% of the sperm cells should have progressive motility and 80% of the sperm should be normal. Any findings of white blood cells in the ejaculate should be investigated for infectious causes such as *Brucella ovis*.

Environmental conditions may negatively impact sperm. For example, this summer has seen some very high temperatures. Extreme heat is detrimental to sperm production and morphology. Producers need to manage rams to prevent the negative impacts of hot weather. One of the best tools to combat heat stress is to provide shade and

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abundant amounts of cool fresh water. Wool lambs may benefit from shearing. Cold weather can be detrimental as well. Rams need to be protected from extreme cold temperatures.

Disease prevention is essential for a healthy flock. The number one health issue for sheep is internal parasites, so internal and external parasites need to be controlled. Rams need to be vaccinated for *Clostridium perfringens* Types C and D as well as tetanus. Producers should consult with their veterinarian for additional information on vaccination for sheep flocks. Certain diseases in rams such as *B. ovis*, pizzle-rot, and urinary calculi can affect fertility. Producers may want to test for some of these diseases such as *B. ovis*. Other disease conditions will require constant monitoring for abnormalities.

Lastly, producers need to use proper male to female ratios during the breeding season. Mature rams can breed 30 to 50 ewes depending on the situation. In contrast, experts advise that ram lambs should be exposed to 15 to 30 ewes. Also, producers need to continually monitor rams during the breeding season. Any trouble with mobility, illness, or extreme loss of body condition could result in fewer bred ewes. Producers need to be ready to replace rams with issues.

Reproductive efficiency of the flock depends on several factors. Ewes and rams are equally responsible for a successful breeding season. However, if one ewe has issues, a producer loses one set of lambs. If a ram goes bad, the producer stands to lose much more. This is why it is very important to manage rams carefully for a successful breeding season. Oklahoma State University Cooperative Extension has a fact sheet that provides more detailed information on ram Breeding Soundness Evaluations. The fact sheet can be found at local OSU County Extension offices or at <https://extension.okstate.edu>.

References

Maquivar, M. G., Smith, S. M., & Busboom, J. R. (2021). Reproductive Management of Rams and Ram Lambs during the Pre-Breeding Season in US Sheep Farms. *Animals : an open access journal from MDPI*, 11(9), 2503.

Alternative Feedstuffs

Earl H. Ward, Area Livestock Specialist

As feed prices remain high, it leaves more people looking for alternative feeds and forages for their animals. The first question that needs to be asked is what is available? To get that answer you will have to step out of the common mindset of feedstuffs, because like humans, animals can capitalize on the nutrient value of an enormous array of products and byproducts. For instance, dairies in Kansas feeding chocolate, a Nebraska grower using ice cream sprinkles and french fries, or an Illinois feeder using discarded candy from a nearby candy factory. These may be extreme examples but for some producers these untraditional feedstuffs may provide a viable option for supplying nutrients. Once options have been identified, it is time to look at a guaranteed or sample analysis and costs. The cheapest feedstuff available is not always the most cost effective.

Below are some concerns that need to be considered when looking at alternative feeds or forages.

1. **Economics** – be sure to look at the total cost, initial cost plus freight, on a dry matter basis. Break those costs down even further to cost per pound of CP and per pound of TDN.
2. **Nutritional value** – the variation in the nutrient composition is great between byproducts but also within a byproduct. For instance, if you were to look up the nutritional CP of corn gluten feed it would say about 22%,



but the truth is that that value is an average and it could vary from load to load of product as much as 19% to 32%.

3. **Additional Nutrients Required** – most byproducts tend to be high in phosphorus, therefore it would be required to add additional calcium to the ration to keep the appropriate Ca:P ratio of 2:1.
4. **Limitations** – most ingredients have feeding limitations associated with them, either due to a toxicity, palatability, moisture content, etc.
5. **Handling and Storage** – ingredients can be offered in any shape or form. Be sure to have the equipment and facilities to handle alternative feedstuffs.

Feeding alternative feeds can be an economical relief, but it is highly suggested to do your homework on the ingredients and have samples tested before making a financial investment. If you need any help evaluating your feed options, contact your county's OSU Extension office.

Freezer Beef – Market Dynamics and Considerations

Scott Clawson, Area Ag Economics Specialist

You may have been living under a rock if you have not had discussions with or seen social media posts for cattle producers selling beef that they have raised. It has been a positive development for production agriculture coming from a negative pandemic experience. The space today is more crowded than it was previously, making it a bit more challenging but also giving producers an opportunity to differentiate their product.

Traditional commercial production agriculture is largely considered a “price taking” activity. This just means that a commercial cow-calf producer or wheat grower has little to no impact on their sales price. They are resigned to accepting the highest per pound bid at the sale barn or what the elevator is offering per bushel. Feeding out calves and having them processed moves the producer to a “price making” situation. In other words, we move from mostly taking what we are given to developing an entire program based off our genetics, management, and story that we hopefully price at a profitable level. The more popular that this activity becomes, the tighter the profit margins will be. For instance, I know more than five and maybe ten producers that I can buy locally born and raised beef from. What differentiates them? It might be some level of convenience or a history of buying beef from them. Ultimately though, price is important. My guess is that eventually with so many people in the market, the profitable operations will be able to control costs and/or fetch a higher price based on a feature or specialty (actual or perceived) that the others don't offer.

I think most people from my generation would associate Gatorade with Michael Jordan. They might even be able to sing “Like Mike” from the commercials. This business partnership was a perfect marriage of product and spokesman. If the greatest basketball player on the planet drinks Gatorade on the court, then that is exactly what I need to drink when we are working out or playing sports. More technically put, that appeal increases demand for that product. Most will gladly pay an additional \$0.50 per bottle over a competitor's price to get what Mike drinks. Coming back to the beef discussion, what attributes, management practice, advertising, or convenience aspect will separate you from others? What characteristic of your product is different or perceived to be different that would encourage a buyer to buy your product instead of another? Or, what attribute is different that will allow for a premium to be paid?

There is roughly a two-year time lag from when a breeding decision is made to harvest. For context, beef sold in the fall of 2024 is the result of a cow being covered today. This is an initial point we can differentiate our product. Utilizing


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artificial insemination or live breeding to a bull with exceptional carcass genetics or a breed with that reputation offers a marketing point. After this, we can consider management. No hormones or antibiotics, grass fed, grain finished are examples of management choices that may or may not add value. Additionally important is how we use those decisions to market in a way that appeals to the customers perceptions of health, product quality, lifestyle, etc. Remember that those previously mention choices have impacts on calf performance, harvest quality, and cost position. Strong cost records will help you price your product at a level that is profitable. Maybe you have a base of customers that fit your plans exactly. However, moving this venture to a larger scale may require more strategic planning. For more assistance or information, contact your local OSU Extension Educator.

<div>  Value of Gain Calculation </div>						
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OK Weighted Average Report 8/26/22						
Weight	\$/lb	Value/hd	Added lb.	Added \$	\$ /lb Added	
325	\$ 2.2815	\$ 741.49				
379	\$ 2.1888	\$ 829.56	54	\$ 88.07	\$ 1.63	
422	\$ 2.1552	\$ 909.49	43	\$ 79.94	\$ 1.86	
473	\$ 2.0745	\$ 981.24	51	\$ 71.74	\$ 1.41	
521	\$ 2.0332	\$ 1,059.30	48	\$ 78.06	\$ 1.63	
572	\$ 2.0035	\$ 1,146.00	51	\$ 86.70	\$ 1.70	
625	\$ 1.8614	\$ 1,163.38	53	\$ 17.37	\$ 0.33	
670	\$ 1.8463	\$ 1,237.02	45	\$ 73.65	\$ 1.64	
727	\$ 1.8234	\$ 1,325.61	57	\$ 88.59	\$ 1.55	
775	\$ 1.7836	\$ 1,382.29	48	\$ 56.68	\$ 1.18	
821	\$ 1.7744	\$ 1,456.78	46	\$ 74.49	\$ 1.62	
924	\$ 1.6887	\$ 1,560.36	103	\$ 103.58	\$ 1.01	

Long Stocker Run		Short Stocker Run		Heavy Stocker Run	
Starting		Starting		Starting	
325	\$ 741.49	325	\$ 741.49	625	\$ 1,163.38
Ending		Ending		Ending	
924	\$ 1,560.36	521	\$ 1,059.30	924	\$ 1,560.36
Total Gain	Δ Value	Total Gain	Δ Value	Total Gain	Δ Value
599	\$ 818.87	196	\$ 317.81	299	\$ 396.98
VOG		VOG		VOG	
\$ 1.37		\$ 1.62		\$ 1.33	

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