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Breeding Bull Management

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For most cow/calf operations, bulls are a substantial investment. In fact, some experts believe in actual dollars, bulls represent the largest investment in cow/calf operations. They also have a dramatic impact on the future genetics in the herd. For these reasons, producers should manage bulls for optimal production.

A breeding bull should be considered an elite athlete. To perform at his best, the bull must be in top physical condition. A bull needs to be on a good nutrition program that meets his energy, protein, vitamin, and mineral needs. At the beginning of the breeding season, a bull should be in a body condition score of 6 to 7 on a scale of 9. Producers should avoid overfeeding a bull since an overweight bull is more prone to lameness issues as well as accumulating fat in the neck of the scrotum which has a negative association with spermatogenesis. A bull generally loses weight during the breeding season, so a lightweight bull may have trouble completing the breeding season. Also, excessive weight loss is associated with decrease sperm production and sperm abnormalities.

A good nutrition program will promote good health; however, bulls still should be vaccinated for diseases. At the very least, bulls should be given the same vaccinations as the cow herd. Emphasis should be placed on reproductive diseases such as Bovine Diarrhea Virus, Infectious Bovine Rhinotracheitis Virus, Leptospirosis, and Campylobacteriosis. Producers might want to give a Clostridial vaccine (blackleg) since fighting injuries may be a problem in bulls. Although there is debate about the effectiveness of Anaplasmosis vaccine, a producer might want to consider bulls as candidates for the vaccine since bulls may not consume enough medicated mineral to protect them from the disease.

Parasite management is a must for bulls. Some studies indicate that bulls have more issues with parasites and will require more treatments to control internal and external parasites than cows. Bulls may need to be dewormed more like young cattle than the cow herd. Horn flies tend to be more problematic with bulls which will require additional treatments.

When practical, bulls should be housed in individual pens when not being used for breeding. When this is not an option, bulls should be placed in pens with plenty of room. Bulls of the same age may be housed together, but operations should avoid placing young bulls with old bulls. Also, following the breeding season, bulls in poor body condition should be placed together to optimize nutrition and weight gain.

According to Dr. Mark Johnson, PhD, Professor and Extension Specialist with Oklahoma State University, two- to six-year-old bulls should be in their prime. This group should be able to breed 25 to 35 cows in a timely fashion. Younger bulls will need to be placed with fewer cows. Producers can base the number of cows that a young bull can breed by using his age in months. A 12-month-old bull should be able to handle 12 cows and 13-month-old should be fine with 13 cows and so on.

Bull Breeding Soundness Evaluation (BBSE) should be conducted on all bulls that will be used during the breeding season. A BBSE is a procedure performed by a veterinarian that ensures a bull has met a minimal set of standards that reflect his reproductive potential. The exam is not a guarantee that the bull will breed cows because some bulls are not



aggressive breeders. The veterinarian will do a physical exam, reproductive exam, and sperm evaluation. Once the exam is completed, the bull will be classified as a “satisfactory potential breeder”, “unsatisfactory potential breeder”, or “deferred”. Deferred bulls should be rechecked at a later date.

Cattle operations should maintain biosecurity protocols when adding bulls to the herd. Bulls should be purchased from reputable breeders. All purchased bulls should be isolated for 30 days prior to having any contact with the cow herd. During the isolation period, bulls should be vaccinated for the above-mentioned diseases. Bulls need to be dewormed with at least two or three different classes of dewormers and treated for external parasites. A producer should consult with their veterinarian about testing for certain diseases such as Trichomoniasis, Bovine Diarrhea Virus, Bovine Leukemia Virus, Johne’s Disease, etc. Lastly, bulls should be observed for any signs of disease and/or physical issues. Any issues noted should be addressed by treatment or by returning the bull to the breeder.

Bulls play an important role in cow/calf operations and their genetics will influence the cow herd for years to come. Producers should manage this important resource properly. For more information about bull management, producers may want to view SUNUP Cow-Calf Corner episode March 18, 2023 (SUNUP.okstate.edu) or visit with their local veterinarian and/or their Oklahoma State University Cooperative County Agriculture Extension Educator.

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A Trace Mineral Block is NOT a Mineral Program

Earl H. Ward, Area Livestock Specialist

Supplying minerals to livestock is essential but often overlooked and misunderstood. It is surprising how many producers do not supply any minerals. However, on several occasions while talking to producers about minerals they tell me that they provide minerals to their animals only to find out that their mineral is a trace mineral block.

Minerals can be classified by either macro minerals or micro minerals. The difference between the two classifications is simply by the amount required. Macro minerals are those minerals required in higher amounts such as calcium, phosphorus, sodium, potassium, magnesium, and sulfur. Macro minerals are expressed on the feed label as a percentage. Micro minerals, also called trace minerals, such as copper, cobalt, iodine, iron, manganese, selenium, and zinc are expressed as parts per million (ppm or mg/kg).

The white salt block, the sulfur block (yellow block), and the trace mineral block (red block) are the most common block supplied to animals. Ultimately all three of these are all salt blocks. The name of the trace mineral blocks leads a person to believe that it is a mineral block. This red block does have some trace minerals in it, but it would not be considered a mineral package. The guaranteed analysis states that the “mineral” block is between 94 to 99% salt which doesn’t leave

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much room for other essential minerals. Table 1 shows that the trace mineral block only provides one of the macro minerals required by livestock which is sodium. It does provide some micro minerals, but not enough to meet a lactating cow's requirements. The table also shows an example of a mineral formulated for a beef cow. It is clear to see that the complete mineral contains a much higher concentration of minerals with only 20% salt. It is formulated to meet a cow's mineral requirement while consuming 4 ounces of mineral. There are question marks on the table because those values were not represented on the analysis, but they are present. The mineral does contain sodium, sulfur, and iron because the label states that the mineral includes salt, sulfates, and ferric oxide, but they are not on the guaranteed analysis.

	Trace Mineral Block	Lactating Cow Requirement	Example of Complete Mineral
Calcium, %	--	0.30	16.0
Phosphorus, %	--	0.19	7.5
Potassium, %	--	0.70	1.0
Magnesium, %	--	0.20	1.0
Sulfur, %	--	0.15	?
Sodium, %	37.0	0.10	?
Cobalt, ppm	0.005	0.10	12
Copper, ppm	0.030	10.0	1200
Iodine, ppm	0.007	0.50	60
Iron, ppm	0.200	50.0	?
Manganese, ppm	0.200	40.0	3600
Selenium, ppm	--	0.10	27
Zinc, ppm	0.350	30.0	3600

There is nothing wrong with having a trace mineral block out for your animals, but it is not a complete mineral program. A trace mineral block should be used as a tool to control the complete mineral consumption rates since animals consume minerals because they are craving salt. Supplying animal with a salt block with help to keep them from over consuming expensive mineral. If you have any questions about livestock minerals, please contact your county's OSU Extension Ag Educator.

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Value of Gain Calculation						
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<i>OK Weighted Average Report 4/7/23</i>						
Weight	\$/lb	Value/hd	Added lb.	Added \$	\$/lb Added	
319	\$ 2.8847	\$ 920.22				
376	\$ 2.8233	\$ 1,061.56	57	\$ 141.34	\$ 2.48	
429	\$ 2.6678	\$ 1,144.49	53	\$ 82.93	\$ 1.56	
470	\$ 2.5512	\$ 1,199.06	41	\$ 54.58	\$ 1.33	
527	\$ 2.5141	\$ 1,324.93	57	\$ 125.87	\$ 2.21	
580	\$ 2.3734	\$ 1,376.57	53	\$ 51.64	\$ 0.97	
623	\$ 2.2832	\$ 1,422.43	43	\$ 45.86	\$ 1.07	
725	\$ 2.0054	\$ 1,453.92	102	\$ 31.48	\$ 0.31	
782	\$ 1.9321	\$ 1,510.90	57	\$ 56.99	\$ 1.00	
823	\$ 1.8953	\$ 1,559.83	41	\$ 48.93	\$ 1.19	
873	\$ 1.8474	\$ 1,612.78	50	\$ 52.95	\$ 1.06	
918	\$ 1.8122	\$ 1,663.60	45	\$ 50.82	\$ 1.13	
969	\$ 1.7544	\$ 1,700.01	51	\$ 36.41	\$ 0.71	

Long Stocker Run		Short Stocker Run		Heavy Stocker Run	
<i>Starting</i>		<i>Starting</i>		<i>Starting</i>	
319	\$ 920.22	319	\$ 920.22	623	\$ 1,422.43
<i>Ending</i>		<i>Ending</i>		<i>Ending</i>	
969	\$ 1,700.01	527	\$ 1,324.93	969	\$ 1,700.01
<i>Total Gain</i>	<i>Δ Value</i>	<i>Total Gain</i>	<i>Δ Value</i>	<i>Total Gain</i>	<i>Δ Value</i>
650	\$ 779.79	208	\$ 404.71	346	\$ 277.58
<i>VOG</i>		<i>VOG</i>		<i>VOG</i>	
\$ 1.20		\$ 1.95		\$ 0.80	



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