



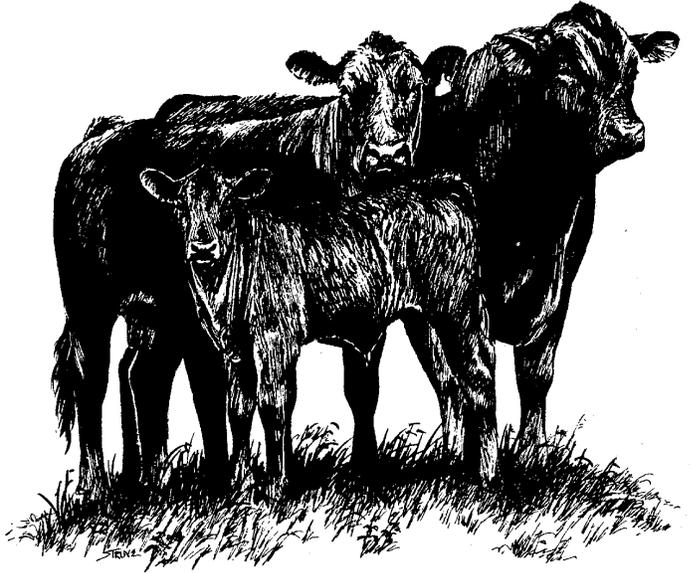
BULL MANAGEMENT

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For proper bull management, the bull's calendar year can be divided into the following three seasons:

1. Pre-Breeding or Conditioning...2 months
2. Breeding Season..... 2-3 months
3. Post-Breeding Season or Rest
and Recuperation.....7-8 months

While the length of each segment may vary from one operation to another, the basic requirements during the periods remain basically the same.



BEFORE THE BREEDING SEASON

This "Pre-Breeding or Conditioning" period should last for two months prior to the time the bull battery is turned out with the cow herd. A checklist of items to consider includes:

Determine Bull Needs

The producer should determine bull needs for upcoming breeding season and bull battery should be fairly well established. New bulls should be acquired at least 60 days and preferably 90 days prior to breeding season.

Evaluate Bulls For Breeding Soundness

*Run breeding soundness exam to check reproductive capacity and physical soundness of each bull. Also, all bulls should be brought up to date in a complete health program and hoof trimming should be done at the start of the conditioning period.

*Approximately 30 days prior to the breeding season, yearling bulls should be exposed to one or two females that are in heat. This allows one to see if the bull has normal mating behavior, and if he is physically capable of serving a cow.

Grouping Of Bulls

Bulls should be grouped according to breeding pastures so they will become familiar with each other and develop a social structure. Please refer to the item entitled "Social Behavior" under Management During the Breeding Season.

Exercise

Exercise is a most critical factor for proper bull development. Also, physical fitness of the bull requires several weeks of conditioning.

BEFORE THE BREEDING SEASON (CON'T)

*Bull lots during this period should be large enough so bulls exercise themselves. For the yearling bull, a couple of pregnant heifers or cows should be put in this pasture lot at the beginning of this period. The bull will tend to follow the females; he may even try to mount. This forces exercise and physical training.

bulls may need 15 pounds of feed or more, of which 5-7 pounds should be grain.

Nutrition

Each bull needs to be handled differently.

* “YEARLING BULLS” – It is extremely critical to evaluate the condition of the yearling bull shortly after purchase.

- If he is “carrying excess condition,” he will need to be let down properly. It is very important that the young bull not be let down too rapidly or during the breeding season because it may result in temporary infertility and even permanent damage.
- On the other hand, bulls that are thin in condition need to be grown at a good rate. These bulls will need to build some energy reserve prior to breeding season.
- Most yearling bulls will need to weigh 1,000 to 1,100 pounds prior to the breeding season. An acceptable gain during this period for moderate or average condition bulls is around 2.0 pounds per day. This gain would allow adequate growth and maintain satisfactory condition without becoming excessively fat.

Some nutritional guidelines would include the following:

- 27-30 lbs. of dry feed per day.
- Ration composed of 80% roughages (grass, hay or silage) and 20% concentrate,
- Or, (depending on bull condition) 6-10 lbs grain and free choice roughages.

* “2-YEAR OLD BULLS” – These bulls need to gain 1 pound per day. To do this, active

- A problem one can encounter with purchasing 2-year old bulls is over-conditioning. These bulls need to be let down. This can be accomplished by starting them on a similar ration that they are accustomed to, but only 60-70% of their previous intake. Reduce grain about 10% per week until desired level is achieved. Substitute grain with light, bulky feeds such as oats. This let down should be completed prior to time bulls are turned out.

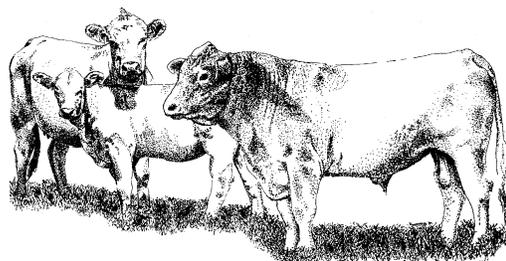
* **“OLDER BULLS”** – Ideal energy level during conditioning period will depend on their physical condition.

- Good Condition = 5-7 lbs. Grain
- Thin Condition = 20 or more lbs. grain may be needed. Divide into two feedings daily.

Adequate levels of vitamin A are necessary for optimum semen production. This can be achieved in several ways:

- Green colored hay is a good indicator of vitamin A
- Natural or synthetic sources of vitamin A to supplement feed or to mineral supplement

All bulls should also have access to a free source of supplemental phosphorus.



Summary

Good bulls represent a substantial investment and are critical to the success of a breeding program. Proper care prior to the breeding season will help insure fertile, active bulls during that time.

DURING THE BREEDING SEASON

During this period one wants to accomplish the following goals – getting the cows settled as early in the breeding season as possible and having them bred to bulls with the highest possible genetic worth. Several factors influence the above goals and they include the following:

Bull To Female Ratio

Defining the optimum bull to female ratio is important to a successful breeding season. The following table is widely used as a recommendation for bull to female ratio.

Estimated Average Mating Capacity of Bulls with a 60-90 Day Breeding Season

| Age of Bull | Number of Cows | |
|-------------|------------------|---------------|
| | Pasture Breeding | Hand Breeding |
| 15 months | 10-15 | 15-20 |
| 18 months | 15-18 | 18-25 |
| 2 years | 20-25 | 25-40 |
| 3-7 years | 25-35 | 35-50 |

Over 8 years 15-25 20-30

However, the above ratio of bulls to females is related to many factors.

Factors Influencing Bull-Female Ratio

- * Bull variation is caused by – Age, Libido, Fertility & Mating Ability.
- * Distribution of females is related to – Terrain, Water Availability, and Pasture Size.
- * Management decisions include – Length of Breeding Season, Reproductive Diseases, Breeding Intensity and Amount of Observation.

Social Behavior

Social ranking (dominance) of bulls influences their sexual activity when they are run in multiple-sire breeding pastures.

*To avoid dominance problems, bulls of the same size and age should be used together.

Young bulls, especially yearlings, should not be expected to compete with older bulls in the same pasture.

Bull Observation

A good manager keeps an eye on his bulls during the breeding season to make sure they are getting the cows bred.

- * Potential problems to look for include – lameness, injury to reproductive tract, inability to complete normal service, and low fertility. Such problems can best be detected by observing bulls while they work and/or observing if cows are returning to estrus.
- * It is especially critical to observe yearling bulls to prevent them from becoming run down in condition.

General Management

To insure that during the breeding season the yearling bull maintains a strong, healthy physical condition and continues to grow, you should supplement with a concentrated ration at

AFTER THE BREEDING SEASON

If a 60-day pre-breeding conditioning period is allowed, this leaves a post-breeding season of about seven months, usually coming in the fall and winter. Goals for this period are basically as follows:

- * keep feed costs at a practical min.,
- * keep the bulls in modest condition
- * minimize chance of injuries, and
- * allow growth of young bulls.

Post-Breeding Appraisal

The first step should be to appraise the bull battery and sort them three ways:

- * Mature bulls in good condition that do not require any special attention.
- * Young bulls that are still growing and extremely thin mature bulls that need higher quality feed during the winter.
- * Old, crippled, cull or sterile bulls that are to be marketed.

a rate of one pound per 100 pounds of body weight. Prior training so the bull feeds out of a bull creep or bucket makes the job easier.

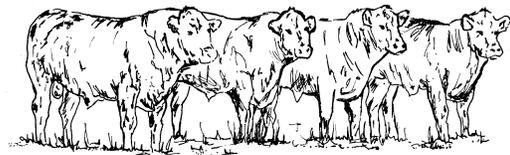
Similar nutrition can be provided to the mature bull that begins losing excess weight due to heavy service or inadequate pasture.

Rotation

If a restricted breeding season is practiced (75 days or less), it may not be practical to rotate bulls. However, rotation of bulls should be considered in extended breeding seasons, during excessively hot and dry periods and when bulls do not establish a social structure and continue to fight.

Summary

Each producer will need to develop a bull management plan that works best for his/her operation. That plan, if it is successful, will need to be flexible to adjust for problems as they arise.



Nutrition

All bulls should have access at all times to the following:

- * High Quality Mineral Mix – Phosphorus is a critical mineral for successful reproduction and is not present in adequate amounts in dry or harvested forages. Good sources of supplemental phosphorus are steamed bone meal or dicalcium phosphate. These can be mixed with trace mineral salt in equal parts or two parts salt to one part mineral.
- * Vitamin A – Natural sources are green growing plants or high quality hay with good green color. Supplemental vitamin A can be added to the mineral mix or fed with a supplement.

* Suggested Rations –

- Mature Bulls – In good condition can exist very well on an essentially all-roughage diet. A good rule of thumb is 2% of their body weight in dry feed per day.
- Yearling & Thin Bulls – should be placed on the best available roughages, such as regrowth from hay fields or high quality hay. Depending on their condition, they should receive ½-1 lb of concentrated growing ration per 100 lbs of live weight to continue growth and recover body conditions.
- Salvage bulls – These bulls can be marketed to advantage after a brief period on a high-energy feed program. They should be placed on excellent or free-choice hay of high quality and then fed a full feed of the concentrate feed that provides the most economical energy source (usually a cereal grain).

Bull Pastures

It is a good idea to have a bull pasture that is isolated. Bulls kept away from cows will remain quieter and will fight less. A pasture with adequate area will encourage exercise and will reduce fighting.

* Make sure bulls have ample protection from extreme weather stress. Spring blizzards can cause frostbite of bulls' scrotums affecting the normal function of the testes and epididymis. Since development and maturation of sperm takes about 60 days, stress in March and April can cause poor semen quality in May and June.

Bull Health

Bulls should be included in the normal herd health program. They appear to be especially vulnerable to external parasites, so preventive steps need to be taken to avoid flies in the summer and grubs and lice in the winter.

Adapted from Art Linton, Cow-Calf Management Guide & Cattleman's Library, No. CL435, CL 436 & CL 437, Montana State University, Bozeman