



Current Report

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The Decision to use Yearling Beef Bulls

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The beef cow industry is noticing a shift to greater use of yearling rather than older bulls. Yearling bulls, on the average, will not breed quite as many cows as two year-olds and do require a higher level of management during and after their first breeding season; however, the advantages in favor of yearlings often out-weigh the disadvantages: 1) a good selection of yearlings is available, 2) shorter generation interval with yearlings means superior genetics gets into commercial herds sooner, 3) economics, more and more commercial cowmen are finding two year-olds to be an expensive item, 4) research and experience with using yearling bulls has disproved many of the criticisms associated with their use. Yearling bulls can be used successfully in almost any situation, provided common sense and proper management are practiced.

Yearling Bull Management

Each year we see more bulls being used as yearlings. This is an excellent way to get an additional year of use from bulls reducing the per cow bull depreciation cost. However, there are several management tips that will make the success of yearling bulls much higher. Run yearling bulls only with other yearling bulls on a set of females. Yearlings who run with older bulls may be physically abused to the point that they will settle very few cows.

Reduce the cow to bull ratio to about 50 percent of that maintained with older bulls. If you run one mature bull to each 30 cows, 15 cows will be plenty for each yearling bull. Some producers have successfully rotated yearling bulls in and out of the breeding pasture at approximately two-week intervals. This "rest and work" rotation requires more management but is very beneficial to maximizing the use of yearling bulls.

Yearlings should be left with the cow herd for 60 days or less. Beyond that time their condition will decline and may have long range effects upon their growth. After their removal from the cow herd, the yearlings should continue to be kept separate from the older bulls at least through their second winter. They should be placed on the best available feed and should receive regular supplementation until the next breeding season. Remember, these young bulls are still growing rapidly, in addition to replacing all the condition they lost in the breeding pasture. Extra care and feed of yearling bulls after the breeding season will result in more attractive mature bulls with a much higher salvage value.

Fertility of Yearling Bulls

It is important that yearling bulls be subjected to a Breeding Soundness Examination (BSE) in order to screen out those which would be high risk bulls in the breeding pasture. The BSE is a combination of a semen test, scrotal circumference measurement and physical examination of the reproductive tract. Your local veterinarian can perform the exams. Costs of the exams often are less than \$35 per bull and will identify possible problem bulls before a disastrous breeding season takes place.

The importance of producing viable semen in ample quantities is obvious, but semen evaluations of yearling bulls (11 to 15 months of age) can be misinterpreted. Failure to produce good semen at the first collection of a yearling bull should not be considered as a reason to condemn. Such young bulls should be re-checked after a few weeks rest and often will produce acceptable semen. Normal extension of the penis (free of adhesions) and absence of pus in the ejaculate are positive, meaningful observations which by themselves, are sufficient reasons for breeding soundness exams for young bulls.

A minimum scrotal circumference for bulls should be established. Scrotal circumference is easily measured and is an excellent indicator trait since a significant, positive correlation exists between scrotal circumference and both volume and percent normal sperm cells. Further, research has indicated a strong genetic correlation (70%) between scrotal circumference in bulls and the fertility (as measured by earliness of puberty) of his daughters. Bulls measured at one year of age should have a scrotal circumference of at least 32 cm. and preferably 34 cm.

Sex drive (libido) is also a vital part of bull fertility and has little or no association with other fertility traits, such as semen quality or scrotal circumference. Libido testing of yearling bulls in research stations has revealed sizable differences in libido test scores of bulls, which were later verified in terms of significant differences in actual conception rate. While libido testing is still in the experimental stage, it does look promising and may soon be a useful part of some seedstock breeders' bull evaluation programs. It would be advisable to expose yearling bulls to a few cycling females prior to turning them in with the cow herd. Shy breeders, fighters, bulls that form a bond with one particular cow ignoring others in heat and bulls which have poor mounting orientation will sire few calves and thus be quite costly.

Yearling Bull Development

New bulls should be acquired at least 60 and preferably 90 days prior to the breeding season. This allows ample time for the new bulls to adjust to the feed and climate of the area. This time also allows bulls that will be working together to become familiar with each other and to develop a social structure.

Perhaps the single most critical factor for proper bull development is exercise. Physical fitness is not acquired overnight, but requires several weeks of conditioning. In designing bull facilities, it is a good idea to locate supplemental feeding areas and water as far apart as possible. Bulls that are physically fit when they are turned out will breed more cows because they will retain a high level of libido longer in the breeding season, and they will stay sound for a longer period of time. Exercise prior to the breeding season will **also** reduce injuries from fighting and riding during that time.

Nutrition prior to turn-out should be at a relatively high level for proper development of young bulls. Young bulls will usually lose weight early in the breeding season so they need to have an energy reserve when they are turned out. Perhaps the best way to describe the ideal condition is "bloomy" but not fat.

Most yearlings will weigh 1000 to 1100 pounds prior to the breeding season and gain about 2.0 pounds per day. This will require about 30 pounds of dry feed per day. Adequate energy should be provided by a ration that is 80 percent roughage (grass, hay or silage) and 20 percent

concentrate. Depending upon the condition of the bulls, this means six to ten pounds of grain per head per day and free choice roughage. At this age the bulls will need to have 12 percent total protein in their diet. Depending upon the kind and quality of the roughage and the grain being fed, this may require a protein supplement.

Another problem sometimes encountered with yearling bulls is that of over-conditioning on newly acquired bulls that have been fitted for a show or sale. The let-down period should consist of ample exercise and gradually decreasing amounts of a ration not too dissimilar to the one to which the bulls have been accustomed.

Producers should consult their local veterinarian for the most appropriate health program for any of the herd bulls. Many cattlemen will vaccinate the bulls as they do the cow herd for leptospirosis. Buying virgin bulls from reputable seedstock producers should greatly reduce the likelihood of trichomoniasis or vibriosis being introduced into the herd. In areas with potential anaplasmosis outbreaks the use of anaplasmosis prevention vaccine has been helpful in keeping bulls protected. The bulls could be vaccinated even if a tetracycline mineral mix is used as the preventative measure for the cows. Bulls need internal and external parasite control just as do the cows and heifers. Caution must be observed however to follow label recommendations closely as some products that are useful for female cattle can be harmful to bulls.

Most yearling bulls can be used effectively, if they are critically selected, properly developed and carefully managed. (adapted from 1989 Nebraska Bull Clinics Proceedings)

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