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Basics of Beef cattle Breeding, Calving Seasons and Bull Selection

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Breeding Seasons

Beef cattle breeding and consequently calving, can take place throughout the year, or it can be restricted to a pre-determined limited period of the year. Where breeding takes place in a restricted breeding season, the most common practice is either a spring calving or an autumn calving season, although some farmers make use of two breeding seasons per year allowing cows that miss a breeding season to rebreed out of season. Whether breeding takes place throughout the year or is confined to a certain time of the year, there are advantages and disadvantages associated with each system, which are often decided by the requirements of the farmer and where the farm is situated. The major limiting influence is that cows are pregnant for 283 days and generally do not re-conceive earlier than 50 to 60 days after calving (post-partum).

Breeding throughout the year

Advantage:

Bulls remain in the herd, thus there is less bull management

Disadvantage:

A high plane of nutrition is necessary all the time, management tasks e.g. dehorning, vaccination, castration, must be undertaken continuously throughout the year.

Restricted breeding season

Advantages:

Herd management and fodder flow planning is simplified. Thus, all calves can be dehorned and castrated in a day or two, leaving the rest of the year open for other activities. This could be a significant advantage for a person not always present on a farm or where other enterprises must be taken into consideration.

It is easier to monitor conception rates and to devise a simple system to detect cows that fail to reconceive.

In small herds, the only way performance testing can be carried out is by seasonal breeding as at least 10 to 15 animals in each group must be tested. In order to provide 10 bulls to make a group comparison, for example, at least 30 calves must be born within a time period of 3 months (approximately 50% of calves are male and mortalities must be taken into account).

Animals can be marketed in uniform groups when beef prices are favourable. Where artificial insemination is used, heat spotting is only necessary for a short period

Breeding in general

•In a single sire herd, the bull is accountable for half of the genetic makeup of the total calf crop.

•The last three sires used in the operation will represent up to 87% of the genetic makeup of a calf crop, especially in a herd where replacement heifers are retained.

•Selecting sires is an important decision and one of the first requirements is to: *Determine your herd's present level of production and decide what traits need improvement!*

Bull-to-cow ratio (1:15 – 1:35)

•Practical bull-to-cow ratios vary depending on the capability of individual bulls and the environment under which they are to perform.

•Always remember that young bulls should be used at a lower bull-to-cow ratio than older bulls.

•Higher bull-to-cow ratios depends on mating ability, semen quality, and libido of individual bulls

Let the cow herd and your previous calf crop tell you what needs to be improved!

Bull Selection Basic Guide

What breed do I need?

There is a wide variety of breeds, and no breed exceeds all other breeds in all traits of economic importance. ***So choose a breed:***

With a market demand for their calves in your area.

With performance history for which you can document and predict the expected performance of future progeny

With the genetic potential to make positive changes in economically important traits.

Which traits to look at?

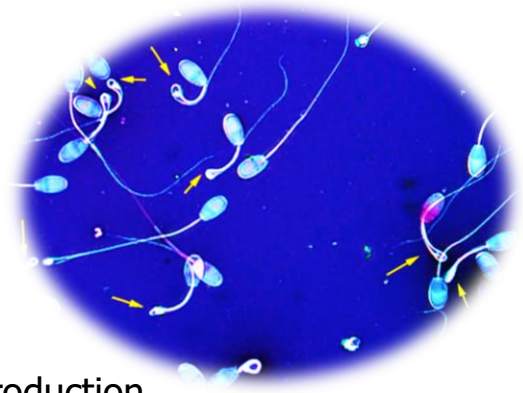
Adaptability; Adaptability; Adaptability and Adaptability

Birth weight - If you intend to use the same bull on mature cows and first- and second-calf heifers, then you need to consider the bull's birth weight EBV. Dystocia (calving problems) is highly correlated to birth weight. It is important to select a bull that is used on all females in the herd, with a birth weight EBV that is better than the average of his breed.

Milk - If you intend to retain heifers from within your herd, then consider the bull's EBV for milk. A bull that is below his breed's average on EBV for milk will most likely sire daughters that do not have a tendency for high milk production.

Weaning weights? If weaning weights need to be increased, then consider a bull with weaning weight EBV that is higher than his breed average. If your previous bull was of the same breed as the bull that you are considering, then his weaning weight EBV must be greater than the previous bull's EBV.

If you want to change breeds, then select a bull that exceeds his breed's average EBV for weaning weight.



Fertility

The single most economically important trait in beef cattle production is reproduction.

Herd sires have the largest influence on herd fertility than any other single animal.

Bulls with larger scrotal circumferences sire daughters that reach puberty at earlier ages than those sired by bulls with smaller scrotal circumferences.

Select bulls with larger scrotal circumferences and positive scrotal circumference EBV's as an indirect selection criteria for improved reproductive capacity.

This brings us to the importance of Breeding Soundness Examination (BSE); our next lecture will discuss just that.

Conclusion

Prioritise which traits need the most attention. Then sacrifice some trait levels in the first selection phase, and then pay attention to your sacrificed traits in your subsequent bull purchase.

The choice remains yours!

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