

Sire Selection

AN ALTERNATIVE APPROACH

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**Don't be caught sleeping,
when SELECTING A HERD BULL**

Fertility will drive profit as if you don't have any progeny, what is the point of farming.

In breeding cattle, your target market is vitally important viz. weaners for beef production, is significantly different if you are an ox or bull producer. Then what is even more important is to whom do you market your weaners. If this is the local agent and/or feedlot, are you producing what the market requires? Failure to do so will incur penalties which ultimately affects your income statement.

A classic example of this is the production of broken coloured calves which either through the agent, local sales venue and desired feedlot, will attract between R 3.00 to R 5.00 per kg reduction in price when compared to whole-coloured calves. The resultant loss on 100 calves could be as much as R 80 000 (200 kg calf @ R34.00/kg instead of 200 kg @ R38.00/kg). Fine boned calves which lack muscling and/or growth can also lead to a reduction in the price realized per kg.

What not to select for in your new herd bull

Consequently, the selection of sires to be used in your beef production herd is vitally important. If they produce undesirable calves, no matter how fertile these bulls may be, you will be on the losing end. Therefore beware of blind selection, especially non-selected multi-sire groups. I believe this to be a shotgun hit-and-miss approach. Such bulls can have functional phenotypic faults including:

- Devil's grip
- Low pasterns
- Fine bone
- Lack of muscling/masculinity
- Wry face
- Undershot jaw
- Lack of body depth.

Stringent selection pointers

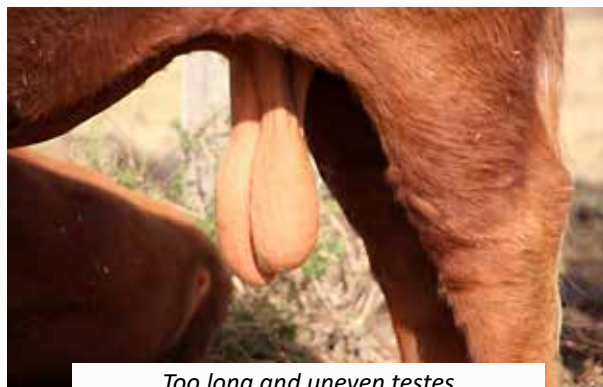
Potential sire selection should include the following points:

1. What is the fertility record/calving interval of the bull's dam and maternal grand-dam?
2. You should select bulls which have been born early in the calving season. This is evident on a low individual animal number (for the bull) and indicates that his dam was amongst the first cows to conceive in the breeding season.
3. Regular calving would represent functional cows which present an annual calf at weaning - no excuses.
4. Did both females have functional udders?
5. There should be little or no evidence of in the dam of sore eyes, foot-rot/laminitis and with a clean health record of no mastitis and a resistance to lumpy skin disease.
6. What is the retention factor of both sire and dam? If it is high, then they can both be deemed to be prepotent viz. high transmitting ability of desired characteristics to their progeny.
7. If this is low, are you selecting "just-a-bull" in the vain hope he might just turn out all right.
8. This can all be summed up as constitutional vigour (Bonsma,1964).
9. Physical evaluation of the bull includes a balanced appearance with a slick coat. An acceptable scrotal circumference is a minimum of 32-34 cm at 2 years of age. The bull should also have a darkening dorsal line of his coat along his spine, which indicates hormonal balance of the animal with his environment.
10. The potential bull must look and act like a bull.

Too few breeders insist on seeing the dam and possibly the grand-dam of the potential bull to be purchased. A visual evaluation is imperative to understand what sort of progeny one could expect. Otherwise your purchase is nothing more than a lucky dip.

Rigorous selection

A classic example of this rigorous selection was practiced by a large (400 cow herd) Holstein milk producer in Schweizer Renecke, NW. His ONLY selection criteria over 30 years or more of breeding was that the dam of the sire (in both



Too long and uneven testes



Poor unbalanced udder



A beefy bull



All you know about this bull is he has some Brahman blood



Jersey bull 4 yr by NZ sire out of 10 lactation cow



Shorthorn cow. Champion Dual Purpose

artificial insemination selected sires and herd bulls) and the maternal grand-dam had to have 3 or more trouble free lactations (no mastitis, sickness etc) in production which can also be equated to Effective Herd Life. He never selected for high milk, butterfat or protein production. He subsequently bred a highly productive herd which maintained above average levels of milk, butterfat and protein production with an average number of lactations more than 3 per cow. Herd fertility registered at 1.1 inseminations per conception with heifers calving under 2 years of age and re-conception rates measured at 80%.

Closed or open herd?

Some beef breeders close their herds to outside genes and only make use of selecting their own bulls. In order to do so a minimum of 400 cows is necessary.

During my M.Sc .Agric (1986) research, a Natal beef producer closed his herd with about 220 cows and selected (incorrectly) for the biggest bull calf year on year as his replacement bull.

In a 15 year period the following was recorded:

- cow fertility (as measured by calving percentage) dropped by 10% which was also

measured with a 4.0 cm reduction in scrotal circumference;

- milk production and therefore weaner weight decreased (from 200 kg to 175 kg) by a similar percentage; and
- heifers exhibited later sexual maturity.
- This all resulted in lower income, assessed at about R 100 000 per year (1986).
- The resultant progeny were not only lighter at weaning but exhibited lower performance (growth) post weaning and undesirable conformation as attested by the local marketing agent.

Whilst closing your small herd of 200 or less cows to outside genetic influences, in the short term selecting your replacement bulls and heifers can be of short term financial gain **BUT** you may not immediately see the deterioration in the quality of your cattle. A considered external observation will observe this and even though the herd may be subjected to natural selection, you want to breed productive cattle of which you can be proud of instead of trying to breed fine-boned antelope. Raising the inbreeding co-efficient will also significantly increase the appearance of genetic deformities. Under natural selection, predators would have removed these inferior animals.

Multiplication using traditional (open) breeding programmes

Traditional breeding programmes employ the purchase of purebred bulls of a breed and using them on either purebred or crossbred cow groups to produce weaner calves.

An example of a successful beef producer is Rudi Lemcke of Botswana. He has successfully bred over 5 000 breeding cows using a variety of breeds in simple crossbreeding programmes. He purchases the best affordable bull of each breed in his programme and mates these to a select group of the same breed. His budget does not allow for the replacement of approximately 400 bulls each year so he breeds his own selected purebred bulls for use in his crossbreeding programme. He wouldn't be considered one of the best, if not the top, beef producers in Botswana by using his own crossbred bulls (which is surely a temptation). The cornerstone of his operation is the use of purebred, selected bulls of each breed on a variety of cow breed types.

This standpoint is similar to that of local successful Northern Cape beef producer Bruce Hunt. He breeds in excess of 2 000 cows using different breeds and breed combinations in a cross-breeding programme. He purchases the best bulls of each breed used in crossbreeding and uses them for a minimum of 4 years.

One has to ask oneself are not the better bulls right in-front (literally) of you. Too often bull breeders are hell-bent on acquiring the next best "top" semen from an imported bull instead of assessing the local bull market and/or their own bulls. A local breeder of a registered breed cited impatience at the rate of progress in his herd and consequently an associated lack of belief in his own cattle by adopting this approach of using the next "top" bull in the AI Sire catalogue.

Retention factor

Do you know if the bloodline of the bulls which you wish to use come from animals which have been retained by the breeder for further use in his herd? Or do they come from a line of bulls merely multiplied without any forethought or planning?

Consider a locally bred Santa Gertrudis bull JL 050119, an exceptional bull with a high retention factor of both sexes in this herd, 60% plus



JL050119

passing inspection and excellent breeding values to boot. The stud owner is using 1 son, 7 grandsons and 3 great grandsons in their breeding programme. Now that is confidence in your breeding programme when you produce such a fine specimen of the breed and then use him extensively. This in many ways is similar to the Santa Gertrudis foundation sire "Monkey".

Another "prepotent" sire is the Angus bull WB

19-39 owned by Bodeel Boerdery, Viljoenskroon, Free State. Besides boasting of average breeding values, the bull sired 396 calves by artificial insemination and natural breeding over a 6-year period. His female progeny number 101 in a herd of 590 breeding cows and the breeder has used 4 sons (2 naturally and 2 by artificial insemination) in his breeding programme, besides having sold over 42 sons at an average of R 60 000 each in this same time period. Modern science has allowed the breeder to continue using the bull by way of frozen semen.

Conclusion

- Define your target market of the end product of your beef production system
- Select stringently for constitutional vigour instead of employing a lucky-dip approach when purchasing a new bull
- Maintain an open mind as where your future genetics may be located
- Use a sire with a high retention factor rather than just-a-bull.

