

What to Look For in a Breeding Bull – Nolan Miller, Silver Creek Bison Ranch, Binscarth, Manitoba

The bull(s) you choose for your herd have a significant influence on your bison operation. They have an impact on the performance of all the calves born on your farm or ranch.

When purchasing a bull for your herd, there are some basics that must be understood. You can put only so much meat on a small frame. A large framed bison will grow to higher weights and result in higher yields – two good characteristics if you are in the bison meat business. In addition, good length adds to top cuts such as the tenderloin and ribeye. The bull below not only has great length but also has significant dept which should add to meat yield in his offspring.



Although these traits are readily identifiable in mature bulls, they are less pronounced in yearlings and two year olds. An experienced producer is able to identify the confirmation characteristics in younger bulls that are destined for a breeding herd.

In addition to length and depth visual muscling is important. A well-muscled bull will normally result in well muscled calves that weigh more, generate higher

yields in top cuts such as ribeyes. The young bull below reflects the required characteristics.



In addition to length, depth and muscling, width is also important. Like the characteristics already discussed, good width in the hip and chest combined with good spring of ribs will also contribute to weight and yield. In the two pictures below, it is clear that one of the bulls has more width.



Combined with length, width, depth, and muscling, you must look at how all these pieces are put together on the animals bone structure. You want good bone

mass, and sound legs and hooves as the bull will be busy moving from cow to cow during the breeding season. In addition to the physical characteristics, the bull should demonstrate dominant characteristics if he is expected to be the primary breeder. If you are able, watching the bull spar with other bulls will assist with this assessment.

A dominant bull with a larger frame, good length depth, width and muscling on sound legs are important characteristics for your primary bull.

What is the financial impact of a good breeding bull?

Cow Calf Producer

Assumptions:

- Breeding fees are \$25.00 more per cow with a superior breeding bull.
- Calves will weigh 25 lbs more.
- One bull for 20 cows.
- Calves sell at \$3.25/lb.

20 calves with 25 extra pounds @ 3.25/ lb.	= \$1625.00
Extra annual cost for 20 calves from a quality bull.	= \$500.00
Benefit of \$1,125.00 for 10 years	= \$11,250.00

Backgrounding

Assumptions:

- As yearlings, bull calves weigh 75 lbs. more from superior herd bull.
- Incremental weight at one year is 50 lbs.

20 yearlings weighing 50 extra pounds. @ 2.25/lb.	= \$2,250.00.
\$2,250 for 10 years	= \$22,500.

Finishing

These calculations are more complex. Types of feed and feed costs have a big impact on results.

Bull Calves from premium herd bulls

For the growing period February 1 – June 1, I used the following assumptions:

- Based on my records I assumed pellet consumption at 1.8% of body weight or 11.5 lbs. per day.
- Consumption of hay at 1.5 % of body weight or 9.5 lbs. of hay per day.
- Yardage at 50 cents per day.
- For this period costs were \$1.80 per day for 120 days or \$216.00.

For the 120 days, average daily gain was 1.46 lbs. at a cost of \$1.23 per pound of gain.

For the period June 1st – December 1st I used the following assumptions:

- Pellet consumption at 1.2% of body weight, pasture at \$0.75 per day and yardage at \$0.40 per day.
- For this period costs were \$2.07 per day for 185 days or \$383.00.

For the 185 days the animals gained 2.02 lbs. per day for a cost of \$1.02 per pound of gain.

Bull Calves from average herd bulls

For the growing period February 1 – June 1, I used the following assumptions:

- Based on my records I assumed pellet consumption at 1.8% of body weight or 9.5 lbs. per day.
- Consumption of hay at 1.5 % of body weight or 7.9 lbs. of hay per day
- Yardage at 50 cents per day.
- For this period costs were \$1.58 per day for 120 days or \$190.00.

For the 120 days, average daily gain was 1.25 lbs. at a cost of \$1.27 per pound of gain.

For the continuation of the growing period June 1st – December 1st I used the following assumptions:

- Pellet consumption at 1.2% of body weight, pasture at \$0.70 per day and yardage at \$0.40 per day.
- For this period costs were \$1.80 per day for 185 days or \$333.00.

For the 185 days the animals gained 1.35 lbs. per day for a cost of \$1.33 per pound of gain.

For the finishing period December 1st to May 1st I used the following assumptions:

- Pellet consumption at 1.8% of body weight or 17.6 lbs. per day
- Hay consumption at 1.5% of body weight or 14.6 lbs. per day
- Yardage at \$0.50 per day.
- For this period costs were \$2.49 per day for 150 days or \$374.00.

For 150 days the gain was 1.66 lbs. per day at a cost of \$1.49 per pound of gain.

Summary

The table below demonstrates that daily gains for bison bulls can be up to 25% higher if they are from superior herd bulls. If 25 months or more are required to finish bison; the cost of daily gains could also be 25% higher. Analysis demonstrates that larger calves at weaning will result in more rapid gains. Bison can be finished at less than 20 months. Although I recognize that every producer has different genetics as well as different goals with respect to their bison

operation, every extra day spent finishing bison beyond 19 months impacts the profitability of your operation.

	Time to Finish – 19 Months	Time to finish – 25 months
Farm costs of calf	\$725	\$700
1 year old	\$216	\$190
19 months	\$383	\$333
25 months		\$374
Total	\$1324	\$1592
Gain per day – lbs.	1.8 lbs.	1.43
Cost per pound of gain	\$1.09	\$1.38

In my many conversations with producers there are also points made about variables such as rib eye measurement, scrotal circumference, the importance of smaller thicker cows for big framed bulls or the need for bigger framed cows for thicker bulls. These factors may all have some influence but more research is needed.

Although there are many variables that will affect the performance of your herd, purchasing a superior breeding bull will get your bison to market sooner with beneficial rates of gain. Make sure that the bulls you choose are dominant, have length, depth, width, muscling, and bone structure on sound legs and hooves. My experience demonstrates that these characteristics are very important.