

Canadian Luing Cattle Association Newsletter

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Message From The Secretary

Iain Aitken

Welcome to our 2023 Fall Newsletter. Finally Canadian cattle producers are receiving the record high cattle prices they have dreamt of for a long time. Unfortunately for many these high prices are tempered by an on-going drought situation. I'm sure I'm not alone in wishing that these high cattle prices would become the norm and prosperity could return to everyone in the cattle industry after the many lean years we've had. If past events are any indication of future patterns though it's more than likely that this will be just another once in a decade price spike so we'd better enjoy it for as long as it lasts!

A Luing Herd Visit

Iain Aitken

On a recent trip to Scotland I made a return visit to the Berryfell Luing herd near Hawick. Wilbert Girvan and his son Scott started buying Luings in the late 1980s while still at their previous farm, Buckholm. Here they built up a substantial herd on a system that was low input by Scottish standards. Typically farms like Buckholm that are a mixture of heather/rough grass clad hills and improved lower land would carry a stock of hill sheep like Blackfaces along with a cow herd. The sheep would tend to live on the hill ground with the cattle being maintained on the lower ground which would also grow silage for their winter feed. In many cases the cattle are

wintered in buildings as Scotland typically has wet winters where the cows feet can do considerable damage to the pastures.



Consistency of type at Berryfell

Wilbert however had designed a completely different system decades previously whereby instead of Blackface sheep they maintained a flock of more productive crossbred sheep that were farmed intensively on a portion of the low ground on the farm in addition to the cattle. The practice of making silage for winter feed was discontinued and this freed up enough acres to maintain both the cattle and sheep on the lower land. The hill land went ungrazed all summer and this provided the winter feed for the cattle, supplemented with some feed pellets as conditions dictated. There were tremendous financial savings achieved under this system as the costs associated with harvesting and feeding silage and winter cattle housing costs were

eliminated and the sheep enterprise was considerably more productive. This model that Wilbert developed has been adopted successfully by a number of other farmers throughout Scotland over the years. Winter grazing the hill land with cows worked well because it was a lot drier underfoot than the lowland pastures. It did however call for cattle able to withstand exposure to wind, rain and snow. Luing cattle are well suited to such conditions so introducing the breed was an important part of the jigsaw.

In the early years Luings were bought in from many different herds and they brought with them their fair share of faults - notably less than desirable udders and feet. To overcome these faults Wilbert embarked on a line-breeding program 25 years ago with selection based on improved feet and udder quality and functional efficiency under their conditions. I think the pictures featured in this newsletter reflect the tremendous quality and uniformity that has been achieved across the herd by doing so.

Having keenly followed the progress of this breeding program over the years it was the obvious choice when I began thinking of introducing new genetics into my closed, line-bred herd. With a similar breeding methodology to my

own I think their cattle offer less risk of upsetting the gene pool that I have built than the more typical outcrossed animals with their randomised genetics.

As a result we have imported semen off Berryfell X4 and bred a few cows to him this summer. Apart from a failed attempt in 2003 this will be the first Scottish Luing genetics introduced into the Canadian breed since Luing Bonus in 1984 and I look forward to seeing the first progeny next Spring.



Berryfell X4 - A fine example of the breed

Thoughts On Bull Fertility

Iain Aitken

When a rancher buys a new bull it is usually with hopes that he will bring genetic improvement to the herd, but above all else his job is to successfully impregnate the females in the herd. Like most bull sellers in Canada we have our vet perform a Breeding Soundness Evaluation (BSE) every spring on

the bulls we are selling along with our herd bulls. I think this is time and money well spent as it can detect infertile or sub-fertile bulls through a semen test performed on the bull.

The part of the BSE that I think has less value is the act of recording scrotal measurements. I know that most breeds have requirements for minimum scrotal size before animals can be sold in Society/Association sales but I wonder if it isn't just an extension of man's natural desire to always equate bigger numbers with better animals? The principle behind scrotal measurement is that by measuring the circumference of the scrotum at the widest point around the testicles you can establish the size of the "factory" for sperm production. This is based on the assumption that the testicles are spherical which some breeds like Luing and Galloway aren't as they tend to be more banana shaped than round. This isn't a fault or weakness, it's just a difference between breeds. To get a true comparison of the volume of these testicles would require measuring not only the circumference of the scrotum at the widest point but also measuring the length of the testicles and calculating the volume. The vets performing BSEs on bulls don't take this into account

and simply measure by the standard method which results in some bulls being judged to have lower semen production potential than they really have.

I think the importance placed on scrotal size becomes even less relevant when we realise that a typical beef bull produces around 6 billion sperm per day. Obviously at the end of the day only one sperm is needed to successfully fertilise an egg resulting in a pregnancy. As a bull can ejaculate 2-3 billion sperm at once and even the lowly artificial insemination straw contains around a half billion sperm the odds of one sperm successfully fertilising the egg are fairly high. Using simple math and assuming that semen production is directly related to testicle size where a 42cm scrotal measurement bull produces 6 billion sperm per day this would indicate that a bull with a 36cm scrotal would produce 5.1 billion sperm per day. It would appear to me that this reduction in semen production would be unlikely to impact potential cow pregnancy rate to any extent. We probably run more cows per bull than most people, but even at 35-40 cows per bull in single sire groups over a short 42 day breeding season they are still breeding less than one cow per day on average so actual semen production should not be a

limiting factor. The preceding calculation assumed that there is a direct correlation between testicle size and number of viable semen produced which actually does not appear to be the case. Both the Texas Longhorn and Wagyu breeds have smaller scrotal measurements than typical British or Exotic (European) cattle breeds yet have much higher semen quality resulting in more viable sperm per ejaculate. Based on the semen test results we get back every year I would venture to suggest the Luing maybe follows a similar pattern.



Typical female at Berryfell

In my opinion what has a lot greater influence on herd pregnancy rates is the bull's athleticism and libido. Unfortunately neither of these can be assessed during the BSE. Bulls that are turned out to work in over-fat condition are more like sumo wrestlers than athletes. Over-fat bulls can also have excess fat in

the neck of the scrotum which results in the sperm being overheated in the testicles which reduces motility. Many bulls suffer foot and leg problems during the breeding season which reduce their ability to breed cows. Unfortunate accidents can always happen and the physical act of two large animals mating can result in broken bones and damaged muscles. However I'm convinced that the heavy feeding many young bulls encounter leaves them particularly vulnerable to injury as their feet and legs are relatively under-developed

for the increased body weight they are carrying compared to a more natural (slower) growth pattern. Bulls that are fed heavily from an early age typically have larger scrotal measurements but if this level of feeding has compromised their physical ability to breed a cow the scrotal measurement becomes irrelevant. Perhaps breed Societies/ Associations should consider introducing maximum weight/ condition for age criteria for sale bulls rather than minimum scrotal measurements to maximise their fertility and breeding soundness?

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