

Volume 12, No. 2 September 2018

Message From The Secretary Iain Aitken

Welcome to our summer 2018 newsletter. Putting it together has given me an excuse to hide indoors and escape the blistering heat! Like many areas of western Canada we are in the middle of a severe drought and the current heatwave is going to be the final nail in the coffin of pasture productivity for this season. The problems on our own ranch were compounded by a severe hailstorm in mid June with golf ball size hail that devastated some of our pasture and hay land. Having had very little rain since then recovery has been very poor.

As ranchers we all know drought is the ever present, #1 risk to our businesses. We try to build resilience into our management systems and finances but when it happens it is still very difficult, stressful and costly to manage our way through. I've included an article citing some of the advantages we find with Luings that are particularly important in years of limited feed resources. One reassurance that comes with drought is that for every dry, hot day we suffer we are one day closer to the rains returning. In the meantime I wish all of you that are affected the best of luck in riding out these challenging times and hope that your pastures and winter feed supplies will carry you through.

Luing cattle for sale

Paul and Andree Galbraith are planning on dispersing their Galena herd after weaning in October and will have a small number of quality females available. The cows are bred back to start calving mid-March through April 2019. Located at Brisco, British Columbia.

Contact the Galbraiths at (250) 346-3100 or by email galenacreekranch@telus.net

The Economic Impact of Foraging Ability

Iain Aitken

In a previous article (Feed Efficiency and the Cow Herd/January 2013 edition) I highlighted the foraging ability of our breed on pasture in relation to Net Feed Efficiency testing being conducted in feedlot situations.

Our current drought situation and impending winter feed shortage brings the economic implications of Luing's foraging ability to the forefront once again. Like many other ranchers in years with greatly reduced forage production on our pastures, we have had to rent additional acres to graze our herd this summer. The opportunity for that in this area involves fencing marginal pasture land that has been unused for several years.



A pasture being grazed after several years rest.

The foraging attributes of the Luing cattle are easy to see when they are introduced to pastures that have been un-grazed for several years. They are typically confronted with a mixture of fresh grass, as well as

several years worth of accumulated dead shrubs resulting from grass and encroachment by species like willow, poplar and buckbrush. While most cows would selectively graze off only the fresh the Luings tend to consume grass everything that is in front of them, including browsing the scrubby species. Opening up the pastures like this will ensure better production in the future as it encourages the more productive species to grow while holding back the encroachers.

The cows are particularly busy browsing in the morning which makes me wonder if they are detecting more sugar (energy) in these shrubby species than in the grasses at this time of day? Later in the day the sugar levels increase in the grasses and legumes and their focus switches to grazing them.

Low spots are particularly attractive to Luing cows in dry years even if they only contain slough grass, sedges and cattails. Since moving to Manitoba the cows have encountered a whole range of weird and wonderful new species from warm season flowering plants like showy milkweed to the very low palatability foxtail barley. I remember years ago being impressed with the diversity of plants growing on the island of Luing, species we never encountered on our farm in Scotland which didn't have the coastal influence. The fact that the cows on Luing utilized these diverse and unusual species was not lost on me, nor was the later realization that it was learned behaviour - each calf gaining grazing experience at it's mother's side - passing on the knowledge down the generations.

There has been some very interesting research work done by Kathy Voth in Utah teaching cattle to eat certain undesirable species by confining them to a feedlot situation and feeding particular weeds in tubs daily until the cattle learn that these plants are quite edible. Her findings show that cattle often don't eat the plants simply because they are unfamiliar with them and have never tried them. She has proven that cattle trained in this way will go on to eat these plants in the wild and will train other herd members to do the same. I like to think that we can skip this laborious process as the Luing already has a willingness to try everything they come across!

Renting pasture land by the acre and having cows that will utilize a wider variety and larger percentage of the available forage allows us to extract more value off each acre. This lowers our daily cost per cow and also allows us to harvest more cow days per acre, which in turn extends the grazing season, which ultimately shortens the winter feeding period. These results seem counterintuitive to the general expectation that drought inevitably results in a shorter grazing season and a longer winter feeding period. Reversing these expectations has been crucial to us maintaining our herd through the current and previous drought scenarios.

All good things must come to an end however - eventually we will run out of grazable forage, or the weather to utilize it. After the extended grazing season cows of our type should be carrying considerable condition on their backs and this will help reduce their winter feed requirements. This year hay is already trading at values far beyond what a commercial cattle operation could economically justify paying so won't be something we purchase. On the other hand there will be plentiful supplies of wheat straw in our area which can be balanced with a protein/energy source like DDGS (Distillers Dried Grains with Solubles) to stretch our homegrown feed supplies. I know from past experience that our cows will eat more, and waste less, straw than the average cow does - again our choice of cattle breed will increase our options and lower our costs.

As price takers rather than price setters in a commodity business, ranchers can only increase our profitability by reducing our costs of production - the foraging ability of the Luing cow is one tool that we can use to achieve this goal.



Same spot as previous photo after short duration, high stock density grazing/trampling - ready to grow more, and better, forage next year.

Horns in the Luing Breed

Iain Aitken

A question that I'm often asked when people make initial enquiries about our breed is whether they are horned cattle. I tell them they are a horned breed - but then confuse them by saying however most of the Luings in Canada are polled! Luing breeder and geneticist Dr Bob Church undoubtedly has a better understanding of the horn/poll genes in our breed than anyone else having run a breeding program for over 40 years with one of the goals being elimination of horns. This article is based largely upon my understanding of his findings.

The Luing breed in Scotland was horned from the outset with it's ancestors being the horned Scottish Highland and Beef Shorthorn breeds. In recent years some inroads have been made into increasing the number of polled Luings in their home country but they lag some distance behind Canada for this trait. The difference over here is the contribution the infusion of "Snowlander" genetics made in the early 1980s. This strain of cattle were developed by using a homozygous polled dairy type Shorthorn bull on Highland cows which meant they were polled from the outset.

Based on Bob's experiences and observations with imported Scottish Luings, the Snowlanders and the blended offspring of both over many generations we believe that Luings do not fit the normal polling pattern expectations set out in the following table.

Parent 1	Parent 2	Progeny
PP	PP	100% PP
PP	PH	50% PP, 50% PH
PP	НН	100% PH
PH	PH	25% PP, 50% PH, 25% HH
PH	НН	50% PH, 50% HH

(PP=homozygous polled, HH = homozygous horned and PH = heterozygous polled)

Bob suspects that there may in fact be two horn genes in the Luing gene pool. If this is the case and one gene is dominant over the other the only way that horns could be expressed is if both genes carry a double recessive allele. If horns only appeared if all 4 alleles on 2 genes were recessive and any polled allele in either of the two genes would result in a polled animal, a horned animal would rarely show up. I believe the statistical chance of thus getting a horned calf would be around 1 in 64 - which is almost exactly how often we are getting horns in our herd.

Although the percentage of Luing calves born polled each year in Canada is approaching 100%, there has yet to be a Luing bull that could be declared homozygous polled based on all the calves he sired being polled. I was intrigued this winter to see some bulls in Scotland with DNA tests indicating they were homozygous polled. subsequently selected and DNA tested 3 of our young bulls and the test results indicated they too were all homozygous polled. While welcome news if true, I have my reservations about the results given that

this is a generic test protocol based on the other breeds that fit the table.

The Luing genome has not been studied and if there are in fact two horn genes at play in the Luing yet the test only looks for markers at one locus on the chromosome the test would not be proof an animal is really homozygous polled.



A typical polled Canadian Luing head.

One thing is clear however, building on the Snowlander influence and never using horned bulls, we get fewer horned calves every year. One of our young bulls that DNA tested homozygous polled this spring has probably more polled ancestry than any other bull in the breed to date. All 30 ancestors in the previous 4 generations of his pedigree were polled. Whether he is truly homozygous polled remains to be seen - like everything in cattle breeding the truth will be revealed in the fullness of time. It is clear that there is a market preference for polled cattle in all but the most extreme ranch conditions where large predators pose a serious threat to cattle that have had their natural defensive weapons removed!

With ever tightening animal welfare standards in agriculture I think the days of dehorning cattle are numbered so we will continue to strive to turn this horned breed into a polled one.

Genetics of Bull Longevity

Iain Aitken

Another chapter is closing in our herd as I pulled our senior stock bull Warrior in from the cows for the last time. At nine years old this was his ninth breeding season and in all that time he has never had an injury or missed a day's breeding. Every year his cow group had more cows bred first cycle and less open than the other groups. His daughters in turn have been the most trouble-free cows we've ever had. These results mirror those of of breeders I know in the United States with large herd/open range conditions who mob breed their herds with multiple sires. They do this to allow natural selection to take place where the fittest, most successful bull breeds the largest number of females.

Many breeders, myself included, believe that there is merit in selecting bulls from older, well proven cows as we feel this increases the chance of breeding cattle with greater longevity. Warrior was the product of embryo transfer performed on a 20 year old cow. We hear a lot about longevity in relation to the cow but has anyone considered the influence the individual longevity of the bull has and whether he can pass that trait on to his offspring? Throughout the wider beef industry bull longevity is often lacking or obscured as a result of the animals being fed too heavily their development leading to during Artificial curtailed breeding careers. insemination usually increases the influence of an individual sire within a breed population but this is certainly not the result of natural selection so how does this affect overall breed longevity?

Another aspect of bull longevity is temperament - towards other bulls and humans.

Although Warrior took his turn as "boss bull" for many years he was never an overly aggressive fighter.

He has always been wary and respectful around people and like his mother seemed to possess a superior intelligence. An example of this was his reluctance to come out of the bull field/corral at any time other than start of breeding season. On that day he would be first out the gate and up the chute to get loaded on the trailer!

Footnote: We are currently looking into drawing semen off this bull for sale through the Luing Association.

Canadian Luing Cattle Association

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