Crops Cows, Creeks & Sloughs Managing Our Riparian Areas

June 26, 2018
Memorial Hall, Valleyview Alberta
By: Brian Harcourt

Speaker..Kerri O'Shaughnessy, Riparian Specialist..

Riparian areas can be part of a Fen, Bog, Marsh,
Swamp or a small stream.
They can be a small part of your farm land.
Size does not relate to the importance of them.
These areas can be called "Green zones"around the various sites.
They trap, store and slowly release water.
They are a buffer to the impacts of flooding and droughts.
They also filter the water improving the quality the quality.
Great areas for fish, wildlife, plants and livestock grazing.
They also a pleasing looking mix of grass, trees and other vegetation.
"Cows and Fish" is a voluntary stewardship program.
They work in partnership farmers, ranchers, cottage owners,
and community agencies on Riparian area management.
They will put on workshops or seminars for training and
distribution of materials to enhance management of the sites.
They will appraise the Riparian site to give the landowner
a starting point of what to do and how to do it.
They can advise on a grazing rotation system and timing of use.

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Ranching for Profit and Grazing Workshop

June 19, 2018
Brownvale Hall

Speaker...Dave Pratt...California.

Comments and Quotes..
Ranching...financially unattractive.
" ...economically unrewarding.
After 5 to 10 years...if its not broke, brake it and redesign it.
As we age we become less flexible.
We may have to subsidize our ranch--off farm income.
Always think of ways to do things better.
Productivity instead of Profitability, you will go broke.
100 cows-how many calves lifetime?
2 die..93 calve..5 dry..5culls..88 good..8 open.
80 left at year end.
100..80..64..51..end of third year.
Depreciation annual $300.00 each.
Sell at 6 years,,,or one more calf, or buy a heifer.
Sell the bred cow, or at 6 years, your choice.
Economic..should I do it,will it be profitable?
Financially..can I afford to do it?
Taxes..aspire to have a tax problem.
What is profit? $ left over..income less expenses.
Land values..$ per acre..ROI or ROA..is cash rent an option?
Can you pay the full cost for labour?
Can you pay the interest on all assets and all other
production costs and still make a profit.
Quote of the day...The Cow must pay her own way!!
Feel free to call Dave...1 800 222 8514.

ASB Summer Tour
July 10 – July 13, 2018
Strathcona County, Alberta

Garry Candy

The days started at 6:30 am – the tours were well run and very eye opening. A few things about Strathcona County:

- Population of Sherwood Park is 59,000
- Rural population is 29,000
- Sherwood Park is considered a hamlet
- There is evidence of great wealth everywhere, i.e. there are only 126 miles of gravel road in the whole county

July 10 – 6:30 am start with breakfast- toured Alberta Ag and Forestry, Crop Division Centre (North) - CDC north. The facility is located on 600+ acres of land not far from the Alberta Hospital. They do a myriad of research on new plant varieties and insects. One of the plots we toured was growing seed potatoes; they are working with over 600 varieties of potatoes for home and commercial use such as chips. The other plots were canola – testing club root resistant varieties as well as the disease itself. One of the other focus points was the bee study and diseases – they work with the Beaverlodge diagnostic unit. The day was spent walking and looking at the various plots and asking questions of our guide. Many of their research areas are indoors and not accessible to us because of disease risks.

July 11 – 6:30 am start with breakfast - 9 buses loaded up at the Millenium Centre and left by 8:30 am. Our first stop was their new recycling facility in the city. These have provisions to handle all kinds of materials from households (including furniture and mattresses), tires, etc. They provide tree branch chipping and the chips are used to create mulch and other products instead of being burnt. They along with the County are experimenting in ways to recycle grain bags in the near future.

Next stop was the Bev Facey School. The school has grades 10, 11 and 12 – about 1250 students. They have trades training available - carpentry, mechanics, etc. and a new horticultural program. They have an indoor greenhouse and lab setting (like an atrium) and also a large outside garden divided into small plots. The flower beds on the grounds are managed by students. Their 2 dedicated teachers say this is much better than teaching math. The teachers create the learning modules in house and it is a credit course. The course is oversubscribed and is very successful in student wellness. According to the primary teacher, a lot of students have anxiety concerns as well as other teenage pressures and this program has a very positive result on student wellness.

One of the teachers at the school introduced us to a weed that is new to northern Alberta – Shaggy Soldier weed. "Plants are 8 to 24 inches tall with opposite eaves. The small flower

heads usually have 5 white ray florets and 15 to 35 yellow disc florets. The leaves and stems have spreading white hair." They think this weed came in with bean seed and initially had one or two. Thinking nothing of them, they tilled them and the following year and had many more. They again tilled the plot and in the 3rd year the weed had taken over completely. It can be chemically controlled but not around edible plants.

We then toured the Stal VDN Equine Facility. The horse is an iconic symbol of the County. There are more horses per capita in Strathcona than anywhere in Alberta. The facility was started by Danielle van der Werf. She runs the facility with about 25 full time workers while her husband operates a Heavy Equipment business. There is a huge indoor riding area complete with beautiful stalls and an outside jumping area as well. They talked about the importance of the turf and footing for jumping horses and were asked why the fences were all wood instead of steel. She explained that if a horse gets a leg in the wood fence, the fence will break, in a steel fence the leg will bread. The horses are worth in the million dollar range, she rides for about half the year.

Our next stop was the Delaney Vet Clinic set in rural Strathcona area. The clinic specializes in horses; they employ 5 full time veterinarians and 7 technicians. Part of what they do is semen testing, artificial insemination and embryo transplants as well as the usual types of vet services; broken bones, tissue damage, vaccines, neutering, etc. A C-Section on a horse can run $10,000.00.

Regarding the subject of horses, I asked a few members about VSI for horses – they said horses were not included and most said they have done away with the program altogether. Their reasoning was that while it benefited livestock owners, there was not a comparable program for crop farmers facing spraying costs for crop diseases.

July 12 - 6:30 am start with breakfast – first tour was to the police and fire stations which are not far from Millenium Place. The police station is relatively new and has a lot going for it. The main one I was interested in was the driving awareness program. They have two race cars now and one being built which is electric. They go around to drag races with their cars and a trailer with a driving simulator on board where they are able to emulate the effects of intoxication or drug use with special eye glasses. They also ask students while they are driving the simulator to check their phones which demonstrates the effect of distracted driving very convincingly. The fire hall is new as well with all the equipment you can dream of including an air boat and a truck and trailer to transport it. They have an integrated fire and paramedic department – this means that firemen and ambulance people are cross trained so they can switch duties depending on the situation. The department works with 3 people to an ambulance team. An item of interest is the 13' statue of a Dalmatian dog in front of the firehall. It has been named Sadie (after a contest involving school children) and commemorates the use of this breed back when horses pulled the fire wagon – the dogs were trained to keep the horses running in the right direction.

We travelled to a Hutterite Colony out by Josephburg, a town of about 10 houses and a new recreation facility for which they were able to secure grant funding. They served lunch and had a

trade show consisting of a few booths including some crop specialists (Beyer, Pioneer), Olds College and Highline (had a ditch mower with spray attachment), and outside were some antique tractors. Also the County was displaying their animal recovery trailer which is a large enclosed trailer with livestock panels and ropes, as well as slides to put an animal on and secure it in order to tow it out. Again all done with grant money – it has yet to be put to use.

The colony consists of 25 households and produce milk, poultry and vegetables as well as doing machining and welding. They have 180 cows where all milking is done robotically as well as the cleanup and the poultry processing area is similar to Lilydale. The welding shops include a CNC plasma cutter that will handle 2" thick material in 5' x 10' sheets. Some of the men go out for computer training on electronically controlled equipment for the farm.

To summarize; this was a great tour both for education and interests. The tour showed what can be done with progressive thinking and access to a great deal of money.

Three things that stood out in my mind:

- Bev Facey school horticultural program
- Recycling facility, particularly the idea of chipping tree waste instead of burning plus recycling plastics
- The fact that the ag land there is over a million dollars a quarter, their taxes are the second lowest in the province and they will point to "Refinery Row" as the reason for the wealth.

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Field Test Plots
July 24, 2018
High Prairie, Alberta

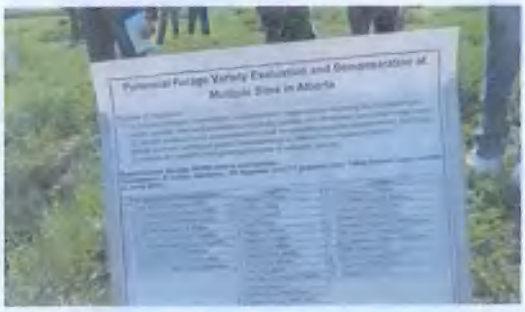
Garry Candy

Many of the test plots were annuals, perennial legumes and cereals. The plots that differed from what they have in Fairview were some legume pasture and forage plots that were 3 years old. These were alfalfa/brome/sainfoin as well as different vetches.

My interest was in the plots that were seeded in 2016 and cut on June 0, 2018. As of my visit on this day, the plants in these plots were about 12-14 inches tall and healthy. The sainfoin was difficult to differentiate from alfalfa until Akim pointed out the wider and thicker leaves.

They had many different varieties of alfalfa and brome and were showing the two types of sainfoin – AC Nova (older variety) and Mountainview (newest type). The Mountainview showed better regrowth and to me was a stronger plant in stem and leaf growth and should be an excellent choice for pasture or forage as it will not cause bloat and its protein and TDN are high.

The event was well attended by interested producers and some board members. The cocktail mixtures that had any variety of vetch did not seem as good as others. In conversation with attendees regarding that, one grower said he had poor luck with heavy vetch and others remarked it was strange because it grows wild very well in our environment.



		Location: High Prairie Trial ABP-SARDA-PCBFA Plot 405 Trt Success Hybrid Brome/AC Mountainview Sainfoin
		Location: High Prairie Trial ABP-SARDA-PCBFA Plot 107 Trt Fleet Meadow Brome/AC Mountainview Sainfoin
		Location: High Prairie Trial ABP-SARDA-PCBFA Plot 106 Trt Veldt Cicer Milk Vetch
		Location: High Prairie Trial ABP-SARDA-PCBFA : Legumes Plot 111 Trt Halo Alfalfa
		Location: High Prairie Trial ABP-SARDA-PCBFA : Legumes Plot 315 Trt AC Mountainview Sainfoin

		Location: High Prairie Trial ABP-SARDA-PCBFA Plot 405 Trt Success Hybrid Brome/AC Mountainview Sainfoin
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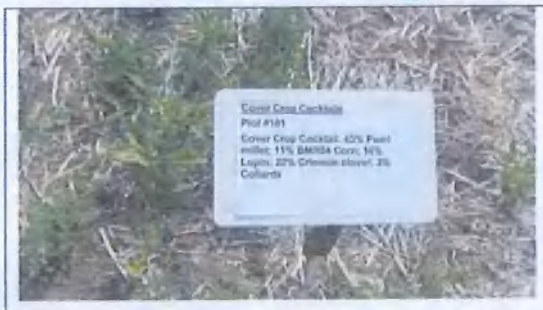
		Location: High Prairie Trial ABP-SARDA-PCBFA : Legumes Plot 111 Trt Halo Alfalfa
		Location: High Prairie Trial ABP-SARDA-PCBFA : Legumes Plot 315 Trt AC Mountainview Sainfoin

Location: High Prairie
Trial ABP-SARDA-PCBFA: Grass

Plot 102
Trt AC Admiral Hybrid Brome

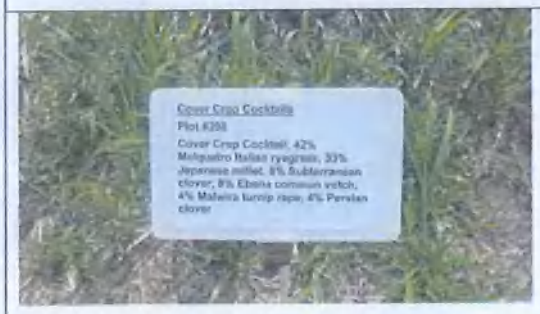
Cover Crop Cocktails




Cover Crop Cocktails
Plot #103
Cover Crop Cocktail: 44% Crown millet; 35% Japanese millet; 13% Crimson clover; 13% Berseem clover; 6% Balo phacelia


Cover Crop Cocktails
Plot #106
Cover Crop Cocktail: 40% Haymaker oats; 5% Proso millet; 5% Italian ryegrass; 20% Hairy vetch; 15% Crimson clover; 10% Winfred brassica 5% Sunflower


Cover Crop Cocktails
Cover Crop Cocktail: 44% Crown millet; 35% Japanese millet; 13% Crimson clover; 13% Berseem clover; 6% Balo phacelia


Cover Crop Cocktails
Plot #208
Cover Crop Cocktail: 42% Melgautro Italian ryegrass; 33% Japanese millet; 8% Subterranean clover; 8% Ebena common vetch; 4% Maliwa turnip rape; 4% Persian clover

ANNUAL FORAGE TYPES

LEGUMES

CLOVER

LUPINS

BROADLEAF COVER CROPS

Grazing School
August 7, 2018
Bay Tree, Alberta

Garry Candy

The Grazing School was hosted by Peace Country Beef and Forage Association at Spruce Lane Ranch owned by Andrew and Vivian Miller with Jim Garrish as speaker. Jim has extensive experience and education in the cattle and sheep industry; currently living in Idaho, he has written many books and conducts seminars all over. Jim coined the phrase: "Management-Intensive Grazing" as the grazing is not intensive but the management has to be in managing time allowed for the animals to stay in a paddock. There was both classroom time and time in the fields.

He began by stating that there are 4 requirements to produce milk, meat and fibre: soil, light, air and water. He calls bison – hippie cows, sheep – cows with a jacket and goats – cows from Arkansas.

We require Co_2, solar energy and water to create sugar and then mix in minerals. When we look at a field to determine condition it is necessary to look at the ground, not across it, checking for bare areas. He stated that a 1200 lb. cow will eat 12,000 lbs. of dry matter feed per year and about 90 % of that goes out the back end. In other words cows spread minerals around as well as seeds. His calculation is that 100 cows can move 50,000 lbs. of minerals around in a year. He refers (as did a friend of mine many years ago) to a cow as a factory.

Correct grazing practices can not only help in milk production and body condition but it can help prevent parasites. Overgrazing can cause parasites and diseases – linking the number of animals to the feed and planning yearly feed is the answer to increased profits. In the plants, positive carbohydrates support the top and the top supports the bottom. Adjusting the carrying capacity to the environment and managing time are the keys to successful grazing.

Carrying capacity or CC is equal to forage production times seasonal rainfall divided by the daily intake times the length of the season:

$$CC = \frac{\text{Forage Production x Seasonal Rainfall}}{\text{Daily Intake x Length of Season}}$$

When you move animals from paddock to paddock, the question is how much leaf should you leave? He maintains that the plants when animals are introduced should be high enough that a bit will not take all the leaves. One fellow remarked "How do I control the size of the bite?" Jim replied that if there is enough growth, they tend to take off the top and move on. This will prevent having bare ground.

Stock density is the key and he had us guess with certain areas in the pasture as to how many animals for a day or how many animals for a set number of days it would hold. The answers were all over the map but some groups were closer in their guesses. The higher the stock density, the shorter the period of time:

$$\text{Stock Density} = \frac{\text{3000 lbs./acre x .5}}{\text{.026 lb. forage x live weight x \# of days}}$$

Looking at a field of grass, alfalfa and dandelion, he said dandelions had the most protein. If plants have less than 3 tillers, it indicates a shortage of carbohydrates. When moving cattle, what you leave is what you get – using 23% is about right.
I would recommend his seminars and books to anyone interested – I purchased 'Management-Intensive Grazing: the Grassroots of Grass Farming.

ALUS – Alternative Land Use Service
Becky Devaleriola – Program Coordinator
Sebastien Dutrisac - Agricultural Fieldman – Northern Sunrise County
August 18, 2018
Nampa, Alberta

Garry Candy

The tour began at the Ag Service building in Nampa with a brief introduction as to what ALUS does and who the partners are – Northern Service County, SARDA, Mighty Peace Watershed Alliance, Cows and Fish, PCBFA and Agri Forestry and Woodlot Society.

ALUS has $6.5 million invested (it is a national program) with 18,500 acres of which 3600 acres are reforested and covers 522 farmers in 3 provinces. The goals are to aid Eco services balance, enhance wildlife habitat and natural insect predators, promote healthy growth areas and to attract and feed pollinators.

They provide design help; financial aid for landowners that want to protect waterways or create them to provide clean wat, plant and wildlife growth and do not take caveats. Producers do sign a 10 year contract and receive annual payments of $60 per acre for cropland and $30 per acre for pasture or wetland. Monies are available for trenching, fencing, providing trees and shrubs and earthworks, etc.

The first tour stop was at Annette and Mike Rosendal's farm. Their project was to get water for livestock instead of using pails from town. They did a study of a low lying area and basically plugged a ditch – dug one end deeper, fenced and installed a water bowl with a solar pump. They are pleased that not only are their livestock happy but they now have nesting ducks and other birds.

The second stop was Rob and Laurie Stavne. Rob's project was to enhance grazing areas for his cattle and also install a remote watering system. The project involved fencing, some earthwork and planting of trees and shrubs. He was pleased on all account and also with the increase of wildlife. PCBFA provided the pasture seed and other funding while ALUS supplied the fencing etc. Part of the project involved a 5 acre soil conservation and paid riparian project.

The third stop was at Mike and Corinna Williams, MCW Apiaries Ltd. This is a honey farm not far from St. Isadore. Their project involves an intensive seeding of spruce trees, dogwoods, all types of plants to produce a good habitat for bees.

We looked at the design and locations of the individual types of plants and the reasoning down to and including sunlight requirements, wind protection, etc. Each seedling is protected by a hemp mat about 13" square which will biodegrade in 2 – 3 years.

The fourth stop was at Clarence and Roberta Hawryluk. This is a riparian enhancement project to stop bank erosion and return to native vegetation. It was done using over 100 logs to create a log gabion and stone to create a wall and a Zuni bowl. This is a fantastic and very rewarding project. Some of the reforestation was done by Junior Forest Rangers from Peace River and High Prairie. 700 native seedlings were planted.

A lot of the seedlings ALUS uses come from Woodmere Nurseries.

The day ended at 4:15 back at NAMPA.

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Fairview Field Tour
August 2, 2018
Fairview, Alberta

Garry Candy

This was a very well attended event. They showcased many plots including cocktails – legumes, cereals and corn. It was a family event with a trout tank, petting zoo, bouncy castle and face painting. I saw a Muskovy Duck for the first time (ugly sucker) at the petting zoo,

Soil water holding capacity was demonstrated at the pit. There were no perennial forages that were established years ago.

I chatted with Akim asking him about nitrate poisoning after hail or frost damage. He explained that because legumes are nitrogen fixing, there is no concern about nitrate poisoning in feeding frozen or damaged legumes. However, damaged cereals such as oats or barley have to be either cut immediately or left for about 2 weeks, either to graze or to bale. If grazing soon after damage, allow the cows in but remove them quickly. In alfalfa, the damaged leaves can cause bloat depending on the maturity of the plant when it freezes – young leaves can soften and become moist causing them to pack and cause bloat.

As an aside, there is a concern for Canola farmers in that the Pest Management Regulatory Agency (PMRA) release proposed decisions to phase out the outdoor use of clothianidin and thiamethoxam, two important products used by canola grower to prevent damage caused by flea beetles.

In discussing this with Dan Doll, Canola Growers Director, he told me that the PMRA has backed off on this. The Canola Growers had explained that with seed treatment it is a very small amount per acre and does not affect pollinators whereas allowing the insects to mature and fly requires spraying which does impact pollinators.

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