Fairview Veterinary Clinic
Fairview Alberta
February 25 2019
By: Julie Watchorn

A group called Mosaic Veterinary Partners Ltd owns Fairview Veterinary Clinic
They have 5 clinics in total Peace River
High Prairie
Fairview
Maple Creek
Brooks

In Fairview we have 2 Veterinarians and 3 Vet Technicians
Have a new chute system so you don't have to back up to the old chutes!
Vet/Client/Patient Relationship –VCPR
Must have herd health check
Adequate information to make treatment plans
Vets advice must be followed
Follow up after treatment

February 1-May 31 There will be local on call services
June 1-January 31 Shared on-call with Peace River weekends only

Offer AI services now

Calf hood Diseases
Cody Creelman DMV

1/3 of beef calves fail to acquire passive immunity due to delayed colostrum consumption
Calves must have 2L of colostrum within 4 hours of birth!!
Always use colostrum from your own herd, has the right immunities for your calves not bringing in new diseases
Don't get a milk cow, also don't buy orphan calves! Same reason... different diseases you don't need at calving!!

Saskatoon Colostrum Company is good brand
Can freeze fresh colostrum for one year
Don't re-freeze
Do not microwave to thaw
Thaw in warm water bath
7-year-old cow is the best donor for colostrum to freeze
Use colostrum that has at least 50-60 IgG for calves that just need a bit of help
100+ IgG for calves that does not have a mother or just has not had any colostrum

2Tb baking soda to 1 liter of water for acidotic calves after colostrum

Calf Scours

Most calf scours cannot be treated with antibiotics
Corona Virus, Rota virus and BVD are viral scours
Coccidia and Cryptosporidia (which is a zoonoses) are Protozoa type
E. Coli, Salmonella, and Clostridium perfringes are the ones that could be treated with antibiotics because they are bacterial

Improve management: Don't calve where you fed all winter
Calve heifer's separate
Don't overcrowd
Minimize exposure to older calves

Scours vaccines supplement. It can't prevent scour outbreak with bad management
Highest risk for scours outbreak is 11-15day old calves after 30 days you are generally out of the woods

Sandhills Calving System
Segregate by age
5 paddocks moving cows out every 2-4 weeks
Move cows that have not calved into new pastures
Leaving calves where they are

Beef Smart- Nutrition
Working for the producer
Copper effects scours too high or too low
Ensure good body condition for proper fetal growth

What you feed and how you feed are your two biggest expenses
What nutrients are you concerned with?
Energy
Protein
Minerals
Vitamins
Water

ENERGY=TDN=55-60-65
Mature cow requires 55% TDN to maintain BCS
60% TDN during late pregnancy
65% TDN after calving
Digestible Fibre

Crude Protein=7-9-11
7% for mature beef cow mid preg.
9% in late preg.
11% after calving
Copper deficient cows are
Un-thrifty poor gaining cows

Red coat color
Have difficult time conceiving
Do a liver biopsy 5-10 of your cows

Ergot Alkaloids
Reduces growth
Shorter gestation length
Lower conception rates
Abortion

Allowable limits-
.010-.33% ergot in feed
.1%= one ergot body in one liter if grain
2-3 ppm alkaloid potency

Beef Smart Consulting Inc.

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Clubroot In The Peace Update
Hosted by SARDA
Rycroft, Ab
February 28/19

Krista Zuzak, Chief Provincial Plant Health Officer

Clubroot was originally found in 1970 in home gardens
Heavy infestation in a market garden 2001 in cabbage
First in 2003 in canola in Sturgeon County
2003 there were 12 fields
By 2018 there are 3044 fields that are positive for clubroot
With 10,000 fields tested

MD of Peace
Birch Hills
Greenview
RockyView
Northern Sunrise
300 new cases found in 2018

Clubroot is spread by soil on equipment
4 years clubroot spores die on their own
Contaminated soils from 100g to 1,000,000g
2016 there were 64 new strains
By 2018 there were up to 170

-Resting spores last a long time in the soil
-Soil movement is how the disease spreads
-The pathogen has a diversity of pathogens occurring naturally in the population
-Genetic resistance- foundational management tool
-Resting spore populations can rapidly shift to become virulent on resistant canola

Canola Council
Cover your Galls- Clubroot Management

Keep spores low and local
Make sure incoming traffic is free of soil especially from unknown areas or if known from clubroot areas
FIND IT EARLY!!!
Isolate patches; minimize soil transfer out of the patches
Seed infested areas to grass, help reduce soil movement and further reduce spore loads
Extend rotations and have at least 4-year rotations with canola
Manage coniferous weeds early (all brassicas will have clubroot spores if in the soil)
Stink weeds, volunteer canola, turnips and radishes in cover crops
Even going from farm to farm with boots
Your boots can carry 140g of soil

Can have spores up to 600,000,000 spores/g
=84, 000, 000, 000 spores on each boot
That's enough spores to infect 41.5 acres!

If you suspect clubroot or have positive test
You identify and mark infested area
Mark out area twice or three times as big
Initial treatment
-Seed to sod-forming grass (perennial rye)
-Control weeds
-Lime to >/< PH 7.2
-Get soil samples!!

Symptoms of Clubroot
-Plants start wilting
-Die out spots
-Of course GALLS ON ROOTS!!!

Greg Sekulic
sekulicg@canolacouncil.org

FYI: Our County has a policy in place already the it will be a 1-4 rotation
Which means you will only be allowed to plant canola every 4 years rotating with cereals and grasses etc the other 3 years

Peace Country Beef & Forage Association
Annual General Meeting
February 22, 2019
Dunvegan Motor Inn
By: Brian Harcourt

Meeting lasted for 2 hours, very interesting.
Several changes in directors.
12 GOV'T sponsors, 10 MDs and Counties,
8 Gold and 56 small companies and individuals.
Excellent supper.
Dr Akim gave a short talk on Cover Crop Cocktail mixes,
blends of various types for many situations.
For advice give him a call. 780 835 6799.

Speaker..Leslie Kelly...Do More Ag..Mental Health and Farming.
Farming--smaller families-big impact on the whole world.
If you suspect a problem is beginning, talk, listen, act, Do More!
I in 5 will suffer to some degree.
40% of those will not seek help.
In US, highest suicide group is FARMERS.
Everyone has a different level of stress.
If someone hints of having a problem walk a mile with him--her.
Support within your means.
domore.ag 3006 550 6135
mkfa.ca
Call EMS...They have a group of about 20 people.

Clubroot Session
Rycroft, Alberta
February 28, 2019

Speaker..Krista Zuzak, Chief Prov. Plant Health Officer.
History of Clubroot..First discovered near Edmonton.
2001..in a cabbage field near Leduc.
2003..in Sturgeon County in 12 fields.
2004.. over 10,000 fields checked. 2018, 3084 fields confirmed.
2018..MD 135, one field. 2018, in 41 Counties and MDs, 300 new fields.
Spores spread in many ways, equipment farm or otherwise,
wind, water, animals, birds.
One gram of soil could hold 1,000,000,000 spores.
Management..scout your fields looking wilting plants and
dig up some of the plants looking for Galls on the roots.

Spray for volunteer canola and weeds.
Remove all soil from all equipment and seed grass at the
entry to the field.
Seed resistant cultivars every 4 years.
Use seed most resistant to the most virulent pathogen types.
Clubroot resistances breaks down in three years.

Gregory Sekulic..Ag Specialist...Canola Growers Asso.
Advice..keep spore loads low and local.
Clean equipment, be very particular, get it all!!!
Isolate patches and minimize soil transfer.
Scout--scout..scout..to identify problem areas early.
Resting spores, Zoospores, Plasmodium invades plant
cells and causes the Galls.
Spores travels wherever soil goes even on your boots and clothing.
You can't do everything but you can't do nothing.
Liming is a possibility but expensive.
sekulic@canolacouncil.org
@sekulicCCC 310 FARM

Healthy Soil Workshop
Fairview, AB.
February 11, 2019
Garry Gandy
This workshop is part of a series funded by CAP, MD of Fairview, Clearhills County and GPRC. Nora from NPARA was there with displays and talked about their research area saying that it is on the poorest land in the region. The crops that they have been researching are legumes, flowers, multi species cover crops, corn and fall seeded crops. She extended an invitation for all to visit. About 70 people attended, some from long distances such as the Little Smoky and Whitecourt area.

Elain Ingham – PHD in Agriculture and many designations

- Has been involved in soil research all over the world for more than 40 years
- She can be reached at www.saifoodweb.com or www.soilfoodweb.com
- Soil and its living organisms were her topic – "Mother Nature is a teacher and she sends messages – listen to what she is telling you"
- Plants in stress send out signs like a sick or injured animal that will attract disease and insects
- With good soil you do not require fertilizers – if you do then your soil has not been taken care of properly
- She explained the roles and functions of bacteria, fungi and protozoans. There is no such thing as poor soil – it only lacks organisms which can be determined by testing the soil
- To test – pull the plants and take soil from around the roots, not soil from a tractor track
- In her 40 years she has studied soil all over the world – from 300,000 hectares of tomatoes to Brazil with corn, soybeans, grains and cotton
- Showed photos of what she calls effects of overtilling – dust bowls and sand dunes
- Toxic fertilizers and chemicals are not required – they need the proper balance of organisms – good healthy plants taste better
- Land can be turned around in as little as a year as flowers depend on the balance of nutrients. Plants get all nutrients except light and air from the soil. With land turnaround, production can increase as much as 300% by the 3rd year and also reduce the amount of water required.
- Don't stress the plant by addressing the symptoms instead of the cause. Roots need to go in very deeply so the soil structure should allow for this. Barley and wheat roots need to go 25 feet deep.

- Soil requires the following:
    - Minerals – balance of sand, silt and clay, a threshold level of 3% organic matter, oxygen must be present for aerobic organisms, Abiotic factors, i.e.weather conditions
- Too much organic matter tilled in can cause detrimental effects. Root material ad growth is better by planning early and growing cover crops in the spring
- Having done 3 million samples up to 2003 she has found rocks are continually turning into sand, silt and clay – just need bacteria and fungi. Nutrients are present, just need to release them – bacteria and fungi make the enzymes and protozoans.
- I checked out the Soilfood website and feel it is very worthwhile for anyone whether you have many acres or a small garden
- She spoke some on composting – do soil tests to make sure your compost has what is needed. Weeds can't handle ammonia but they thrive on nitrates. Need to: suppress disease, retain nutrients, stop runoff, ensure nutrients are available, decompose toxins and build soil structure. There is sometimes a need for predators – even grasshoppers
- She compared building soil and building a house – start with a foundation and then add rest. The appearance of the soil will show bacteria, aggregate, root hairs, ciliates and protozoan. Fungi diseases cause root distortions

Dr. Zamily Zavala – Manager of CARA in Oyen

- Very knowledgeable and highly educated in soils
- Showed slides of healthy and not so healthy soils – discussed what plants need and what the lab can do for anyone who grows a plant - soil aggregation is the 1st step to healthy soil
- Use CARA to understand what is affecting your soil health – see your soil in a general way using lab reports. There will be custom assessments such as if active carbon is needed and other suggestions
- This was a very worthwhile and eye-opening day – both speakers were great. Dr. Zavala had a lot of excellent information but due to how quickly she speaks, I was unable to write it all down.

Dr. Zavala extended an invitation for us to set up groups of up to 20 persons to tour the lab in Oyen. I would suggest that we discuss dates and times with the lab and then ask for interest from the public.

Sarah Hayward

From: MacKay Ross <muckslotus@yahoo.com>
Sent: March-17-19 2:10 PM
To: Sarah Hayward
Subject: Re: farm to plate pre conference

Hi Sarah

Not sure why you haven't received my notes so I am simply coping and pasting them into this email.

MPWA wetland workshop
Final integrated watershed management plan finalized March 2018 Megan Graham
Understanding wetlands and ties to policy and legislation Wanda Watts
Alberta wetland identification and delineation directive, for resource to identify a wetland.
Wetland management is covered by the environmental protection and enhancement Act, public lands act, and the water act.

Restoration of disturbed boreal peatlands. Jean-Marie Sobze
Peatland is defined as more than 40cm of peat.
1m(squared) peat from donor site spread on 10m2 for reclamation.
Various methods to reclaim sites to original natural state, currently very costly but effective.

ALUS with Northern Sunrise County
Payment rates are based on local acre rent for each land usage, many rates inside one project.

Regional ASB

My thoughts and future ASB agenda items.

Fire education for our producers in relation to the dead aspen.
Should we invite forestry to help with our white zone fire plan?

CFGA18
Leaves of grass w/Dr Henry Janzen
Restoring land will require going back to long rotations including perennials and grazing animals.
Health is a metaphor not a scientific word. The heart of the definition is function of its ecosystem, it's production, and is context dependant, what are we expecting the soil to produce?
The ultimate use of lands is to maximize solar energy capture.
More SOM (soil organic matter) the more C (carbon) and therefore energy that will cycle through the soil, water retention also goes up. Perennials maximize solar capture by being there all snow free days, they have evolved to persist, (annuals up to 32% of C is exported) perennials promote recycling more goes into the soil than is exported.
Manure returns 80% of what was taken from the soil.
How do we optimize solar capture, even in annual crop years?
Wisdom is a putting together, knowledge is a taking apart.
Everything is connected, one impact affects the whole system.
Practices will vary from place to place, but the principles are constant.
Most occupants of land are not quantifiable (wildlife impact, insects, microbiology, etc.).
Sustainability is only revealed after long periods of time, regeneration can be measured in a couple years.
How do we remind a larger audience that land as legacy is important?
How do we get our stories across, and get people out to experience the land themselves?
No fast easy fixes, there is a lot to learn.
We need a whole picture approach to agriculture.
We need storytellers and poets.
We need to remind people that the land is where their energy (food) comes from, not just my income.
Hope must be inspired, show the examples of success in farms that are making progress.
We must think proactively, not defensively, of how livestock can and do benefit the health of the land.

Carbon market opportunities w/Karen Haugen-Kozyra
Virescosolutions.com
If we increase SOC (soil organic carbon, a significant portion of SOM [soil organic matter]) in our soils by 0.4% per year we can offset 100% of C (carbon) emissions per year.
Youtube; The forgotten Solution Documentary
Nature4climate.org
Global compliance carbon pricing, Carbon pricing was started in Alberta in 2006. Only jurisdiction to offset at scale through agriculture.
Revenue is small per acre/head, and is it permanent/safe?
60% of the C (carbon) is emitted at primary (agriculture, forestry, Oil & Gas exploration/production etc) production.

Water vapour has increased 4% as a greenhouse gas in our atmosphere.
The more molecules in the atmosphere the less energy escapes to space.
Quantifying the reduction/sequestration of C (carbon) on a farm remains elusive.
Google; The US grassland carbon experience.
Compliance and voluntary markets.
Significant differences, both have value.
From 2008-2012, 5.7M acres of grassland was converted to cropland.
Grassland C (carbon) offset prices are $5-10 per tonne.
Look into Alberta's market 30% of the tonnage is traded in the voluntary market.

Planning Forage Production w/Bill
Know your soils and match crops to suit.
Know your forage species, suit to use.
Recommends simple mixtures of forages on high productive land and complex mixtures on poor land.
3 year legume in rotation almost eliminated wild oats in fields.
2-3 years of legumes in rotation, 1 year doesn't have the yield benefit of year 2 and 3.

Seeding forages w/Dr. Reewch
"The sins of planting will haunt you all year." Bob Nielsen professor at Purdue University, in forages it's 2+ years.
Use certified seed.
Forage seed to soil contact, "fluffy" soil is not going to work, land roll afterwards.
"Rule of boot" should see imprint of heel and sole, if the arch is visible it's too fluffy.
Seed depth 2-5x the width of the seed.
Error on the side of shallow seed depth.
Seeding rate evaluation, 6-18 lbs/acre test across the US, no benefit to the higher seeding rates.
"Rule of hat" 10-12 seedlings under a ball cap tossed into the field.

Balanced nutrition in forages w/Dr. Tom Jensen
Fertility keeps getting more complex.
4R, "right" form,rate,time,placement. Maximizes plant use minimizes run off.
Each farm/soil impacts what the 4R means.

Irrigated forages w/Jack
Irrigated grazing is profitable, according to his experience.
Retention of legumes is impacted by pH, lift it to 6.5, increases longevity.
"Small" amount of birds foot trefoil in pasture is beneficial, don't graze the last month of the summer though.
How do I bring the pH of my soil up? Lime is too expensive.
Heavy graze and reseed pasture, hot part midsummer, to have a chance.

Gallagher w/Jacque Grier
High performance grazing management.
Manage the forage, soil, then livestock. Wholistic.
Graze at 2L pop bottle height, stop at 2L bottle on the side.
Stock density is key to utilization.
Never graze past 3 days as that damages the plants that are attempting to regrow.
Trefoil, approx 60 days rest to set seed.
Water within 750 feet of grazing,if possible.
Clean water.

James Anderson 1777 Scottish agronomist grazing recommendations.
Smart fence from Gallagher for sheep grazing, cost?

Cattle can increase carbon and biodiversity. W/Cameron Carlyle
Native grasslands hold half again as much C as tame or crop.
Grazing results in higher sequestration of C.
Grazed Grassland cover increases bee diversity and abundance.

Grazing inputs need to be amortized over the life of the pasture.
Technology is only advantageous if innovation utilizes it.
Each day of extended grazing saves the Canadian cattle industry $4 million.
The manager is accountable, if the measurements are going the wrong way it is the managers responsibility.

Virtual tour of the Waldron Ranch w/Mike Roberts
65,000 acres 13,000 cattle.
10 month grazing period, 40 ranchers send cattle as they see fit.
60-90 days of growing season.
Always manage for a dry year.
150 paddocks.
Do flies stress cattle or do stressed cattle attract flies?
Doesn't matter if it's a cowboy on a horse or a drone, do what works.
Grazing management is key.
60' spans on electric fence, step on it and it will touch the ground.
39% of Canadian agriculture is grass/forage, 5.09 billion economic value only 3rd in the sector, 11 billion indirect value.
Peace River area is the 2nd largest forage growing sector in the world.

Forage breeding for the future w/Stacy Singer
People started breeding/selecting crops about 13,000 years ago.
Estimates 70% more food production in the next 40 years, but in warm areas a 1'C increase in average temperature results in a 3-5% loss in production.
Genomics accurate to r=0.61?
Mutagenesis results in dozens of mutations and is non-GM however CRISPER-CAS9 inserts 1 gene and is GM?
Farmers are advised to plant 10-15% susceptible corn alongside their BT Corn so the worm doesn't adapt, but no one does.

Managing genetics in a shifting tide w/Dr Vern Baron
30 year hay yield decrease has been 0.5 ton/acre, on farm issues, and climate change(temp increase).
Current daily winter feeding cost of cows is higher than $3 a day.
Climate change is giving us longer fall and shorter winter increasing the viability of winter cereals.

Multi species annual integration into annual mono crops. W/ Mike Schellenberg
More species varieties, more micro organisms in the soil. Mono crops increase the population of pathogenic microorganisms.
Flea beetles destroyed the brassica mono culture, but couldn't seem to find the brassica in the mixes.
Terminated alfalfa didn't release N for 2-3 years, decomposition takes time.

Soil is meant to be covered w/Steve Geoff
"It's hard to sell complexity when people crave simplicity"
Treat cover crops like cash crops; cause they are the other half of the balance.
Who is your mentor?
Keys to Cover Crop success;
Learn all you can
Understand where the future may be going
You can fight the social push for "environmentally safe" for the rest of your life or you can get to it, your choice.
Biologically dead soil won't grow good cover crops, keep trying, the year it works the benefits will last.
Livestock are the key to quickly improving soil.
Spend money and time on learning how soil works, invest in management.

Challenge: Increase your cover crop acreage by 10% this coming year.

Managing Receivables Risk. W/Jerry St.Germaine
AscendantFX manages international fund transfers.
Foreign exchange (FX) is 35x larger than NSX. 71% increase from 2004-2015, 10.5 trillion annual.
Speed of accounts receivable is key due to currency risk and possibility of a "NSF" cheque.
Payment timing mitigates currency fluctuations, payment options make it faster for buyer to complete their share of the transaction, check clearing has different timelines due to payment type.

Trade Policy with Japan w/Paul Pryce
Tariff free on alfalfa, barley etc.
Canada imports 30 Million dollars in Kobe beef. Since the tariff drop, Australia"s imports rose 37% in the first ¼ of 2018.
China's tariff against US alfalfa (Round up Ready) opened opportunity for Canada to sell alfalfa.
76% of Japanese feel GM are unsafe hampering trade, similar in China.
MRLs (minimum residue limits) for natural products like Tylosin in honey, are coming.

Agri King w/Mark King
Silo king product is a feed treatment for silage.
"Nothing is so good it can't be better." Del Couley
3 part solution however the first one is not available in Canada.
Shows benefits however the differential is 4-9%. My note; anything 6% or less is statistically insignificant.
Fungi in the rumin is significantly impacted.

Trimble Carbon Aggregation w/Bill
107 large emitters in Alberta, double the next highest province.
Record keeping will increasingly be important as consumer wants to scan a product and see your farm.
Trimble must keep data for 7 years, carbon traded is coded to ensure one time sale and can only be sold in Alberta(at this time).

Tracking change, measuring and mapping SOM w/ Kimberly Cornish
Look into Shipwheel farms, holistic management resulted in a 60x increase in production on some paddocks.
If you don't measure and monitor, you can't change.
Carbon soil testing is now cost effective, but didn't give a price.

Tillage workshop

Steve Groff
Cover crops are only a tool, success is based on management.
Do you know how to manage the soil on your farm?
If you treat your cover crops as well as your cash crop they will succeed.
Cover crops are a long term(10 year?) tool, yes 3-5 years is possible but cost and failures make it challenging.
Covercropinnovators.com weekly webinars $250 a year.
Keys to cover crop success; Learn all you can, look forward (even if you are wrong at least you have plans). The most important cover crop tool is a shovel.
Your below ground herd needs the same care and attention as your above ground herd, keep enough plant between them.
Soil health is a lifelong journey.
10% challenge, what is the 10% you are going to try this year.
What plants can we grow to promote mycorrhizal fungi.
Dwayne Beck Dakota lakes farm? Research
Sly undercut seeder.

Prairies North Farm Forum

Soil sample, now what. w/Elston Solberg & Therese Thompkins

Soil test interpretation.
Soil and tissue test combination, connect the dots.
5/6 soil mobile nutrients; nitrogen, sulphur, chloride, boron, molybdenum and water
Keep nitrogen in amicnile form as long as possible.
Plant mobile nutrients; N, K ,P, Magnesium show deficient in bottom (old) leaves all others show in top (new) leaves.
Molybdenum , poor mans lime, grams/acre, sprayed on.
"Most important thing to put on your crop, is your shadow."
Strip leaves old to new and lay side by side to compare what the plant is self scavenging.
Even small amounts of fertility mid season will yield significantly.
13.5% protein in wheat shows proper management to maximize available nutrients. If 4.7% protein at flag leaf, shows the wheat is on target for 13.5% in grain.
Phosphorus in manure will hit 30-40 ppm, boron a minimum 1 ppm.
Measure water in the soil, it is certain, precipitation is probability.
Top 4" of soil builds the plant, depth below 4" builds yield.
Do you know your annual and in season precipitation?
Focus on Nitrogen/Sulphur, Nitrogen/Phosphorus and Calcium/Boron ratios.
Learn the number of lbs of water required to grow a bushel of your crop. Nutrient balance will bring that number down.
4-5" of rain to grow a ton of hay.

Genomics tools for beef. w/John Basarab
myherdandme.com includes parentage, breed composition(mate matching), hybrid vigor score, EPDs/value indices and lethal recessives, relatedness.
Know your herd sires as it affects herd for 10-25 years.
Breed composition allows precision breeding.
Calf crop percentage has remained constant at 83%-85% over the last 20-30 years.
Fertility is 2x more important than (lbs of) beef production.
A negative (below 0 which is average) RFI (feed efficiency) is better
Hybrid vigor, longevity, and profit(trials have shown); more than $200 return on a $45 DNA test, test sires minimum and random sample replacement females (or all), can back calculate dams for free.
Buy the genotype of your sires, couple bucks and a signature.
X First thing that goes if you select for size in beef (milk in dairy) is fertility. X

Succession Planning and keeping youth in agriculture. Merle & Annessa Good
Don't put down land rent on pasture, pay on standing forage.
22% gross on production joint agreement (crop share), cheques back and forth, $65 min, cap of $90 per acre.
Have to do the math on how much one business is subsidizing the other and the expectations as a result.
Machinery needs to be proportionally owned after 10 years, land or livestock.
Succession planning is passing on the business (farming)not the land.

Important realizations;
1.Parents will die with some land.
Farming business (equipment etc)is never left to non farming child. Land and investments is estate planning.
Business vs, estate fairness.
2.Operating portion can't go to a non farming child.
If you are leaving land to off farm children, the lawyer is probably doing it wrong.
3.Any land going to an off farm child has to be leased back to the operating farmer, for minimum of 5 years.
Land left to a non farming sibling must included a lease to farming sibling clause. Rent should be 25-30% of crop insurance.
Spousal partnership for minimum 2 years
4.If you transfer land before death have repurchase option.
5.Retire into farming child's company.

Living with Beavers w/Cows and Fish

Riparian areas are key to water management and the beaver is a powerful element in that interaction.
Recommended the book "The Beaver Manifesto" by Glynis Hood
Female is dominant but beavers mate for life.
2 adults, 2-2 year olds and 2 kits is a normal family unit per lodge.
"Beaver Fever" is a misnomer as 95% of muskrat carry guardia but only 13% of beavers.
Beavers actually design their dams to leak, which maintains ideal level.
A colony requires 1 acre of aspen to maintain them for 1-2.5 years.
Beavers can be absent from an area for 10-30 years.
Dams trap sediment and nutrients, which results in cleaner water down stream.
Water downstream from beaver dams is cooler in summer and warmer in winter which helps fish populations.
80% of Alberta's wildlife depend on riparian area, (and 100% of fish of course:)
Watch Beaver Exclusion fence construction and installation video on cows and fish website.
Trapezoidal shape 29-30 ft of surface area to keep beaver from damming culverts.
Is possible to attract beaver with a Digital sound recording of running water!
Illegal to relocate beaver at this time in Alberta, so live trap is not really an option.

XXX Recommend to council to attend "Living with Beavers" workshop, include applicable administration as well. Would the public works be open to the idea of a porous portion of road to transmit water from one side to the other without resulting in running water to stimulate beaver instinct to dam? Culverts that are double walled are quiet and therefore don't trigger the audible instinct to dam.XXX

Pond levelling device to limit dam height and therefore pond size?
County of St. Paul has been using a variation for about 15 years.

Landcouncil.org "the beaver solution" video
Cross conservation area beaver reintroduction project 2012.
YouTube "The beaver whisperer" Michael Leclair
Beaver County started a "Mitigating beaver-human conflict with adaptive management"
Average cost for a pond leveller $1024.85
Mean stream flow in the North Saskatchewan measured at Edmonton has dropped in half since 1911.

Look at lobbying the province through the provincial ASB conference to allow relocation of beaver from undesirable to desirable locations.

Value Creation Engagement "save our seeds"

Are they trying to put all grains in the same boat as canola?
"Private sector investment" is the oft repeated phrase.
Saskatchewan crop Development Centre would currently receive a large portion of funding, but how long till private companies took the market share and therefore the funds.

Public breeding programs are seeing declines in funding, while costs are going up.
No one was in favour of either proposed royalty option, no one opposed to support of Public research dollars.

Alternative Energy Workshop David Thompson

Solar/Wind in the last year has become cheaper than coal.
Lots of movement, growth to 30% or higher by 2030 in many US states.
Canada currently at 66% renewable, 80% non-emitting.
Wind energy currently pays a total of 13.5 million to land owners in Alberta per year.
Environment and parks has the information on wind vs bird strikes, which is publicly available.
Energy Alberta has residential solar grants.
Free submeters electric or gas, up to 3 per site and a max of $3000.
Alberta.agriculture.ca/feap
On farm solar PV program is Grid tie only, however the contract is only a couple years, then one could buy batteries and go off grid if desired.
Alberta Utilities Commission website for info.
Rob Harlan is the manager at SESA heard him speak at Westmark Hall.
There are 8 recommended lawyers in the province for dealing with Renewable energy companies.

Maximize genetic potential of wheat. W/Sheri Strydhorst
New CWRS wheat recording 100b/acre yields.
Nitrogen to maximize yield is quite a bit lower than to maximize protein.
Post anthesis N application can only boost protein if the crop is yielding higher than expected based on seeding applied N. But it takes 30+ lbs/acre to get from 12% to 13.5%. Not very cost effective. PGR (growth restricting herbicide application, check with consumer as PGRs are often prohibited) is also required to prevent lodging.
Can good science offset bad fungicide use. If a fungicide won't improve yield, why use it.
Fungicide use in dry conditions, every use increases the chance of resistance, plus no yield benefit.
Look at head timing application especially if no evidence of fungus at flag leaf time. Rain fall before timing and the variety of wheat are key.

Pulse Agronomy w/Nevin Rosaasen
Try lentils, small acres and make sure they are red.
Neonic update.
Widest used pesticide in the world, brought in to replace more harmful pesticides.
Caffeine derivative.
20 parts per trillion is the chronic level of risk.
Phase out is social not usage or science based. All pollinators in western Canada were given a thumbs up for health and population.
Field hero's tip; think beneficials before spraying.

Intercropping w/Lana Shaw
Flax and alternative to chickpea? Faba beans?
Alternating rows doesn't work as well (10" spacing).
Significantly less pest issues.
Dockage cleaner is desirable, big seed size difference helps with sorting, but have capacity bph to separate off the combine.
3 cash crop intercrop?

Crop market update w/Neil Blue
Our dollar follows the price of oil very closely.
World wheat stocks are high.
India has 50% tariff on peas and 66% on chickpeas(do I have that backwards?). High tariffs with no evidence of a change for years.

Winter watering system tour, Bonanza
CAP overview.
Funding available for a portion of well decommissioning.
Alberta Farm Energy and Agri-Processing (feap) also has funding for agriculture producers.
EFP (Environmental Farm Plan) less than 10 years old required for most funding sources.
Beefresearch.ca beef cattle research council of Canada. Lots of info, including water systems calculator, cost/pound gained etc.

Farmtech 2019
Hug your haters w/Jay Baer
Every complaint counts and needs an answer, complaints unanswered results in -50% advocacy yet answered complaints increases advocacy +25%.
Customers must be heard.
Answer everyone, 60% of complaints are indirect but are still crucial to answer.
XXX Reply only twice, on any public (twitter, FB) medium. XXX
Reply with empathy.
The angrier they are the friendlier you need to be.
It is always an emotional argument, empathize.
40% expect a reply (online) in 60 minutes.

Barley growers MLA candidates forum.
Boring political promises and rhetoric.

Can farming save the world before it destroys it? W/Jack Bobo
Reduce the negative impact of agriculture world wide.
The Colorado river no longer flows to the sea mostly due to agricultural removal of water.
People love innovation almost as much as they despise change.
Europe is offshoring their ag/environmental footprint to Brazil.
Perceived risk needs to be dealt with.
If you lead the conversation with science you will lose, lead with empathetic emotional common ground.
What we hear about, we worry about, and give to (breast cancer) yet don't give/worry to high fatality causes.
Do not trust your brain, it will show you things that are not there.
Confirmation bias, accepting information that coincides with existing bias.
Be a better storyteller. Values always win over science, empathize, bring science to the story after trust is established.
Explain the why, people don't usually care about the what.
Population growth is from longevity not births, and will plateau around 2050.
"Maybe by then organic could feed the world." Why can't it now?
Golden rice is close to marketability, registered in Australia and USA but it's been a 20 year story so far.
Intrexon is behind the non browning apple, looking to spread that trait to many products.

Will El Nino turn off the rain? W/drew Lerner
Average precipitation in the peace for last summer.

But we are in abnormal drought aup to Dec 31/18.
Topsoil and subsoil moisture is "moist" in our area.
Potentially going into a several year cooling time, El Niño will probably end this fall/winter.
Going to be dry in the peace during summer, but wetter in the spring.
If he's wrong, spring will be average and summer only slightly below for moisture.
Solar minimum is forecasted by NASA will not stop dropping till Jan 2023 and last for 5 years. More rain and cooler average.
"Little ice age" type effect, long droughts at the 2023-2027 years.

Sensory science w/ Michelle Sigvaldson
We evaluate foods all the time, eating and putting it in our grocery cart. How do changes of primary production change the edible product?
How do the 5 senses and their derivatives affect our purchasing and enjoyment of eating foods.
No one EATS in a white box.
Women enjoyed beer more in an ale house as opposed to a white sensory box, men didn't care.
Plant proteins are being seeked out by consumers.

Issues for this federal election w/Tasha Kheiriddin
Populism, Carbon tax, immigration, trade doesn't rate, polarization,

Killer robots w/Brian Tischler
Stripper headers is a system, less material through the combine, less evaporation,
Simplertk2b $1000 budget RTK
Google earth can be 1m to 6km off
Agopengps.jimdosite.com
Programming his 30 year old JD tractor to auto farm, wrote code for the next project while riding around, while it rolled his land.

Tillage challenges w/David Lobb
Tillage erosion is its own type, not explained by wind or water erosion. It is the act of dragging/allowing loose soil to erode, especially off high spots/hills. Frequent, deep, fast. 1 kg per meter of equipment per % slope.
Moldboard plow Beta=1.0, chisel plow Beta=1.5-2 so up to twice the erosion, high speed disc high as well but no funding to confirm, disc Beta=2 not counting harrows, cultivators higher than plow as well.
Pre potatoe tillage beta=3, seeding with coulters beta=0.1 high disturbance seeding of beta =1 same as plow!
In certain areas worse than wind and water erosion.
Also subsoil that is barred by tillage is more wind/water erodible than topsoil.
3 billion USD in 2016 lost due to soil erosion.
60% yield loss on hill tops.
10cm scraped from low lying area to the hill tops, near complete restoration of yield. Do not take more than 10cm.
Cost can be recovered in 3-5 years (soil Landscape restoration) DO NOT clean out sloughs, the soil must be taken from the right place.
Major source of sediment in water is channel bank erosion!!! Riparian areas and slow meandering stream bed is therefore key.
Any vegetation on the surface, actually has higher Phosphorus loss than tilled soil.

Rural property crimes, alberta response w/RCMP
Rural crime is a national issue not just Alberta.
Numbers were decreasing from 2006-14. 2015 it headed back up and continues to slowly rise.
Roll out of civilians who do the typing of police reports, member calls in, follows a template to dictate report, staff types up, member reviews report, then goes back policing.
Automated license plate reader scans as the officer drives, notifies officer if a suspect plate is read.
Dedicated officers to track and arrest prolific offenders, meaning they cover large areas but don't respond to emergency calls unless absolutely necessary.
Reoffender management, how to stop the base cause of the crime.
5 principles; all partners AHS, social services, RCMP, etc.
License plate screws to decrease swapping of plates.
Crime prevention/deterrence through environmental design.
99.3% of the time, turning in a light and yelling "Hey, I'm on the phone with the police!" Will result in the perpetrator leaving with haste.

Mixed grain Intercropping w/Lana Shaw
Should you put up a sign to notify passerby's what's happening in your field?
Flax/legume.

Overyielding is common, decreased inputs result in more gross margin.
What are the values of intercropping; over yield isn't everything, diversity, resilient, lower inputs, acknowledge harvest ability, maturity, disease issues (less spray options) benefits include less risk, workload, production costs.

Cover crops Debolt
5 principles; minimize soil disturbance, armour to prevent water and soil erosion, diversity, keep living roots as much of the season as possible, livestock integration.
Pea/cereal intercrop, 75% of normal pea seeding rate an 50% of normal cereal seeding rate. I did this in 2017, am tempted to reverse the rates.
What blend for your cover crop? Identity the goal; soil fertility, forage production, grazing.
32-34 plants per square foot, 1.5 million seeds per acre total in your cover crop. Factor in +5% seed rate for each crop to cover mortality.
"40-10" variety of forage peas stay green/vegetative late in the season. Grow with triticale or maybe SOI oats to restrict lodging.
Proper fermented silage will lower nitrate levels up to 60%, making it generally safe to feed.

Why cocktails? w/Allan **McLachlan**
Increase forage yield per acre, improve soil health, decrease fertilizer inputs, stretch grazing season.
Impressive (over double average) silage yields.

Cocktail experiments and trials. W/Ken Binks
Experiments and successes. Works but you must find what works on your land.

Cocktail w/Kurt Hale
Covers in Cleardale, 70# oats in the mix to accommodate high rainfall year. Hairy Vetch grows well. Less commercial inputs, none in the last 4 years.
Have been applying 10 lbs/acre of hairy vetch per acre maybe back off to 6-7#.

On Wednesday, February 20, 2019, 6:00:24 p.m. MST, MacKay Ross <muckslotus@yahoo.com> wrote:

Hi Sarah,

I booked in to the preconference at the farm to plate conference at Nisku. I am flying and it was only $50, so one less travel day bu t one more conference day.
Please add it on the next meetings agenda:)

Regards;

MacKay