



2016 Annual Report



Foothills Forage & Grazing Association 2016 Annual Report



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Mission Statement

Assisting producers in profitably improving their forages and regenerating their soils through innovation and education.

Vision Statement

We envision a global community that respects and values profitable forage production and healthy soils as our legacy for future generations.

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Chairman's Report

2016 was the year that Foothills Forage and Grazing Association really broadened our method and scope of communication.

With the expansion of the FFGA management team to include an Environmental & Communication Coordinator our ability to reach out to producers with new and improved information has greatly increased.

We are now extending our message to include consumers and people looking for accurate information about environmental stewardship through livestock, forage and soil management. Looking to expand our involvement and knowledge in the beef industry, many of our members participated in the McDonald's Verified Sustainable Beef Pilot Project. The pilot created forward thinking assessments that aided in improving participants operations and showcasing their best practices. This participation led to FFGA becoming a voting member on the Canadian Roundtable for Sustainable Beef (CRSB).

FFGA continued to bring in experts to share knowledge with our membership. Nicole Masters put on 2 clinics on the science behind healthy soils and its benefit to production and environmental stewardship. Jim Gerrish's grazing school taught us how to efficiently manage our land and finances. Dr. Anibal Pordomingo spoke on improving animal performance through grazing strategies.

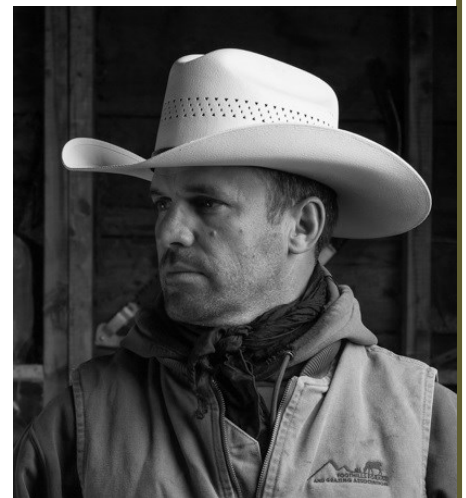
Workshops, conferences and farm site tours were well attended and provided an opportunity for our board, members and industry partners to gather. Together we were able to learn and compare stories about "how it *does* work" on our operations or in this part of the country.

Saving the best for last, my position would be considerably more difficult if I didn't have the support of some key people. Our staff; Manager Laura Gibney and Environmental & Communications Coordinator Rachel Mclean are exceptional in their roles. Much of our success and achievements in the last few years are a direct result of their hard work and ability to make the board's decisions a reality. The FFGA Board of Directors; this group of dedicated, passionate producers put the life and laughter into our organization while keeping a keen eye on the future. Our membership; your support, input and participation are the reason for the FFGA. Our industry partners; your financial and organizational support enables us to achieve our goals and bring value to our membership. Thank you one and all!

Regards,



Sean LaBrie



Manager's Report

In 2016 the spring came early and warm with the dry conditions continuing into June, stunting early pasture and forage growth. Once the tap turned on in early July it didn't turn off! 2016 marked the first year of the provincial High Legume Pasture Project of which FFGA has two sites; one at Longview with Producer Co-operators, Alex & Carol Robertson, the other at Steve & Janet Yule's near Gleichen. The early dry weather delayed emergence of the 60% Mountain View sainfoin and alfalfa, 40% grass, 10 acre stands. Once the moisture came it just wouldn't quit which made weed control a challenge. Eventually Alex was able to do a quick graze and Steve baled so both volunteer crops were removed and the sites had successful establishment. We look forward to monitoring the progress of these sites over the next few years and how the new sainfoin variety does under grazing management. 2016 was also the establishment year of a Perennial Forage demonstration site at Morrie & Debbie Geotjen's near Cremona. This is a provincial collaboration to gather information on the performance of 32 species of legumes, grasses and legume/grass mixes.

It was a year of growth here at FFGA. Rachel McLean joined our team in January as our Environmental & Communications Coordinator. Adding a full time position to our capacity allowed us to host a record-setting 19 informative and exciting events with over 1,000 attending! Not only did we see an increase in the number of events we held but also in attendance, many of our events were sold out or had record numbers of producers attend. We increased our membership by over 30 operations and that number continues to grow in 2017. I congratulate Rachel on her successful outreach through the newsletter, website and social media. Not only are we seeing great results in membership and attendance we are also seeing more young producers join the mix which is encouraging for the FFGA and our industry. This growth was supplemented through the enhanced funding of the Agriculture Opportunities Fund.

FFGA continues to expand not only at the grassroots here at home but we also continue to step-up our involvement in industry initiatives in an attempt to be proactive in positive change within the industry rather than being reactive to the changes happening around us. We continue to be a proud member of the Agriculture Research & Extension Council of Alberta, the Alberta Forage Industry Network and award three FFGA bursaries and one Nuffield Scholar annually, and also joined the Canadian Roundtable for Sustainable Beef and their work on sustainable verification of beef in Canada. We look forward to the role we can play in shaping the future of the forage and beef industries.

As we move into a new year the FFGA board and staff are actively guiding the direction of the association by participating in a Strategic Planning Session with John Knapp. We are continuing the momentum and focus of soil health through partnership with the Chinook Applied Research Association (CARA) Soil Lab opening in Oyen this year, where biological soil sampling will be available! FFGA is working with Dr. Yamily Zavala (CARA) and our sister associations across the province not only on the development of this lab but to begin to benchmark soil biology across the province, which has never been done before. We are also an active partner in planning the Western Canada Conference on Soil Health & Grazing being held in Edmonton on Dec 5, 6 & 7, 2017.

On a personal note I will be leaving FFGA for another year to focus on the new addition to our family in April. While I will miss you all at FFGA, I am excited to see what the FFGA Board, Rachel and Interim Manager, Jennifer Duckering, will get up to in my absence!

Laura Gibney



Environmental Coordinator's Report

Well, one year is in the books for me, and what a year it has been. This association has been a great resource for me to grow my knowledge and education of what's new, what's innovative, and what works. This board and group of passionate people make this association. They always have new and great ideas and are striving for the best.

I am very proud of where we have come as an association and how much we have been able to grow in the past year. Last year we hosted a record 19 events (that's 1.58 events/month!). This included annual events such as Ladies Livestock Lessons and Ranching Opportunities to new events like the Salinity Causes & Cures Workshop and the Nicole Masters Soils Events.



My job includes a bit of everything with a focus on Environment & Communications. On the environmental side, I have been assisting producers in completing their Environmental Farm Plans (EFPs) and Growing Forward 2 funding applications. In 2016, I assisted 39 operations in their EFP completion. In addition, Foothills hosted 3 EFP workshops in our partnering counties. I have also joined the provincial EFP Operations Committee which will help Foothills to have a voice in the future of EFP and the versions to come.

The recent push with environmental awareness and social license has increased the importance of being good environmental stewards of our land. The focus towards soils in the past few years has been a great stride, and looking to partner with groups and associations we are working to help voice the positive impact proper grazing management can have on the environment.

On the communications side, I rebuilt our website and have amped up our social media footprint in terms of Facebook and Twitter. Here are some stats regarding our online platform:

1,077 Likes on Facebook

That's up 647 Likes!

802 Twitter Followers

45% of website views are done on a mobile device

Top Information Conduits:
1.) Newsletter
2.) Website
3.) Facebook
4.) YouTube
5.) Twitter

Website Users:
45.8% Female,
54.2% Male

11,972 website hits in 6 months

Website Traffic Hits' Sources: 41% through Facebook, 27% through email links, 19% through google search, 13% through partners/referral

I look forward to continue growing with Foothills and within such a great membership of people!

Sincerely,

Rachel McLean



Ian Murray, Chair

2016 was a good year for ARECA. We worked with our 9 members associations to deliver programs across the province.

RVTs: 5 of our member associations delivered pea, wheat, barley, oats and flax Regional Variety Trials on 22 sites across the province. Yield data is collected and distributed in the Alberta Seed Guide.

Pest Monitoring: As in the past, 6 of our associations worked with AAF to monitor insect infestations across the province. We monitored 8 insect pests in 260 field visits over the summer and submitted the data for inclusion in the Alberta Insect Pest Monitoring Network releases.

We launched a new website in 2016. It is cleaner, leaner, and is full of information about programs delivered by our member associations (www.areca.ab.ca).

Connections Newsletter: We created and distributed 9 newsletters with the intent of increasing the connection between our member association Boards. Each edition featured one member association. The newsletter is distributed internally to all association Board members.



Janette McDonald, Executive Director

Environmental Farm Plan: In 2016, we introduced the Web 3.0 edition of the EFP. As well, ARECA was instrumental in leading a movement to a national EFP. We hope to move this plan further in 2017. Late in 2016, we started preparing the Alberta EFP 5-year Business Plan for 2018-2023.

Sustainable Sourcing: ARECA was awarded Green Intern funding in 2016 and our intern has completed an excellent summary of potential global sustainability requirements and how those requirements will impact Alberta farmers.

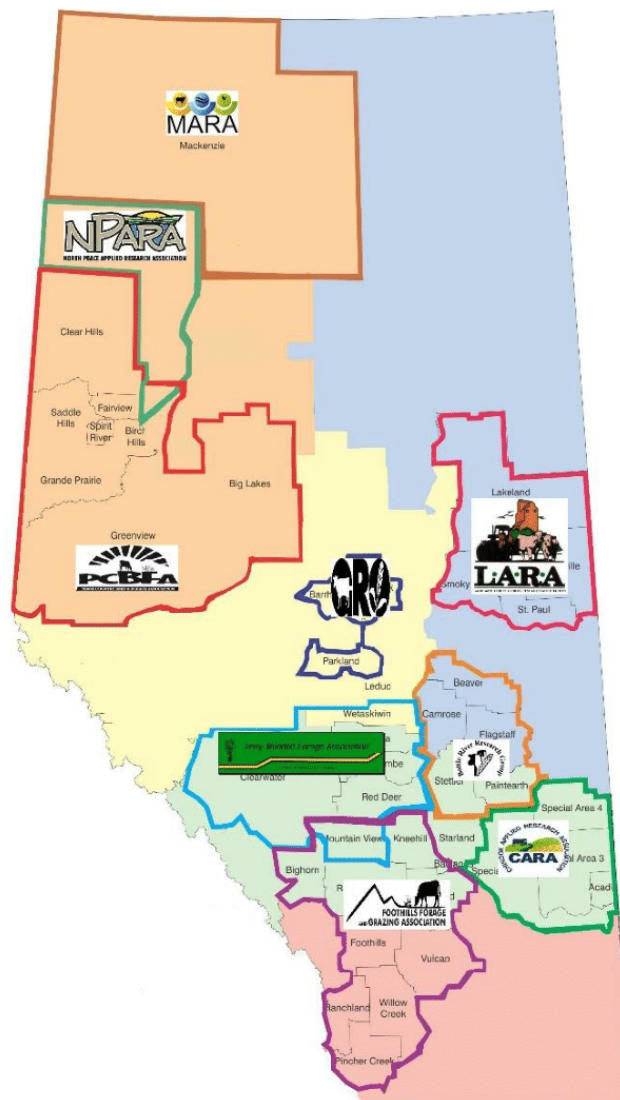
Governance: In 2016, the ARECA Board spent time developing sound processes around how projects are approved and managed within ARECA and between ARECA and our members. Our new processes have resulted in successful programs and co-operation between our members.

Sainfoin Pasture: All associations are collaborating with ARECA and Alberta Agriculture and Forestry (AAF) on a province-wide sainfoin pasture project. We established 10 sites and will be measuring plant health and grazing yield in 2017.

Project Management Training: All ARECA associations and their staff manage projects. Project Management is a valued skill. Late in 2016, ARECA paid for training of 10 staff from 7 associations. This was an excellent course. If we work at what we learned, our projects will get better and better. Some staff comments:

"This was one of the best training workshops I have ever been to."

2016



Foothills Forage and Grazing Association

EVENTS



The year kicked off with Ladies Livestock Lessons (LLL) in Cochrane. The ladies had an exciting agenda featuring a stockmanship demo with Curt Pate and his daughter Mesa.

The 80 gals heard from Dr. Melody Chan on “In Food We Trust” and practiced up on their ranch roping with Stan Cena from the Cochrane Roping Club.

Grazing management was also taught by Dr. Edward Bork from the U of A and Shannon Arget of the Verified Beef Program gave an update. In addition, Dr. Alycia Chrenek from Zoetis gave a refresher on cattle and equine vaccines.

The day was great for seasoned ranching women as well as new faces and provided a good opportunity for networking and the sharing of information.



LLL is hosted in partnership with Kneehill County, Mountain View County, M.D. of Bighorn, Red Deer County, Cows and Fish, Wheatland County, & Rocky View County

High Quality Forages

For Growing & Finishing Cattle with Dr. Anibal Pordomingo and Clayton Robins

Dr. Pordomingo of Argentina is a Senior Researcher with the National Institute of Agriculture Research of Argentina. His work and areas of expertise include ruminant nutrition, feeds & feeding, and animal performance. He spoke in

Brooks on these topics as well as forage sequencing for finishing cattle, grazing strategies for optimal gain, and beef quality under various grazing systems.

After lunch, the topics were paired with Manitoban Clayton Robins. Clayton is a 2013 Nuffield Scholar, who studied energy-dense forages. He is also a former beef and forage researcher with Agriculture and Agri-Food Canada.

Clayton brought a practical angle to some of the topics touched on by Anibal. He spoke on feeding energy-dense forages and their place in production systems in Canada. This event brought in 45 producers in Brooks and was hosted in collaboration with the Chinook Applied Research Association.



RANCHING OPPORTUNITIES

“Ranching in the 21st Century” was the topic for this year’s annual hit event, Ranching Opportunities.

The speakers followed this topic with the lineup featuring Nick Black on “Alberta Consumers: Understanding What They Want”. Nick talked about the new anti-meat movement, who we need to target, and gave us the cold hard facts when it comes to who is eating and believing what.

The breakout sessions featured a cattle handling demonstration with Curt Pate, a meat lab session, and Ben Wilson of FarmOn on social media and online community support.

This year’s producer panel was extremely well received and featured the topic the “Pros and Cons of Winter Feeding” where the producers

discussed their personal experiences. The winter systems we looked into included bale grazing, straw chaff bunching, and corn grazing.

The event was another success with a sold out tradeshow, a great student presence and participation as well as a sold out producer attendance of 180.



Hosting Partners: Olds College, M.D. of Bighorn, Red Deer County, Kneehill County, Rocky View County, Wheatland County, Mountain View County, & Alberta Agriculture & Forestry



McDonald's Verified Sustainable Beef Pilot Project— Producer Information Meeting

In 2014, McDonald's made a global commitment to begin sourcing a portion of their beef from verified sustainable sources in 2016. The intent of the pilot project was to:

- 1.) Begin purchasing a portion of beef from verified sustainable sources in 2016.
- 2.) Bring the Global Roundtable for Sustainable Beef (GRSB) Principles and Criteria to life through locally-relevant, outcomes-based initiative.
- 3.) Support and accelerate development of an industry-led beef sustainability framework.

The team worked with multiple partnerships to set segment specific, locally relevant, outcome-based indicators aligned with the GRSB Principles and Criteria. They also delivered a scale that enabled verifiers to assign each participating operation with a performance score for each indicator.

Foothills partnered with the Hussar 4-H to host a producer information meeting on the pilot project.

When the pilot wrapped up in June of 2016 8,967 head of cattle had been tracked through



an entirely verified sustainable supply chain (ranches, backgrounders, feedlots through to processing plants).

The Pilot was the first beef sustainability initiative in the world to bring the GRSB Principles and Criteria to life through a locally-relevant, outcome-based initiative for sustainable beef production.

The Pilot was handed to the Canadian Roundtable for Sustainable Beef (CRSB) in July of 2016 and the project continues to progress.

Foothills Forage has been a part of this and is now an active member of the Canadian Roundtable for Sustainable Beef. We hope to bring a voice to the table from the perspective of ranchers and forage producers.

Pilot Performance by the Numbers

- 183 on-site verifications of Canadian operations
 - 178 beef cattle operations
 - 154 cow-calf and backgrounders
 - 24 feedlots
 - 2 packers
 - 1 patty plant
 - 2 dairy farms
- 121 cow-calf and backgrounders achieved verified status
- 20 feedlots achieved verified status
- 2 packers and 1 patty plant achieved verified status

Jan
2014

8,967
head of cattle

Apr
2016

tracked by BIXS through an entirely verified sustainable supply chain (ranches / backgrounders / feedlots through to processing plants).

This translates to:

8 million
pounds of hot
carcass weight,
or...

300,000
pounds of Canadian
beef into the McDonald's
system, or...

2.4 million
burgers all from a
fully verified sustain-
able supply chain

Working Well Workshop

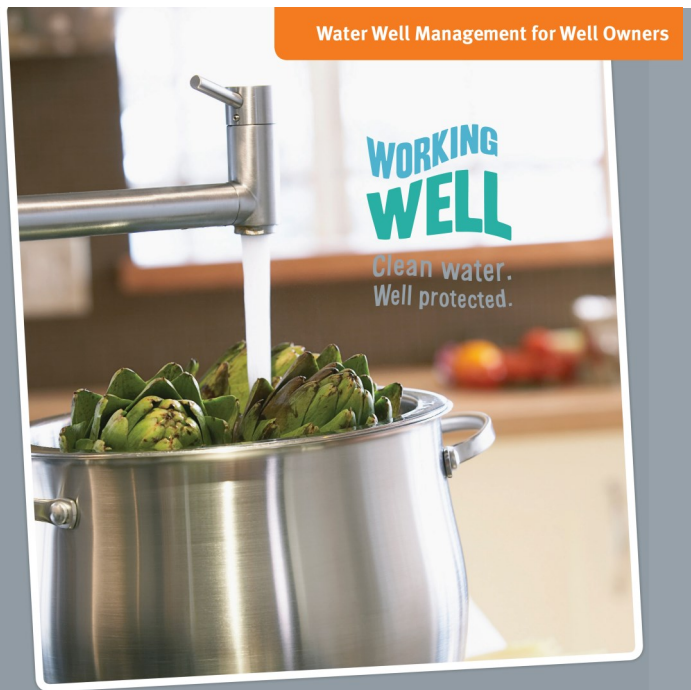
- ♦ FFGA partnered with Vulcan County and Alberta Agriculture to host a water well management workshop which covered:
- ♦ The proper way to construct a well
- ♦ The right place to locate a well to prevent risk of contamination
- ♦ How to test the water in your well to feel confident it is safe to drink



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- ♦ How to properly operate and maintain your well
- ♦ How and when to shock chlorinate your well
- ♦ What to do about old or abandoned water wells on your property

The day was hosted by professionals in the business and we saw attendance of 40 water well owners in Vulcan.



Water Well Management for Well Owners

Environmental Farm Plan Workshops

In 2016, FFGA in partnership with ARECA, Vulcan County, Wheatland County, and Alberta EFP to host EFP Workshops in Claresholm, Vulcan, and Strathmore. The aim of the workshops was to:

- ♦ Introduce the Environmental Farm Plan Workbook
- ♦ Discuss Growing Forward 2 Funding Incentives
- ♦ Provide direction for the completion of the Environmental Farm Plan





Annual General Meeting

FFGA's 2016 Annual General Meeting featured local farmer and inspirational speaker Chris Koch. Chris was born without limbs and now travels the world and speaks to groups doing inspirational talks.

The day also featured Cheryl Hazenberg. Cheryl is Nuffield Scholar who traveled the world studying beef traceability systems in different countries. Her talk titled "Should Beef Have a Barcode?" has been presented at multiple events and was featured recently at the Canadian Beef Industry Conference.



STOCKMANSHIP SCHOOLS
with Richard McConnell & Tina Williams
of Hand'n Hand Solutions



Foothills Forage, in conjunction with Organic Alberta & Grey Wooded Forage Association hosted Bud William's daughter Tina Williams and her husband Richard McConnell in Cochrane in June for a Stockmanship School.

The session focused on proper livestock handling techniques. The two described good Stockmanship as "not about having "tame" animals, it means having the tools to keep your livestock in the proper mental state as they go through the entire production process with the results of lowered stress and better quality of life for you and your livestock".



Soil Health: The Bottom Lines

Nicole Masters

On **June 24**, 134 producers and partners joined us in Carstairs to learn about soil health with New Zealand soil specialist Nicole Masters. Nicole focused on feeding microbiology and the indicators of healthy & unhealthy soils. The day featured half classroom and half field time with the inspection of a local soil profile near Cremona.

In **November**, in response to popular demand, Nicole returned to Airdrie for an in-depth Advanced 2-day Soil School for 30 producers. The sold-out school went into more depth on enhancing the C, N and water cycles, soil microbes, cover crops, weeds as indicators, soil minerals and the role of major nutrients, mineral & microbial synergy, and crop diversity.



Mountain View
COUNTY



CAM CLARK FORD

Salinity Causes & Cures

In July, in conjunction with Wheatland County, Western Irrigation District, and Farmer's Edge, Foothills hosted a Salinity Causes & Cures Workshop for 32 producers. The day started out in the classroom learning about the different kinds of salinity and ways to prevent saline soils. Then WID spoke to irrigation salinity and ways they are working to manage it.

In the afternoon, the group went in the field to see how a local producer has been combatting soil salinity issues in pasture. The group discussed how water table levels are related to soil salinity and what species to plant in the recharge and discharge areas to promote growth and organic matter buildup to combat salinity problems.

Jim Gerrish Level II Grazing School

For 3 days in August, 30 producers attended an Advanced Grazing School with Grazing Guru Jim Gerrish. "Jim's experience includes over 20 years of beef-forage systems research and outreach while on the faculty of the University of Missouri. As well he has 20 years of managing a commercial cattle and sheep production on their family farm in northern Missouri. His research encompassed many aspects of plant-soil-animal interactions and provides foundation for many of the basic principles of Management-intensive Grazing."

Also discussed was advanced grazing cell design, using pasture inventory, high legume pastures, how to use a cost:benefit analyzer, fence & water development, cow size affect, planning stock policy, and grazing wedges.



High Legume Pastures

With Jim Gerrish in Alberta, FFGA took this opportunity to have Jim speak to a larger group of 60 on High Legume Pastures.

The afternoon also featured FFGA board members and producers Ian Murray and Alex Robertson on their experience with high legume pastures and where they fit within their systems.

They also talked about manure seeding and their success with letting legumes go to seed followed by grazing. Legumes discussed included sainfoin, cicer milk vetch, red clover, sweet clover, birds foot trefoil, and alfalfa.

Alberta Agriculture and other experts were also present and the group received great discussion time while inspecting the AAC Mountainview Sainfoin project and a previously established sainfoin stand.



“The fear of bloat costs the livestock industry far more than bloat itself” - Jim Gerrish



Foothills' Fall Pasture Tour

Offsite Watering Systems & High Sugar Pastures

On October 19, 65 producers came out to Milo to learn about off-site watering systems & high sugar pastures.



In the morning, Dr. Yamily Zavala of Chinook Applied Research Association spoke on soil health and the benefits of cover crop cocktail mixes. She also touched on the different crops and the benefits each provides.

The morning also featured Marvin Jackson with Sundog Solar. Jack spoke about the different types of off-site solar watering systems. This was followed by discussion, questions, and a demonstration at local producer Chad Monner's.

After lunch, the group headed out to Chad

Monner's cocktail mix pastures and discussed the effects on soil and putting



condition on calves. Prior to the event, soil and forage testing was done to determine the effect of the crops on soil as well as the quality of the feed and this information was discussed with the group.

Graeme Finn of Union Forage spoke about different cocktail mixes and the benefits and challenges of each, as well as seeding times, moisture requirements, and more.

The day concluded with open discussion and a question/answer period.



AUSTRALIA AGRICULTURE TOUR

For 23 days, 25 travellers embarked on an adventure on our Agriculture Tour to Australia.

Due to its large land base, Australia's agriculture varies regionally depending on weather and rainfall conditions. The majority of our trip was spent in Queensland and part of New South Wales. Queensland's agriculture is made up of beef, field crops, horticulture, sheep, pigs, poultry, and dairy.



Day 1: Los Angeles—During a layover in L.A. on our way to Australia we took a bus tour of L.A. and Hollywood. We walked on the Hollywood Walk of Fame, saw the Hollywood sign, Chinese Theatre, and Kennedy Memorial



Days 2 & 3: Port Douglas—After a 14 hour plane ride we made it to Port Douglas, Australia. Port Douglas is on the northern portion of the east coast. The area is in the wet tropics of Australia which has an annual temperature of 24°C and an average rainfall of 110 inches.

Aboriginal culture here dates back more than 10,000 years and rainforest covers 2 million hectares (only 0.3% of the continent). Our time in the rainforest included a train tour, skyrail ride, an aboriginal presentation, amphibious vehicle ride, barron gorge and falls, as well as the Kuranda Zoo.



Day 4: The Great Barrier Reef—The Great Barrier Reef is one of the 7 wonders of the natural world and is the world's largest coral reef. It contains over 3000 individual reef systems and coral cays. The Foothills group enjoyed the reef with the option of snorkeling, submarine, helicopter, snuba, and scuba.



Day 5: Wetherby Station—We made our way to our first cattle "station" (ranch). The Wetherby Station was established in 1878 and raises droughtmaster beef cattle and is a tourist destination.

irrigation. Macadamia trees are native to Queensland and take approximately 8 years to produce nuts. Harvest is done by a machine which simply scoops them off the ground. The outer husk is removed and the seed is sold as a commodity.

Kureen Farms—Kureen Farms is a blueberry, macadamia nut, banana, and avocado farm. The blueberries are grown in pots as the soil is not suited for them and tarps protect them from the sun and wind and they are irrigated using drip

Day 6 & 7: Longreach (The "Outback") - We then flew to Longreach, which is inland over the Great Divide mountain range. Longreach is on the Tropic of Capricorn and has an average annual rainfall of 17 inches and temperature of 31°C, however it suffers regularly from severe multi-year droughts, fires, and floods. The first day the group went to a local outback pub, saw a machinery museum, cowboy poetry, and the Stockman's Hall of Fame.





That evening, the group went to Walker's Camden Station, home of Nuffield Scholar James Walker. We toured their station, home, corrals and enjoyed a steak dinner in the outback where the Queen has also visited.

Day 8: Longreach Pastoral College—We visited the local agriculture college which has 46 full time students and is over 40,000 acres. Their programs include beef and cattle, sheep and wool, equine, ag business, and short courses.



Latrobe Station—Coming out of a 5 year drought, the Brown family agreed to let us visit their ranch. They wanted us to experience life in the outback. They have droughtmaster cattle and were just bringing the cattle back from further south. The area runs approximately 1 cow per 25 acres and paddocks are extremely large because of this.



Day 9: Melton Grazing—We started to head back east towards the coast on the bus and as we did, there was evidence of increased rainfall and more greenery. On day 9 we stopped at Melton Grazing, a ranch that practices rotational grazing with a grazing plan and electric fence powered by solar panels. They run purebred Red Brahman Bulls and Brangus and are Organic, EU, MSA, and PCAS Accredited.



Day 10: 2PH Farms—2PH is a citrus and grape farm. They have over 500 seasonal workers and direct market their product to retailers. It takes approximately 8 years to get returns in citrus and minimum wage for workers is \$22.60/hour.

Sorrell Hills, Duaringa—This farm is a grain and cattle farm with 27,000 ac and 5,500 ac of cropland. They have 1000 certified organic cattle on forest land and their cropland mainly falls on the flood plain. They have cropland that gets flooded once every 3-4 years. They plant sorghum, corn, mung beans, wheat, and chickpeas.

Day 11: Vella Farm—Nuffield Scholar Ray Vella gave us a tour of his ranch. Ray and his family live off grid approximately 2 hours from town. They have an extensive grazing plan of their 18,000 acres and 3000 Brahman cross cattle. They also fatten their own cattle using grass and cotton seed soaked in molasses.



Day 12: Crocodile Farm—Koorana Crocodile Farm is an approved farm which opened in 1981 as a means of removing dangerous crocodiles. They currently have over 3000 crocodiles which they harvest at 3-4 years old for meat and leather. The group even had the opportunity to try crocodile meat. Koorana is home to the world's second largest crocodile in captivity at 5.48 m (17 ft 11 in).



Day 13: Rosehall Station—Kara Knudsen and her husband run Rosehall Cattle Station on forest country and native pastures. They are a genetics focused farm with a "Calf or Carcass" rule. Bulls are tested annually and non-performing breeders are culled. They hosted the group for lunch down by the river.



Day 14: Glenden Bullock Team—Bullock's were traditionally used to clear the forest land for agriculture and development. Bullocks were used because they were less excitable, tougher, and more dependable than horses. The team was driven by a "Bullocky". At Glenden we got to see a demonstration of how the bullocks are harnessed and driven.

Day 15: Tocal College—We then flew out to Sydney and drove up to the Cessnock region to Tocal College. This college is a historic agricultural property settled in 1822, which teaches agricultural skills and has beef, dairy, chicken, horses, and sheep enterprises.



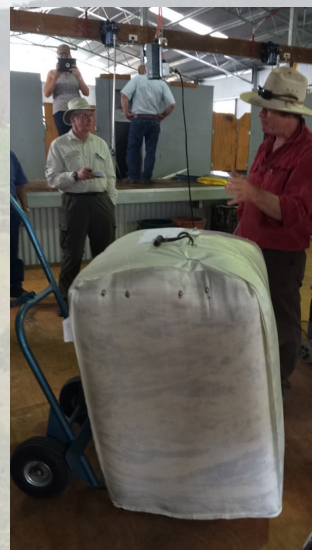
Day 16: Hunter Valley Wine Visits—The group had the day to explore the Hunter Valley region, the birthplace of Australia Wine. We visited 5 wineries and tasted plenty of wine and cheese.

Day 17: Bruce Richardson's—Bruce and his wife Lyn live in the world's second largest canyon, the Capertree Valley. Lyn is a member of the Australian Stock Horse Society and raises thoroughbreds and Australian Stock Horses.



Day 18: Toulon Pastoral—On day 18 we had the opportunity to visit a holistic managed sheep farm (merino wool producer). The farm is part of the "green movement" and even has a solar powered truck which pulls his no-till seeder which cuts and seeds directly into sod.

Day 18: Glenwood Merinos—This 5th generation woolgrowers ranch focuses on genetics, sell breeding studs, and are starting in their own wool products. This Farmer of the Year practices rotational grazing and extensive pasture management. He



demonstrated the sheering shed and wool press for the group.

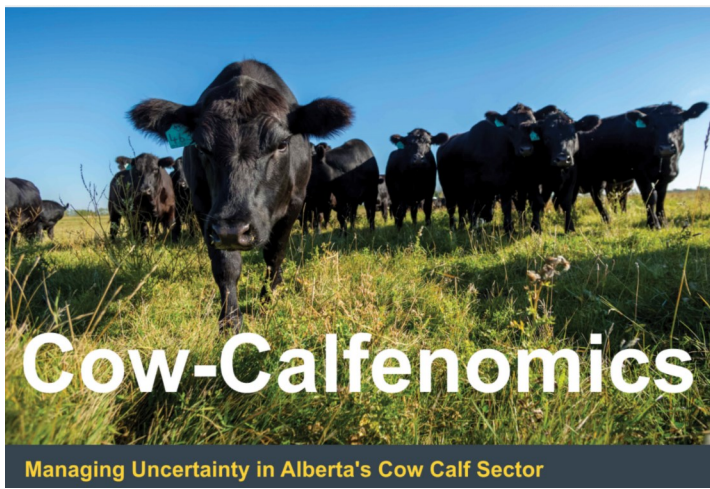
Day 19: Opal Experience—Back to Sydney, we stopped at an opal store. Opal is a hydrated amorphous form of silica its colour is determined by the type of rock it forms in. Opal is the national gemstone of Australia and is home to the world's largest gem opal, the "Olympic Australias" which is worth around \$2.5 million and weighs 7.6 lbs.



Day 20: Sydney—The group enjoyed a free day touring Sydney. The architecture and history in the city blew us away. To finish off the day and the tour we enjoyed dinner on a cruise throughout Sydney's harbour, taking in the Opera House, Sydney Harbour Bridge, and city skyline.

Day 21: Homeward Bound after an exciting, interesting, and once-in-a lifetime trip.





Cow-Calfenomics

In November, FFGA teamed up with Alberta Beef Producers, AFSC, FCC, Alberta Agriculture, and ARECA to bring you Cow-Calfenomics. The tour took place in Nanton, Lethbridge, Olds, Vermilion, and Evansburg. This annual event covers the economics of ranching and the cattle industry. This year the agenda topics included:

7 Drivers of Financial Success

- 1.) Continuous Learning
- 2.) Current Finances
- 3.) Professional/Third Party Advice
- 4.) Business Plan with Long Term Goals
- 5.) Cost of Production Monitoring
- 6.) Assessing & Managing Risk
- 7.) Financial Plan with Budget Objectives

- ♦ Market Outlook and your Marketing Options
- ♦ Transition Planning
- ♦ Risk Management Perspectives
- ♦ The Cost of Production
- ♦ 7 Drivers to Financial Success
- ♦ What Does Your Neighbour Think?

FFGA Member Appreciation Christmas Party

FFGA hosted this year's Christmas Party on December 16 at the Heritage Inn in High River. Members enjoyed a complimentary roast beef dinner followed by a recap on the Australia Agriculture Tour by Rachel and Cowboy Poetry. Cowboy Poetry was done by Robbie Robertson, the "Mountie Cowboy Poet" and FFGA's own Morrie Goetjen. The night also featured refreshments and time for fellowship.



Other Events FFGA Supported

- ⇒ Southern Alberta Grazing School for Women
- ⇒ CCIA Age Verification Workshop
- ⇒ McDonald's VSB Wrap Up Meeting
- ⇒ Canadian Beef Industry Conference
- ⇒ Water in an Agricultural Environment
- ⇒ Jay Fuhrer Soils Day
- ⇒ Waldron Ranch Tour
- ⇒ Worker's Compensation Board (WCB) Information Session
- ⇒ Advancing Women in Agriculture Conference
- ⇒ Working Wells Workshops
- ⇒ Union Forage Field Day
- ⇒ Olds College Career Fair
- ⇒ Farm Succession Planning Workshop
- ⇒ Success for Women in Agri-Food
- ⇒ Canadian Beef Industry Conference
- ⇒ Global Roundtable for Sustainable Beef Meeting



Foothills Forage and Grazing Association

PROJECTS

Sainfoin—High Legume Pastures Project

Foothills Forage has 2 of the 12 project sites across Alberta and B.C. Peace Country with the various Forage and Applied Research Associations and ARECA (Agricultural Research and Extension Council of Alberta).

The goal of this project is to establish a high legume pasture (60%+ legumes, 40% mixed grass) and see how it does under managed grazing in subsequent years.



High legume pastures have a greater capacity to withstand drought conditions and are extremely productive. They also extend pasture productivity beyond the “summer slump” of tame grasses and provide nitrogen fixation to the soil. This can reduce fertilizer costs and increase forage production and profit. High legume pastures also provide root systems to different profiles in the soil, therefore increase the utilization of soil moisture and increase

carbon capture depths.

Livestock producers often shy away from high legume pastures

due to the risk of bloat. Incorporating Sainfoin, containing tannins, into the pasture mix reduces the incidence of bloat.

The new Sainfoin variety AAC Mountainview is claiming to compete well in a forage stand and with a higher regrowth so it can regrow at the same rate as alfalfa.

The AAC Mountainview Sainfoin was developed by Dr. Surya Acharya, Agriculture and Agri-Food Canada, Lethbridge and part the project is to test it's success in different areas of the province.

Continued on the next page...



Sainfoin– High Legume Pastures Project Continued...



2016 was the establishment year for the sites.

The site in Longview was cultivated, harrowed, and packed May 9, 2016 and was seeded on June 7 to 1/2 to 3/4 inch depth. Fertilizer was applied in the seed row at a rate of 8 lbs/ac of

Nitrogen and 25 lbs/ac of phosphorus. It was seeded with 60% Ultimate Pasture Mix (AAC Mountainview Sainfoin & Hay Grazer Alfalfa) at 33 lbs/ac and 40% Graze Master Mix (Fleet Meadow Brome, Tall Fescue, Orchard Grass & Slender Wheatgrass) at 5 lbs/ac. This site was also seeded with a companion crop of Baler Oats at 34 lbs/ac.

For weed control the Longview site was grazed with 100 cow-calf pairs and 3 bulls for 1.5 days on August 1 and 2. The site was then mowed on August 4.

Rating	Plant Count/ft ²
Excellent	>6
Good	3-5
Fair	2
Poor	<1

Table 1. Sainfoin plant counts per square foot and the stand rating given based on the count.



In August the site showed a plant count which rated as fair to good (see Table 1). Foothills hosted our “High Legume Pastures” afternoon tour here in August to display the results which were fairly positive. The site showed

better results than our second site, most likely due to rainfall timing differences (Table 2).

Date(s)	Gleichen Rainfall (inches)	Longview Rainfall (inches)
Before July 1	1.4	4.65
July	11.2	4.85
August	2.7	2.8
September	0.4	2.4
Total	15.7	14.7

Table 2. Rainfall in 2016 in inches at the Gleichen site versus the Longview site.

The second site (Gleichen) was seeded on May 16, 2016 to 1/2 to 3/4 inch depth with 33 lbs/ac of the Ultimate Pasture Mix (AAC Mountainview Sainfoin & Hay Grazer Alfalfa) and 5 lbs/ac of Graze Master Mix (40% Fleet Meadow Brome, 30% Tall Fescue, 20% Orchard Grass, and 10% Slender Wheat Grass). Due to the late rainfall (Table 2), the site in Gleichen displayed weed problems and a plant count which rated as poor to fair (see Table 1). The area only received 1.4 inches of rain before July 1 and then experienced excessive rainfall in July of 11.2 inches of rain most likely contributing to this problem.

In year 2 Foothills Forage will continue to monitor the sites, plant counts, soil health, and bloat control. We will be planning a field day next summer as well as in 2017 to look at the following results.

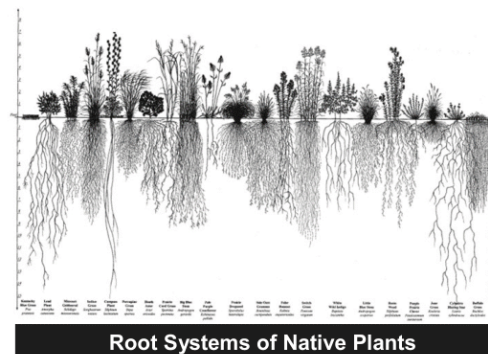


HIGH LEGUME PASTURES

Advantages of High Legume Pastures

Higher quality and quantity of forage over the grazing season.

- ◆ Increased profit per acre.
- ◆ Increased production from each acre.
- ◆ Increased gain per acre per animal.
- ◆ Improved cow condition and conception rates.
- ◆ Extends the grazing season, and helps manage the summer slump.



Builds soil quality, and is a source of Nitrogen for the pasture. (The highest potential happens when the seed has been inoculated with the correct bacteria).

- ◆ Nitrogen that is fixed is a symbiotic bacterial process, and root nodules are formed.
- ◆ Fixed Nitrogen is available to other forage plants through legume root cell leakage or fecal transfer.

Biodiversity of organisms above and below ground.

- ◆ Legumes with grasses bring more diversity of functional traits, and access various depths in the soil profile to capture and transfer moisture, nutrients, and enhance plant/soil/organism ecological systems.
- ◆ A healthy pasture has increased soil organism activity, insects, birds, and wildlife.

Greater stability of yield during drought.

Carbon sequestration can be improved with legumes added to grasses, and increased management.

Increased possibility for family succession on the same land area.

“The fear of bloat costs the livestock industry far more than bloat itself”

- Jim Gerrish



Perennial Forages Trial Project

The majority of the annual feed requirement of Alberta's cow herd consists of perennial forages, including both grasses and legumes. Two thirds of the total costs of maintaining the cow herd is comprised of pasture and stored feed and bedding comprise approximately two thirds of annual cow maintenance costs (Alberta Agriculture's Agriprofits Benchmarks) therefore managing the supply of forage is very important. Identification of high yielding varieties for different areas of the province contributes to a positive economic return.



Forage producers in Alberta have had limited access to information on new perennial crops in recent years. This project is intended to bridge the information gap by evaluating a number of species and varieties at several locations in Alberta.

The purpose of this project is to provide farmers and ranchers in Alberta with performance information on a number of grass and legume species and varieties.

It will introduce cultivars which have been developed in recent years but have had limited regional evaluation. 32 species and/or varieties of perennial grasses and legumes have been

selected for evaluation in 8 different regions of Alberta. Establishment, winter survival, and

yield will be monitored. Data from sites within the same ecoregions will be combined for a regional analysis, increasing the confidence in project results and recommendations.

Dr. Vern Baron, Agriculture and Agrifood Canada, Lacombe, was consulted in the development of this project, contributing to the focus and emphasis of regional variety selection.

This project compliments work currently underway in Saskatchewan and Manitoba by Dr. Emma McGeough and Bruce Coulman. It will also expand the evaluation of a new sainfoin variety developed by Dr. Surya Acharya of Agriculture and Agrifood Canada in Lethbridge. The trials will expand the overall data base for perennial forages, including varieties which have not yet been evaluated at several points in the province.

This is a 3 year demo site which started this year. Foothills Forage's site is near Cremona, AB is approximately 1.5 acres in total size. It is made up of 3 blocks:

- 1.) Grasses with 11 individual species in strips
- 2.) Legumes with 14 individual strips
- 3.) Grass & Legume mixes with 9 strips



Perennial Forage Trial: Map of Forage Plot

Cremona, AB

Sheep Fescue

Fleet Meadow Brome
AC Admiral Meadow Brome
AC Knowles Meadow Brome
Success Hybrid Meadow Brome
Greenleaf Pubescent Wheatgrass
Kirk Crested Wheatgrass
AC Saltlander Green Wheatgrass
Tom Russian Wildrye Grass
Fojtan Festulolium
Killarney Orchard Grass
Courtney Tall Fescue
Grinstad Timothy

Sheep Fescue

20-10 Alfalfa
44-44 Alfalfa
AC Assault Alfalfa
Dalton Alfalfa
Halo Alfalfa
PV Ultima Alfalfa
Rangelander Alfalfa
Rugged Alfalfa
Spredor 4 Alfalfa
Spredor 5 Alfalfa
Yellowhead Alfalfa
AC Mountianview Sainfoin
Nova Sainfoin
Veldt Cicer Milk Vetch
Oxley 2 Cicer Mile Vetch

Sheep Fescue

Fleet Meadow Brome/Yellowhead
Success Hybrid Brome/Yellowhead
AC Knowles Meadow Br/ Yellowhead
Fleet Meadow Brome/Spredor 5
Success Hybrid Brome/Spredor 5
AC Knowles Meadow Br/Spredor 5
Fleet Meadow Brome/AC Mountainview
Success Hybrid Brome/AC Mountainview
AC Knowles Meadow Br/AC Mountainview
Fleet Meadow Brome/Nova
Success Hybrid Brome/Nova
AC Knowles Meadow Br/Nova

Sheep Fescue



KEY	
	Grasses
	Legumes
	Mixes
	Guard



Perennial Forages Trial Project Continued...

Soil samples were collected in the spring (April 27, 2016) to create a fertilizer recommendation. 10 representative samples were taken at both 0-6 and 6-24 inch depths. Available nitrogen, phosphorus, potassium, sulphur, pH, salinity, texture, and organic matter were tested.



Throughout the project, rainfall was recorded and will continue to be recorded (See Table 3). Then on June 7, 2016 with the partnership of Chinook Applied Research Association (CARA) the site was seeded and a seeding map was created (See Page 24).

Observations in the first year indicated a volunteer oat problem from previous oat swath grazing on the site. However, the desired plants were still visible.

The volunteer barley was baled on August 19, 2016 to allow the desirable species to come through.



Rainfall in 2016

Date	Amount (inches)
May 23, 2016	1.5
May 29, 2016	0.4
July 7, 2016	1
July 9, 2016	1
July 13, 2016	0.75
July 14, 2016	0.4
July 16, 2016	5
July 30, 2016	0.3
July 31, 2016	0.5
August 7, 2016	2
August 11, 2016	2
August 21, 2016	0.5
September 5, 2016	1.0
September 6, 2016	0.75
September 10, 2016	1.0
September 11, 2016	1.0
Total	19.1

Table 3. Rainfall at the perennial forage trial site near Cremona, AB in 2016.



Foothills Forage is planning a tour of this site for the summer of 2017. Stay tuned through the newsletter to come check it out!



Canada Thistle Mining Weevils: A Hopeful Biocontrol?



Photo Credit: Integrated Weed Control

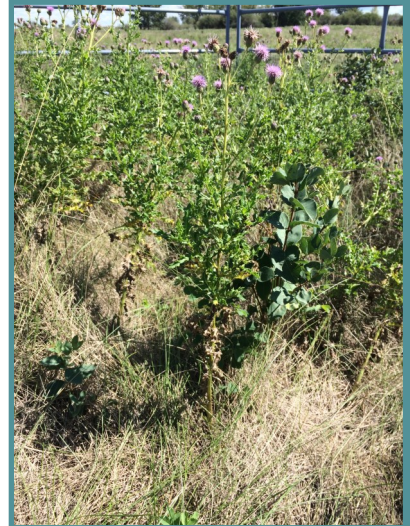
What if we could control Canada thistle without the use of herbicides that destroy our mixed legume and alfalfa stands?

And more importantly, save money in the long run without the expensive costs of annual herbicide application? That is where the Canada Thistle Mining Weevil comes into play or *Hadroplontus litura*.

This weevil was first introduced to Canada from Europe in 1965 and feeds solely on Canada Thistle and a few close relatives. It attacks the rosettes

of Canada Thistle in early spring before the thistle bolts. The adult weevils attack the foliage of the thistle plants and the larvae mine the inside of the stem.

In early summer when the larvae have fully fed, they emerge from the thistle through small exit holes that they chew near or just below ground level. They work their way into the soil, and enter the pupal stage in which they transform into adults. After two to three weeks, adults emerge from the soil in late June and July and feed on the thistle foliage until heavy frost occurs in the fall. Although foliage feeding seems to slow growth in the thistle, the larvae seem to have the biggest impact on thistle health.



FFGA is currently participating in a regional weevil trial. In 2012, 58 dishes (each containing up to 105 weevil individuals) were released into controlled sites across Alberta. The objectives of the project were to determine if the weevils would work, if a native population could be established in Alberta, if they are a cost effective control, and if additional weevils need to be added in consecutive years to follow.

Foothills set up two trial sites, one with Rod & Beth Vergouwen near Strathmore and the other with Phil & Pam Rowland near High River. The weevils have not been detected on the High River site since their fall 2012 release, leading us to believe they did not survive the winter. However, Foothills is keeping track of the progress near Strathmore as weevils and larvae have been found each year since.

In year 4 of the plot at Strathmore we are starting to see a reduction in thistle populations. Adult weevils were noted present and damaged and dead thistle were visible. In comparison to the control, the weevil plot noted a 100 plant decrease in the 25m² plot.

This leads us to believe that the weevils are successful based on a long-term strategy and favorable temperature conditions upon release. The benefit of these creatures is their ability to be placed in sensitive areas such as riparian areas, native pastures, or organic pasture.

Foothills Forage is facilitating an order on behalf of our producer members with the West Central Forage Association for weevils for August/September 2017. If you are interested in ordering weevils, please contact the WCFA office at (780) 727-4447. Price TBA based on USA exchange rate.



Thank you to our 2016 Partners



Agriculture Opportunity Fund



FFGA is a proud member of the Canadian Roundtable for Sustainable Beef, Alberta Forage Industry Network, and Agriculture Research & Extension Council of Alberta.



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