

2020

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The Verdant Element

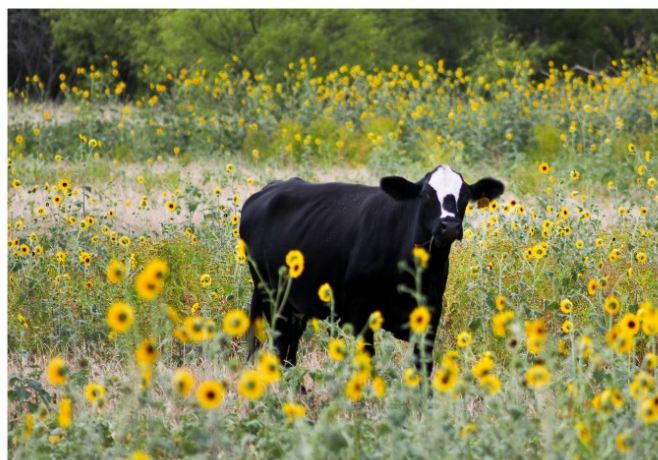
POST HARVEST GLOW

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For the first time in five years, the weather has cooperated for an excellent window for haying and a beautiful harvest. This year has definitely had its challenges with most having to harvest in May, then seed after that. Then the deluge in June with some cold, wet, windy weather following, but there was a rainbow after the storm with some dry hot weather. It also provided a bit of a reprieve of the stress of unharvested acres, or wet grain in the bin. Yields may have been patchy and a bit underwhelming which is a cause for concern. I think it may be safe to say that many are looking forward to wrapping up this year and putting it to bed.

This extended autumn weather has allowed for many to catch up and complete their fall work, and perhaps reflect on this year's accomplishments. What were your successes? Did you try anything new, or change your management in some way? Is there something that you are thinking of doing different next year? Is there something that you would like to learn more about? We at LARA would like to hear about it. Extension certainly has been a challenge this year, but we are starting to think about next year. If there is a burning topic, something new, or perhaps a refresher on something familiar, we would like to know to serve you best. Our format may have to change, with a few more webinars than in person events, but we look forward to providing you the information that you want.



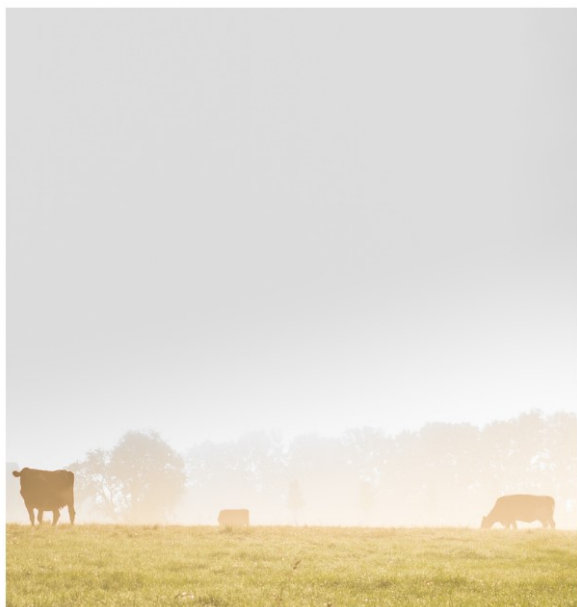
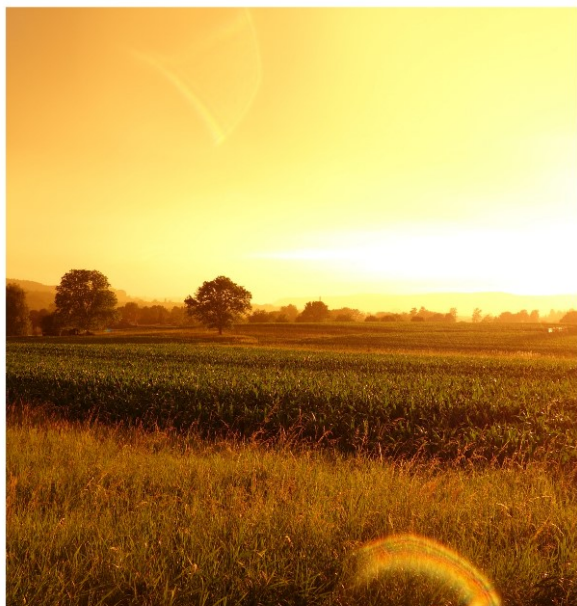
LAKELAND AGRICULTURAL RESEARCH ASSOCIATION

SOIL HEALTH ACADEMY

With Gabe Brown, Ray Archuleta,
Shane New and Dr. Allen Williams

JULY 19-21, 2021

Through hands-on training from the world's leading experts, Soil Health Academy participants learn how to increase profitability, build resiliency into the land, decrease input costs and improve nutrient density of food and agricultural products. No matter where you farm or what you grow, the Soil Health Academy will teach you how to improve soil health through practical regenerative agricultural principles.



SOIL HEALTH IS WEALTH

WHAT YOU WILL LEARN:

- **Principles of Soil Health & Adaptive Stewardship**
- **Properly Test Soils to Reduce Inputs**
- **Restoring Vibrant Ecosystems Through Adaptive Grazing**
- **Making Grazing Highly Profitable & Desirable**
- **Successful Marketing: Strategies for Enhanced Net Margins**
- **Nutrient Management**
- **Designing Cover Crop Mixes**
- **Farm Economics and Whole Farm Planning; and**
- **So much more...**

Cost to attend is:

\$1,600 for two people or \$900 for single registrant

Visit www.laraonline.ca

for more information about the event.

For inquiries or to register call (780) 826-7260

or email sustainag.lara@mcsnet.ca

Foxtail Barley

We see it lurking on the edges of the fields or in those low wet areas. It is in our pastures, haylands and cropland. And this year it spread, sometimes seeming like it was the only thing growing. Foxtail barley could be an ideal contestant on “Survivor” by outwitting, outplaying and outlasting all your efforts for control. This years weather conditions made this weed thrive, but also our management and soil conditions are very favorable to its flourishing population. Foxtail barley likes low calcium soils, high magnesium nutrient conditions, along with soils that are low in organic matter (humus), poor porosity and drainage (high moisture). Salts are also a factor in their success as well.



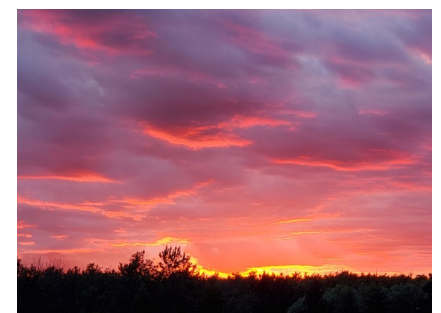
Foxtail barley has a shallow fibrous root system. Individual plants reproduce vegetatively by forming new tillers. It spreads mainly through seeds, which are easily dispersed by the wind. It is not palatable once the seed head emerges as the stiff awned heads can easily lodge in the mouth, nose and eyes can create abscesses, lump jaw and calf diphtheria.

To combat these unwanted species there are a variety of approaches you can take. You need to be able to tie up nitrates, increase your calcium in your soil and increase infiltration to allow excess sodium to leach from the profile. Sounds simple? You can do this through the addition of certain species (that are also great for grazing), such as planting (a mix of some of the following would be best) radish, turnip, chicory and sweet clover. These little powerhouse species would foster the conditions needed to improve the soil to prevent foxtail barley growth.

Due to the shallow roots, cultivation can be used to control foxtail barley. It does not spread by rootstocks or rhizomes like some other perennial weedy grasses. However, bare ground can give rise to numerous other weed species, and break up soil structure. Cultivation would need to be followed by planting a competitive annual crop or forage crop with respect to tolerance to wet and salt tolerant characteristics.

Suppression can also be achieved via grazing or mowing in the spring prior to seed set. You will need to monitor to see if a second grazing/mowing is needed.

Glyphosate application, when properly timed can be used to control foxtail barley. However in a perennial forage this would not be an option. To control foxtail barley (*Hordeum jubatum*) in established grass pastures, or grass/legume (alfalfa, trefoil) pastures, apply Kerb 50 WSP Selective Herbicide in late fall prior to freezeup.



To report prohibited noxious weeds call the Alberta Pest Surveillance System at :

310-APSS (2777)



The Value of Water

It is easy to take for granted the value of water until you lose it. As Canadians it is easy to think that water is readily

available and of relatively good quality. We are not like some countries that I have travelled to that are ravaged by water borne illness, or water scarcity. Although the Lakeland is abundant in both surface and groundwater resources, it does not take long to travel to other parts of the province that are not so blessed. The Peace region for instance, up until recent infrastructure investments for regional lines, households rely predominantly on dugouts for household use. In the southern part of the province, agriculture would look a lot different if there was no irrigation. When I lived in Australia it was the 9th year of drought in a row, farmers were paying tens of thousands of dollars to maintain water rights, but were not able to access the limited water reserves. On the walnut operation I worked on, we were paying full water rates to access only 30% of our allocation, just to maintain the investment of the 8,000+ trees. Water shortages in bureaucratic systems have been a source of conflict for centuries.

Mark Twain said it best, "whiskey is for drinking; water is for fighting over."

Rural water sources are very vulnerable. This a point driven home this summer when my well pump quit and then was seized onto the pitless adaptor and we were unable to pull it out to replace it. We spent the August long weekend without water, and let me tell you it was a *long* weekend. We ended up cutting off the top 12 feet of our well casing to cut below the pitless adaptor to pull the pump, couple a new casing, putting in a new pitless adaptor and well pump. And to do this we had to excavate down around the well, and then continually pump out the bottom as we were below the water table. That first day without water was humbling. It took us the three days to dig out our well and replace everything, so we ended up getting a tank and hauling in water (and then trying to patch it into our system), but even then we were very conservative with our water use. The last day without our well water was self imposed, as we shock chlorinated our well and wanted it to sit for at least 24 hours. The total four days (one without any water at all, and three with limited water) was a stark reminder that water is precious, and we are truly fortunate to be able to turn on our taps and (usually) have access to water.

This also serves as a reminder to maintain and protect your water resource. A well, once contaminated, depending on the contaminant can be rendered unusable. Ensure that your well is upslope from potential contaminants such as fuel, fertilizer, pesticides, herbicides, manure, and septic systems. Annual testing of

your water source is critical to monitoring for contaminants, as well as if your well is in good condition (no cracks in the casing, no bacteria forming). Not over pumping your well will preserve the lifespan of your well. You can consider also attending a working well workshop that will be held in the future to increase your knowledge of our groundwater resources, how to maintain your well and tips for keeping your well functioning well into the future.



Photo left: the joys of high iron, hard groundwater.
Photos to right: digging out the pitless adaptor and having to pump out the water due to the high water table.



Environmental Farm Plans

The environment is becoming a more prominent issue. It is a large factor in marketing agriculture and food products in today's global markets. Consumers are demanding more transparency and are demanding high quality and safe products. Reputation of food safety is critical to retain and gain access to domestic and international markets.

Environmental Farm Plans (EFP) provide a tool for producers to self analyze their operation and identify environmental risks, current standards, areas for improvement and also highlight what they are doing well. Having a completed EFP allows producers to access different funding opportunities, such as the Growing Forward Stewardship Program. It is also useful in product branding that demonstrates specific environmental standards.

The EFP Process

An EFP can be completed through workshops, online or one-on-one session(s). The EFP first identifies the soil and farm site characteristics. Following this, the producer completes only the relevant chapters that apply to their operation; such as wintering sites, fertilizer, pesticides, crop management etc.

Upon completion the EFP is submitted to a Technical Assistant for review. Once reviewed the EFP will be returned along with a letter of completion.

The EFP is a living document and should be reviewed and updated periodically.

If you wish to complete an EFP or have any questions regarding EFP please contact Kellie at the LARA office at 780-826-7260

Riparian Health Assessment

The riparian zone is the interface between the upland and a water course. A healthy riparian area: traps and stores sediment; builds and maintains banks and shorelines; stores water; recharges aquifers; filters and buffers water; creates primary production and much more!

A riparian health assessment is a tool designed to evaluate the site and can provide a foundation to build an action plan and identify priorities.

If you would like a FREE Riparian Health Assessment conducted on your property or more information please call Kellie at 780-826-7260 or email sustainag.lara@mcsnet.ca



CANADIAN AGRICULTURAL PARTNERSHIP

The Canadian Agricultural Partnership is a five-year, \$3 billion federal-provincial-territorial investment in the agriculture, agri-food and agri-based products sector set to begin in April 2018, and is the successor of the 2013-18 Growing Forward 2 partnership. In Alberta, the Canadian Agricultural Partnership represents a federal - provincial investment of \$406 million in strategic programs and initiatives for the agricultural sector.

Currently accepting funding applications is the Environmental Stewardship and Climate Change program and Farm Water Supply.

Funding Opportunities Stewardship covers projects such as:

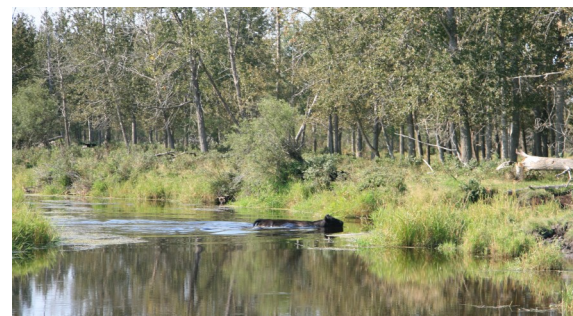
Riparian Area Fencing and Management	Permanent fencing and potentially cross fencing	Funding Maximum: \$75,000 Cost Share: 30% or 50%
Year-Round / Summer Watering Systems	Portable or permanent systems that are not in your yard site	Funding Maximum: \$50,000 Cost Share: 30% or 50%
Watercourse Crossings	Construction materials needed for watercourse crossing in accordance with the Water Act	Funding Maximum: \$10,000 Cost Share: 30% or 50%
Riparian Management Strategies - OPEN	Activities which are not explicitly ineligible and which can be shown to meet or exceed the program goals. Potential projects include: pond levelers for beaver management, riparian buffer establishment, native prairie management, grazing management consulting, wetland restoration	Funding Maximum: \$100,000 Cost Share: 30% or 50%
Relocation of Livestock facility or confined wintering site	Relocate a livestock facility that poses a significant risk to water quality or the environment, and properly remove the existing facility	Funding Maximum: \$100,000 Cost Share: 30% or 50%
Improved Land Application of Manure	To adopt technologies that result in more efficient nutrient use and decrease nutrient loss through run-off and volatilization. Eligible costs include: load cells, flow control meters, on the go nutrient analysis technology, compost turners and much more.	Funding Maximum: \$100,000 Cost Share: 30% or 50%
Agricultural Input and Waste	Improved pesticide management; improved nutrient management (sectional controls); plastic rollers; shelterbelts; wetland assessments	Funding Maximum: \$7,000 - \$15,000 Cost Share: 30% or 50%

More Information On Funding Opportunities

For more information on these funding opportunities go to: <https://cap.alberta.ca/CAP/index.html>

Call the LARA office to set up a time to go over funding possibilities and for assistance with the application forms.

Please note that applications must be approved prior to work being done or purchases made to be eligible for the funding.



Stuck in the mud? Consider an offsite watering system.

Lakeland Agricultural Research Association

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Sustainable farming encompasses a wide range of practices and principles; combining environmental stewardship with profitability and ensuring that the family farm will be there for generations to come.



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WWW.LARAONLINE.CA

Clubroot and You

Clubroot is spreading. Some years it might be inches, others it could be miles. Being proactive and preventing the spread is your best defence. Maintaining good crop rotations and changing and selecting the best varieties for your location are good management strategies to prevent pest pressures such as insects and disease for any crop species. Cleaning your equipment is another. At a minimum, knocking off the large soil chunks before leaving the field and heading to another is a good practice to get into. If you have a clubroot infected field you may need to go a step further and power wash and disinfect and perhaps perform field operations such as seeding last. You could also consider planting a grassed section where you stage all your equipment and can clean equipment as well; as most cases of clubroot are found in field entrances. If you are borrowing, renting or receiving a demo piece of equipment, ensure that it is clean before entering your property, especially if you do not know where it previously has been. If you are having hunters (or service providers such as utilities, mechanics, technicians etc.) entering your land, consider having a conversation with them about cleaning their equipment, especially if it is wet out (like the last few years) and their equipment is tracking mud. Scout your fields. Take the time to monitor for disease and pests as it will have huge benefits in managing and preventing the spread.

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