



Grain, Grass & Growth

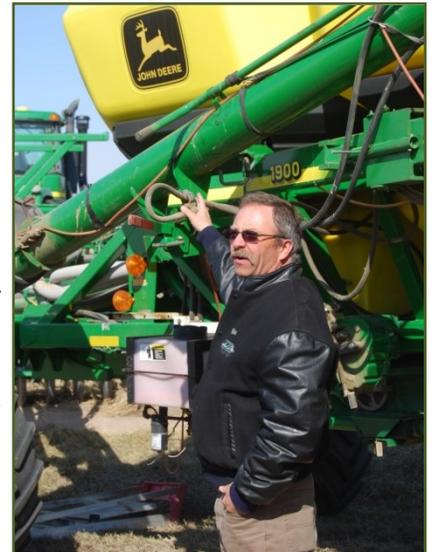
April 2017

www.chinookappliedresearch.ca

CARA Welcomes New Board Members!

The Chinook Applied Research Association is pleased to welcome 3 new producers to its Board of Directors. Representing the Special Area 2 Ag Service Board is Nathan Berg from the Cessford area, replacing Craig Horner. Barry Redel of Consort joins us representing the Special Area 4 Ag Service Board. Gloria Nelson, from south of Veteran, has represented the SA 4 group for several years and now serves as a Director at Large. The third new voice on the CARA Board is Landon Olsen of Cereal who was elected as a ratepayer rep for Special Area 3 at the February 28th CARA Annual Meeting and Project Review. Landon replaces retiring Board member Charles Schmidt.

Charles, formerly of Chinook and now farming in Saskatchewan, joined the Board in 1997 so has help guide direction of our association for over 20 years. Over the years he has been a strong supporter of moving the agricultural industry ahead, serving not only on CARA's Board but representing this area on provincial initiatives, including the ARECA Board. Charles promoted field scale projects, the importance of micro-nutrients, getting youth interested in agriculture and most recently our Soil Health Lab. Best of luck in Saskatchewan Charles!



What Else is New?

CARA's Soil Health Lab Initiative We are looking forward to bringing a retired classroom to Oyen for renovation into our lab facility this spring. The lab will house all the equipment Yamily has gathered, including the donation of biological assessment equipment from RA West International and the photo spectrometer purchased by Foothills Forage and Grazing Association.

AC Saltlander Demonstration CARA is partnering with Agriculture and Agrifood Canada and Bill Smith at Sibbald in looking at AC Saltlander green wheatgrass grown alone and in mixes with other perennials on different levels of salinity. All plots will be seeded this spring.

Crops Demo CARA is partnering with Sounding Creek Seeds and Starland County to demo some crops not traditionally seen in this area. Some of these crops have potential use in cocktail cover mixes while others, such as quinoa, are destined for specialty markets.

The Year After Pulses The Alberta Pulse Growers is providing support to help CARA monitor soil health and nutrient indicators conditions in the year following peas and lentils.

Watch for other new ventures in future newsletters!

Growing Forward 2 Funding update



With the overwhelming applications and limited funding some Growing Forward 2 programs are currently closed until further notice. While Alberta Agriculture can't give a specific date to expect program announcements, we can let you know which funding programs are currently accepting applications and which are not.

Traceability Technology Adoption

Program purpose statement

The Traceability Technology Adoption Programs are designed to encourage producers to implement traceability technologies in their livestock operations. The adoption of practical, cost-effective traceability technologies will assist producers with animal management, and will enhance the integrity of Alberta's traceability system for animal health, public health and food safety purposes.

Program description

The GF2 Traceability Technology Adoption Programs will reimburse eligible producers for 70% of approved costs for equipment and software that capture animal data for animal management and traceability purposes.

There is limited funding for the Programs. Applications will be processed on a first-come, first-served basis, and subject to the Program's funding constraints. There is no prerequisites for applying to this program.

Application process

- Review the Program Terms and Conditions for the appropriate operation (ex. sheep, Cow/calf or Feeder cattle).
- Review the Eligible RFID Software and RFID Readers information.
- Complete the appropriate Application Form and submit it to the Program.

Social License is Here to Stay

Special Areas and the [Chinook Applied Research Association](#) welcomed the [Canadian Cattlemen's Association](#) Advocacy Coordinator, Stina Nagel, to the Hanna Legion on February 7th to discuss beef advocacy and the impact of social license at the Young Rancher's Forum.

Social license is a concept that's here to stay, says Nagel. In a marketplace where 93% of Canadians know little or nothing about farming (Canadian Centre for Food Integrity), and 1.8% of the population is producing the food for the rest (Statistics Canada), farmers and industry must now rely on public trust for their right to operate. This public trust is called social license. Programs like [Verified Beef Production Plus](#) work to build social license with consumers, and was recently a hot topic in Pollockville, AB where 70+ beef producers attended a workshop to become VBP+ trained.

The millennial generation is more interested in their food production than any other and studies show they source a lot of their information from social media and online sources. It is therefore very important that primary food producers share accurate, responsible and positive advocacy messages about our

The following programs are still closed to applications. These programs may or may not become available in the future, but if they do reopen be ready to apply.

Livestock Welfare Producer: For implementing low stress, low hazard environments for livestock such as upgrading corral systems.

Animal Health Biosecurity Producer: For livestock quarantine pens, trailer sanitation and rodent control for poultry for example.

On-Farm Energy Management: Funds investment which improve energy efficiency on Alberta farms.

On-Farm Stewardships: Funds projects that help livestock and crop producers implement on-farm management practices in five areas that positively impact water quality and promote sustainable management of inorganic agricultural wastes.

To get the most up to date information on program availability please visit www.growingforward.alberta.ca and click 'subscribe' on your favorite programs.

If you would like assistance with your application or another project you can contact the CARA office for assistance.

310-farm

industry. This sharing is called advocacy or 'agvocacy,' a term coined by FCC's Agriculture More Than Ever. Nagel shared some of her best tips when agvocating online:

1. Stick to providing information and examples.
2. Keep tone positive and informative.
3. Do NOT curse, call names or use derogatory language, even if others have done so.
4. Don't post angry or upset. Write a response but wait half an hour before posting it.
5. Double check facts and provide sources when available.
6. Ensure proper spelling, grammar and terminology. This will add credibility to your message.

Want to learn more? Here are some agvocacy resources worth checking out:

[The Real Dirt on Farming Blog](#)
[Agriculture More than Ever](#)
[Canadian Centre for Food Integrity](#)
[Beef Advocacy Canada](#)
[Canada Beef](#)

Heightened Risk of Pea Leaf Weevil Damage in 2017

Properly inoculated annual legume crops, like field pea and faba bean, produce most of the nitrogen they require for growth through the growing season via nitrogen fixation carried out by nodules on plant roots. Hence, field pea and faba bean are generally grown on nitrogen deficient soil without much, if any, additional synthetic nitrogen fertilizer. When the pea leaf weevil (PLW) insect pest feeds on the nodules of pea and faba bean seedlings, this natural nitrogen source is greatly compromised, inhibiting optimal pea and faba bean growth throughout the remainder of the growing season as well as decreasing crop yield.

The pea leaf weevil was reported in southern Alberta in 1997 and remained for several years south of highway 1. Since 2013, this insect's geographic range has greatly expanded into central Alberta, extending as far north as Sturgeon County, north of Edmonton, with lower levels of feeding reported in east central Alberta.

Given that 2016 survey levels were high in the aforementioned areas, there is a high risk of infestation in the same areas if winter and spring conditions are favourable. A potential predictor of population increase is precipitation in August. As many areas with high weevil populations in 2016 experienced August precipitation, pea and faba bean producers in these areas are advised to plan control strategies for the 2017 crop year.

After spending the winter as an adult beetle in perennial legumes, adults are attracted to annual and perennial legume crops in spring, including field pea, faba bean, lentil, alfalfa, and bean. However, egg laying only takes place in soil near field pea or faba bean seedlings, so root nodules of lentil and alfalfa, for example, are not affected. Just prior to egg laying, adult PLW insects feed on the margins of seedling leaves resulting in a notched or scalloped leaf appearance (see Figure 1), which is not expected to reduce yield. After hatching from eggs, the worm-like larvae proceed downward into the soil where they primarily feed on root nodules resulting in decreased nitrogen fixation by pea and faba bean plants. Spring weather conditions can alter the timing and severity of PLW damage. Weevils arrive early to pea and faba bean fields if warm temperatures above 20 degrees C persist for more than a few days in late April or early May, potentially corresponding with higher yield losses. Alternatively, if cool weather occurs during the same period, yield is generally not as compromised especially when the crop advances past the 6th node stage before the weevils arrive. In either case, field scouting is required to make control decisions on a field by field basis. It is



Figure 1. PLW feeding damage on pea leaves (photo: L. Dosdall)

advised not to seed into cold soil.

Yield losses may occur when there are more than 30% of seedlings (3 out of 10 plants along a seed row; assess groups of 10 plants in multiple rows) with feeding damage on the clam leaf before the 6th node stage in peas. The clam leaf is the most recently emerged leaf. Most research has not shown that control of weevils using foliar insecticide prevents yield loss. The ineffectiveness of foliar spraying probably arises because weevils have already laid enough eggs to significantly damage root nodules when sprays are applied or because healthy weevils immigrate after spraying. According to research on the Prairies, nodule protection is more effective when pea seed is treated with a systemic insecticide product prior to seeding. Faba bean may be similarly protected, but this requires investigation. If feeding damage is only apparent on the older, lower leaves and not on the newer clam leaf, the weevil has probably already laid eggs and spraying would be of no value. Therefore, producers should scout for damage on the clam leaf and not on lower leaves. Since PLW migrate into field pea and faba bean fields, foliar damage is initially observed along field edges. Foliar insecticides applied early in an infestation to field edges may be a sound economic decision; however, additional on-farm research will provide more clarity. Limited spraying would also reduce the risk of affecting beneficial species, such as ground beetles, that may help manage PLW populations via predation.

Neil Whatley¹, Hector Carcamo², Meghan Vankosky³

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Consumer Confidence in Beef an Important Topic in Pollockville

Over 70 beef producers gathered at the Hardgrass Hub in Pollockville on February 1st for a [Verified Beef Production Plus \(VBP+\)](#) workshop that was hosted by the Berry Creek Ag Society in conjunction with Special Areas 2 and the Chinook Applied Research Association. Christine Erichsen walked producers through modules focusing on food safety, animal care, biosecurity and environmental stewardship, aimed at creating transparency and trust with beef buyers and consumers. The VBP+ program is an updated version of the well-known Verified Beef Program that was developed by the Canadian Cattlemen's Association and is required for Growing Forward 2 producer funding for items such as squeezes with neck extenders, load bars and scale software.

The program is a voluntary training and audit system that provides practical, affordable and credible principles for beef producers using existing proven national standards, such as the [Code of Practice for the Care and Handling of Beef Cattle](#), the [Canadian Beef Cattle On-Farm Biosecurity Standard](#) and [Environmental Farm Plans](#). Its focus is to give producers the tools, protocols and proof of social license to increase consumer confidence in Canadian beef and meet marketing demands more easily and cost effectively. You can view the [VBP+ Producer Checklist](#) to complete a self-assessment or get additional information at www.verifiedbeefproductionplus.com.

GF2 Eligible RFID Software

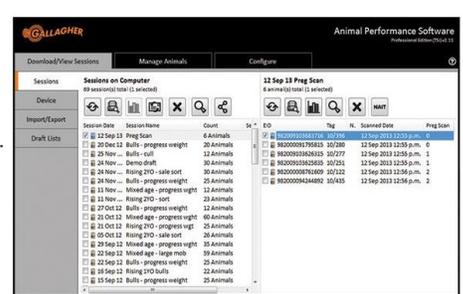
The Growing Forward 2 Traceability Technology Adoption Program is designed to encourage producers to implement traceability technologies in their livestock operations. The adoption of practical, cost-effective traceability technologies will assist producers with animal management, and will enhance the integrity of Alberta's traceability system for animal health, public health and food safety purposes. Here are a few descriptions of eligible RFID software programs with the Growing Forward 2 program.

Animal Performance Software from Gallagher

Animal Performance Software (APS) Standard is weigh scale/ EID tag reader integrated farm management software which provides easy access and reports on individual animal information.

- New icon based menus make it quick and easy to view and use current and historical and life data information on an individual animal level.
- Pre-set reporting enables quick analysis of frequently accessed information i.e. full animal/ mob history, predict.
- Weight of animals at a given date or date animals will reach a given weight.
- Easy information sharing between vets, farm advisors, dairy, grazier owners and farm managers and owners etc.

For more information check out www.gallagher.com



CattleMax

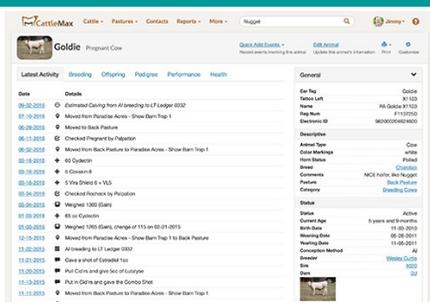
Make informed decisions. Powerful reporting lets you customize report formats to see your herd information in the way that works for your operation including:

- INVENTORY- Keep up with active and inactive animals
 - BREEDING- Record pasture, AI, and embryo breeding
 - CALVING- Calve cows and re-use information
 - MEDICAL- Track treatments and movements
 - WEIGHTS- Record weights, carcass and more
 - FINANCIAL- Keep up with purchases and sales
- To name a few!



CattleMax enables you to securely record, update and share your cattle records across multiple devices, multiple users and multiple locations.

For more information check out www.cattlemax.com



HerdTrax

Capture and track everything. Capture data at birth and every subsequent event for the rest of the animal's life: calving records, animal care, reproduction, genetics, nutrition and growth.

Data is always accessible and secure. Your information is accessible anytime and on any device. It is securely stored and only authorized users have access to it.

Get the information you need when you want it. Herdtrax provides the information and tools required to answer your questions and support your management decisions. It highlights animals that need attention and provides valuable benchmarks for in-herd comparisons and assessments.

Keep control of your herd. Each year, Herdtrax provides a detailed profile and performance analysis on every animal. Over time you will see firsthand if your management decisions are working or not.

Collaborate with partners. Herdtrax makes it easy to share information and collaborate with integrated partners: veterinarians, nutritionists, feeders, packers and retailers.

For more information check out www.herdtrax.com



Ranch Manager: Cattle Edition

Manage both Cow Calf and Purebred cattle records with Ranch Manager: Cattle Edition. Built for tracking cattle, Ranch Manager detects inbreeding, tracks cattle ID, pedigree, pasture location, and tracks cattle movements. Historical Data produces a complete view of your cattle operation currently and for every year entered (including dead and unmanaged animals). Sort, filter, search and navigate through Ranch Manager to retrieve and view data. Other features and benefits include: rapid data entry, adding cattle pictures, customizable picture pedigrees, due date reports, income and expense recording, treating multiple animals at once with vaccinations, interface with wand readers, download weights from cattle scales, average daily gain, other weight and measurement information.

For more information check out www.lionedge.com



Garden Planning: Are You Planting Noxious Weeds?

By: Jesse Williams

As you begin planning your gardens this spring, be sure to double check you are not harbouring noxious weed fugitives in your landscape. There are several popular ornamental plants that are deemed noxious and must be controlled as per the *Weed Act*. While they may be beautiful to look at, these noxious plants are extremely invasive, will outcompete native species, and quickly become out of control.

Be Diligent

Many of these plants are found hiding in commercially available wildflower mixes, flower shops, gardening stores and supermarkets, and are even recommended for planting by popular magazines and publications. It is your responsibility to be aware of what you are planting. If you see any of these species please call your Ag Fieldman for disposal instructions.

Which Ones Are Noxious?

All of the species below are noxious and must be controlled. For the full listing of noxious & prohibited noxious weeds visit:

www.abinvasives.ca

Row 1 (L to R): toadflax, white cockle, dame's rocket

Row 2 (L to R): yellow clematis, baby's breath,

Row 3 (L to R): blueweed, oxeye daisy, common tansy



Treating Your Well with Chlorine

A little chlorine applied regularly is the best bet

Questions about water well disinfection are among the most common questions water specialists hear from producers. It is acceptable to use chlorine, but regular application is the safest and most efficient solution, says Bob Buchanan, a water specialist with Alberta Agriculture and Food (AF).

“By doing regular disinfection every six to 12 months, you may be able to save yourself from the more costly and technically difficult shock chlorination treatment that is best done by an experienced water well driller,” says Buchanan.

How chlorine works

Chlorine bleach is the most common chemical method for disinfecting water wells. It becomes a significant disinfecting agent when it combines with nitrogen compounds such as ammonia to form chloramines.

However, chloramines are slow acting disinfectants that require long contact times for effective disinfection. A faster acting solution is created when higher levels of chlorine are added to the water. The excess chlorine then forms hypochlorous acid (HOCL), a fast acting, more powerful disinfecting agent.

Although adding more chlorine may be beneficial, Buchanan says there is a point where excessive chlorine concentrations can create more damage than benefit. “High dosages of 1,000 parts per million (ppm) of chlorine are less effective due to a change in water pH,” he says.

“Liquid and granular chlorine are both extremely alkaline. This results in an increase in pH when mixed with water. As the pH of the solution rises, the effectiveness of chlorine to kill bacteria is dramatically reduced. This higher concentration of chlorine is quite corrosive to the metal well casing and can be a concern for some older wells.”

Well disinfection vs shock chlorination

The terms “well disinfection” and “shock chlorination” are often used interchangeably, says Buchanan. However, well disinfection involves routine control of bacteria with small chlorine dosages of 50 to 200 ppm while shock chlorination is recommended to remediate bio-fouled wells and control problems created by high levels of nuisance bacteria.

Shock chlorination requires a much higher chlorine dosage of 200 to 1,000 ppm and the addition of an acid to lower the pH of the treatment solution in order to be effective. Buchanan recommends regular well disinfection as a way to help avoid the costly shock chlorination process that generally requires a water well driller to do properly and safely.

Further information on disinfecting wells is available in *Water Wells That Last*, a publication available on-line at the AF Ropin' the Web site at www.ropintheweb.com.

Information and assistance on disinfecting wells and a number of other on-farm environmental practices is available through a strong network of technical assistants (TAs) throughout the province.

This article may be reprinted with the credit: Alberta Environmental Farm Plan, www.albertaEFP.com. Article developed by The Alberta Environmental Farm Plan Company.

Fusarium Tests and How to Use Them



Fusarium head blight (FHB) is well established in Ontario, Manitoba and Eastern Saskatchewan grain crops. Also called scab, this disease has now moved into western Saskatchewan and parts of Alberta as well. Alberta has a [Fusarium graminearium management plan](#) which defines a prevention and control strategy. FHB is caused by *Fusarium graminearum*, a fungus that produces a mycotoxin called deoxynivalenol (DON), also known as vomitoxin. Seed infected with DON cannot be sold into the food market and can cause serious health problems if fed to livestock.

There are a number of tests for fusarium, and each has a specific purpose. This bulletin lists three main tests and what they should be used for.

For more information on fusarium-related tests, please see 20/20 Seed Labs bulletins on the [fusarium DNA test](#), and [fusarium testing FAQ](#).

Fusarium Plate Test & PCR Test

To test for the presence of *F. graminearum* on your seed, there are two tests.

The Canadian Grain Commission plate test:

Five-day test.

- Gives a percentage of *F. graminearum* found in each sample to 0.5%.
- Is an excellent follow-up for the fusarium DNA test.

The PCR test:

- Two-day test.
- Detects the presence of the DNA of *F. graminearum* in a sample but does not provide a quantitative result.

NOTE: These tests will not tell you if your seed contains vomitoxin in quantities high enough to be hazardous to animals (please see DON test, below).

Negative results from either of these tests mean that you can:

- get your grain cleaned at any seed cleaning plant in Alberta.
- sell your grain for seed in Alberta.

What's in your calving kit?

Regardless of whether producers are ready for the calving season, calves are being born. Being prepared is one of the best ways to ensure that the season goes smoothly. Here is a few things every producer's calving tool kit should contain:

1. Veterinarian's phone number – call if you are not sure about the calving.
2. Long plastic gloves – These should be worn when examining the cow to protect you and the cow. If these are not available, be sure to wash your hands and arms thoroughly, keeping all materials as clean as possible.
3. Pail of warm water.
4. Disinfectant – Udder wash diluted in warm water or a suitable iodine preparation can be used to wash the plastic gloves and cow's vulva.
5. Clean towels and paper towels.
6. Lubricant – Use a veterinary lubricant or a light mineral oil or Vaseline or Crisco oil.
7. Calving chains plus two handles. Put one loop above the dewclaw and the other below the dewclaw. Use one chain for each leg. Put the large link on top of the foot, so the pull is on the topside.
8. Special Equipment – a calving jack and calf snare – be familiar with and know how to use these pieces of equipment before calving starts.
9. String or dental floss to tie off a bleeding navel cord.
10. To stimulate breathing have a) cold water to put on the calf's head b) clean straw to put in nostril. Do not put your fingers in the calf's mouth – use a clean paper towel or apply pressure with your hand from the eyes on down to the nostrils to clear the nasal cavity of mucus.
11. Colostrum – Have a supply of fresh, frozen or commercial colostrum available for calves: from thin cows, cows with large teats, twins, premature calves, from difficult or cesarean deliveries and/or uterine prolapses.
12. Nipple bottle or esophageal feeder to ensure that the calf gets colostrums. Try the nipple bottle first but make sure that at least 4 litres of colostrums are given to the calf within 6 hours after birth.
13. Tags, notebook and pencil

Positive results mean that:

- your grain cannot be sold for seed in Alberta.
- the grain could be used for feed or sold out of the province (see below).

NOTE: Keep in mind that *F. graminearum* may be non-viable on the seed sample, or it may have been present on the seed surface and killed during the bleach treatment routinely used as part of the plate testing method. Our Technical Help Line is available for further assistance in interpreting test results.

DON Test (Vomitoxin)

A DON test is used when you want to check your grain for the presence of DON, or vomitoxin.

- One-day test.
- Uses an ELISA (enzyme-linked immunosorbent assay) method to detect the DON mycotoxin.
- Provides you with the amount of the mycotoxin present in the sample, expressed in parts per million (ppm).

NOTE: The ELISA test will not tell you if *F. graminearum* is present on your seed.

Negative results:

- are an indication that if *F. graminearum* or *F. culmorum* are present in your grain, they were not producing mycotoxins at the time of the test. (Both species can produce DON.)

Positive results:

- do not identify which species of fusarium is causing DON production, or if the fungus is still viable. (Because DON is a chemical produced by a fungus, it will not disappear, even if the fungus is no longer living.)

Positive DON Test results do not necessarily mean your grain cannot be used for feed. Please see 20/20 Seed Labs website for more information.

Management Strategies for Fusarium Head Blight

Alberta Barley

FHB, also called scab or tombstone, is caused by several species of the *Fusarium* fungus, the most significant being *F. graminearum* (*Fg*). Farmers in Manitoba, eastern Saskatchewan and irrigated areas of southern Alberta battle *Fg* every year.

Fg fungi overwinter in the soil, surviving on infected cereal and corn residue and on seed. *Fg* spores emerge in the spring and summer, causing *Fg* spread to cereal and grass heads at the flowering stage. Spores that reach a cereal flower can infect the developing kernel. Infected heads may exhibit white or pinkish fungal growth that produces more infective spores.

Spores are carried on air currents to other plants and adjacent fields. Like most fungal diseases, *Fg* thrives in moist weather and rising summer temperatures, but it doesn't need much moisture—a shower is enough to spread the disease and create conditions that favour head infection. Soil-borne *Fusarium* inoculum can infect plants at different stages of growth, causing seedling blight and crown and root rot in cereals, as well as stalk and ear rot in corn.

FHB reduces yields of barley and other cereals. However, mycotoxins produced by *Fg* species in affected grain are of greatest concern. *Fg* typically produces more mycotoxin than the other *Fusarium* species. The main toxin is deoxynivalenol (DON) and grain buyers specify a maximum permissible level of DON for their purchases. Agriculture and Agri-Food Canada advises a maximum of 1 ppm of DON for swine, dairy cattle and horses, and 5 ppm for poultry, beef cattle and sheep. Maltsters have zero tolerance for DON—it leads to beer that gushes when opened.

Because FHB is so destructive and easily spread, Alberta designated *Fg* as a “declared pest” under the Agricultural Pests Act in 1999 and has developed a set of best management practices to control it. These practices are described in the [Alberta Fusarium graminearum Management Plan](#).



Fusarium damage results in shrunken, chalky kernels

Prevention/management tips:

Where *Fg* is not established

- Plant disease free seed

Where *Fg* is established (primary management strategy)

- Plant seed with low detectible *Fg*
- Rotate crops from cereals to non-host crops (two years away from small cereal grains and three years or more away for corn); use pulses, canola, or forage legumes for at least two consecutive years in crop rotation
- Use 'least susceptible' varieties
- Limit *Fg* seedling blight by treating seed with a fungicide
- Apply a timely foliar fungicide (early flowering stage) to prevent stubble borne *Fg* infection
- Limit irrigation during flowering period
- Learn the disease symptoms

Other management strategies

- Increased seeding rates reduce tillering and therefore shorten a field's overall flowering period, which decreases infection time susceptibility and improves fungicide performance.
- Stagger planting dates to avoid having all cereal fields flowering simultaneously
- Effectively chop and spread straw and chaff during harvest
- Residue burial via tillage may hasten disease breakdown



Fusarium crown rot on wheat seedlings



**Alberta
Barley**

New online calculators available from the Canola Council of Canada

canola council OF CANADA Home Target Density Calculator Seed Rate Calculator My Fields Resources About

Minimize your **risk** and maximize your **profit**
with the right plant density target and seeding rate

Target Plant Density Calculator

Seeding Rate Calculator

Learn how to set a target plant density in plants/ft² or plants/m² that fits with your individual field conditions, abilities and appetite for risk

Calculate your optimum canola seeding rate or use this calculator after seeding to understand your emergence

Just in time for spring seeding, the Canola Council of Canada has released new seeding rate and plant stand calculators.

The Canola Council's press release says, “growers often default to seeding rates of five lbs./ac. or lower, regardless of seed size or field conditions.” Using these new tools will make it easier for farmers to make a “more refined” decision in the crunch time of seeding.

The “target density calculator” takes into account your risks, like weed competition, spring frost and expected insect damage. While the Canola Council has been recommending a density of seven to 10 plants per square foot, there may be situations where lower plant densities will still meet target yield goals. (However, the calculator will not recommend a target lower than six plants per square foot.) Once you know your target density, the “seeding rate calculator” computes your required seeding rate based on your expected rate of seed survival and the thousand kernel weight of the seed in your shed.

Find these handy tools online at canolacalculator.ca.

Western Canada Conference on
Soil Health & Grazing

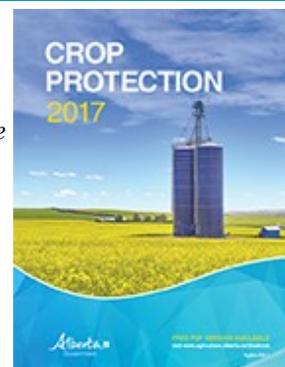
PROFIT ABOVE WEALTH BELOW

Edmonton, AB
December 5 - 7, 2017

www.absoilgrazing.com

Crop Protection 2017 (the "Blue Book") is the most comprehensive, up-to-date guide for the selection and application of chemicals to protect your crop. Easy-to-use write-ups for all product registrations make finding information fast and efficient. The 2017 *Blue Book* features over 592 pages of the most current information, including full indexes, easy-to-use charts and tables. This book is a valued crop protection tool for Western Canadian farmers.

The 2017 Blue book is available at the CARA office or online through Alberta Agriculture website.



2017 Fields Wanted!

CARA staff will be conducting pest surveillance surveys for the 2017 season. We are looking for **Canola, wheat** and **pea fields** within the Special Areas and MD of Acadia.

If you would like to submit your fields for one of these surveys please contact Olivia at the CARA office or email cara-3@telus.net.

2017 Forecast Map

The Alberta Insect Pest Monitoring Network has published their 2017 forecasting maps for bertha armyworms, cabbage seedpod weevils, grasshoppers, pea leaf weevils, wheat midge and wheat stem sawfly. To view the forecast maps visit the Alberta Agriculture and Forestry's Insect Pest monitoring network website.

[http://www1.agric.gov.ab.ca/\\$Department/deptdocs.nsf/all/prm13779](http://www1.agric.gov.ab.ca/$Department/deptdocs.nsf/all/prm13779)

Alberta Insect Pest
Monitoring Network



CARA's Soil Health Lab Update

Watch for updates as we move forward in the development of our NEW Soil Health Lab.

More of a Digital Person?

If you would like to receive this newsletter via email, please contact Olivia at cara-3@telus.net

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