



Grain, Grass & Growth

September & October 2016

www.chinookappliedresearch.ca

Soil Health and Crop Field Day

Rainfall demanded an adjustment from a true field day to a seminar format for CARA's Crop and Soil Health Field Day which took place at the CARA Center on August 3. Lunch was served to 44 participants who spent the day in CARA's shop gathering information from several industry specialists. Technicians waded into some of the nearby trials and demo's to provide a close look at some of the crops discussed during the day. CARA's Dr. Yamily Zavala led discussion on the basics of soil health and demonstrated differences in aggregation and moisture retention from soil samples she has collected from fields across Alberta. Dr. Mandula Bandara, Crop Scientist at Alberta's Crop Development Center in Brooks, shared information on the pulse and special crop research he oversees. Keith Gabert, Canola Council of Canada Agronomist provided some scouting and harvest tips for canola and mustard. Neil Whatley, Alberta Ag and Forestry Crop Specialist, summarized some of the benefits and tips for managing production of lentils and other pulse crops. Use of the Brix Meter for monitoring crop quality was presented by Bob West, RA West International, Taber.

Be watching for CARA's fall and winter event announcements. We are in the planning processes of the 7th Annual Cattlemen's Clinic, Young Farmers Forum, Young Ranchers Forum and the 3rd Annual Ladies Calving Clinic. Follow us on Social Media to get the most up-to-date announcements.



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.

On-Farm Solar Photovaltics

The program provides funding towards solar photovoltaics on Alberta farms. This enables producers to conserve non-renewable fossil fuels and reduce carbon emissions, ultimately reducing the environmental footprint of Alberta's agriculture industry.

The Growing Forward 2 Solar Photovaltics Program addresses two important industry priorities:

Improved environmental stewardship. When producers make investments in clean energy and reduced carbon emissions, they are recognized for their commitment to sustainable practices.

Improved energy management. Producers who install photovoltaic systems tend to take a renewed interest in their electricity usage; this leads to additional efficiency investments.

What kinds of PV Systems are eligible?

To be eligible for funding, a Photovoltaic system must be:

- Grid-tied, not off-grid,
- Approved under Alberta's Micro-Generation Legislation,
- Positioned to optimize sunshine and minimize shading,
- Have manufacturer-warranties on: Solar modules, Racking, Inverters and/or Micro-inverters,
- Producing power that is used in the production of a primary commodity, and
- Purchased after April 1, 2013, including already-installed systems.

The following programs are still closed to applications. These programs may or may not become available in the future. But if they do re open 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.

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




Cow-Calfenomics

Managing Uncertainty in Alberta's Cow Calf Sector

Date	Location	Venue	Time
November 1, 2016	Nanton	Nanton Community Center	9 a.m. registration 9:30 a.m.-3:30 p.m. session
November 2, 2016	Lethbridge	Country Kitchen Catering (same building as the Keg on Mayor Magrath Drive)	
November 3, 2016	Olds	Student Alumni Centre at Olds College	
November 8, 2016	Vermilion	Vermilion Regional Center	
November 9, 2016	Evansburg	Royal Canadian Legion	

The agenda this year will cover:

- Market Outlook and your Marketing Options
- Transition Planning - The Human Aspect
- Risk Management Perspectives
- Cost of Production - Do you know yours?
- 7 drivers to Financial Success
- What does your Neighbor Think? A Beef producer's perspective.

For more information go to agriculture.alberta.ca/cowcalfenomics

How to Register
All participants are requested to register prior to Wednesday, October 26, 2016. The registration fee is \$30 (GST included) and includes lunch. Registration for students and young producers (those under 25 years of age) will be sponsored by the Alberta Beef Producers. To register please call the Ag-Info Centre at 1-800-387-6030.

Safely dispose of liquid waste with the ChemSafe app

What's included?

- Ability to Report Spills & Releases
- A Material Search Tool
- Safe Disposal Information
- Contact Information



Search "ChemSafe"



How Hay is Stacked Does Make a Difference

Barry Yaremcio , September 26, 2016

A year's supply of hay has been harvested. Bales are coming into the feed yard for storage. What is the best strategy to stack and store the hay to minimize weather damage, shrink, and nutrient loss? Preventing moisture from migrating into the bales from rain or melting snow reduces bacteria, mold and fungi growth which reduces damage. Three common methods of stacking hay are compared.

The **pyramid stack** creates the most damage. Moisture that runs down off the top bale migrates into the middle and bottom rows. Damage occurs where the bales touch.



The **mushroom stack** results in less damage than the pyramid style. Moisture that runs off the top bale migrates into the upper end of the bottom bale creating damage. Increased soil to bale contact allows more moisture to enter the bottom of the lower bale.

Individual bales stacked in a row with 4 to 6 inches space between the bales results in the least amount of damage. Any rain that falls or snow that melts can run off the bale surface minimizing damage.



Bales that are stacked outdoors and unprotected from the weather lose weight over the storage period. Up to 15% of the bale weight (dry matter) can be lost over the first winter. Reducing moisture migration into the bale reduces weight loss.

Hard core bales with a high density (made tight) are able to shed water better than soft core bales or bales with lower density. Net wrap also sheds water better than bales made with twine.

It may appear to the eye that three or four inches of damaged hay in a 5 foot bale is not significant. Work done by Buckmaster (1993) found that 3 inches of spoilage impacts 17% of the hay and 4 inches impacts 22% of the bale.

Improving the physical characteristics of a bale and reducing weathering damage to stored hay can reduce bale shrink, quality loss and the overall cost of feeding the cow herd over winter.

Source:

Barry Yaremcio
Beef and Forage Specialist
Ag-Info Centre
Stettler



Join the Alberta Wheat Commission & Alberta Barley at your regional meeting this November

We invite you to connect with your neighbours, receive a Commission update, and learn about timely industry issues from our informative lineup of speakers.

We hope to see you there.

albertabarley.com | albertawheat.com | 1.800.265.9111



Alberta
Barley

Alberta Wheat
COMMISSION

What is the Quality of Your Feed?

CARA has a hay probe available to producers to collect hay samples for analysis. There are a few feed test packages to choose from and they range in pricing from \$20 to \$60/sample. We send the samples to a lab for analysis of your choosing. Feed analysis can show protein levels, energy, fibre, moisture, mold and a lot more! For more details contact the CARA Center.

The "Dirt" On Soils

What can we learn about soil from the Alberta Soil Information Viewer?

David Spiess, P.Eng., GIS Engineer, Alberta Agriculture and Forestry.

Rob Dunn, P.Ag., FarmWise Inc., Lethbridge, AB

Farmers and ranchers realize the importance that healthy soil plays in such areas as supporting life on earth, filtering land, water and air of toxins, pathogens, and greenhouse gases, and, securing the world's food supply. Alberta has a diversity of soils that contribute to these functions and fortunately, we have access to an excellent soil information database through the Soil Information Viewer to better understand and manage those resources.

The valuable insights available through the Soil Information Viewer, running from an internet welcome page located at soilinformation.alberta.ca, is a starting point for soils investigation on any given farm or ranch. The viewer accesses soil information stored in database tables called the Agricultural Regions of Alberta Soil Inventory Database (AGRASID). The information in the database looks at the ability of Alberta soils to grow crops, allowing comparisons between different lands in different areas, gives information on soil properties, helps with making environmental farm plans, and a whole lot more.

Over the past 75 years there has been a significant investment in local soil survey and mapping throughout Alberta's agricultural regions and AGRASID is a compilation and update of those soil survey reports. The database describes over 858 soil types within 28,366 map units across 26 million hectares in a standardized 1:100,000 scale, including detailed physical and chemical information for each soil type. The Soil Information Viewer displays these AGRASID map units, providing background on the soil types associated with any particular unit and where those soil types can be found within the landscape topography.

From the Alberta Soil Information welcome page (shown below), the viewer is accessed by pressing the graphic on the left of the page or by pressing On-line Soil Viewer above the graphic. The welcome page also provides access to a number of tip sheets and YouTube videos so that an interested visitor may read how to or watch how to perform several common tasks with the soil information viewer and at the same time, familiarizes them with an overall understanding of the capabilities the viewer may provide.

Alberta's Soil Information Viewer is a user friendly internet tool to access soils information from AGRASID. The tool, along with the supporting AGRASID database, are a starting point for learning more about the unique properties and productive capability of local soil.

About Agricultural Region of Alberta Soil Inventory Database (AGRASID) Version 3.0. Visit the Alberta Soil Information Viewer to find for more information on your land.

CARA's Soil Health Lab Update

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

CARA is currently HIRING! We are looking for a Soil Health Lab Technician to join our staff. Check out the job opportunity posting on the back page of this newsletter. Send us your resume via email, fax or stop by the CARA office if you are interested in applying.

NOTE: there is nothing "dirty" about soils— just ask Dr. Yamily Zavala. Watch this section future newsletters for more important information on Soil Health

Get the Jump on Weeds for Next Year

Column for September 14, 2016

Growing conditions have been close to ideal for crops and for weeds. With such prolific weed growth, it's not too early to consider post-harvest weed control. Conditions are good this year for some excellent control against perennial and winter annual weeds.

Winter annuals are weeds that germinate in the fall or late fall, go through the winter in a rosette form, and go to seed quickly once spring comes. Common winter annuals include stinkweed, shepherd's purse, scentless chamomile, narrow-leaved hawk'sbeard, bluebur, stork'sbill, flixweed, and common groundsel, among others. They form a few leaves in the fall, and overwinter as a rosette. These plants develop their own anti-freeze, preventing them from dying. It gives the plants an advantage the following spring as they send up a seed stalk and go to seed before most other plants get started.

Winter annuals deplete soil moisture and nutrients in the fall and spring. They can be very competitive against fall and spring seeded crops. Often, a spring herbicide application is too little, too late, as the plants are already going to flower or seed and are much more difficult to kill.

Under conventional tillage, these weeds were not a big problem. A late fall tillage operation would control them easily. With the switch to conservation and zero tillage, these weeds have gained prominence as serious, spring weed problems. Without tillage, other control strategies need to be used and one cost effective method is a late fall application of herbicide.

The best time for a fall application of herbicide is from late September to mid or late October, depending on the fall and the problem weeds. However, a successful fall weed control program requires the right conditions. Weed control, even after a frost, can still be very effective as long as the weeds have some green, actively growing plant material. Timing of application then, is most effective because the plants are small and more susceptible. Also, you get as many weed seeds germinating as possible. Winter annuals are able to continue growing, even after the first frost, until the ground freezes. Most winter annuals can be controlled in the spring, except for narrow-leaved hawk'sbeard, but control after they bolt is a lot more expensive and less effective.

Herbicide options are very economical in the fall. Chemicals like 2,4-D and MCPA provide good control and, at recommended rates, will be safe for most crops the subsequent spring. It is important to know the problem winter annuals you have so you can pick the best herbicide for it. Glyphosate works well in mixtures, on many winter annuals but it may not be the best one depending on the weed. Other common herbicides used for winter annuals, other than MCPA, 2,4-D and glyphosate, are dicamba, tribenuron-methyl and bromoxynil. Check with the label to ensure there is no problem with residual chemicals on the following spring crop.

Problem perennial weeds like Canada thistle, quackgrass, dandelion and sow thistle are best controlled by a fall application of herbicide. Once again, the plants need some green leaf material and be actively growing. Dandelion seedlings are easy to control in the fall but, after overwintering, they almost become bulletproof.



Photo credit: South Sask Farmers

Winter annuals are a persistent, increasing problem under reduced tillage. Under the right weather conditions, a late fall spray can repay you handsomely with reduced weed competition next spring. If the weather's right it could be worth your time and effort.

MEALS IN THE FIELDS



Have a recipe the field crew loves?

CARA is collecting recipes for a 'MEALS IN THE FIELDS' cookbook. Drop off a copy of your famous home style cooking recipe or send Olivia an email at cara-3@telus.net.

Deadline to submit recipes will be October 31. The cookbook will be available in November once all recipes are submitted.

7th Annual CATTLEMEN CLINIC

Tuesday, November 15th
Senior's Centre, Oyen
10:00 a.m. – 4:00 p.m.
Lunch included



Agenda Highlights:

- Managing Johnes Disease & Canada's New Beef Code of Practice
*Dr. John Campbell, DVM
University of Saskatchewan*
- Are We Over-Vaccinating?
*Dr. Cec Ruschowski, DVM
Oyen Vet Services*
- What the Market Wants & What Pays
*Dr. Ian Goodbrand, DVM
Dryland Cattle Trading Corporation
Border Veterinary Clinic Ltd*
- Verified Beef Production Plus
*Shannon Argent
Alberta Verified Beef*
- Growing Forward 2 Update





Partners:  **AFSC**

Pre-registration is appreciated:
Call CARA at 403-664-3777
or email us at cara-3@telus.net

\$25.00 CARA Members
\$30.00 Non-members

The communities of Consort & Oyen, AB present the

2016 HIGHWAY 41 PHEASANT FESTIVAL

REGISTRATION OPEN NOW!

FULL DAY HUNT | 30 TEAMS | 1,000+ BIRDS
CALCUTTA | BANQUET | SQUARE DRAW
SILENT AUCTION | HEN CONSERVATION
RELEASE | SUNDAY VOLUNTEER HUNT

\$1500/ TEAM | MAX 6 HUNTERS + 2 DOG HANDLERS
SPONSORSHIP & VOLUNTEER OPPORTUNITIES AVAILABLE

Sat | October 22 | 2016

EMAIL HIGHWAY41PHEASANTFEST@GMAIL.COM
VISIT WWW.HIGHWAY41PHEASANTFESTIVAL.COM







HWY41PHEASANTFEST

Weed of the Month

September – Yellow Toadflax

(linaria vulgaris)

Fact: Yellow toadflax was introduced from Eurasia as an ornamental.

Provincial Designation: **NOXIOUS**- must be controlled in Alberta

Reproduction: Yellow toadflax can reproduce both by seeds and vegetatively. Vegetative reproduction enables a stand of toadflax to spread rapidly. Stems develop from adventitious buds on primary and lateral roots. These buds can grow their own root and shoot system, and become independent plants the next year. Yellow toadflax colonies persist mostly via vegetation means.

Environment: Yellow toadflax rapidly colonizes open sites. It is most commonly found along roadsides, fences, rangelands, croplands, clear cuts, and pastures. Disturbed or cultivated ground is a prime candidate for colonization. The seedlings of yellow toadflax are considered ineffective competitors for soil moisture with established perennials and winter annuals. However, once established, yellow toadflax suppresses other vegetation mainly by intense competition for limited soil moisture. Mature plants are particularly competitive with winter annuals and shallow-rooted perennials.

Impacts: Yellow toadflax contains a poisonous glucoside that is reported to be mildly poisonous to cattle. However, the plant is considered unpalatable and reports of livestock poisonings are rare.

Often Confused With: Before flowering, this weed is often confused with leafy spurge, however toadflax does not contain the milk latex that leafy spurge does when the stem or leaves are cut.



Identification

Lifecycle: Perennial Forb

Stems: Mature yellow toadflax plants are 1-3 ft. tall with 1-25 smooth erect floral stems.

Leaves: Leaves are narrow, lance-shaped, soft, and pale green. Leaves are mainly alternate but lower leaves appear to be opposite due to crowding.

Flowers: Flowers are bright yellow and resemble snapdragons. Flowers are arranged in a raceme at the ends of branches.

Seeds: Capsules are round-ovate, 0.3-0.5 in long, and two-celled. Seeds are brown or black, circular, and surrounded by a notched wing.

Roots: Taproots may be up to 3 ft. long. Horizontal roots may grow to be several yards long, and can develop adventitious buds that may form independent plants.

Control

Mechanical: Where the soil is soft you may be able to pull the toadflax with its intact root system. Repeated pulling should occur to deplete the seed bank. Recurring mowing may assist by starving the roots. Repetitive cultivation can destroy the perennial root system, however you should consult with your agricultural fieldman in regards to soil conservation. All equipment should be thoroughly cleaned afterward.

Chemical: There are several products available that work very well on this weed. Your Ag Fieldman can suggest the best herbicide for your infestation location (in-crop, pasture, roadside, etc). Common chemicals used include: Acetic acid, Amitrole, Dichlorprop, Diuron, Glyphosate, Hexazinone, Imazapyr, MCPA, Metsulfuron-methyl, Picloram. Always check product labels to ensure the herbicide is registered for use on the target plant in Canada by the PMRA.

Biological: A stem mining weevil, *Mecinus janthinus*, has been successfully established in Alberta for control.

Grazing: Because toadflax is unpalatable to livestock this is not a viable option.

SPOTTED THIS WEED? Give your local Ag Fieldman a call!

Special Areas 2: Jesse Williams (403) 854-1114 (or send a text!)

Special Areas 3: Don Hogan (403) 664-3618

Special Areas 4: Justine Simpson (403) 577-3523

Lower Crop Prices, Lower Quality ... What to do?

In anticipation of high crop yields and production both here and in the US, crop prices fell from mid-May into harvest-time. Over that time period, high quality milling wheat dropped by about 75 cents/bushel, yellow pea prices dropped \$4 to \$5/bushel and feed barley and feed wheat prices are down about a dollar/bushel. With prices having fallen and some crop quality reduced by disease during the season and by rains near maturity, what alternatives does a producer have?

First, assess your financial position. Start with a quick cash flow, that is money inflow compared to money outflow. List the amounts and timing of bills, loans and personal living expenses to be paid month by month (or week by week if fine-tuning is needed). To counter those payments, list expected income from all sources, including potential farm produce sales and any personal income. If necessary, consider the alternatives to speed up inflow or slow outflow, while keeping creditors either current or knowing that you are working on the situation.

Put your marketing plan into action by estimating the quantity and quality of inventory to sell. As well as checking with your local buyers, consider using the Canadian Grain Commission's Harvest Sample Program as a free way to get a base grade on your representative crop samples.

Check into the merits (or not) of storing crops until prices improve. Some crops may have strong premiums for contracting into forward delivery periods (carrying charge market condition) while other crops may not offer any such premium. After reviewing market outlooks, you are as good a judge as anyone as to which crops have potential for price improvement and which crops are likely to provide flat prices at best. Make sure that crops to be stored will maintain their quality. Dry if necessary and monitor condition to prevent spoilage and insect damage until delivered. Last year there was some crop that spoiled even though it was technically dry.

Shop widely when checking into marketing outlets for your crops. Include processors, feeders and any other market or agent. A crop damaged in one respect may still have desirable characteristics to certain buyers. On the other hand, you may have some high quality crop that will command a premium in the market. For example, during August, some buyers raised their malting barley price bids and some strengthened their premiums for wheat protein. Be cautious in your choice of buyers to ensure that you do receive full and fair payment in a timely manner.

Consider using the Advance Payments Program. To help with cash flow needs, a cash advance is available through the Canadian Canola Growers Association by using farm produce as security. The maximum advance is \$400,000, of which the first \$100,000 is interest free.

It is useful to establish a list of crop buyer contacts. Make reference notes as you experience positives and negatives in your marketing. A good start at a crop marketing contact list is available on request.

Neil Blue

Crop Market Analyst

Alberta Agriculture & Forestry

780-422-4053 neil.blue@gov.ab.ca

Canadian Grain Commission Harvest Sample Program!

The Harvest Sample Program is a voluntary program for Canadian grain producers. If you sign up, you will receive a Harvest Sample kit annually that contains envelopes for sending in samples of your crop. Visit the Canadian Grain Commission website link <http://goo.gl/OXP4uX>



CARA Hosts Applied Research and Forage Association Staff

Over 20 staff from producer groups across the province visited the CARA Center on August 9th. The day included a presentation on Soil Health by Yamily, an overview of CARA's Soil Health Lab and a visit to the Smigelski Crop Trial site, the Rude Perennial Forage Site and Cameron Carlyle's U of A Drought Monitoring Project site in the Sounding Creek Community Pasture. The group also discussed Hemp production with grower Aaron Rude and enjoyed a great lunch at the Red Barn. A great networking day for everyone!



Protecting hay from environmental damage

September 13, 2016

Adequate moisture conditions in most of the province have resulted in larger than normal yields resulting in bigger stacks and rows of hay bales. If the winter is normal and cow numbers remain static, there could be a large surplus of hay carried over into next

summer (2017) and fed over the winter of 2017 – 18.

When hay is carried over the course of a winter, bales weather and lose both weight and quality depending on when they were made. This poses a few key questions including, what is the potential loss in value when storing the bales outside, unprotected from the elements?

What are the losses, and how big can they be?

Research on over-winter outdoor bale storage done in the Westlock, AB area found a 5.7% reduction in bale weight over the first winter. A 1,400 pound bale in July would weigh 1,320 pounds the following spring. In this trial, the bales were stored outdoors in an area that was higher in elevation compared to the surrounding area and the grass was mowed prior to bringing the bales onto the site. Other research reports indicated that weight loss can be as high as 15% (210 lbs. for a 1400 lb. bale). Increased losses are expected if the storage area traps snow over the winter or if spring melt does not run off increasing the amount of water damage.

Weathering also affects the acceptability of hay to livestock. Cattle eat less weather damaged hay; the cows will reject or waste up to 8% more feed from bales stored unprotected outdoors compared to bales placed under a tarp or stored under a shed.

Bales stored outdoors tend to squat or flatten out during storage. The total surface area of the bale in contact with the ground and exposed to rain increases, adding to the weather damage over time. Digestibility of the weathered hay can drop 10% compared to hay protected from the elements.

This loss in consumption and digestibility is further compounded by leaching losses of protein and soluble sugars (energy). Nutrient losses are greater from the leaf portion of the plant compared to the stems. Weathered hay can test 2 to 3% lower in protein (hay that tested 14% after baling can be 10 to 11% the following spring). Energy content can be 20 to 50% lower as well (TDN value of 63% after baling can be as low as 45 to 55% the next spring). If the winter is variable with many freeze / thaw cycles, damage will be greater than in winters that are constantly cold.

Bales made with net wrap are able to withstand weather damage better than those made with twine. Net wrapped bales can have 10% damage whereas bales made with twine can have 18% damage. Hard core bales with high density (heavier bales) are packed tighter and shed water better than bales with lower density (lighter bales). Soft core bales sustain more damage than hard core bales.

Weather damage to the outer layers of the bale significantly impact overall bale quality. If a 5 foot diameter bale experiences 4 inches of deterioration, this affects 23% of the total bale weight. Overall quality is reduced significantly even if it appears that a small layer of the bale is damaged.

Spending time to prepare a bale storage site, covering the bales with a tarp or plastic, or placing bales under a shed will provide an economic advantage especially if a portion of this years' crop will be carried over into next winters feeding period. If a 1400 pound bale is valued at 5 cents a pound or \$ 70 per ton, weight loss of 5.7 percent, a reduction in acceptance (increased waste) by 8%, and a 10% loss in digestibility increases the "cost" of providing the same amount of nutrients to the cow at \$89.65 per bale.

If a 1400 pound cow is fed 40 pounds of hay for 125 days it requires 5000 pounds (3.6 bales) of "non-damaged / protected" hay for the wintering period. Cost of the undamaged hay at \$70 per bale is \$252.00 per head for the 125 days.

Using values mentioned above; unprotected hay with the associated weight loss, reduction in quality and increased waste; the cost of providing the equivalent amount of nutrients from the hay and accounting for the losses increases the cost to \$322.74 per head.

The difference in feeding cost is \$70 per cow when associated quality and yield losses are considered when storing hay outdoors unprotected from the weather. Harlan Hughes from North Dakota State University (1989) calculated that a \$1 reduction in winter feeding costs would improve overall profitability of the operation by \$2.48.

Evaluating feed storage options and protecting hay from weather damage could significantly impact the cost of wintering cows.

Barry Yaremco
Beef and Forage Specialist
Alberta Agriculture and Forestry

Stop Dutch Elm Disease

The province has no native elm trees but; many thousands of elms worth millions of dollars have been planted in Alberta cities, towns and rural landscapes because of their stately beauty, rapid growth, good regenerative capacity, extensive life-span, and ability to survive extreme climate conditions.

What you can do to stop DED

Homeowners should be aware of Dutch Elm Disease and take the following steps to help prevent this disease from ravaging our elm trees:

- Adhere to the Provincial elm pruning ban between April 1 and September 30. Pruning should be done when beetles are not active, between October and March. All tools used on diseased trees should be disinfected.
- Elm materials should be disposed of at a landfill – stored elm firewood is an ideal breeding ground for elm bark beetles.



STOPPED Hotline
1-877-837-ELMS
stopped@shaw.ca

Clubroot Management Plan



Crop rotation

Three or four years can make a difference in Canada. “After a break from canola for two years or more, most of the spores will not be viable. Recent research suggests more than 90% of the spores will no longer be capable of infecting plants. This doesn’t eliminate the threat but greatly reduces the likelihood of severe yield loss,” Orchard says. “A two-year rotation in a clubroot-infested area seems to be the recipe for clubroot resistance to be overcome quite quickly. It’s nature at work.”

Reduce soil movement

A typical drill or tillage implement has many kilograms of soil clinging to its openers, discs or shanks. If one gram can have millions of spores, any field work that moves soil is also moving clubroot — and lots of it. Use tillage only when necessary and clean off as much soil as possible when moving any machinery from field to field. Reducing tillage to retain more surface residue will decrease wind erosion and infestation of other fields downwind. In wet harvest conditions, cleaning off combine, cart and truck tires between fields may be required to reduce soil tracking. Remember, clubroot spores can be present in all soil, not just fields seeded to canola this year. Take care to reduce soil movement in all fields.

Keep looking

Don’t assume those dead patches in low lying areas were just drowned out. Identifying clubroot patches early will mean growers can implement rotation and other management measures to contain the patch and minimize the economic impact from clubroot. “County fieldmen in Alberta are concerned and becoming very educated and willing to work with the growers,” Orchard says.

Variety selection

Although most current varieties use the same mechanism (genetics) for clubroot resistance, a few new options have been introduced recently and much work is being done to introduce new genetics. “Not over-relying on our current genetic sources is very important to preserve them,” Orchard says, “so rotating out of canola for an extra year or two will help this.”

Set aside the worst patches.

Putting severely infested patches into forages for a few years might be the best choice to stop spread of spores through field work. Make the patch 50% larger in area than the infested patch to contain fringes that may have elevated spore levels. In that time, research on management practices, soil amendments, and new genetics may come along that provides an economic management option for these areas.

For more on clubroot management, go to the canolaencyclopedia.ca and look for the clubroot chapter in the Diseases section or visit clubroot.ca.



Extension Highlights

Grazing Options Field Day

Featuring High Legume Pasture Project



Learn from producers' experiences and why they're keen to graze high legume pastures. The focus will be on establishment and how to be successful with high legumes.

First stop on our tour will be at CARA's High Legume Pasture Project site with Gould Ranching south of Consort. We will also visit fields with corn planted for grazing as well as other grazing option sites.

Grazing Options Field Day

Several producers took time off from haying and silaging to visit CARA's High Legume Pasture Demo and Trevor Deagle's corn site on August 18. Andrea Hanson, Beef Extension Specialist with Alberta Agriculture and Forestry, led discussion on the High Legume Pasture project which has been replicated at 13 sites across the province by applied research and forage associations. CARA's site is located south of Consort with Gould Ranching. Craig Ference, Double F Farms, shared some practical management tips for growing corn here in the Special Areas.



CORN & COVER CROPS FIELD DAY

CORN & COVER DEMOS FOR COCKTAIL COVER CROP MIXES

Join us for the morning to explore corn varieties and the potential of several crops for cocktail mixes. You will also see 30+ crops of Brassicas, broadleaves, cereals, legumes and corn varieties. Four demos of diversity, phacelia, crimson clover, Appin Turnip, Sorghum Sudan 70, Japanese millet and sweet mangel.



Corn and Cover Crop Field Day

20 producers spent the morning of September 20 looking at demo strips of 34 crops which may have potential for use in improving soil as part of cover crop cocktails. The Field Day was hosted by Curtis Hoffmann of Sounding Creek Seeds at a site near Loverna. CARA's Dr. Yamily Zavala led discussion on attributes of each crop, complimented by experience from Pat Fabian, Fabian Seeds and other attendees. Alexis Arthur, Thunder Seed Corn Specialist, Thunder Seeds shared management tips and variety information for producing corn



for silage, grazing or grain.

Schedule of Events

Pruning & Tree Care Hanna Learning Center October 22 9:30 am- 3:00pm	Join us for the day to learning about tree pests & diseases, the pros & cons of different mulches and how to properly prune your trees
7th Annual Cattlemen Clinic Oyen Senior Center November 15 10:00 am- 4:00pm	Managing Johnes Disease, Canada's New Beef Code of Practice, Verified Beef Production Plus, What the Market Wants and What Pays & Are We Over- Vaccinating?
Young Farmers Forum Oyen TBA	AFSC Crop Insurance, Grain Contract 101, Financial Advice, Crop Scouting 101, and How To Tell Your Farm Story Using Social Media
Young Ranchers Forum Hanna TBA	Cattlemen's young leaders, How To Tell Your Farm Story Using Social Media, Common Diseases & When To Call The Vet, Feed Samples Interpreting and CPIP & LPIP Insurance

Pruning and Tree Care



Dates: Saturday, October 22 **\$20**

Time: 9:30 a.m. to 3:00 p.m.

Presenters: Shelley Barkley – How to Treat for Pests and Diseases
 Nigel Seymour – Tree Care and Pruning
 Olivia Sederberg – Mulches and Watering Systems

Morning will be the classroom learning session and after lunch you will have the opportunity to do some hands on practice. Bring pruners if you have some and a bag lunch.

Brought to you by Chinook Applied Research Association, Hanna in Bloom, Hanna Ag Society and Hanna Learning Centre

Call 403.854.2099 to register.



SOIL HEALTH LAB TECHNICIAN

The Chinook Applied Research Association is now accepting applications for a Soil Health Lab Technician. We need to fill this position as soon as possible – please respond immediately if interested.

Term: October 10, 2016 – March 31, 2017

Duties:

Assist with the physical set-up of CARA's Soil Health Lab
 Assist with the evaluation of soil and plant samples according to appropriate standards and protocols

Qualifications:

Recent graduate of a degree or diploma program from an agricultural, environmental or science field of study
 Ability to follow instruction
 Aptitude for performance with great attention to detail
 Ability to work in a team atmosphere
 Basic understanding of soils and agricultural production
 No laboratory experience required – on the job training provided

Closing date: October 8, 2016

Submit resumes to: Dianne Westerlund
 Box 690
 Oyen, Alberta
 T0J 2J0

Fax: 664-3007
 Email: cara-dw@telus.net

For more information, call Dianne at 403-664-3777

More of a Digital Person?

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

CHINOOK APPLIED RESEARCH ASSOCIATION

Box 690 Oyen, AB T0J 2J0

Ph: 403-664-3777 Fax: 403-664-3007

Email: cara-1@telus.net Web: chinookappliedresearch.ca

@CARAresearch

Like us on Facebook!

