Photo courtesy of Whiskey Creek Ranch

Member of ARECA

Grain, Grass & Growth

April 2016

www.chinookappliedresearch.ca

Annual Crop Strategy Seminar

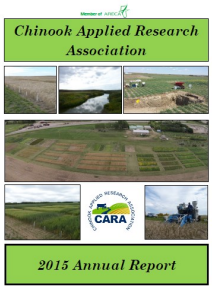
CARAs Annual Crop Strategy Seminar was held in Oyen, March 15 and included an array of farming related topics such as glyphosate resistant kochia, crop scouting with drones, pest forecasts, market outlooks, crop rotations & lentil production to help farmers prepare for the quickly approaching crop year.

Kelly Cooley from CoolPro Solutions was the first presenter of the seminar and spoke about the biology of kochia and why it has developed to be resistant to certain chemicals. Kochia is the 3rd most abundant weed in Southern Alberta, and resistant kochia has been confirmed in east central Alberta Farmers should consider reducing the number of glyphosate applications in a single season and incorporate other herbicides in weed management programs. When growing glyphosate-tolerant crops farmers may also need to incorporate non-herbicidal measures like crop rotation, tillage and manual weeding if necessary to control populations.

Kristina Polziehn, Axiom Agronomy Ltd., spoke about the usage of drones when scouting crops to assist farm management systems. The program (Agpixel) that Kristina uses processes unmanned, manned and satellite imagery for precision agriculture. The NDVI maps (Normalized Difference Vegetation Index) can be used to take advantage of the fact that healthier green vegetation has higher near infrared reflectance and lower red reflectance, providing enhanced insight for reducing inputs and increasing efficiency on the farming operation.

Scott Meers, Alberta Agriculture Entomologist Specialist provided an update on which insect pests are likely to b a problem this year. Neil Whatley, Alberta Agriculture Crop Specialist, led discussion on the importance of pulse crops in roatation and shared tips for growing successful lentil crops. Neil Blue the third Alberta Agriculture Specialist on the agenda, provided insight on the market outlook for cereals, pulses and oilseeds.

For more details check out the 2016 Pest Forecast and the 2016 Market outlook on the Alberta Agriculture website. The CARA office has Lentil Production Manuals available for those who may be interested.



Our 2015 Annual Project Reports are now available!

For those members who have not yet received their report let us know. If you are interested in receiving future reports contact CARA about becoming a CARA member.

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 won't give a specific date to expect programs announcements, we can let you know which funding programs are currently accepting applications and which are not.

Confined Feeding Operation (CFO) Stewardship

This program helps Alberta livestock operations and commercial manure applicators assess their potential risk to water quality and make improvements to minimize that risk, benefitting their business and the environment.

What kinds of projects are eligible?

- run-on and run-off controls
- manure storage facilities that increase capacity to the required 9 month minimum
- livestock facility relocation away from creeks, streams or other water bodies
- renovation of livestock facilities that existed prior to 2002
- solid liquid separation or composting equipment
- more eligible projects are available on the Funding List

How are costs shared?

The program covers 50% of eligible costs for most project categories. Some categories are funded at 70% or 30%.

Pre-requisites

You must complete one of the pre-requisites prior to submitting an application.

Option 1 – a CFO Site Assessment Checklist with a qualified ARD staff member. Please phone 310-FARM(3276) to be put in contact with a CFO Extension Specialist in your area.

Option 2 – an Alberta Environmental Farm Plan (EFP). You can contact CARA to be set up with an EFP & for assistance in completing your EFP.

These programs may or may **not** become available in the future. For up-to-date status on these programs check the www.growingforward.alberta.ca website.

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 and rodent control for poultry, for example.

For more information on any of the growing forward 2 programs you are able to call CARA at 664-3777. To get the most up to date information on program availability please visit www.growingforward.alberta.ca and click subscribe on your favorite programs.

Modernizing Canada's Wheat Class system

Agri-news, November 30, 2015

The Canadian Grain Commission (CGC) is working towards modernizing Canada's wheat class system.

"The CGC began a review of wheat varieties that are suitable to new quality standards in May, based on the outcomes of the Canadian wheat class modernization consultation," says Krista Kotylak, field crop business development agrologist, Alberta Agriculture and Forestry, Edmonton. "The review was in part due to some concerns about declining gluten strength in Canadian wheat shipments. The proposal included reviewing the quality of standards expected for the CWRS and CPSR wheat classes so the performance of those classes is more consistent with customer expectations.

Gluten strength is an important factor in bread baking performance as it contributes to the ability of dough to rise and maintain its shape as it is baked, notes kotylak. "The reclassification is intended to narrow the range of gluten strength parameters within the CWRS class, establishing Carberry as the lower threshold for gluten strength and Glenn as the upper threshold."

Effective August 1, 2016, both the existing Canada Western Feed and the Canada Western General Purpose wheat classes will be eliminated. However, there will be two new classes with the proposed names of Canada Northern Hard Red and Canada Western Special Purpose.

"Canada Northern Hard Red will include certain predesignated Canada Western Red Spring (CWRS) and Canada Prairie Spring Red (CPSR) varieties," says Kotylak. "Canada Western Special Purpose will include varieties that are currently designated to the Canada Western General Purpose Wheat Class."

The transition of Canada Western Red Spring CWRS) and Canada Prairie Spring Red (CPSR) varieties will start on August 1, 2018.

"Commercial growers who producer these varieties will still be able to market their grain in the CWRS class until this time. As of right now, we know of 25 CWRS and 4 CPSR varieties that will be affected– including Lillian, Harvest and Unity. These three varieties accounted for 25 percent of prairie– wide CWRS acreage last year.

The CGC has also identified additional varieties for which more quality data is needed, but these varieties were not disclosed publicly. The CGC will provide at least two years notice if they are to be designated to another class.

"The grain commission's decision will likely pressure some wheat growers to switch varieties and buy new CWRS genetics within two years." ass kotylak. "It would be best If producers obtain tests on their samples so that they have a better understanding of quality of grain they have, and can market it to maximize its value."

More information can be found on the Canadian Grain Commission Website.

Contact
Krista Kotylak
780-643-0702

Canadian Grain Commission
www.grainscanada.gc.ca

Field Selection for Lentil Production

Neil Whatley, February 2016

Proper field selection provides lentil growers with a head start toward producing a successful crop in 2016.

Since lentil does not tolerate water saturated soils, selecting a field with good drainage and few low areas is important. Lentil on sandy and loam soils turn out better in higher precipitation areas or if the growing season ends up having high rainfall.

Lentil production is most successful when grown in rotation with cereals. The general recommendation is the four year "cereal-pulse-cereal-oilseed" rotation, which can include barley or durum. Growers find that wheat after lentil increases the crop value by producing higher protein.

Research shows that lentil rooting depth averages 0.6 metres (2 ft). When the deeper rooted wheat crop is grown after lentil, it extracts water and nutrients from a greater depth of up to 1.8 metres (6 ft), producing higher yield and higher protein. This demonstrates the water and nutrient use efficiency of including lentil in a crop rotation.

Since a properly inoculated lentil crop fixes most its nitrogen needs, lentil should be grown on nitrogen deficient stubble fields of which the previous crop extracted much soil nitrogen by means of a higher yield. Although the newer red lentil varieties are much more determinant than older varieties, they continue to be somewhat inclined towards indeterminant growth behaviour (growing vegetatively without setting seed) if there is excess soil water and nitrogen present later in the growing season. Therefore, seeding into nitrogen deficient soil helps to prevent indeterminance.

Avoid fields that have been recently sprayed with herbicides whose soil residues affect lentil. There are a dozen residual herbicide products that restrict lentil growth, including Authority, Curtail M, Everest and Frontline 2,4-D. Check your crop protection guide for re-cropping restrictions.

Select fields that have received good perennial weed control treatments in the past. Proper weed control in lentil requires a long-term strategy involving the entire crop rotation. Lentil is a poor competitor and herbicides currently registered for use in lentil production do not control weeds like Canada thistle, quackgrass and perennial sow thistle. This problem can be alleviated by applying glyphosate as a pre-harvest perennial weed control in the previous crop. The introduction of CLEARFIELD lentil varieties has been a valuable asset for post-emergent control of a fairly wide spectrum of grassy and broadleaf weeds with products like Odyssey. The labels of Edge and trifluralin herbicides indicate that they must only be applied in the fall as granular formulations and must be incorporated at least once in the fall.

Lentil plants ripen from the bottom upwards, with the lowermost pods being the most productive. Although newer varieties have increased height and lodging resistance, it continues to be important to be able to get the harvest cutter bar near to the soil surface to capture the low hanging pods. Although rocks are not a huge problem anymore due to the usage of land rollers, a field with a serious rock problem should be avoided.

Field pea and lentil crops are hosts to similar root rot diseases. Fusarium root rot and aphanomyces are soil borne diseases that affect both pulse crops. Therefore, allow four years between growing pea and lentil in a crop rotation; six years if aphanomyces is present.

ATCO Electric Farm Safety Tips

Today's farm equipment is bigger than ever which can mean big problems when you're working around power lines. Contact with a power line can result in damaged equipment, severe injuries or even death, but is 100 percent preventable. Stay safe with these tips:

1. **Check the height of your equipment.** If you're buying it new, confirm the height, update your GPS with any changes and consider your route to ensure you can cross safely under power lines. Exercise caution if equipment is higher than 4.1 metres.
2. **Stay seven metres away from power lines.** Keep this in mind when operating grain augers or air seeders, or when lifting truck boxes or back hoes.
3. **Stack and store wisely.** Whether it's a grain bin or bale storage, stack and store it seven metres away from power lines.
4. **Plan before moving tall equipment.** Map your route and locate any overhead power lines. If you don't know whether it's safe to cross under or work near a power line, **call ATCO Electric for help: 1-855-277-1670**.

For more information on working near power lines safely, visit atcoelectric.com.

Sprayer contacting a power line.

Management of Seed-Placed Fertilizers

Mark Cutts – AF Crop Specialist

The importance of fertilizers for sustaining crop production is well recognized. A common fertilizer management practice is to apply fertilizer with the seed at the time of seeding. Despite the benefits of seed placed fertilizer, it is important to ensure proper amounts are being placed with the seed. Applying too much fertilizer with the seed can reduce or delay crop emergence. In order to ensure seed-placed fertilizers are being managed properly, an understanding of the factors that influence their use is required.

The fertilizer product most commonly evaluated for seed-placed safety is urea (46-0-0). Seed placed urea can reduce crop emergence through ammonia toxicity. A number of factors impact the amount of urea that can be seed-placed. Factors to consider include: seedbed utilization (calculated as the spread of seed and fertilizer divided by the row spacing), soil conditions (soil texture, soil moisture), and seed size. It is important to recognize that an interaction exists between these factors and as a result the amount of urea that can be seed-placed varies considerably. Higher seedbed utilization (eg. 50 percent versus 10 percent), finer textured soils (clay verses sand) and a larger seed size (cereal versus canola) allow more urea to be placed with the seed.

It should be noted, that for seed-placed urea, moisture conditions at the time of seeding and moisture received shortly after seeding (up to seven days post-seeding) can minimize the toxic effects of urea in the seed-row. However, to minimize the risk associated with urea, the amount to be seed-placed should reflect moisture conditions present at the time of seeding.

Many producers seed-place phosphate fertilizers in order to ensure seedling plants have early access to this nutrient. The main phosphate fertilizer used in Alberta, monoammonium phosphate (11-52-0, 12-51-0), generally has low seedling toxicity. However, there is a distinct difference in maximum amounts of seed-placed phosphate based on crop type. In general, cereal crops can tolerate the amount of phosphate that is typically seed placed, while crops such as oilseeds and pulses are more sensitive. In Alberta at ten percent seed bed utilization, the maximum recommended rates of seed-placed phosphate for cereal, pea and canola are 50, 25 and 15 pounds per acre respectively.

A third fertilizer product that can be seed-placed is potassium chloride (0-0-60). Seed placed potassium fertilizer can impact crop stand establishment through a salt effect. The safe level of potassium that can be applied with the seed depends on crop type. In general, tolerance is higher for cereal crops as compared to a smaller seeded crop such as canola. Pulse crops are sensitive to seed-placed potassium fertilizer and producers may need to consider alternative fertilizer placement approaches such as banding.

When fertilizer is being seed placed several factors must be considered. An understanding of these factors and how they interact will allow the maximum benefit of these fertilizers to be achieved. For more information on seed-placing fertilizers please refer to the Alberta Fertilizer Guide located on Ropin' The Web or contact the Ag Info Centre at 310-FARM.

Herbicide Resistance in Weeds - Frequently Asked Questions

What is herbicide resistance?

Herbicide resistance occurs when a previously controlled weed species is no longer killed with an application of the same herbicide, even at elevated rates. Resistance can occur in other organisms with other pesticide products such as fungicides and insecticides.

Why does weed resistance develop?

There is genetic variability in all weed species. Therefore a population of weeds contain plants with varying sensitivities to particular herbicides. When you frequently seed the same crop and spray with the same herbicide, you quickly select weeds with greater tolerance to the herbicide. Short or limited crop rotations and/or reliance on one particular herbicide group aids in developing herbicide resistance. It is not just repeatedly applying a particular herbicide brand; this applies to all herbicides using that particular mode of action. Repeated applications of the same herbicide, mode of action, creates selection pressure that favours plants with the resistant genes over other weed biotypes. Within a few generations, the majority of those weeds will have the resistant genes. This is why it is so important to know the mode of action of the herbicides you use. See Herbicide Group Classification By Mode of Action for more information.

How do you identify herbicide resistance?

When checking fields after spraying, several telltale signs indicate possible herbicide resistance development. If all other reasons to explain the lack of weed control are ruled out, then weed resistance is the most likely culprit. Some telltale signs are the following:

- Are other weed species listed on the product label controlled satisfactorily? It is unlikely for multiple weed species to develop resistance at the same time.
- Is the herbicide failure patchy with no reasonable explanation?
- Do field records show the same herbicide or herbicide group being used on this land recently and was any reduced effectiveness P on a particular weed species noted in this area of the field in the previous year?
- Do individual plants of a specific weed species show herbicide injury symptoms next to other weed of the same species, with no visible symptoms?
- Do field histories show frequent use of the same herbicide or herbicide group year after year?
- Do herbicide resistant weeds already exist in your farming area?

If you suspect weed resistance, collect and send weed seed samples to a lab for testing and confirmation.

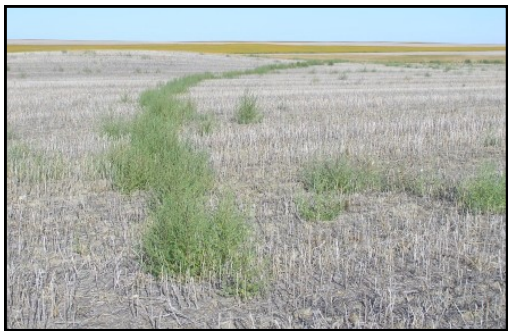


Photo courtesy of Alberta Barley

Herbicide Resistance in Weeds continued

How bad is the problem?

As an example, weed surveys, conducted every 5 – 10 years, are finding an alarming increase in the percent of fields in Alberta with herbicide resistant wild oats. The majority of our wild oat herbicides are in the group 1 mode of action. In 2001, 11% of surveyed fields had group 1 resistant wild oat. By 2007 the percentage increased to 39% of surveyed fields. Currently, over half the fields in Alberta are suspected to have group 1 resistant wild oats. There are also populations of Group 2 and group 8 resistant wild oats in Alberta. What's left? Almost all grassy weed herbicides are Group 1, 2 or 8. Glyphosate (group 9) is effective but overuse will select for resistance to it too. We don't have an unlimited number of herbicides effective on wild oats, or for that matter, on any other weed species.

How can you prevent it?

Weed resistance can be avoided or at least delayed by utilizing the following practices.

· Rotate herbicide groups and crops. Using different herbicide modes of action on a problem weed prevents selecting for the resistant biotypes. Using different crop types provides different competition levels to the weed from the crops. Crop rotation also changes crop-weed interactions and weed control systems, preventing the buildup of resistant weeds.

· Keep and use detailed field crop histories to prevent a buildup of resistant weeds by stopping the overuse of one group of herbicides.

· Using a herbicide mixture with more than one mode of action on problem weeds can help delay the onset of resistance.

· Apply an integrated weed management approach to weed control. This includes the use of herbicides but also crop rotation, use of perennial crops, competitive cropping, higher seeding rates, mechanical control, biological control, adjusted seeding dates and other tools.

· Measure results and prevent the movement of resistant weed seeds to other parts of the farm or elsewhere through equipment sanitation.

· Use herbicides on weed problems if they exceed the economic threshold for the crop.

· Limit the use of herbicides with long soil residual time. Residual herbicides create enormous selection pressure over extended periods for the resistant plants.

Why should you care?

Herbicides are an important tool to control weeds. However, sole reliance of this tool for weed control can decrease or even eliminate its effectiveness. An integrated weed management plan ensures herbicides remain effective on problem weeds well into the future.

Riparian Areas & Grazing Management– April Livestock Lesson

Special Area No.2 Ag Fieldman, Jesse Williams

Canada has the most wetlands of any country in the world, making up 4% of the world's and 14% of Canada's landscape. While we may not typically think 'wet' when we talk about the southern region of the Prairie Provinces, 5-25% of this region is covered in freshwater marshes and shallow open waters. This is significant because half of the migratory birds on the continent pass through this region and use our wetlands. It also has a huge impact on agricultural producers, their practices and grazing management requirements.

So, what is a wetland?

According to the Alberta Wetland Policy (2013) a wetland is defined as:

Land saturated with water long enough to promote wetland or aquatic processes as indicated by poorly drained soils, hydophytic vegetation, and various kinds of biological activity that are adapted to a wet environment.

Is a slough a wetland?

Yes! A slough is another name for a mineral wetland like a marsh or shallow water wetland.

What is a riparian area?

The Alberta Water Council defines a riparian areas as:

-transitional areas between upland and aquatic ecosystems

-have variable width and extend both above and below ground

-influenced by and/or exert an influence on associated water bodies, which includes alluvial aquifers and floodplains, when present

-Riparian lands usually have soil, biological and other physical characteristics that reflect the influence of water and/or hydrological processes.

Why protect your riparian areas?

Riparian areas are key to the ecosystem working properly. These unique areas can trap sediments, recharge groundwater, provide primary productivity and support biodiversity. If a riparian area is compromised, the watershed may experience:

-reduced water quality

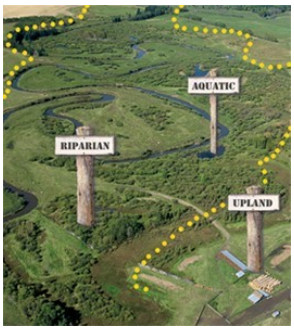
-increased runoff, erosion and sedimentation

-reduced groundwater storage

-higher peak flows and lower base flows

-increased floor and drought frequency

-reduced habitat quality and food supplies



Grazing Management

Grazing management has a huge impact on the health of a riparian area. Because of the migratory manner of the bison herds in Alberta, our riparian areas adapted to a grazing-rest management situation. This meant that there was never year-round constant grazing pressure on one riparian area, as the bison herds were always on the move. Today, in a fenced and settled landscape, we need to remember the grazing-rest management style in order to keep our riparian areas and water bodies healthy. When grazing is too intense at vulnerable periods, without rest, riparian health and functions will decline.

Plants require sufficient time to regrow and store energy that will allow them to regrow the following year. Producers need to therefore balance the needs of the animals with the available forage supple, distribute stock evenly, provide sufficient rest periods through the growing season and avoid grazing areas during fragile periods.

Growing Forward Grants

There is Growing Forward 2 grant money available to agricultural producers to help protect their wetlands and riparian areas. Examples of programs that projects may be eligible under include On-Farm Water Management, regional

Attention producers!

Baby's breath not an ornamental

A Bulletin from your local Agricultural Fieldman **Jesse Williams**

A *NOXIOUS WEED* designated by Alberta's *Weed Act*

While Baby's Breath (Gypsophila paniculata) has long been seen as an ornamental wild flower to spruce up wedding bouquets, table pieces and adorned by flower girls as a crown, this weedy species is actually designated by the Alberta Weed Act as a noxious weed.

What does NOXIOUS mean?

Within the provincial Weed Act, a species designated as noxious reads ***'A person shall control a noxious weed that is on land the person owns or occupies'***. As the appointed inspector, your local Ag Fieldman is able to issue Weed Notices to the landowners, should a noxious weed be found on their land. This would require the landowner to take control measures to eradicate the weed themselves, at their own cost. While this is the way many other municipalities operate, **As Ag Fieldman, we prefer to work with their landowners to identify noxious weeds and assist the landowners in creating a management strategy.** This includes 4 free hours of pesticide application if you are within the Special Areas.

I found Baby's Breath. Now what?

Call your Ag Fieldman! *Whether you have identified the species or you just think you have seen it, on your land or your neighbors, give us a call. The Ag Fieldman are hoping to get this relatively easy to control noxious weed under control within our municipal borders.* ***We want to work with landowners.***

Acadia Valley	*Stacy Scheuerman*	*(403) 972-3755*
Special Areas 2	*Jesse Williams*	*(403) 854-1114*
Special Areas 3	*Don Hogan*	*(403) 664-5585*
Special Areas 4	*Justine Simpson*	*(403) 575-5525*
Starland County	*Al Hampton*	*(403) 772-3793*
	Dara Calon	*(403) 820-3807*

FLOWER FACTS

This perennial reproduces by seed only, making it very important to control prior to seed set. It's deep tap root can extend to 4m, allowing it to access deep groundwater in drought situations and enjoys coarse and/or alkaline soils, allowing it to thrive in the Special Areas. At the end of each growing season the stem will die off at the crown, creating a tumble weed of huge noxious seed spreading capabilities. New stems will re-sprout from the crown each spring.

Prevention: Simply don't grow this plant as an ornamental! Be wary of any bouquets that utilize baby's breath, as some florists still manage to get their hands on this cheap filler. Landfills, and particularly cemeteries are often major infestation sites because of forgotten bouquet arrangements.
For more information visit **www.abinvasives.ca**

Management Strategies

Chemical: *There are chemical means of controlling this weed which differ for each type of management situation (in-crop, pasture, ditches, etc). If you are interested in using herbicides, call your Ag Fieldman for the best recommendation or have them come out to do the work.*

Grazing: *Young plants are more susceptible and palatable for grazing. Be careful not to overgraze healthy pasture just to eliminate baby's breath.*

Mechanical: *Mowing prior to seed set can help you prevent addition to the seed bed, however the plants will re-sprout. Hand pulling is very difficult because of the deep tap roots. You would need to sever the root below the root crown (several cm below ground level) to prevent re-sprouting.*

Unfortunately there are no biological control measures identified yet.

For more information visit: www.abinvasives.ca

Custom Rates and the Machinery Cost Calculator

Clients often call Alberta Agriculture and Forestry's Ag Info Centre for information on custom rates. Custom operators have been surveyed annually in the past to determine the rates they charge. Reported rates varied considerably due to economies of scale. Some operators cover more acres than their competitors and are able to charge less due to the fact that they spread their fixed costs over more acres. As there is usually little difference in variable costs any variation in custom rates could also be attributed to differences in machinery size. Survey results were typically filtered to allow for a most common reported range but that still showed a 20 to 25 percent variation in many cases.

Unfortunately, response to the survey has been disappointing the last number of years. For some applications no responses were received or the sample size was so small and localized that the results were meaningless. Due to this lack of response the Custom Rate Surveys in recent years have been less robust and useful than in years past.

Producers are often asked to do some custom work for neighbours. They have come to rely on the Custom Rate Survey to come up with rate they can charge their neighbour. With the demise of a functional Custom Rates Survey, producers are looking for an alternative to develop custom rates. This is where the Machinery Cost Calculator comes in.

The Calculator can be found on Ropin' the Web under Decision Making Tools and then under the Machinery tab at the left of the screen. The Help icon in the top left corner will assist you in getting started. This calculator is a web based tool that is populated with default values that can be customized. Some of the default values are actually calculated values based on the initial price of the equipment. For example, the residual value is set at 50% of the initial value but it can be overridden. The repair rate is set at an industry standard of 3% of initial price for power equipment, 2% for trucks and 2 to 6% for implements but these can be changed to reflect higher repair costs.

We are currently in the process of updating the default values in the Calculator to reflect the higher capital cost of equipment due to the deteriorating exchange rate. By default, the new price of equipment has been used for the purchase price component of the calculator. A user has the option of inputting the depreciated cost of equipment or the actual purchase price of used equipment to arrive at their own customized custom rate.

The tool is useful in determining the machinery costs involved with a change in acreage or change in equipment size. It does provide data for the development of partial budgets and other management decisions. The calculator can also help in determining the working capacity of various implements. By and large, however, its main use has been for people to determine custom rates.

What if scenarios can be developed using the calculator. By changing the value of specific variables different scenarios can be compared. The print function allows you to create a hard copy for comparison purposes and thus lets you develop strategies to better manage your farm. One note of caution, if you are using a zero value in any of your comparisons, do not leave the cell blank. Put the zero (0) character in the cell. The reason is that the calculator uses a Java script and Java does not like blanks. An example would be where you might want to develop a dry rate (no fuel included) for custom combine work. Use the zero character in the fuel cost cell to calculate this.

If you have any questions about the Machinery Cost Calculator, give us a call at the Ag-Info Centre. Our phone number is 310-FARM (3276).

Ted Nibourg, B.Sc.Ag, M.Ed.
Farm Business Management Specialist
Ag-Info Centre

2016 International Year of Pulses

The United Nations declared 2016 to be the International Year of Pulses (IYP2016). The goal of the year is to raise the profile of pulses and to celebrate the role of beans, chickpeas, lentils and other pulses in feeding the world. It is a galvanizing moment to draw together key actors to further the contributions pulses make to health, nutrition, and sustainability.

IYP2016 will promote broad discussion and cooperation at the national, regional and global levels to increase awareness and understanding of the challenges faced by pulse farmers, be they large scale farms or small land holders.

Please visit iyp2016.org or iypcanada.ca regularly to keep up to date on IYP2016 activities and announcements.

2016 INTERNATIONAL YEAR OF PULSES

Watch social media for upcoming details & registration!

Verticillium longisporum Fact Sheet

Canadian Food Inspection Agency

Background

Verticillium longisporum is a plant pathogen that can cause early death and reduced yield in crops. It is one of three species in the genus *Verticillium* that causes a disease commonly known as verticillium wilt. *Verticillium longisporum* infects a broad range of crops, but the most severe impact is on oilseed rape (canola). In Europe, verticillium wilt is considered one of the most important diseases of crucifers.

Where is Verticillium longisporum found?

Europe: Belgium, Czech Republic, France, Germany, Netherlands, Poland, Russia, Sweden, United Kingdom (England and Wales)

Asia: Japan

North America: United States (California, Illinois)

Biology

The disease cycle of *V. longisporum* happens in two phases. First, the fungus grows inside the vascular (water conducting) tissues of the plant. Then, it has a necrotrophic stage, which involves tissue rot and the production of microsclerotia in dying plant tissues. Microsclerotia are the survival structures of the pathogen. They are tolerant of many environmental conditions.

The first phase of the disease cycle requires microsclerotia to germinate in the soil. This occurs when they are in close proximity to plant roots. The fungus grows in plant roots and spreads up into the above-ground vascular tissues of the plant, including the stem and leaves. As the disease progresses into the second phase, the fungus causes the stem and leaves to prematurely degenerate. Microsclerotia form on the stem (see Figure 1), and when infected plant debris is incorporated into the soil, these survival structures can stay in the soil until there is another host plant available to colonize.

Symptoms

Disease symptoms include yellowing of leaves and lateral branches, early degeneration, drying out of stems and leaves, and, potentially, plant death. Yellowing and stem symptoms tend to occur on one side of the plant (see Figure 2). Symptoms may also include early ripening of seeds on infected branches. Reduced plant biomass and smaller seed sizes have also been reported on canola as a result of infection with *V.longisporum*.

How does the pathogen spread?

The pathogen is primarily spread through the movement of infested soil or diseased plant parts. There is also some evidence that seed from heavily infected crops may introduce the pathogen to new areas.

Management and Control

Survival structures of this fungus (microsclerotia) can stay in the soil and remain infective for many years, even without a host plant. This makes eradication a difficult process, and requires that host plants of the fungus are not grown on infected fields for several years. In countries in which *V. longisporum* is present, in-field control measures concentrate on reducing the number of microsclerotia in soil and include tilling plant residue into the soil to reduce wind-blown spread of infected debris, clearing fields of susceptible weed species, and extended crop rotations.

Ladies Post Calving Clinic

Dr. Tamara Quaschnik (Steadfast Veterinary Services) shared her expertise and humor as she addressed post calving issues on February 29 at the Community Center in Hanna.

Approximately 90 ladies took part in the clinic which included many practical tips on caring for the new born and ensuring their mothers are in good shape to feed their baby and re-breed. In addition to a very informative presentation and a excellent turkey dinner, the women also had the opportunity to do a bit of shopping with vendors such as Steeped Tea, Cattlemnunns Ranching, JR Designs, Handhills Lake Stampede, TQ Leather, Scarves by Brianna Reiger & Essential Oils. Taking care of our personal health and managing the stress of a busy calving season was addressed by a short presentation and “stretch break” by Patrick May with Patrick May Exercise Services.

The crowd included from new comers to the cattle industry to very experienced cow managers. Tamara’s presentation included advice and observations valuable for everyone.

We hope to see everyone at next years Ladies Calving Clinic!

10 TIPS

for Planting, Care and Maintenance of Shelterbelt Trees

Government of Alberta (Oct 21,2010)

"Shelterbelts are an investment in the future and play an important role in the agricultural landscape and farming operations," says Laura Poppy, agroforestry specialist, Agroforestry Development Centre, Agriculture and Agri-Food Canada. "Tree buffers improve crop and livestock production and reduce the environmental impact of agriculture. Keep shelterbelts functioning well by planning ahead and maintaining the health and vigor of individual trees."

Pre-planting

1. Plan ahead – select tree species to suit the site, soil and objectives. Some trees can grow up to 18 m (60 feet) tall and 6 m (20 feet) wide. Do not plant trees where drainage, visibility and safety will be an issue. Do not plant too close to buildings, utility lines or roads. Choose trees suitable for the soil and environmental extremes in the area

2. Prepare planting site – stake the rows and begin preparing the site one year before planting. Remove grass and weeds with herbicides or mechanical cultivation. Site preparation is the best way to improve tree survival and growth.

3. Pre-planting care of seedlings – tree and shrub seedlings from the AAFC Prairie Shelterbelt Program are delivered in the early spring as bare-root stock (no soil around the roots). These seedlings must be planted immediately. The fragile, perishable seedlings can be stored for a short time in a cool, dark location. Do not soak the seedlings in water for more than a few hours or they will die. If you cannot plant within 5 days, it is recommended to temporarily heel-in the seedlings by digging a shallow trench, lining out the seedlings and covering the roots with soil.

Planting

4. Planting techniques – always plant seedlings into a weed-free, well prepared site. Plant seedlings slightly above the root collar swelling. Take care not to damage or bend the roots. Cover with soil and make sure not to bury branches, or leave roots exposed to the air. Tramp soil firmly to remove air pockets and water immediately. If planting a large number of trees, consider using a mechanical tree planter. Check with the local Ag fieldmen, Ag rep or AAFC-AESB office for availability.

Post-planting care and maintenance

5. Weed control and mulches – competition from weeds is the leading cause of failure and slow growth in newly planted shelterbelts. Control weeds and grass with mechanical cultivation, registered herbicides and/or mulches. Mulches such as black plastic, landscape fabric or wood chips reduce weed competition, retain soil moisture and moderate soil temperatures. Be aware of wind conditions and exercise caution when applying herbicides in or near shelterbelts and non-target vegetation. Some agricultural and lawn applied herbicides are lethal to trees, so read labels and consult local experts for recommendations.

6. Watering – water seedlings immediately after planting. In low rainfall regions or under drought conditions, supplemental water may be necessary for the survival and growth of newly planted trees and shrubs. Water heavily (but infrequently) to encourage deep root growth.

7. Pruning and fertilizing – in most cases, shelterbelts will not require pruning and fertilizing. Pruning is required only to remove dead, diseased or broken branches. Removal of branches close to the ground is not recommended as it reduces density and buffer efficiency. Incorrect pruning can severely damage trees. Topping or pollarding is not recommended and makes a tree more susceptible to disease and insect infestations. Do not fertilize late in the season, as this can lead to winter injury.

8. Protection from animals – newly planted trees and shrubs are susceptible to rodent damage. Control measures include fencing, keeping the site clean and applying animal repellents. Livestock can also harm trees. Fence livestock out of shelterbelts at all times, even when trees are mature. Manure from concentrated livestock operations or sewer pump-outs can kill trees over time.

9. Insects and Diseases – regular inspection and diagnosis allows for early control. Trees under stress from weeds, drought, damaging chemicals or flooding are more susceptible to insect and disease problems. Consult local experts for pest identification and control methods.

10. Replanting and Renovation – seedlings that do not survive should be replaced the following spring to prevent gaps in the shelterbelt. Gaps or low-density areas can concentrate the force of the wind and reduce the effectiveness of the shelterbelt. Trees are living systems and eventually become old. Before removing old shelterbelts, consult a local expert for more details on effective renovation techniques.

Check out the Agriculture and Agri–Food Canada Website for their Online Shelterbelt Design Tool: http://goo.gl/mUoda1

Meet Your Agricultural Fieldmen

Agricultural Fieldmen are uniquely qualified to manage the diverse ASB programs across Alberta. Many members have university or college degrees in Agriculture, Biology, Environmental Technology, and/or Business Administration. Several are Professional Agrologists or Certified Crop Advisors. All AAAF members have an extensive applied agricultural or environmental science background. All share a common tie to the diverse world of agriculture, and believe strongly in the importance of the industry to society's well being.

Agricultural Fieldmen are also administrative officers that carry out the various programs set out by their Agricultural Service Boards. They are also appointed as inspectors or regulatory officers to administer the four acts for which the municipalities and counties are responsible for.

These four acts are:

- Agricultural Service Board Act
- Weed Control Act
- Soil Conservation Act
- Agricultural Pests Act

Agricultural Fieldmen also assist in the enforcement of the Animal Health Act.

Stay Connected!

www.aaaf.ab.ca

@AAAFieldmen

AAAF Association of Agricultural Fieldmen

Jesse Williams

Special Areas No.2

She came to the Special Areas in 2014 after graduating from the University of Calgary with a Bachelor of Science in Botany and working with Dow AgroSciences as a sales agronomist for several years. She originally hails from a small ranch in Brooks, AB where she grew up with every 4-H project imaginable. Her and her husband now reside on the Bullpound Flat south of Hanna where they run a red commercial cow/calf operation. Jesse became a Fieldman for the Special Areas 2 in June of 2015.

403-854-5624 Hanna District Office jesse.williams@specialareas.ab.ca

Don Hogan

Special Ares No.3

Don was born and raised on the family farm just west of Oyen, where he helped with daily operations on the farm with cattle and grain, and still does today. He also attended school from K to 12 in Oyen. He started with Special Areas in 2009 in the carpentry shop at the Youngstown Service Centre, then moved to the parks department in 2011 working under John Armstrong. As of March 2016 Don became the Fieldman for Special Areas 3.

403-664-3618 Oyen District Office don.hogan@specialareas.ab.ca

Justine Simpson

Special Areas No.4

Justine grew up on her family's ranch Northeast of Sedalia. Coming home on weekends to help her parents with the ranch, she balanced her scholastic endeavors with working on the farm as well as competing in rodeo up until her graduation. She graduated in 2013 from the University of Calgary with a Bachelor of Science Degree. After 3 seasons as a summer assistant to the Ag. Department for Special Areas, Justine became a Fieldman for Special Areas 2 in January of 2014 and transferred to Special Areas 4 in May 2015.

403-577-3523 Consort District Office justine.simpson@specialareas.ab.ca

Alan Hampton (left)

Starland County

Alan was born and raised in Starland County and continues to farm grain at Rowley as the 4th generation on their 100 year farm. He attended the U of C for 2 years, and then went to Olds College where he took a Field Crop Management Program which he completed in 2007. From May 1987 to December 1988 Alan was employed as a seasonal worker with the Starland Agricultural Service Board (ASB). In April 1989 Alan became the CASCI co-ordinator with the ASB and in January 2001 the Agricultural Fieldman. He currently resides on the family farm at Rowley where he lives with his wife and 2 sons.

403-321-1287 Morrin Office ahampton@starlandcounty.com

Dara Calon (above, right)

Starland County

Dara Calon is the Assistant Agricultural Fieldman for Starland County, and has been in this position for the last three years. She finished her diploma in Land and Water Resources from Olds College in 2009 and completed a Bachelor of Science in Environmental Science from the U of L in 2012. Dara grew up on a grain farm 20 miles NE of Drumheller, and is still involved with the farm. She currently resides on a farm near Michichi with her fiancé and her cat Dotty.

403-772-3793 Morrin Office dara@starlandcounty.com

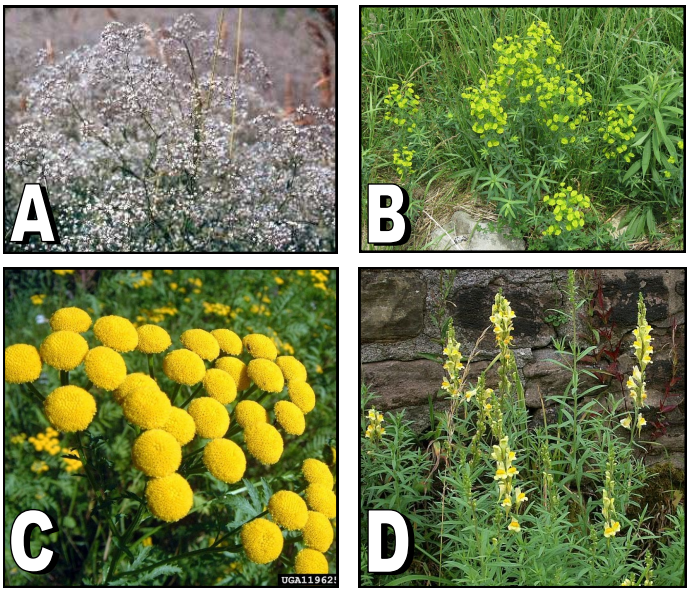
Stacy Scheuerman

MD of Acadia #34

Stacy grew up in Hussar, AB, working with her family running CJS Agro Services Ltd., an Ag-chemical and fertilizer business. She moved to Acadia Valley in 1995 and in 2002 opened a second location of CJS. After selling the business to Richardson Pioneer, Stacy worked for a year in both the Acadia Valley location and the Oyen elevator. She then worked for Kuhn Farms, in Acadia Valley, until she got the Ag Fieldman position in March 2015. Stacy and her three children are active members of the community in Acadia Valley as well as Oyen, through dance, hockey, community events and volunteering.

403-664-9560 MD of Acadia Municipal Office ag.fieldman@mdacadia.ab.ca

How's your weed ID?



For answers see the last page of our newsletter.

Congratulations!

Dr. Cecilia (Cec) Ruschkowski from Oyen, Alta. Is this year's recipient of the Boehringer Ingelheim WCABP Veterinarian of the Year award. She operated the Oyen Veterinarian Services clinic since she graduated from vet school in 1984.

Last fall Oyen Veterinarian Services was presented with the Merial Student Rotation Award from the University of Calgary faculty of veterinary medicine. This award is voted on by the students and given to the clinic that has offered the best learning environment in their fourth-year rotation.

Article from the Canadian Cattlemen THE BEEF MAGAZINE

Want to access government funding for your Farm or Ranch? Come join CARA and the Spondin & District Ag Society for a

Growing Forward 2

&

EFP

Producer Information Session

WHERE: Spondin Community Centre

WHEN: Monday, April 25th 2016

TIME: 8:00pm - 9:30pm

Please register by calling or emailing CARA at

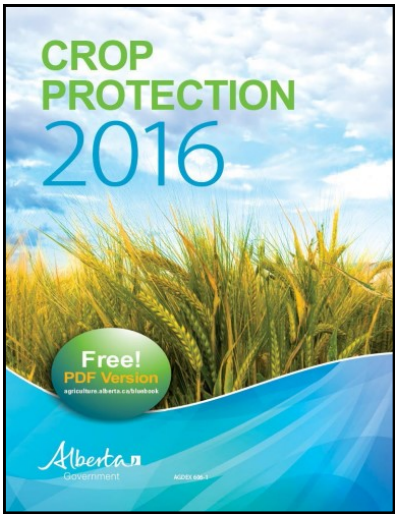
403-664-3777

cara-lr@telus.net

Chinook Applied Research Association CARA

Growing Forward 2
A federal-provincial-territorial initiative

Building on a Solid Foundation
Alberta EFP
Environmental Farm Plan



Crop Protection 2016 (the "Blue Book") is now available!

One of the most widely requested publications from Alberta Agriculture and Forestry (AF), the Blue Book is revised annually. New product registrations and other new details give producers the most up-to-date information available to protect their crops.

An important part of the annual update is the addition of newly registered pesticide products. For the 2016 Blue Book a number of new herbicides, insecticides, seed treatments and foliar fungicides have been added. In addition to including new products, previously registered products are updated. Significant changes in some products, crops covered and usage instructions give producers better options than ever.

Newly registered herbicides focus on pre-seed weed control. The majority of the new pre-seed herbicides are registered for use ahead of seeding cereals; however one pre-seed product is registered for use ahead of canola. Other new herbicide products are registered for in-crop use for a variety of crop types. A number of new fungicides have been registered for use in 2016. New foliar fungicides are available for use on pulse crops, canola and cereal crops. A small number of insecticides and seed treatments were added to the 2016 Blue Book. Most of the new insecticides and seed treatments are registered for use on potatoes.

When using pesticides it is important to be aware of pesticide resistance. It is recommended that pesticide products be selected based on chemical group and active ingredient. Purchasing pesticides products based on newly registered product names could lead to repeated use of a chemical group and increase the risk of developing pesticide resistance. All pesticide products presented in the Blue Book have their chemical group and active ingredient listed. By using this information the risk of developing pesticide resistance can be reduced.

Copies of the 2016 Crop Protection book can be ordered through ARD's Publications Office, at 780-427-0391 or by visiting www.agriculture.alberta.ca/publications. Other inquiries or comments about the 2015 Crop Protection book can be directed to the Ag Info Centre at 310-FARM.

Weed ID Answers

A) Babys Breathe
B) Leafy Spurge
C) Common Tansy
D) Toadflax

If you find any of these weeds please report them to your local Agricultural Fieldman.

ALBERTA RANCHERS
WINTER GRAZING CATTLE
video series

Visit the **Alberta Agriculture YouTube** channel to watch the **'Managing Risk in Winter Grazing Systems'** video series. These videos feature practical tips from cattlemen across Alberta including Calvin Bishell, James Madge & Colt Peterson from the Special Areas.
Check them out!

Pest Surveillance Fields Needed!

CARA will be seeking Canola & Wheat fields for CARA staff to conduct Pest Surveys this season. If you would like to submit your field information, please give the CARA office a call with the following information.

- Contact Information
- Legal land description
- Crop variety

The staff will call land owners before entering any field.

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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