

STARLAND AG TALK

Volume 5, Issue 1

IN TUNE...IN PROGRESS

March 2008



Clubroot Overview

Events to Keep in Mind

Managing Oil and Gas in the Watershed ~ March 14, Trochu Community Hall

Branded Beef Marketing Opportunities ~ March 18, Olds College

Farmer Pesticide Course ~ March 28, Delia Community Hall

5th Annual Southern Alberta Grazing School for Women ~ July 16 & 17, Rowley



Alberta Agriculture and Food has online calculators to assist you with your farm management in the areas of Crop, Livestock, Area and Volume, Machinery, Farm Management and Metric Decision Making Tools. The following list showcases the Crop Decision Making Tools:

- Variety Yield and Performance Data
- Grains, Forage and Straw Nutrient Use
- Alberta Management Insights
- Crop Enterprise
- Money Map
- Crop Choice\$
- Grain Shrinkage Calculator
- Test Weight Converter
- Pesticide Selector
- Herbicide Selector
- AFFIRM V2.0 Software
- Forage Seed Mixture Calculator
- Cereal Seeding Calculator
- Peas, Pulses and Other Large Seeds Calculator

Livestock Decision Making Tools:

To access the tools, go to the Alberta Agriculture and Food website at www.agric.gov.ab.ca. Select the Decision Making Tools tab across the top of the page. Then select your decision making tools category on the left side of the page.

What is it?

Clubroot, caused by *Plasmodiophora brassicae*, is a serious disease of canola, mustard and other crops in the cabbage family. Cole crops such as broccoli, brussels sprouts, cabbage, cauliflower, Chinese cabbage, kale, kohlrabi, radish, rutabaga and turnip are also susceptible to clubroot.

Where did it come from?

Clubroot was first detected in a canola field near Edmonton in 2003. This find was the first report of clubroot on canola in Canada. How the disease made its way to Alberta is unknown.

Why has it spread?

Clubroot can only spread through resting spores in the soil. Resting spores are most likely to spread via contaminated soil carried from field to field by equipment. Tillage equipment represents the greatest risk of spreading the disease as soil is frequently carried on shovels from field to field.

Why is it of concern?

Resting spores are extremely long lived, surviving in soil for up to 20 years. The longevity of the resting spores is a key factor contributing to the seriousness of the disease, especially under tight canola rotations. Research indicates that infestations nearing 100 per cent cause about 50 per cent yield loss, while infestations of 10 to 20 per cent lead to 5 to 10 per cent yield loss. Also, yield and quality (oil content) of the seed are reduced.

What is being done about it?

In spring 2007, clubroot was added as a declared pest to Alberta's *Agricultural Pests Act*. The *Agricultural Pests Act* is the legislative authority for enforcement of control measures for declared pests in Alberta. Researchers from the University of Alberta and Alberta Agriculture and Food have begun research projects on clubroot in Alberta.

What is the current state of clubroot in Alberta?

At this time, clubroot has primarily been found in the Edmonton area. However, it has the potential to spread to most of the traditional canola growing areas of Alberta.

What is Starland County's Position?

Being in the Dark Brown Soil zone with most producers using recommended canola / mustard rotations (1 in 4+) years should limit the ability of clubroot to establish in this area. However as clubroot is a soil borne pathogen the possibility exists that it could be introduced to a field via contaminated equipment, seed or feed which has come from an infected area. As such we are recommending that farmers be proactive and follow best management practices to reduce your risk of exposure. The ASB is currently developing a strategy and will be introducing a policy this spring which will deal with clubroot to minimize any impact this pathogen may have should it be found in the County. For best management practices and further information follow the link at [www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/agdex8593](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/agdex8593) or contact our office at 772-3793.

FARMER PESTICIDE CERTIFICATE TRAINING

The Farmer Pesticide Certificate Course is designed to give farmers the skills and knowledge required to use pesticides safely and confidently.

The course package includes an eight module workbook and learner's guide which focuses on:

- pesticides and how they work;
- pesticide poisoning and first aid;
- personal protective equipment;
- safe pesticide handling procedures including
 - transporting,
 - storing,
 - mixing
 - and disposal;
- environmental safety;
- integrated pest management (IPM) including
 - field scouting,
 - IPM tactics and decision making,
 - pesticide resistance;
 - legislation and food safety;
 - pesticide application and equipment calibration;
 - and special applications including
 - fumigation
 - and seed treatment

Upon successful completion of the final exam, students will be issued a FarmerPesticide Certificate. A valid Farmer Pesticide Certificate is required for the purchase of some restricted pesticides including Tordon 22K and aluminum phosphide.

FARMER PESTICIDE CERTIFICATE TRAINING

DATE: Friday March 28
TIME: 9:30 A.M. to 4:30 P.M.
LOCATION: Delia Community Hall Meeting Room
COST: \$60.00 This includes course materials and lunch.
REGISTRATION: Pre-registration is required on or before Friday March 14 by contacting the Starland County Office at 403-772-3793. Since we must order work books and tests we require a commitment by this date to ensure we get our course materials.

FURTHER INFORMATION: Contact the Starland County Office at 772-3793 and ask for Alan Hampton or Lindsay Cherpin

Richardson Ground Squirrel Control

The Richardson ground squirrel, commonly known as the “gopher” is found throughout Starland County. This pest is a burrowing rodent that spends most of its life underground, hibernating for up to eight months of the year. Natural mortality among the Richardson ground squirrel is quite high, particularly in males. As a result, the sex ratio among adults is about 4 females for each male. Females live approximately 4 years on average (maximum 6), while most males live for only one year (maximum 3).

When it comes to reducing ground squirrel populations there are several options available to producers. However not all solutions offered will be suited to the scope of the infestation, and may not be economically feasible in some situations. Also when developing a control program one must also take into account the life cycle of the ground squirrel and keep in mind that early spring control proves to be the most effective in reducing populations.

Cultural Control

This has shown limited success. Some research has been conducted on the effect of tall vegetation on ground squirrel populations and movements. The data, while limited, indicates that squirrels may move out of tall vegetation stands to more open grass fields. This would indicate that overgrazing could intensify an existing problem. Once the ground squirrels have been removed from a crop area, re-invasion can be substantially slowed by destroying their old burrow systems through deep tillage.

The use of raptor (hawk and owl) platforms, nest boxes and perches close to ground squirrel colonies will also help reduce their numbers and will limit colony growth and expansion.

Chemical Control

The chemical options are the most widely used and likely will be the most cost effective for large infestations. The two most common acute poisons registered for ground squirrel control are strychnine alkaloids and anti coagulants. Strychnine causes death by entering the blood stream and interfering with the central nervous system, resulting in convulsions and eventual respiratory failure. Anti coagulants interfere with the clotting mechanism of the blood and cause death from internal bleeding three to four days after the bait has been consumed. Anti coagulants may require more than one treatment to be effective.

In Canada ready to use (RTU) strychnine baits are legally bound by a maximum concentration of 0.4%. Rumors often circulate about higher concentration baits, but they do not exist. There is also much debate over (fresh mixed) “wet and dry baits. Chemically the concentrations are identical. Wet baits are intended to be prepared and used within a week. Dry baits have a wider application window because they will not mold if stored for extended periods. If the ground squirrel consumes either bait, the effectiveness will be identical.

Chemical baits are most effective when applied early in the season. Once an alternate food source has been established, ground squirrel consumption of bait will be limited. Repeated baiting with the same bait during the same year is generally unsuccessful. Baiting should be done thoroughly and correctly the first time. **Always read and follow all label directions for products used.**

Continued on next page...

Fumigants

Ground squirrels can be killed in their burrow systems by using one of several toxic gases called fumigants. However, fumigants are only effective if ground squirrels are present in their burrows, so fumigation should only be done early in the morning or late in the day or when the rodents are not above ground (i.e. during cool, cloudy or rainy weather). Some fumigants work equally well during the day where ground squirrels have been seen entering their burrow. Like other control agents, fumigation is most effective soon after ground squirrels emerge from winter hibernation when their numbers are lowest.

Gas cartridges (sold as "Giant Destroyer" or "Woodchuck Bomb") are easy to use and are available from farm, hardware or horticultural retailers. These products are effective although costly, so therefore would not be considered on a large scale.

Phostoxin (aluminum phosphide) produces a lethal gas through the slow sublimation process of the pellet similar to that of a mothball. The downside to this method is a longer fumigation time. Phostoxin produces an almost odourless phosphine gas that quickly enters the animal's blood stream causing death by asphyxiation. Phostoxin is available for use only by licensed pesticide applicators and holders of a farmer pesticide training certificate.

"Exit" foam is a recently developed control agent that causes death by asphyxia or drowning although it is listed as a fumigant. Exit is a quick expanding, soapy liquid that is introduced into the burrow from a pressurized tank through a hand-held wand. Exit quickly fills the entire burrow system causing the squirrels to either drown in the soapy foam or die from asphyxia.

Exit requires considerably more labour than other fumigants, but has excellent potential in urban areas such as residential green spaces because it contains no pesticides. Like other fumigants, Exit requires the same application strategy because the rodents must be present in the burrows where the product is used. More information on this product can be found on their website at www.exitholdings.com.

Carbon-monoxide gas from a gasoline vehicle (use only pre anti-pollution device model) is effective, but due to cost, its use is restricted to small areas or few rodents. Use a proper flexible gassing hose, place it deep into the burrow entrance and tamp soil around the hose to contain the gas. Seal up all holes with dirt, and gas the burrow for at least 30 minutes. Do not open holes for 24 hours.

Flammable Gases

Flammable gases are not registered for ground squirrel control even though many have been touted as an effective method to kill ground squirrels. However, highly inflammable gases such as acetylene and propane pose a serious risk of injury or death to users and passers-by, and for these reasons, they should not be used.

Gas exploding devices or anhydrous ammonia or other toxic gases have not proven to be safe, reliable or effective. Studies have shown that introducing and igniting oxy-acetylene or propane/oxygen mixtures in ground squirrel burrows is not particularly effective on large-area operations.

Although no data exists on the effectiveness of anhydrous ammonia, there have been, at best, mixed results with its use. The cost, utility, practicality and labour are considered serious drawbacks to anhydrous ammonia fumigation.

The main concern with flammables and anhydrous ammonia is user and bystander safety. In fact, due to the high risk of chemical exposure, anhydrous ammonia suppliers refuse to sell their product for this purpose.

Other Control Options

Other methods of control include shooting, trapping, and vacuuming. Shooting and trapping although time consuming are very effective methods of control on smaller scales or isolated areas. Vacuuming is used in the U.S. on prairie dogs, but currently no reliable data exists on the usefulness of this method on ground squirrels.

County Update

Starland County supported a resolution at the Provincial Agricultural Service Board Conference in January 2008 to have the Pesticide Management Regulatory Agency grant emergency registration of 2% strychnine to be made available to Alberta producers for Richardson Ground Squirrel control this spring. As of February 13, 2008 an emergency registration of the 2% Liquid Strychnine Concentrate has been granted until July 30, 2008. Details of the program will be made available as we receive them.

For further and more detailed information on the Richardson Ground Squirrel you can link [www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/agdex3471](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/agdex3471) or contact the Starland County office at 772-3793.

ARE YOU INTERESTED???

The Starland County Agricultural Service Board is considering the purchase of a Rawhide Portable Corral System.

"One person can set up the Rawhide Portable Corral in about 10 minutes ready to contain 150-400 head of cattle without lifting a panel. The self contained system easily pulls down the highway at the speed limit and fits through any gate your pickup will. Works on extremely uneven terrain. Over 20 different corral configurations are possible. Wheels on each panel with electric over hydraulic jack eliminates lifting and saves time. Includes frame gates for sorting."~ Rawhide Portable Corral System, 2008

If you are interested in having this system available to rent from Starland County, please contact Alan Hampton or Lindsay Cherpin at 772-3793. More information on this portable corral system can be found at www.rawhideportablecorral.com or we have a video available at the County office for your information.



Photos Courtesy of Rawhide Portable Corral System



Get your feet wet

Join the Red Deer River Watershed Alliance today! If you live, work or play in the Red Deer River watershed, your actions can have an impact on the health of the watershed. Join the RDRWA to find out what you can do to help manage the watershed that you live in.



www.rdrwa.ca

The Future is Now

You can make a difference

The Red Deer River Watershed Alliance is an inclusive, collaborative partnership that seeks to balance healthy ecological, economic and social conditions within the Red Deer River watershed. We want your participation.

Where in the watershed world are you?




Red Deer River Watershed Alliance

Get connected! **FREE MEMBERSHIP.** Call today to join: 403.340.7379

Canadian Grain Storage CD-ROM


Agriculture and Agri-Food Canada, University of Manitoba and the Canadian Grain Commission have a program available to producers to provide information on grain storage. This program allows you to input your grain storage conditions (which include type of grain, bin dimensions, grain temperature, grain moisture content, foreign material, harvest date, storage end date, grain damage, presence of insects, previous infestations, sanitation, grain dryer, aeration and pneumatic conveyor presence) and it will provide recommendations to you to manage the quality of your stored grain. The program also offers images of over 200 insects, moulds and storage structures, pesticide labels and over 20 publications on stored grain protection.

This program is available both on CD-ROM (available at the County office) or on the internet on the Canadian Grain Commission website, www.grainscanada.gc.ca.



A publication of Red Deer River Watershed Alliance

RED DEER RIVER WATERSHED ALLIANCE



MANAGING OIL AND GAS IN THE WATERSHED

Friday, March 14, 2008
Trochu Community Hall
Trochu, Alberta
10:00 am - 3:00 pm
(Doors open 9:30am)

*Join us in discovering the interaction of the oil and gas industry with watershed management.
Topics covered will include: water use and management in the oil and gas industry,
Coal bed methane recovery practices, managing stream crossings,
impacts of CBM recovery on groundwater*

Guest Speakers:
Natalie Cooper—Shell Canada
Mary Griffiths—Pembina Institute
Bruce Peachey—New Paradigm Engineering Ltd.
and Andrew Nikiforuk—Independent Journalist

For more information - See our Website - www.rdrwa.ca
Register by Email: info@rdrwa.ca or Call 403-340-7379
Before March 7, 2008

Red Deer River Watershed Alliance 4918 59th Street Red Deer, Alberta T4N 2N1 T: 403-340-7379 F: 403-356-9189 E: info@rdrwa.ca www.rdrwa.ca

Branded Beef Marketing Opportunities

**March 18, 2008, Olds College
Animal Science Building, Room 614**

- 9:30** Continental Breakfast and Registration
- 10:00** Opportunities and Challenges for Branded Meat Programs at Food Service, Retail and Processing
- 11:30** Best Practices for Commercialization Success
- 12:30** Lunch
- 1:00** Prairie Heritage Beef Producers
- 2:00** South Dakota Certified Beef—Value Added Marketing Options for Cattlemen
- 2:45** Coffee
- 3:00** Canada Gold Beef—New Possibilities for Canadian Brand
- 3:45** Organic Certification Process
- 4:15** Homeward Bound

For more information and to register call Alberta Ag Info Centre, 1-800-387-6030 or Patrick Ramsey, Opportunity Analyst, Alberta Agriculture and Food, 652-8303

Starland Ag Talk is published by Starland County Agricultural Service Board four times annually. If you have an article suggestion or questions on the topics you see here feel free to contact Lindsay Cherpin or Alan Hampton.
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Where should a backflow prevention device be placed on a water line?

Exactly where depends on the situation

There's no faster way to contaminate farm water supplies than a backflow of polluted or contaminated water. One of the chief causes of backflow is the connection of contaminated or polluted water to potable water. A common example of this occurs when a cross-connection of a well and a dugout are piped together and powered by pressure systems.

One of the quickest ways to eliminate the risk of backflow is to use a backflow prevention device. When it comes to placement on the water line, a key rule of thumb is that a backflow preventer should be installed on the line that leads to the cross-connection or potential cross-connection.

Exactly where it should be placed depends on the situation. For example, a garden hose connection on a frost-free hydrant would use a hose bib vacuum breaker on the end of the hydrant, at the hose connection. A community pipeline system will often require backflow preventers installed where the community water line enters the farm.

The fact sheet *50 Backflow Questions and Answers* provides additional help for producers making these decisions. It can be found on the Web at <http://www.oakgov.com/drain/assets/docs/Watts%20F-50.pdf>.

Match risk with protection

The risk at the cross-connection point determines the type of prevention device required to protect against the potential hazard. The most inexpensive backflow protection option, a hose bibb atmospheric vacuum breaker, is installed on faucets and hydrants with hose connectors in order to prevent backflow from a hose.

Dual check valve assemblies are the most common backflow prevention devices used on farms and are best for most non-hazardous situations, says Bob Buchanan, agricultural water specialist with Alberta Agriculture and Food (AF). "These valves have safeguards in two different places and provide a higher level of protection."

In cases where there is a high risk of contamination, such as when a farm is connected to a municipal water supply, a reduced pressure zone assembly backflow preventer may be required. These devices have safety checks in place to protect the integrity of the municipal water supply.

Assistance available

Information and assistance on backflow prevention, as well as a number of other on-farm environmental practices, is available through a strong network of AF and Agriculture and Agri-Food Canada / Prairie Farm Rehabilitation Administration (AAFC / PFRA), technical assistants (TAs) throughout the province. Contact an AEFPP facilitator or regional team leader or visit the AEFPP Web site at www.AlbertaEFP.com for information on TAs in your area.

"Reprinted courtesy of the Alberta Environmental Farm Plan Company; www.albertaEFP.com".



Water Well Workshop



Starland County has an opportunity to host a Water Well Workshop presented by Alberta Environment and we would like to know if you would be interested in attending. The workshop could run in April 2008 or Fall 2008. Please contact Lindsay Cherpin if you are interested and what date would be your preference.

Expanding Crop Rotations with Pulse Crops and Winter Wheat

Wednesday, March 19, 2008, Stettler Legion Hall
(5012-51st street)

Thursday, March 20, 2008, Viking Community Hall
(5021 -54th Ave)

Registration both days at 9:30am
Program runs from 10 am to 3 pm

Are you looking for ideas to widen your rotations?
Are you concerned about high fertilizer prices?
Are you looking for ways to spread your workload?

Program:

- **Sheri Strydhorst, University of Alberta**
Natural Nitrogen in your Cropping System
- **Yves Dooper, Alberta Pulse Growers**
Agronomy and Production Tips for Field Peas
- **Dale Soetaert, Ducks Unlimited**
Benefits and tips for winter wheat production in East Central Alberta
- **Ron Heller, Reduced Tillage LINKAGES**
The Dynamics of Crop Rotations

Please pre-register if you plan on attending.

Call **1-800-828-6774** toll free or 780-582-7308 by March 14, 2008

Workshop *and* lunch are \$10 for BRRG members, \$15 for non-members.

Brought to you by Alberta Pulse Growers, Battle River Research Group, Alberta Reduced Tillage Linkages and Ducks Unlimited Canada