

## Riparian Improvement: Not Just for Beef Producers

Water quality is a concern for everyone, including agricultural producers. For many years, there have been financial incentives to encourage beef producers to manage riparian areas differently to lessen the impact livestock have on water quality but few incentives for crop producers.

In the spring of 2013, H2C succeeded in receiving a grant application from Alberta Conservation Association to provide assistance to crop producers interested in lessening the impact their operations have on area water quality.



Alberta Conservation  
Association

*Conserving Alberta's Wild Side*

Riparian areas provide flood mitigation by increasing groundwater storage. They also provide erosion control and nutrient uptake by slowing the flow of water over the landscape. Incorporating riparian areas into an operation can protect producers in dry years, remaining productive while other areas are too dry for crops.

The grant is aimed at providing crop producers technical assistance in determining the size of riparian buffer needed to lessen impact while maximizing acreage for cropping. H2C has shrubs, trees and native grass seed to create these areas.

If you are interested in a project, contact H2C for more details.



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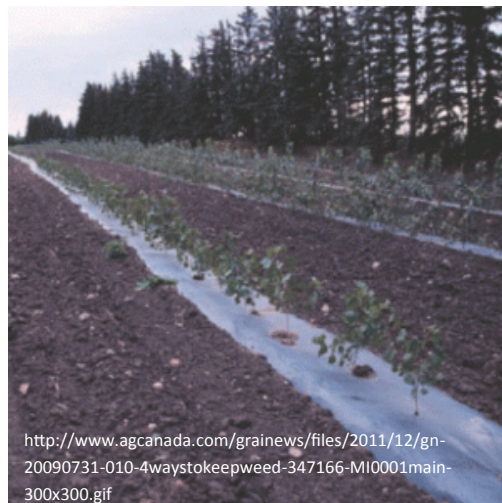
## Protect Your Tree Investment with Plastic Mulch

Plastic Mulch is a cost and time effective way in which to protect shelterbelt seedling trees and provide them with a competitive edge. This plastic provides increased warmth to start your seedlings growing earlier in the season, protects weeds from weed and grass pressures and conserves water, reducing watering requirements.

With the end of the PFRA program, options like plastic mulch become more attractive. Seedlings no longer represent a gift from the federal government but an investment. By applying plastic mulch, producers increase the success rate of seedlings while lowering maintenance cost and time consumption.

This season, two municipalities in the H2C were gifted an applicator from Agriculture Canada. H2C assisted over 35 ratepayers lay over 72 rolls of plastic mulch with these applicators to support the growth of newly planted seedlings. This represents over 20 miles or 45 kilometers!

If you are planning a shelterbelt for 2014, consider fall plastic mulch application. By using the summer season to prepare the intended shelterbelt site, optimum soil condition, weed control and siting can be achieved. This timing also means that the seedlings are ready to go into the ground almost as soon as they are received and the moisture from



<http://www.agcanada.com/grainews/files/2011/12/gn-20090731-010-4waystokeepweed-347166-MI0001main-300x300.gif>

spring melt is trapped beneath the plastic, waiting for seedlings to take advantage.

Increasingly, municipalities are looking at providing seedlings to their ratepayers at as low a cost as possible. Watch your newspapers in the early spring for these programs to take advantage of the savings municipalities can pass on through volume discount ordering.

If you are interested in a fall application of plastic mulch or possible application in the spring, contact Highway Two Conservation.



## Bertha Army Worm on the Rise– Dawnia Myshak

Bertha Armyworm is a significant pest of canola crops. They overwinter in soil as pupae. In the spring, pupation is complete and the armyworms emerge as moths. Adult moths lay eggs on the leaves of the canola plants. The eggs hatch small, pale green larvae. The larvae are the only stage in their lifecycle that cause damage. The larvae take approximately six weeks in the summer months to reach their maximum growth stage. While canola is the Armyworm's preferred habitat and food source, they can also harm other crops, such as peas and potatoes, but they are secondary hosts and not preferred food sources to the Bertha Armyworm.

Every summer, a variety of groups, including municipalities and various research groups, participate in monitoring Bertha Armyworm populations in Alberta. Monitoring includes setting pheromone traps in canola fields and counting number of Bertha Armyworm moths weekly. Bertha Armyworm has been observed in elevated numbers in the area the Highway Two Conservation area this year. They are not at a critical level yet, but it is important to be aware of the increase in population. It may be indication that the pest could become an economic factor in coming years. The population jump does not indicate an imminent threat of outbreak, but monitoring is still essential. Monitoring provides an awareness of the possibility of a problem and allows for timely control when a pest does become an economic threat.

Bertha Armyworm can be a significant pest of canola in Alberta. Their populations are naturally subject to environmental conditions and predation from other insects, but when conditions are favourable, their populations have the opportunity to expand to damaging numbers. Bertha Armyworm populations have been recorded as being higher than usual this year, but not yet an economic concern. Monitoring will be essential in canola fields in the coming year.

## Community Gardens– As Local As It Gets

Sheila Wooten  
Highway Two Conservation  
July 2013

In recent years, there has been a lot of attention given to locally produced food, specifically in urban centers. This has led to a market driven change in how we as a society view our food. It has also stimulated a movement in agricultural communities to diversify their operations and more producers are looking at market garden production as a viable business decision.

With that in mind, H2C, the County of Barrhead, Alberta Human Services and Barrhead FCSS teamed up to form the Barrhead Community Garden Association in February of this year. The Associations goals were many. To provide an area for the community to garden together, strengthening social community connections, to stimulate interest in Market Garden Production, provide an opportunity for a hand up to low income families and give valuable work experience to under employed citizens.

Land within the Town of Barrhead was donated for the garden by the Schneider Family and ground breaking took place on May 18th. 52 plots ranging in size were staked out and planting began.



Photos Courtesy of Ros Rudd– FCSS

This initiative has brought together the Barrhead community in such a fantastic way. Many donations were given to the Association. Peat was donated by the Schneider family and compost from Clean It Green It out of Edmonton. Levelling services were given by 4-Lee Cat Service. Planting materials and vegetables were donated by South Side Greenhouses and breaking of the ground was done by Deerline. Funding was given through FortisAlberta, McCains, Alberta Human Services, the County of Barrhead and Nestle.

With any initiative such as this, it is the people that drive it. The garden is rarely empty.

Despite the weather, participants have enthusiastically kept up on their weeds with FCSS Coordinator Ros Rudd organizing work bees and "Weeding Angels" helping other participants out unexpectedly. Marilyn Flock, Agricultural Fieldman at the County of Barrhead and Assistant Fieldman Kyle Meunier have been very involved with the project. The County is hoping to produce vegetables for a local harvest supper in the fall. County of Barrhead summer staff have spent many hours tending to the garden common areas and assisting in plot placement and planting. Ms. Flock has the experience to help participants with any weed or pest issues and has planted a few demonstration plots within the garden for that purpose.

It is the Associations hope that this initiative continues in the coming years and that the garden becomes a space that attracts people for its beauty and functionality. It is our goal that the garden becomes a worthwhile destination, valued by the community and cared for by that communities residents in the years to come. The Barrhead Community Garden is a space to be proud of.



Photos Courtesy of Ros Rudd– FCSS



# Facing Off With Disease Pressure

- Dawnia Myshak

Highway Two Conservation

July 2013

In 2012, area producers faced off with a multitude of field diseases. Take all root rot of wheat, sclerotinia stem rot and black leg of canola were all seen increased numbers, as well as an increase of lab verified occurrences of *Fusarium graminearum* in Alberta.

Last years infected crops have left behind inoculum in the field and in some cases on the seed to be planted. This abundance of inoculum that has been left behind from the previous year's crops leaves this year's crops vulnerable to infection, especially under the right conditions.

High humidity fosters disease development and a heat-rain cycle can be the trigger of a disease explosion in the area. It is important to monitor the conditions in each individual field. As every farmer knows, there is a great amount of variation over each individual operation. The variations in conditions

may lead to high disease occurrence in one area and not another, even though they are close together.

Crop scouting is an important method in ensuring each field is treated according to its



[http://canola.ab.ca/image.axd/images/uploads/news/blackleg\\_200x250.jpg?m=Crop&w=200](http://canola.ab.ca/image.axd/images/uploads/news/blackleg_200x250.jpg?m=Crop&w=200)

requirements in season. There are no blanket solutions for a farm. Scouting for disease helps to make timely management decisions. The earlier a disease is detected, the earlier a problem can be controlled and prevented from spreading or worsening.

Tightened rotations have contributed to disease occurrence greatly. Planting susceptible host crops every year or every second years allows the

disease pathogen to build up on the field and increases disease severity year after year, under favourable conditions. A one year break from a host crop is not enough to minimize the disease inoculum in the soil.

There are a variety of tools available to help reduce disease severity in crops. Rotating crops is usually the first recommendation made to decrease a diseases occurrence on a field. The less often a host crop is planted, the fewer the opportunities there are for a disease to propagate.

Planting a resistant variety is also a good measure in battling crop disease. Resistant varieties do not eliminate a disease, but they help to lessen the negative impact a disease can have on a crop. It is also important to note that when utilizing a resistant variety you must rotate resistance genes. This means that you should not plant the same variety over and over. Genetic resistance can wear down to the point where to pest becomes resistant to the plant's resistance and that plant can no longer shield itself from the offending disease. Fungicides are also an option in disease control. Timing is important when it comes to fungicide applications. This is where regular scouting becomes essential. Monitoring disease development allows for a timely decision whether a fungicide application is necessary.

Disease pressure is an obstacle all crops face. Timely management decisions are essential in controlling crop diseases. There are a number of great resources in disease scouting available on the internet. Crop advisors and local experts are also excellent options in making management decisions.

## Determining Economic Threshold in Crops—

Dawnia Myshak

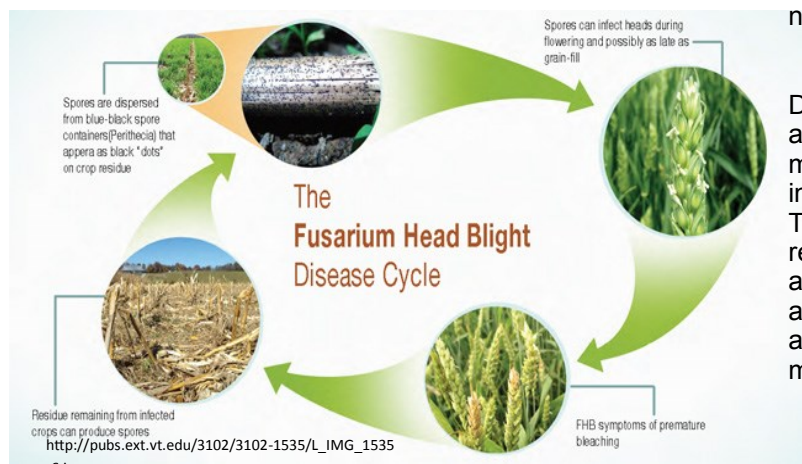
Spotting that first insect pest in your crop can be quite worrisome, but this is not the time to react. It is important to take the time to determine if the pest is going to have a financial impact on the crop. At what point is it financially warranted to manage a pest infestation in your crop? This is called the economic threshold. Economic threshold is where the damage that the pest is causing to the crop is a greater financial burden than the cost of controlling the insect.

Being aware of the crops growth stage and the conditions under which it is growing are two important considerations in determining economic threshold. Some pests only cause damage to plants in specific growth stages so if a crop is not in the susceptible stage there may be no concern to the producer. The condition of the crop is also a notable factor to consider. In some cases, crops that are healthy and growing under ideal conditions may be able to overcome the pest damage on their own. On the other end of the spectrum, a crop that is experiencing environmental stresses, such as drought or disease, may not be able to withstand even a light infestation of insect pests.

Monitoring the field regularly is integral in making management decisions. A small infestation that seems inconsequential may grow to beyond the economic threshold quite quickly and if scouting is not taking place there is no way to make timely management decisions. Without regular field inspections significant damage may occur that could have been preventable

Choosing an appropriate sampling method for the insect you are sampling is key to obtaining accurate information. Using the wrong sampling technique can leave you with an incorrect estimation of the level of infestation. For example, in canola, scouting for lygus involves sweeping the field with a sweep net, while determining economic threshold for flea beetles is an estimation of damage to the surface of the plants leaves. There are many examples like this where it would be integral to choose the right method in order to obtain accurate population estimations. Insects are often not distributed evenly across a field. When scouting for insects it is important to keep in mind the preferred habitat of the insect you are looking for.

Determining economic threshold for crop pests allows you to make cost effective management decisions. The cost of controlling the pest should not be higher than the cost of the damage being done to the crop. Scouting allows you to keep track of the pest infestation so that it does not surpass the economic threshold. If the pest infestation surpasses economic threshold the loss of yield is greater than what the cost of spraying would have been. It is important to diagnose a problem before this point.





## Biosecurity– Keep Clubroot Out of Your Fields!

Biosecurity is not a new thing– it's been a concern for livestock producers for years but new for this round of Growing Forward funding, crop producers are offered biosecurity funding for their fields.

The program can be found through the Growing Forward 2 website under Biosecurity: Plant Health and Biosecurity Program. It does not require a completed Environmental Farm Plan though it is not currently accepting applications. The listed purpose of the program is "...to help producers invest in new equipment and adopt improved biosecurity practices to reduce the potential for the introduction and spread of pests, allowing the industry to increase its capacity, competitiveness and sustainability".

With fusarium and clubroot occurrences on the rise, the timeliness of this program is obvious. Municipalities are looking at holding information sessions to provide producers with more details. For further information, contact Alberta Agriculture at 310-FARM or call H2C and we will point you in the right direction!



## Pond Days

This spring, H2C hosted "Pond Days" in Athabasca County, Westlock County and the County of Barrhead. Students from area elementary schools in the fifth grade were taken through stations where they learned about Water Quality, Aquatic Life, Riparian Areas, Quad Safety, Invasive Plants, Fire and Wilderness Safety.

In total, 323 students from three schools participated in the event and H2C hopes to continue with the program next season.

Events such as this enrich the curriculum taught by area teachers and provide a hands on learning opportunity for students. They also provide an opportunity to highlight key messages such as the connection between riparian areas and water quality– a very real issue for agricultural producers today.

H2C would like to extend a warm thank you to all of the presenters who made these events possible.

Mike Merris of AESRD "Respect Our Lakes", Kerri O'Shaughnessy of Cows and Fish– Alberta Riparian Management Society, Penny Stephani of Agriculture Canada– STB, Klondike Search and Rescue, John Biro– Westlock County Fire Chief, Craig Plitt– AESRD, Jacolyn Tigert– Westlock County Agricultural Manager, Adam Esch– Westlock County Recreation Coordinator, Ryan Alice– Athabasca County Peace Officer, and Bryan Hall– Athabasca County Regional Fire Coordinator. Without the time and hard work of these individuals, events such as "Pond Days" would not be possible.



## Highway Two Conservation



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***A Partnership Between:***

