

## We baby sit your crops while your on your summer holidays!!

You've had a long hard spring of uncertainties, rushing to get your crop in, trying to spray, now its time to relax. Wouldn't you say it's about time you spend some time with your family, maybe head to the lake? We are finally getting some warm weather so take advantage of it! Let our skilled agronomists take it from here while you pack up the family for a summer vacation. By seeking our Agronomic Consulting Services you can be rest assured we will be keeping a keen eye on your crop for any bugs or diseases. You can also pre book acres that need to be sprayed, so a spray job is as easy as a phone call away. We have different agronomic packages to suit your needs and budget. One of our agronomists can keep an eye on your crops so if a problem arises it can be dealt with in a timely and efficient manor. Let us take care of your crop.

*Mark your calendar for the upcoming Annual Rack Canola Tour! Scheduled for Monday July 20th*



## Pre-harvest Glyphosate

As August approaches, many producers have harvest on their minds. The main concern is getting the crop off and in the bin as soon as possible. Today, many farmers apply glyphosate to their crop before going in with the combine. There are a few important reasons why this is being practiced. The first is increased weed control on hard to kill weeds. The application of glyphosate at this time is aimed at many perennial weeds, such as Canada thistle, Perennial sow thistle, Quackgrass, Dandelion, etc. Nearing the end of the growing season, many perennial weeds are translocating nutrients down into both their rhizomes and roots, in an effort to prepare for winter. This time period is crucial in trying to control these weeds, as the herbicide will be taken into the plant and sent down towards the roots, resulting in a higher rate of control. Another reason for a pre-harvest application of glyphosate is to ease in harvest practices. Pre-harvest can result in earlier combining (especially if it's a wet fall), as well as deliver a more uniformly ripened crop. One thing to note about this practice is that it is not recommended when crops are being grown for seed production. For example, as peas and lentils have an indeterminate growth nature, an application of glyphosate can negatively affect the top pods on the plant, causing germination issues. For this problem, producers can switch to such products as Reglone, which are safe to apply for crop dry down, as well as the crop can be used for seed the following year. The drawback on this product is its reduced activity on weeds actively growing in the crop. Crop staging is important for applying glyphosate pre-harvest. In wheat, barley and durum it is recommended to spray

when the crop has roughly 30% or less moisture. This stage would be represented typically 3 or 4 days before one would normally be swathing. In canola, it too should be applied at 30% or less moisture, and is represented by most pods being green to yellow, and most seeds having turned from green to either yellow or brown. Again, peas and lentils should be sprayed at 30% or less moisture. In lentils, the bottom pods should be brown and have the seeds loose inside (the stage when normally swathed). In peas, the lower half of the pods should be brown and the seeds dry, with the upper pods yellow and wrinkled (again, the stage when normally swathed). A rate of 5-10 gallons of water per acre is recommended to penetrate the canopy. Good coverage is essential for both the dry down of the crop and the control of weeds. This rate can be varied dependent on the thickness of the canopy.

Mike Ritz, BSA



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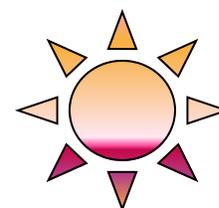
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### *Growing Degree Days*

*May 1st- June 21st*

*2009- 265 } 25% lower*  
*2008-352 }*

## Wire worm Population on the rise

The presence of wireworms has become a growing concern for farmers in Canada. Wireworms feed on the tissues of germinating seeds or young seedlings, damaging the stem eventually causing the death of the young plant. Patchy or spindly crop caused by wireworms is often assumed to be poor germination or poor seed (Alberta Agriculture, 2006), which is why scouting is important.

Wireworms are the larval stage of a harmless beetle, called the click beetle. They are a yellowish-orange segmented worm about an inch in length. In May to June the beetle lays 200 to 400 eggs, which hatch the larvae in three to seven weeks and begin to feed (Alberta Agriculture). If the wireworms don't find food within four weeks of hatching they will die. They can remain in the soil for 4 to 5 years, even surviving harsh conditions (Helen McMenamin, 2009). They hibernate for the winter and continue to feed the next spring.

Damage occurs in the spring because the wireworms feed on seeds as well as seedlings and the cool moist soil brings the larvae closer to the surface. In the summer, the larvae seek for these conditions lower in the soil. Wireworms shred the stem rather than severing it, like that of the cutworm.

Controlling wireworms is difficult because they live underground and there are no seed treatments to kill them since Vitavax (containing Lindane) was taken off the market. However they are most vulnerable from egg to early larval stage, so, as suggested by Alberta Agriculture (2006), cultivation in early spring can starve the hatchlings, expose eggs, and injure larvae. Summer fallow will have no effect on the larvae because they can survive on humus for two years. Cultivation later into the season will harm the pupae and larvae. Try to rotate to a less susceptible crop if possible to control the population. This is difficult because wireworms will eat almost any crop; however, grasses are preferred, so rotate to crops such as a pulse crop, a resistant variety, or canola because the wireworms are bothered by the seed treatment on canola seed. Seed treatments

such as Syngenta's Cruiser Maxx® and Bayer's Poncho® help control wireworm damage, however, they do not kill them, resulting in an increasing population. The wireworms have poor movement in the soil; therefore, packing the seed row is another option for control. When the soil is packed on the seed row, the wireworms prefer to travel between the seed rows in the looser soil to find food. Be sure the packers follow the seed rows and don't pack between the rows, which would cause the wireworms to travel along the seed row. Seeding practices should be taken to ensure quick emergence, as this will reduce wireworm damage if there is a risk of infestation.

Scouting for wireworms can be done by setting up baits and planting them about 1-2 inches below the soil (seeding depth). Bury whole potatoes and dig them up in one to two weeks and check for tunnels, as recommended by Alberta Agriculture. Scouting can also be done by digging for them, as they are usually within 3 inches of the surface. Economic threshold is said to be one worm per square meter (Alberta Agriculture, 2006).

Scouting should be done for wireworms, as they can cause yield loss and are usually mistaken for other reasons causing thin, spindly, or patchy crop. Producers should pay more attention to the wireworm, as the populations get larger, as it is possible that they can become a real problem in the future. Call your local Rack dealer this fall and we will help you set up bait stations!

Lindsay Barber  
Student, U of S Agriculture  
Summer Intern, Rack Petroleum



Cruiser Maxx® is a registered product of Syngenta/Poncho® is a registered product of Bayer

## Is it safe to cut water volume?

In a dry spring like this, when good quality water is harder to come by, many growers debate about cutting water volumes. When cutting your rates, the main sacrifice is coverage. Is the volume of water allowing enough coverage for control while minimizing crop injury?

Some things to consider before cutting water volumes: What is the goal of your application? What are you targeting, weeds, insects, or disease? If it is to control weeds then you must consider the particular product you are using. Increased water volumes can increase the safety of the herbicide on your crop. Environment and crop conditions will also determine the extent of crop injury from an application. A crop stressed by weather will be more susceptible to crop injury from a spray application than will a healthy crop with minimal stress.

A crop can also be stressed from spraying unsafe tank mixes or spraying a crop that is out of stage. It also depends on the nature of the weeds you are spraying, some weeds have a thick waxy cuticle or hairy leaves which need higher water volumes to increase penetration and coverage. Broadleaf weeds are generally easier to achieve good coverage than grasses. The vertical leaves of grasses don't readily intercept as much chemical. It is especially important to use adequate water volumes when dealing with contact products such as Liberty or Reglone. Products such as Odyssey, Solo, and Viper also require 10 US gal of water per acre for the best control. Another important situation when you should

use high water volumes is to increase coverage when you are spraying fungicides. Increased water volumes will allow for maximum coverage and disease control.

Remember, water is the cheapest part of your spraying application. Consult the Crop Protection Guide, product labels and call your local Rack representative for more answers regarding water volumes.

Dion Fowler, BSA



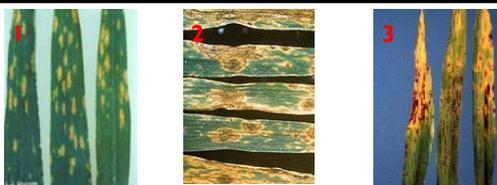


# Plant Health = Higher Yields

In cereals, grain yield can be reduced by pathogens that damage green leaves preventing the production of sugars and proteins needed for growth. These disease causing organisms also limit the movement of water and sugars throughout the plant. Yields are also reduced when the pathogen uses the plant energy to produce more disease rather than for plant growth or grain development.

Some common diseases in cereals:

1-Tan spot wheat 2-Septoria leaf blotch 3- Net blotch barley



In plots done by Rack in the Biggar and Wilkie areas we saw anywhere from 2-12bu/ac yield increase in cereals following a Headline® application. The chart below shows a barley trial done in the Biggar area. We also noticed a visual height difference and line in the field on an average to below average moisture year.



Headline vs Check Barley



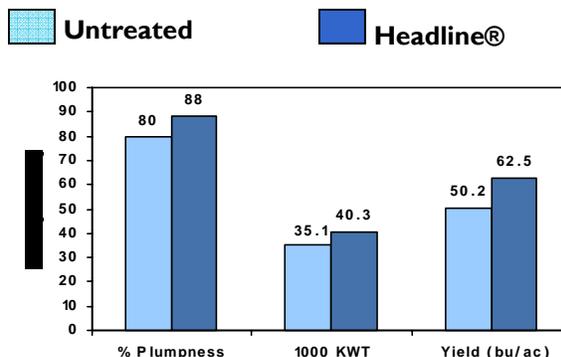
Researchers have developed yield loss estimates for scald in barley, which is also relevant to other cereal diseases. They found that yield loss was proportional to the area of the flag leaf and second last leaf infected by disease, according to the following equation:

Yield loss (percent) = {2/3 of the area of the flag leaf infected (percent) + 1/2 of the area of the second last leaf infected} divided by 2.

For example, the yield loss with 30 percent of flag leaf infected and 50 percent of second last leaf infected would be {30 x 2/3 + 50 x 1/2} divided by 2 = 22.5 percent.

Source: Alberta Agriculture, Food and Rural Development.

According to BASF and our findings as The Rack Field Research Team, Headline® applications in cereals and pulses have shown increased yields, and not only in high moisture conditions, due to plant health. Headline® improves plant health through: **Disease Control**- energy is spent on plant growth rather than fighting disease. **Growth Efficiency**- proper use of carbon and nitrogen. **Stress**- Tolerance-cold, drought and heat tolerance



Darren Egert  
Biggar, Sk  
Headline on  
Metcalf



In summary Headline® applications in cereals have shown an average of 10% yield increase. Fungicide applications act as preventative measure to protect leaves and head and in turn prevent yield loss. When considering fungicide application you should consider risk factors such as weather conditions, crop rotation and cereal variety. This year The Rack is doing a trial on half rate Headline® in wheat at the time of in-crop spraying versus check, visit the Rack website for upcoming results after harvest [www.therackonline.com](http://www.therackonline.com).

Headline® is a registered product of BASF

Jamie Coleman, BSA

In the spring of 2002 Rack petroleum launched premium choice plus diesel in response to the increasing poor quality of diesel being provided by refineries. The refineries were being forced to meet the new emission standards with their product and thus had to remove more sulphur from the diesel to achieve this. Removing the sulphur from the diesel solved the emission standards dilemma; however it reduced the lubricity and power of the fuel.

On top of the low sulphur content, diesel was losing quality from its path from the refinery to the engine. Cetane values were low, condensation and its propensity to absorb water diluted the fuel, asphaltene fall out and cold weather all contributed to lowering the quality of the diesel.

Rack decided to take action launching a new premium diesel to provide customers a diesel that would have many positive effects for them and their diesel engines. Rack Petroleum's patented bio diesel additive, with the bio portion made at the University of Saskatchewan. The Rack Premium Choice plus diesel is proven to enhance mileage, and performance while burning cleaner, reducing emissions, and protecting your engine.

The fuel additive contains various components:

**New Detergent Formula**- removes carbon and coking caused by low sulphur diesel, meets Cummins L-10 clean up specs, prevents gumming of valve stems, prevents piston ring sticking

**Double Lubricity Component**- Bio-diesel plus synthetic lubricity enhancer, reduces friction wear in engine and fuel system, prevents pump and injector seizure, tested with MROCLE and BOCLE system, exceeds ASTM laboratory tests, reduces chance of expensive break down.

**Thermal Stabilizer**- Provides consistency in fuel combustion, improves fuel economy up to 6%, reduces exhaust emissions, extends engine life, improves pulling power

**Storage Stabilizer**- Prevents fuel separation, impedes the growth of bacteria, impedes asphaltene conglomeration, improves mileage and performance, improves pulling power.

**Corrosion inhibitor**- prevents formation of rust, retards corrosion of fuel system parts, keeps pump and injectors operating efficiently, and reduces repair costs to fuel systems

**Cetane Number**- this is a measurement of the combustion quality of diesel fuel during compression ignition and the fuels ignition delay (the time period between the start of the injection and start of the combustion of the fuel). It is a significant expression of diesel fuel quality among a number of other measurements that determine overall diesel fuel quality. Increasing your cetane number can result in many benefits including: reduced knock & noise, misfiring, shock loads and peak pressures in cylinder, lower emissions, and shortened ignition delay, easier cold starts and better warm up. Our Rack premium plus diesel can improve your CN up to 4 points!

Rack provides fuel services 24/7 this includes farm deliveries. We also have seven self serve gas bars located at Saskatoon, North battleford, Asquith, Perdue, Biggar, Rosetown, and Unity. Our gas bars except Visa, MasterCard, and Rack fuel cards.





### LOCATIONS

<i>Battlefords</i>	<i>937 1800</i>
<i>Biggar</i>	<i>948 1800</i>
<i>Luseland</i>	<i>372 4411</i>
<i>Outlook</i>	<i>867 8371</i>
<i>Purdue</i>	<i>237 1800</i>
<i>Rosetown</i>	<i>882 1800</i>
<i>Saskatoon</i>	<i>683 1800</i>
<i>Unity</i>	<i>228 1800</i>
<i>Wilkie</i>	<i>843 1800</i>

**Need an agronomic problem solved ?**  
**Go on line and ask us a question we will answer back in 24 hours !**



## The 50 cent Decision

Where do you spend your time on the 50 cents? The buying side or the selling side? Lets look at the buying side. Lets assume that you can save 50 cents an acre on buying chemicals, fertilizer, or other crop inputs on 4 purchases, If you farm 3000 acres you save 4x \$0.50x3000= **\$6000.00** Not bad. You could probably take the good wife on a 2 week trip to the Caribbean. How much time did you spend saving the 50 cents? Did you buy local or from the big guys or discount brokers?

Now lets look on the selling side. Lets assume on those 3000 acres you grow 750 acres of barley, 750 acres of wheat, 750 acres peas and 750 acres canola. What's 50 cents a bushel worth? Barley 60 bus/acre x \$0.50 x 750 + Wheat 40 bus/acre x \$0.50 x 750 + Peas 30 bus/acre x \$0.50 x 750 + Canola 35 bus/acre x \$0.50 x 750 = **\$61,875.00**. Wow! maybe the wife could get the new house she had been hinting about!!!! How much time did it take you marketing to get the extra 50 cents when selling? Did you truck a little further? Did you haul or did someone pick it up?

The return on the buying side is *10 000* fold VS the return on the selling side is *100 000* fold

Where do you spend your time and effort???

Jim Vancha, P Ag

## Meet our Experienced Agronomists



Gaylord Dennis was born and raised on a farm in Perdue Sask. Gaylord has been involved in the Ag retail business for 26 years, 15 of which have been with Rack Petroleum Ltd. He works out of the Perdue location as manager, and is a certified Crop Advisor to help out with your agronomic requirements. He looks forward to continue working with the local producers, while bringing new solutions to the table to help with your crop production needs.



Jamie Coleman grew up on a large cattle/ grain operation near Mullingar, SK. After obtaining her Bachelor of Science in Agriculture at the U of S, she started at the Biggar location in 2001, working under Dennis Bulani as his agronomist and later Sr Agronomist. Today she manages one of Rack Petroleum's newest sites at Wilike. Jamie is passionate about agriculture and enjoys field scouting and figuring out agronomic issues.



Kent Clark was raised on a farm near Milden, Sk where he took a early liking to farming helping his dad and wanting to operate the equipment as many young boys do. He went on to obtain his Diploma in Agriculture at the University of Saskatchewan, and has been involved in Ag industry ever since. Kent has been with Keg Agro for five years and now that the two have joined, with Rack Petroleum Ltd. for two years. Kent is manager at the Outlook location, he find the variety of crops grown in his area especially interesting, such as potatoes and dry beans.