It’s a SuperSite Summer!

While taking a drive this summer to check crops, why not stop by one of the Bayer CropScience Demonstration Strip Trials or SuperSites? These sites have been developed to showcase new Bayer CropScience innovations including new cereal herbicides, seed treatments, fungicide formulations and the latest in Invigor® canola hybrids.

DSTs compare the Bayer CropScience Seed and Crop Protection Products to other production choices on the market. A SuperSite has the benefit of locating all three field scale trials (canola, herbicide, and fungicide) in close proximity so that one can clearly see the breadth of the Bayer CropScience innovation at one stop.

A Canola DST is a site where Invigor canola hybrids are seeded alongside competitor cultivars by producers under large-scale production practices. Each canola cultivar is treated with the appropriate system herbicide. Each DST features multiple strips of canola cultivars replicated twice, with a small isolation strip around each replicate as shown in the illustration.

continued on page 3
Much like the weather, predicting the risk of bertha armyworm (Mamestra configurata) pressure in canola fields depends on many conditions. However, trapping programs set up in the spring can alert growers of what might be eating up their profits later in the season.

“While it is hard to forecast what to expect for bertha armyworms this year, winter conditions were adequate for good overwintering survival,” says John Gavloski, Extension Entomologist, Manitoba Agriculture, Food and Rural Initiatives, Crops Branch.

According to Gavloski, research* done in Manitoba in the 1980s resulted in an equation relating survival of pupae to the number of winter days where the soil temperature at 5 cm is -10°C or less.

“One of the study’s conclusions was that layers of snow as thin as 5 cm can prevent soil temperatures at a depth of 5 cm from reaching the low air temperatures that commonly occur where bertha armyworm overwinters, protecting pupae from exposure to lethal low temperatures,” he explains.

There are other factors that will determine the size of the bertha armyworm population, including natural enemies and weather conditions during egg laying and larval development.

“Bertha armyworms do best in moderate and cooler temperatures,” says Gavloski. “A study from Agriculture Canada in Winnipeg in the 1970s showed that when larvae were kept at constant temperatures, mortality of larvae increased when temperatures were above about 30°C. Summer weather can affect the bertha armyworm population, and these effects can’t be accurately predicted in advance.”

The larval stage is when crop damage occurs. The worms prefer to feed on canola, rapeseed, mustard, alfalfa and lamb’s quarters but they will also feed on flax, peas and potatoes.

Depending on the season and crop location, bertha armyworms will inflict the most serious crop damage within a three-week period between late July and late August when the larvae are in their last two growth stages.

Gavloski advises farmers and agronomists who noticed high populations in 2007 to be extra vigilant in monitoring for bertha armyworm again this year.


### Life Cycle of the Bertha Armyworm

**Bertha armyworms develop through four distinct stages – adult, egg, larvae and pupae*. There is one complete generation per year in Canada.**

#### ADULT
- Adult stage is a moth
- Begin emerging from over-wintering pupae in early to mid-June, continue until early August
- Adult moths mate within five days of emergence and lay their eggs on host plants
- Each female moth will lay about 2,150 eggs with numbers reaching as high as 3,500 eggs per female

#### EGGS
- Eggs are laid in single-layered clusters of about 50 to 500 eggs on the lower surface of the host plant leaves
- Eggs are sculptured, ridged and pinhead in size
- When first laid, eggs are white in colour, becoming darker as they develop
- At average temperatures, eggs hatch within a week

#### LARVAE
- Newly hatched larvae are approximately 0.3 cm long
- Pale green with a pale yellowish stripe along each side, making them difficult to see on the underside of leaves
- Eggs are sculptured, ridged and pinhead in size
- When first laid, eggs are white in colour, becoming darker as they develop
- At average temperatures, eggs hatch within a week

#### PUPAE
- Pupae protect the bertha armyworm while it transforms from the larval stage to adult moth
- Bertha armyworms survive the winter as pupae in the ground at depths of 5 to 16 cm
- Pupation usually begins in mid to late August
- All larvae will have pupated by early to mid-September.
- If autumn is unusually warm, some pupae may continue their development and emerge as moths in late August or September, dying when winter arrives

*Manitoba Agriculture, Food and Rural Initiatives, www.gov.mb.ca/agriculture/crops/insects
Take control with Decis®

Decis® is the most powerful synthetic pyrethroid insecticide available. Affordable and effective at very low rates per acre, Decis works quickly on bertha armyworms, diamondback moths, flea beetles, grasshoppers and cutworms in canola and cereal crops.

Application Timing & Rates

Bertha Armyworm/ Diamondback Moth

GROUND: Apply when larvae are present and actively feeding. Decis 5EG controls only those insects present. Use the higher rate when infestations are high or canopy is thick.

40 - 60 mL/ac. in 9 gal. of water per acre

AERIAL: Apply once per season, when insects are present. Apply when insects are actively feeding. For heavy infestations, use the higher rate.

40 - 60 mL/ac. in 1 - 2 gal. of water per acre

Always read and follow label directions.

For complete production information as well as insect identification and the management materials visit:

http://www.bayercropscience.ca/Products/Insecticides/Decis-Horticulture.aspx

A DST is the ideal opportunity for growers to see how specific canola cultivars perform in regional growing conditions and production practices that are similar to their own. This is also an opportunity for growers to see new non-registered InVigor hybrids with LibertyLink® technology.

CEREAL HERBICIDE DEMONSTRATION STRIP TRIALS

New this year are Herbicide Demonstration Strip Trials that showcase Infinity™ herbicide and a new Bayer CropScience complete grass and broadleaf wheat herbicide, currently in the registration process with the PMRA. These will be showcased side by side with competitor herbicides and tank mixes. Product mix comparisons will be done on 12-14 treatments to demonstrate product efficacy, speed of activity on target weeds and crop safety.

FUNGICIDE DEMONSTRATION STRIP TRIALS

The Fungicide DSTs focus on wheat, barley, canola and the associated disease protection. These replicated trials will compare the Bayer CropScience fungicide products against an untreated check and/or a competitive fungicide option. Measures being compared will include yield, grain quality, and disease pressure. These trials will showcase the Bayer CropScience fungicide product portfolio including such products as Proline®, Stratego®, Folicur®, and Rovral® Flo.

WHERE TO FIND THE 2008 SUPER SITES AND DST LOCATIONS

<table>
<thead>
<tr>
<th>SuperSites &amp; all DSTs</th>
<th>ALBERTA/BC</th>
<th>SASKATCHEWAN</th>
<th>MANITOBA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canola DST</td>
<td>Cranford, Vulcan, Strathmore, Trochu, Legal, Westlock, Wanham, Rolla (BC), Paradise Valley, Star, Stettler, Camrose</td>
<td>Quill Lake, Humboldt, Aylsham, Melfort, Lanigan, Wilkie, Hamlin, Gull Lake, Regina, Milestone, Davidson, Duval, Carlyle, Langenburg, Sturgis</td>
<td>Oakville, Stonewall, Morris, Rosebank, Arbog, Killarney, Elgin, Virden, Manitou, Dauphin, Swan River</td>
</tr>
<tr>
<td>Herbicide DST</td>
<td>Cranford, Strathmore, Sexsmith</td>
<td>Hamlin, Harris, Lanigan, Melfort, Quill Lake</td>
<td>Elgin</td>
</tr>
<tr>
<td>Fungicide DST</td>
<td>Olds, Wetaskiwin, Westlock, Wanham, Sexsmith, Rolla (BC), Star, Namao, Smoky Lake, Camrose, Vermillion</td>
<td>Aylsham, Lanigan, Humboldt, Leask, Prince Albert, North Battleford, Milestone, Fairlight</td>
<td>Morris, Beausejour, Oakville, Stonewall, Swan River, Dauphin</td>
</tr>
</tbody>
</table>

So, whether you grow canola, cereals or both, this is the summer for you to get a first hand look at how Bayer CropScience products stack up against the competition. With so many sites conveniently located across the Prairies, you’ll be sure to find one that reflects your growing conditions. Be sure to talk to your local retailer or Bayer CropScience representative to find out more about your local trials.
The Ideal Broadleaf Tank Mix Partner

If grass and broadleaf weeds (including Group 2 resistant biotypes) are standing between you and higher yields, there’s a tank mix option new to the market this season. “Infinity offers excellent control of annual broadleaf weeds on its own. Partnered with one of the two tank mix options and you can also kill hard to control grass weeds like wild oats in one pass with no worries about antagonism,” says Ross Deveson, Portfolio Manager, Cereals with Bayer CropScience. “It controls 12 of the most abundant annual broadleaf weeds while providing suppression of dandelion and Canada thistle.”

When partnered with Puma®/Super or Horizon® for grassy weed control, Infinity provides minimal interference or antagonism. It allows both products to work in uninterrupted harmony. No additional herbicide is required to enhance broadleaf weed control.

“There are very few tank mixes that will control wild oats, cleavers and kochia at the same time,” says Wes Orosz, who farms near Pru’homme, Saskatchewan. “Puma and Infinity did an excellent job on all three of these tough-to-kill weeds.”

Infinity was very easy to use. There are very few tank mixes that will control wild oats, cleavers and kochia at the same time, Puma and Infinity did an excellent job on all three of these tough to kill weeds. – Wes Orosz, Pru’homme, Sask.

MANAGE GROUP 2 HERBICIDE RESISTANCE

What makes Infinity the ideal tank mix foundation is pyrasulfotole, the first new mode of action in cereals in over 20 years. Pyrasulfotole belongs to an entirely new group of herbicides – Group 27. Because of this new mode of action, Infinity also controls all weeds on its label that have become resistant to commonly used herbicides (such as those in Group 2).

Its unique chemistry means you don’t have to stress about herbicide rotation when choosing Infinity for control of the toughest annual broadleaf weeds, including:

- Kochia
- Group 2 resistant kochia
- Wild buckwheat
- Cleavers
- Simple to use, Infinity is completely crop safe on all varieties of spring wheat, durum and barley with a very wide window of application on all crops (1 leaf to flag leaf timing).

The ideal tank mix partner – it’s just one more reason Infinity is light years ahead. To learn more about Infinity visit www.lightyearsahead.ca.

The introductory year for InVigor Health hybrid canola is off to a successful start. Growers showed their support and quickly snapped up all of the acres of specialty canola oil contracted through Cargill, the exclusive marketer of the specialty canola oil produced from InVigor Health canola.

Oil from InVigor Health hybrids has a high-oleic content designed to maintain stability in high heat food processing applications. This oil has been tested to ensure it meets the taste and functional requirements of food companies. The high-oleic oil offers a healthier alternative to trans fatty acids created from hydrogenated vegetable oils.

“The trend in producing food products without trans fat shows no sign of slowing,” says Lionel Lamont, Canola Portfolio Manager for BCS North America. “While this year’s acres have been already contracted, this is a great opportunity for growers to consider InVigor Health for next year.”

InVigor Health 1141 and 1143 are the first commercial releases of the new InVigor Health line and are setting the stage for future InVigor Health hybrids currently in development. In official WCC/ RRC registration trials, InVigor Health 1141 and 1143 yielded 120% of the checks.

“InVigor Health canola gives growers a distinct advantage by delivering the best agronomic performance of any canola hybrid with LibertyLink combined with the high stability oil profile for a contract premium,” says Lamont. “Each day we are seeing more and more growers discovering the advantage that comes with increasing their canola marketability.”

For more information on Invigor health and other related products visit:

http://www.bayercropscience.ca/invigor/InVigor-Health.aspx