



THE PULSE AGRONOMY NETWORK
PARTNERSHIP WITH INDUSTRY



PAN - All Pulse Bulletin #5 – June 1, 2009

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Optimizing Weed Control with the IMI Herbicides

Mark Oostlander – Technical Development Specialist, BASF Canada

The Imidazolinone (IMI) herbicides are effective broad spectrum herbicides for control of grass and broadleaf weeds in pulse crops. ODYSSEY DLX, ODYSSEY, and SOLO are herbicides used in field pea and CLEARFIELD lentil crops that are based on the IMI herbicide technology. The IMI's are systemic herbicides that work in the growing points of plants, and prevent the production of 3 essential amino acids (leucine, isoleucine, valine) which are required for protein production. When an IMI herbicide is applied to a susceptible plant, growth stops within 10 – 48 hrs. Chlorosis (yellowing) is usually visible within 2 – 7 days, with death of the growing point occurring at 4 – 10 days. Plant death will usually occur in less than a week for the most sensitive weeds (i.e stinkweed), and 10 – 14 days for most of the grass and broadleaf weeds. It can take as long as 2 – 3 weeks to kill the toughest weeds or when the herbicide is applied under adverse conditions (cool, dry weather). Even though weeds do not appear dead, soon after application they often go into a period of “suspended animation” when they stop competing with the crop.

The IMI herbicides affect a natural biochemical process within the growing point of the plant. Therefore, for optimal weed control to occur the plants must be actively growing. Any environmental condition that limits the growth of a plant will slow and/or decrease the activity of the herbicide. As many herbicides affect a natural plant process, the effect of environmental conditions on herbicide activity is not just specific to the IMI herbicides, but exists across most herbicides used.

To optimize the weed control with the IMI herbicides, the following application tips should be followed:

ODYSSY DLX (Group 1, 2)

Application Tips

- Optimize weed control, including volunteer cereals, with a pre-seed application of glyphosate. Ensure all grasses are sprayed prior to the 6 leaf stage and established or difficult to control weeds are controlled prior to seeding.
- In areas with a concern for Group 1 resistant wild oats, ensure the application is applied on the wild oat prior to the 4 leaf, 2 tiller stage to obtain optimal control from the ODYSSEY portion of the herbicide.
- To optimize crop tolerance ensure that ODYSSEY is sprayed on field peas from the 1 to 6 above ground node stage of the crop.
- Coverage is important. Optimal efficacy occurs with application at 10 gallons of water per acre, particularly on hard to control weeds.
- Weed control by ODYSSEY DLX may be reduced under dry conditions and residual activity requires rainfall after application to activate.
- Optimize activity on brome species by applying a pre-seed application of glyphosate followed by an in-crop ODYSSEY DLX application prior to the 4th leaf stage of the spring seedlings.
- To optimize weed control avoid applications prior to or following cool night time temperatures.

ODYSSEY (Group 2)

Application Tips

- Optimize weed control, including volunteer cereals, with a pre-seed application of glyphosate, ensure all grasses are sprayed prior to the 4 leaf, 2 tiller stage and established or difficult to control weeds are controlled prior to seeding.
- To optimize crop tolerance ensure that Odyssey is sprayed on field peas from the 1 to 6 above ground node stage of the crop.
- Weed control by ODYSSEY may be reduced under dry conditions and residual activity requires rainfall after application to activate.
- Coverage is important. Optimal efficacy occurs with application at 10 gallons of water per acre, particularly on hard to control weeds.
- To optimize weed control avoid applications prior to or following cool night time temperatures.

SOLO (Group 2)

Application Tips

- Optimize grassy weed control, including volunteer cereals, with a pre-seed application of glyphosate and ensure all grasses are sprayed prior to the 4 leaf, 2 tiller stage.
- To optimize crop tolerance ensure that SOLO is sprayed on field peas from the 1 to 6 above ground node stage of the crop.
- Weed control by SOLO may be reduced under dry conditions. There is no residual control due to low soil activity of SOLO.
- Coverage is important. Optimal efficacy occurs with application at 10 gallons of water per acre, particularly on hard to control weeds.
- Optimize activity on brome species by applying a pre-seed application of glyphosate followed by an in-crop SOLO application prior to the 4th leaf stage of the spring seedlings.
- To optimize weed control avoid applications prior to or following cool night time temperatures.

Watchouts/warnings for all IMI products

- Avoid spraying when a risk of frost is in the forecast – a near frost event is considered +5°C or lower (minimum daily temperature).
 - Activity on all weeds may be reduced under drought conditions as weeds must be actively growing to optimize control.
 - Best practice is to wait 3 days after a near frost event before spraying to ensure weeds and crop are actively growing and optimal efficacy can be obtained.
 - Always refer to the manufacturer's product label for specific information on crop staging, weeds controlled, and application information.
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NEW FACTSHEET - Management of Ascochyta Blight of Chickpea

Agriculture and Agri-Food Canada, in cooperation with the Pesticide Risk Reduction Program, is developing and implementing a reduced risk strategy for sustainable Ascochyta blight management in chickpea. As part of this strategy, they have developed a factsheet for chickpea growers that will help them make better cropping and pest management decisions. The factsheet is available at www.pulse.ab.ca for anyone who is interested in more information.

Faba bean fields needed for disease survey

Alberta Pulse Growers Commission is funding a disease survey that will quantify the incidence and severity of root rot in Alberta faba bean fields. The survey will be conducted on 30 commercial faba bean fields. If you know of a producer who has a faba bean field that could be included in the survey please contact our office. Please note that we are looking for faba bean fields of any variety.

Alberta Pulse Growers Commission Welcomes Grower Relations and Communications Director

The Alberta Pulse Growers Commission welcomes Tammy Jones as their new Grower Relations and Communications Director. Tammy previously worked as a diversification specialist with Manitoba Agriculture, Food and Rural Initiatives. She grew up on a small mixed farm in southwestern Manitoba, obtained a Bachelor of Science degree in Agriculture with a crop protection major from the University of Manitoba, and has worked in both the private and public sectors of agriculture. Prior to Tammy's work with the government, she worked for the Manitoba Pulse Growers Association, so she has working knowledge of the Canadian pulse industry. To complement her agricultural roots, Tammy's communication experience includes 3 years of work in radio, communicating information to farmers, researchers, and policy makers in newsletters, on websites, through group consultative processes and in one-on-one meetings.

Tammy will provide support to the continued development of a viable and sustainable pulse industry in Alberta through communication and extension activities. One of Tammy's main goals will be to re-engage producers and industry in the activities of the Alberta Pulse Growers Commission.

Tour Listings

June 4, 2009 Lethbridge Crop Walk

9:00am - 11:00am; Coffee and Doughnuts 8:45

Meet in the Visitor Parking Lot at the Lethbridge Research Centre. The Research Centre is 1 km east of Lethbridge on Secondary Hwy #512 (Goal Road). Featured topics will include:

1. General discussion on environmental effects of the "Wild Weather" on crops this spring - cold injury, frost damage, disease, potential insect problems, physiological problems, etc.
2. Will view early effects of seed-placed versus sidebanded fertilizer with wheat, barley and canola (effects of Urea vs ESN placement and in-crop fertilizer application with winter wheat and other crops)
3. Look at the winter pulse trial - winter pea and lentil are doing well - view Pea Leaf Weevil feeding on pea and faba bean
4. Look at the seeding date trials for wheat, barley and canola - to see how each crop and growth stage is managing after the cool weather conditions (discuss effects of cold temperature injury on crops)

For further information contact Ross McKenzie, Agronomy Research Scientist at 403-381-5842; Rob Dunn, Land Management Specialist at 403-381-5904; or Don Wentz with Reduced Tillage Linkages at 403-381-5845; or Ken Coles, Manager with SARA at 403-381-5118.

July 7, 8, or 9 (Pick one day), SARA Diagnostic Field School, Lethbridge, Alberta

Diagnostic Field School for producers. Featured topics will include:

- Winter Peas, Lentils, Barley and Triticale
- Contans (Bio-Control of Sclerotinia)
- Nutraceutical for the control of Malaria
- Pests
- Agronomy
- More to be determined...

For more information contact

Ken Coles, 403-381-5118 or sara.research@connectcomm.ca

Chris Procyk, 403-381-5118 or chrisprocyk@hotmail.com

To Register contact:

Elizabeth Tokariuk, 403-345-6550 or sara-research@platinum.ca

July 14 & 15, 2009 Integrated Crop Management Field School, Olds College

Olds College is hosting its Integrated Crop Management Field School to help producers perfect their skills. July 14 will feature Forage Management and July 15 will feature Field Crop Agronomy.

One Day: \$149 GST; Both Days: \$249 GST

Contact Nancy at 1-800-661-6537 ext. 4677

July 21, 2009 CDC Saskatoon Plant Science Field Day

Crop Development Centre – Plant Sciences Field Day

Kernen Crop Research Farm (Hwy 41 and Blackley Road), Saskatchewan

Morning and afternoon concurrent sessions:

- 1) wheat, barley, oats, flax and weeds
- 2) peas, lentils, chickpeas, winter wheat and agronomy

Registration 8:30-9:30; Tours 9:30-4:00; Lunch 12:00

July 23, 2009 SARDA Annual Tour, MD of Big Lakes, Alberta

Cost: \$20 for tour, lunch and refreshment

For more information and to pre-register, please call the SARDA office at 780-837-2900

July 30, 2009 SARDA Annual Tour, Northern Sunrise County, Alberta

Cost: \$20 for tour, lunch and refreshment

For more information and to pre-register, please call the SARDA office at 780-837-2900

July 30, 2009 Lacombe Field Day, \$20 registration Before July 24; call Loree 403-782-8114

August 5 & 6, 2009 Seed and Agronomy Expo, Didsbury, Alberta

½ mile north on Hwy 2A from the intersection of Hwy 2A and 582

Parkland Agri Services is hosting the Seed and Agronomy Expo. Demonstrations will showcase new and old varieties, inoculant and fertility effects, fungicide response, and crop response to seeding rate and fungicide application. The expo will also highlight agronomy in other crops. Attendance is limited. Register by calling Pat at 403-888-2050

Previous PAN Bulletins

View Previous PAN Bulletins at:

<http://www.pulse.ab.ca/ForProducers/Publications/PulseAgronomyNetwork/tabid/125/Default.aspx>

If there is an article that you would like to see or contribute to the Pulse Agronomy Network, e-mail reply or call 780-986-9398 Ext3.

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