



January 30, 2012

## **Weed Resistance – Coming to a Field Near You**

Weed resistance has been an issue in crop production for many years. Wild oats and a few other weeds have developed resistance to popular herbicides. Most producers are aware of this issue, but there are always herbicide alternatives being developed.

“Resistance to glyphosate, a chemical commonly known as RoundUp® is found in other parts of the world and in Canada,” says Harry Brook, crop specialist with Alberta Agriculture and Rural Development. “Alberta now has its first case of glyphosate resistance. It has been confirmed that there is glyphosate resistant kochia in southern Alberta. This should serve as a wake-up call to producers to use different herbicide groups when treating problem weeds. Failure to take this problem seriously will result in the loss of effectiveness of our most popular weed control products.”

Continually using the same herbicide or products from the same herbicide group, actually results in selecting for those plants that are either not affected or affected less by the active ingredient than other plants. By killing off susceptible plants, you set the stage for the resistant ones to thrive as all their competition is killed off.

“Herbicides that have one specific mode of action are most likely to lead to resistant weeds,” says Brook. “However, the most common reason for having resistance show up is due to repeated use of the same chemical. Glyphosate falls into this category.

“Over the last 20 years, the price of glyphosate has dropped to the point where it is relatively cheap. The move to conservation tillage and zero tillage relies heavily on using herbicides to control volunteer and early germinating weeds. Herbicide tolerant crops further encourage glyphosate use to the point

where a piece of land could have three to four applications of glyphosate in a growing season. Short crop rotations and a lack of crop variety have set up the situation for herbicide resistance to show up in weeds. This has led to glyphosate resistant kochia being found in Southern Alberta.”

Keep in mind that pesticide companies are having greater difficulty finding new products or modes of action that work as

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herbicides. The supply of new products to control problem weeds is not unending, and miracle cures rarely happen. Herbicide companies know about resistance, and they have partially dealt with the issue by combining different herbicides from different groups into one product. A lot of the “new” herbicides are only co-packs or premixed formulations of existing products.

“Combining products helps somewhat, but it does not address the real issue of specific herbicide overuse,” says Brook. “It may extend the life of a herbicide where resistance is developing, but it doesn’t solve the problem. There are also weeds that develop multiple resistance to a wide variety of herbicide groups and modes, the superweed.

“For example, group 1 and group 2 herbicides have been used extensively over the last two decades for wild oat control. Now, many producers are finding that they have resistance issues in their wild oats. In Manitoba, there are fields with wild oats resistant to three or four different herbicide groups. We are running out of herbicide options for wild oat control.”

This resistant kochia is Alberta’s first case of glyphosate resistance and the third weed with glyphosate resistance in Canada. It is evident that the way pesticides are used must change and the issue of resistance must be taken more seriously or producers will run the risk of losing some of their most useful tools for weed control.

“Pay attention. Watch your fields. Use a good crop and herbicide group rotation to keep this problem at bay,” adds Brook.

Contact the Ag-Info Centre or your local agronomist for more information.

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## 2012 Provincial Insect Update

Insect forecasts maps were posted to Alberta Agriculture and Rural Development’s site after the Agronomy Update which was held in Red Deer on January 17 and 18, 2012.

“The past year was a relatively quiet one on the insect front; however, things never stay the same in the insect world and 2012 has the potential to provide challenges in several areas,” says Scott Meers, provincial pest management specialist with Alberta Agriculture and Rural Development. “Annual surveys are carried out for seven insects, the pests that historically pose problems in one part of the province or another.”

- Bertha Armyworm – 146 sites were monitored, the largest survey completed on this insect to date. Findings include a larger moth catch than the previous year. An elevated count was experienced in the Fort Vermillion area. An elevated risk in the Two Hills areas, as well as in Vulcan and Strathmore area. There was limited need for control operations in 2012.

Alberta has been in the low end of the life cycle of this pest for the last few years, but appears to be on the increase. It is advisable for farmers to watch the maps and stay updated as the coming growing season progresses.

- Diamondback Moth – this pest migrates up from the southern U.S. each year, so it’s difficult to predict. The insect makes up to three complete life cycles in Alberta each year. The monitoring indicates the number that show-up early in the season and from there, predictions on how severe the potential problems could be. There is usually only about two to three weeks advance warning for this pest, due to its lifecycle patterns.
- Cabbage Seedpod Weevil – there were quite low populations in 2011, largely because of the poor spring conditions. Typically the earlier flowering fields of canola will be the ones that will need to be watched and likely sprayed for control. This insect hasn’t moved into central Alberta; however, it will be watched it closely. There is no reason to expect that the low numbers in southern Alberta will repeat in the coming growing season so careful monitoring and attention will be required in the traditional problem areas. A lot of research information is drawn from the sweeps that are done as part of this insect survey.
- Wheat Stem Sawfly – there are no issues with this pest north of Hwy 1, and overall we are at the lowest population numbers of this pest and have been for a few years. There are a couple of hotspots: one just west of Brooks and southeast of Taber to the Foremost area.
- Wheat Midge – has been a big issue in Alberta as it keeps finding new areas to infest. In 2011, it was confirmed in the Peace for the first time. This survey consists of 285 soil samples from 59 counties across the province, and these samples have to be individually washed. For this insect to be a problem, the wheat midge emergence and wheat stage have to line up. The wheat is susceptible from as soon as the head is visible up until anthesis, when the anthers show up. If wheat is put in early and anthesis happens before the midge emerges, there is very little midge damage. The biggest problem areas are in southwestern Alberta but there are also individual problem fields throughout central Alberta.
- Pea Leaf Weevil – the amount of damage is surveyed in late May and early June. This is less a forecast than just a relay of the survey results. Vulcan area, typically showing the highest levels, has shown decline in populations, while the Wheatland area is showing the highest levels they have ever recorded. There are still fairly high populations in the Lethbridge to Medicine Hat area, but not as high as in years past. Those who were fighting this pest in 2011 will need to continue in this coming year. Seed treatment for this pest is the best preventative measure producers can take.

- Grasshoppers – last year, there were over 1600 survey sites across the province. The Peace has some pockets of higher populations. South and central Alberta show quite low populations, and the risk in north central Alberta are variable. Grasshopper populations follow the weather, so depending on the spring temperatures and precipitation, producers will see populations accordingly.

In 2011, surveys were also carried out on the western bean cutworm, an insect that attacks beans and corn. The interest with this insect pest is tolerant of BT corn, and has been making inroads, but has not yet been detected in Alberta.

To view the survey and forecast maps, visit the Alberta Insect Pest Monitoring Network homepage at [www.agriculture.alberta.ca/bugs-pest](http://www.agriculture.alberta.ca/bugs-pest)

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## **Update to the Carbon Offset Market**

An update to the carbon offset market system was recently posted to the Alberta Agriculture and Rural Development website. The update includes a chart that outlines the various deadlines for farmers and project developers (aggregators) depending on the timing of the project in question.

“This updated information includes several application dates that apply for claiming historical credits, credits up to 2010 and credits from 2011,” says Graham Gilchrist, Assistant Farmers’ Advocate. “The dates are different for farmer applicants and aggregator applicants. It’s important to know these dates so that opportunities are not missed.”

The notice outlining deadline requirements for claiming historical credits was issued by Alberta Environment and Water (AEW) on December 20, 2011. The Farmers’ Advocate Office recommends that all farmers and aggregators take some time and review this information. Albertans who wish to claim 2002-2011 vintage years must finalize claims, have the projects verified and be submitted to the Registry by the deadlines. Any offset claims made after these dates will not be accepted by AEW unless a waiver is granted by AEW.

To view the information chart, visit the Alberta Agriculture website at [www.agriculture.alberta.ca](http://www.agriculture.alberta.ca) and type ‘update to the carbon offset market’ in the search field.

Historic offset credits already serialized on the Alberta Emissions Offset Registry will remain active until such time as they are submitted to Alberta Environment and Water as a compliance option under the Specified Gas Emitters Regulation or removed from the registry.

All projects coming forward after January 1, 2012, must meet the requirements for ‘go-forward’ crediting provided in the Technical Guidance for Offset Project Developers.

For more information contact the Farmers’ Advocate Office toll-free in Alberta at 310-FARM.

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## **HACCP – Making Food Products Safe, Online Video – Part 2**

The second part of the food processing safety video HACCP – Making Food Products Safe is now online. The two-part video production explains how the seven principles of Hazard Analysis Critical Control Point (HACCP) can be used by processors to develop, implement and maintain a HACCP system.

A HACCP system is internationally recognized as the single most effective way to eliminate, reduce or control hazards in any food handling or processing operation. The benefits of a HACCP system include: increased food safety, meeting or exceeding customer requirements, reinforcement of best practices by staff, and reduced waste.

Both part one and part two of the HACCP video are available by visiting Alberta Agriculture’s website at [www.agriculture.alberta.ca](http://www.agriculture.alberta.ca) and typing HACCP – Making Food Products Safe into the search field.

For further information on developing a HACCP system, please visit the Alberta HACCP Advantage (AHA!) program website [www.agriculture.alberta.ca/aha](http://www.agriculture.alberta.ca/aha). The goal of the Alberta HACCP Advantage (AHA!) program is to assist food processors in implementing a complete and effective food safety program. The AHA! program includes numerous resources (AHA! Standard, AHA! Guidebook, AHA! Recognition, gap assessments and a training corner). The website also provides food safety links and food safety specialist contact information.

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## **Direct Marketing Proteins Included in an Upcoming Course**

Alberta livestock producers who are thinking about diversifying their existing operation in different ways, or are interested in getting into direct marketed production of fruit, vegetables or protein will want to attend the Alberta Farm Fresh Local Food Short Course being held in Red Deer on March 1 and 2, 2012. This course was formerly known as the Berry and Vegetable School. The name has changed to reflect the addition of 'protein' products to the list of course topics.

"This conference is an opportunity for new, potential or experienced producers to learn and interact," says Robert Spencer, commercial horticulture specialist with Alberta Agriculture and Rural Development. "This year's schedule includes introductory and advanced topics, with a protein stream and protein-specific sessions being offered on both days. There is something for everyone at this year's course."

New, potential and experienced producers will have a chance to learn about protein production, marketing and processing, including sessions on poultry, grass-finished livestock, basic meat processing equipment, as well as the rules and regulations for safe and appropriate handling, packaging and transportation of meat. Find out what things need to be considered when starting up a new venture. Hear from experienced producers who will discuss their recommendations concerning things that should be done or should be avoided in order to be successful. Learn about different direct market channels (CSAs, etc) and about agri-tourism and animals.

"Regardless of what sessions you participate in, you'll find lots of opportunities to learn, network and share your own knowledge and experiences with other participants," says Spencer. "Participants are welcome to come for one or two days."

For a tentative agenda and registration information, visit the Alberta Farm Fresh Producers Association website at [www.albertafarmfresh.com](http://www.albertafarmfresh.com)

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## Agri-News Briefs

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### **Opportunities for Local Food Distribution Systems**

According to the most current Statistics Canada data, the total food expenditures by Alberta households were \$10.7 billion in 2009. One-third of Albertan households surveyed said they would buy more food grown or made in Alberta if it was convenient and identifiable (Alternative Agricultural Markets in Alberta 2008).

North American research demonstrates growth potential through community food assessments, locally produced food tracking studies, and food enterprise case studies. Recent research indicates that a profitable local food system includes:

- innovative market channels
- mentorship programs
- supply scale up by coordinated production
- alternative financing
- farm and food business incubators
- food hubs that employ food storage, aggregation and novel distribution

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### **Landowners Summit for the Oldman Watershed**

The 6th annual Holding the Reins Summit will be held in Fort Macleod on February 7, 2012. The theme of the summit is Watershed Stewardship: where are we headed? The full day agenda includes presentations and updates from the Oldman Watershed Council, rural teams, as well as landowner and watershed stewardship groups. Additional topics on the agenda include protecting the headwaters, invasive species and the Oldman watershed and watershed hydrology and modeling. A presentation on Youth Range Daze rounds out the agenda. For further information or to register, visit the Oldman Watershed Council website at <http://oldmanbasin.org/> and click on the Holding the Reins links.

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### **Alien Invasive Species Forum**

Dr. Ken Fry (entomologist and member of Olds College faculty), Dr. Jean Turgeon (Natural Resources Canada), Troy Kimoto (Canadian Food and Inspection Agency), and other experts in urban forest management are part of an alien invasive species forum being held in at Olds College on March 1, 2012. Some of the most significant insects and diseases threatening forests in the Prairie Provinces, such as Dutch Elm disease vectors, Emerald Ash Borer, Asian Longhorned Beetle and European Sirex, will be discussed at the forum. Experts will also present information on the surveillance and education efforts of CFIA, Olds College and StopDED. Participants will:

- receive status updates and hear about management options for invasive forest pests
- participate in workshops on early detection and identification
- learn about the National Forest Pest Strategy
- be able to apply for CEUs (pending)

The forum is \$99 plus GST per person. To register for this forum, call toll-free 1-899-661-6537 ext. 4677. More information on the forum is available online at [www.oldscollege.ca](http://www.oldscollege.ca) and type Alien Invasive Species Forum in the search field.

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### **2011 Alberta Average Farm Input Prices**

Average prices for the month of December 2011, have now been posted. All agricultural inputs were reported to be in good supply for the month of December 2011, with the exception of general farm labour in some areas of the province. Prices shown on the chart are simple averages for Alberta, in Canadian dollars (\$), and are based on a survey conducted in the first week of each month by Alberta Agriculture's Statistics and Data Development Branch, in partnership with Wild Rose Agricultural Producers. To view this information, visit the Alberta Agriculture and Rural Development website at [www.agriculture.alberta.ca](http://www.agriculture.alberta.ca) and type 'average farm input prices' in the search. For additional information, phone 780-427-4011. As of April 1, 2009, this project was sponsored by Growing Forward, a federal-provincial-territorial agreement.