ONTARIO BEAN GROWERS

UPCOMING EVENTS

- Ontario Bean Growers is hosting chefs from Aramark, an international food company, at Fieldcrest on **August 26, 2015**. The chefs will learn about Ontario bean production, visit fields and the processing plant and then enjoy a bean-filled meal. A huge thank you to Fieldcrest for hosting our event!

- The week of **August 31, 2015** Ontario will welcome a delegation of Mexican bean importers. The importers will visit Ontario research facilities, farms and processors to learn more about our bean production and quality. OBG would like to thank the researchers, farmers and processors who will take time at this busy time of year to showcase Ontario agriculture for our guests.

- From **September 18-19**, Ontario Bean Growers will be attending the *Heart & Stroke Foundation's Canadian Stroke Congress* in Toronto. The event brings over 900 health practitioners to Toronto for two days to learn about new research in stroke prevention, treatment and recovery. Ontario Bean Growers will have a booth at the Congress to address the importance of a healthy diet, including beans, in disease prevention and recovery. Our goal is to educate health practitioners about the many health benefits of eating beans so the information can be passed along to patients.

- This fall, Ontario Bean Growers is sponsoring the *Bean Improvement Cooperative conference*, taking place from **November 1st to 4th** in Niagara Falls. The conference is an opportunity for researchers to share presentations and posters in five key areas: Production/ Agronomy, Plant Diseases, Pests and Resistance, Utilization and Human Health and Breeding/Genetics.

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DESICCANT USE *this* SEASON – *from* PULSE CANADA

Be Aware of Market Risks Involved with Desiccant Use This Season

The pulse industry in Canada has made significant progress in developing acceptable maximum residue levels (MRLs) globally for pulse crop products used in Canada. However, growers are strongly advised to be aware of possible marketing restrictions that may arise from using certain desiccants/harvest management tools this season.

In Canada, these products include diquat (Reglone), glyphosate (Roundup), saflufenacil (Eragon), glufosinate (Ignite), flumioxazin (Valtera) and carfentrazone (Aim). Unlike most crop protection products used in Canada, desiccants/harvest management tools are applied very late in the crop year and residue levels may be higher in seeds. As a result, growers must ensure that they take appropriate risk mitigation steps to ensure product residue remains below MRLs set by regulatory agencies.

While the Canadian pulse industry has been working hard to eliminate market access risks, each of the six desiccants/harvest management products registered for selected pulse crops in Canada still has the potential to cause issues in certain crops and markets. Growers are always advised to be aware of international regulations in order to make the best crop management decisions.

1. Do not exceed the product's labelled rate
2. Time the application according to the label
3. Consult with your exporter/processor about which desiccants are acceptable in international markets
4. Consult the chart in this newsletter indicating market considerations and statuses for specific products

Markets Where MRLs are Sufficient to Allow for Use of Main Desiccants on Pulse Crops

MARKET	European Union (EU)	Countries that rely on Codex MRLs (e.g. India, Pakistan, many others)	Japan	United States (U.S.)
GLYPHOSATE as a harvest management tool (e.g. Roundup)	No marketing issues associated with glyphosate residues for peas, lentils, or chickpeas in the EU. Although there is an MRL set for the use of glyphosate on beans in the EU, the MRL level is set at a low level of 2 parts per million (PPM) for this crop in this market. Consult with your exporter/processor about dry, edible beans destined for the EU. (This applies to the preharvest use only.) ⚠	No marketing issues associated with glyphosate residues for peas and lentils in CODEX countries. Although there is an MRL set for the use of glyphosate on beans, the MRL level is set at a low level of 2 parts per million (PPM) for this crop in this market. MRLs have not been established for chickpeas or faba beans. Consult with your exporter/processor about beans or chickpeas and faba beans destined for CODEX countries. (This applies to the preharvest use only.) ⚠	No marketing issues associated with glyphosate residues for peas in Japan. Although there is an MRL set for the use of glyphosate on dry beans, lentils, chickpeas, and faba beans for Japan, the MRL is set at a low level of 2 parts per million (PPM) for these crops in this market. Consult with your exporter/processor about beans destined for Japan, as well astor lentils, chickpeas, and faba beans. (This applies to the preharvest use only.) ⚠	No marketing issues associated with glyphosate residues. The MRL is set and is adequate for preharvest uses in the U.S. Follow label directions to remain within legal limits. (This applies to the preharvest use only.) ✓
DIQUAT as a desiccant (e.g. Reglone)	No marketing issues associated with diquat residues for peas, lentils, chickpeas, and beans in the EU. The MRL is in place for these. Follow label directions to minimize residues and maintain levels below the MRL. No marketing issues associated with diquat residues ✓	for peas, lentils, chickpeas, and dry beans in CODEX countries. Follow label directions to minimize residues and maintain levels below the MRL. ✓	No marketing issues associated with diquat residues for peas, lentils, chickpeas, faba beans, and dry beans in Japan. The MRL is in place for these. Follow label directions to minimize residues and maintain levels below the MRL ✓	MRLs have not been established for diquat use in pulses in the U.S. Consult with your exporter/processor before using product. ⚠
SAFLUFENACIL as a harvest management tool (e.g Eragon)	No marketing issues associated with saflufenacil residues for peas and dry beans in the EU. MRLs have not been established for lentils for the 2015 crop in the EU. The product is not registered on chickpeas or faba beans. Follow label directions to minimize residues and maintain levels below the MRL. ⚠	No marketing issues associated with saflufenacil residues in CODEX countries. The MRLs are set for pea, lentil, and dry bean desiccation uses (the product is not registered on chickpeas or faba beans). Follow label directions to minimize residues and maintain levels below the MRL. ✓	No marketing issues associated with saflufenacil residues in Japan. The MRLs are set for pea, lentil, and dry bean desiccation uses (the product is not registered on chickpeas or faba beans). Follow label directions to minimize residues and maintain levels below the MRL. ✓	No marketing issues associated with saflufenacil residues in the U.S. The MRLs are set for pea, lentil, and dry bean desiccation uses (the product is not registered on chickpeas or faba beans). Follow label directions to minimize residues, maintain levels below the MRL. ✓
GLUFOSINATE as a harvest management tool (e.g Ignite)	No marketing issues associated with glufosinate residues for lentils, as the MRL is in place for the EU. Lentils are the only pulse crop for which the product is registered in Western Canada. Follow label directions to minimize residues and maintain levels below the MRL. ✓	MRLs have not been established for glufosinate on lentils in CODEX countries. Lentils are the only pulse crop for which the product is registered in Western Canada. Consult with your exporter/processor before using product on lentils. ⚠	No marketing issues associated with glufosinate residues for lentils, as the MRL is in place in Japan. Lentils are the only pulse crop for which the product is registered in Western Canada. Follow label directions to minimize residues and maintain levels below the MRL ✓	MRLs have not been established for glufosinate use on lentils in the U.S. Lentils are the only pulse crop on which the product is registered in Canada. Consult with your exporter/processor before using product on lentils. ⚠
CARFENTRAZONE (e.g Aim)	MRLs have not been established for preharvest use on dry beans, chickpeas, or peas (not registered on lentils or faba beans). In cases where crop is destined for the EU, growers and exporters should confer prior to using the product in order to avoid marketing problems in the EU. (This applies to the preharvest use pattern only.) ⚠	MRLs have not been established for preharvest use on dry beans, chickpeas, or peas (not registered on lentils or faba beans). In cases where the crop is destined for CODEX countries, growers and exporters should confer prior to using the product in order to avoid marketing problems. (This applies to the preharvest use pattern only.) ⚠	No marketing issues associated with carfentrazone residues on dry beans, chickpeas, or peas (the product is not registered on lentils or faba beans). The MRL is set and is adequate for preharvest uses in Japan. Follow label directions to remain within legal limits. ✓	No marketing issues associated with carfentrazone residues on dry beans, chickpeas, or peas (the product is not registered on lentils or faba beans). The MRL is set and is adequate for preharvest uses in the U.S. Follow label directions to remain within legal limits. ✓
FLUMIOXAZIN (e.g Valtera)	No marketing issues associated with flumioxazin residues for dry beans (not registered for harvest aid use on other pulses). The MRL is established for the EU. Follow label directions to minimize residues and maintain levels below the MRL. ✓	MRLs have not been established for flumioxazin in CODEX countries at this time. In cases where the crop is destined for CODEX countries, growers and exporters should confer prior to using the product in order to avoid marketing problems. ⚠	No marketing issues associated with flumioxazin residues on dry beans (the product is not registered for harvest aid use on other pulses). The MRL is set and is adequate for preharvest uses in Japan. Follow label directions to minimize residues and maintain levels below the MRL ✓	No marketing issues associated with flumioxazin residues on dry beans (the product is not registered for harvest aid use on other pulses). The MRL is set and is adequate for preharvest use in the U.S. Follow label directions to minimize residues and maintain levels below the MRL. ✓

NOTES:

1. A TANKMIX BETWEEN GLYPHOSATE AND SAFLUFENACIL WOULD BE A CAUTION FOR CODEX COUNTRIES AND JAPAN, BASED ON CAUTION OVER GLYPHOSATE RESIDUES IN THOSE JURISDICTIONS
2. A TANKMIX BETWEEN GLYPHOSATE AND FLUMIOXAZIN WOULD BE A CAUTION FOR ALL JURISDICTIONS EXCEPT THE US, BASED ON CAUTION OVER GLYPHOSATE RESIDUES IN THE EU, CODEX COUNTRIES AND JAPAN.

Preharvest Herbicide Summary for Dry Beans

SOURCE: Dr. Chris Gillard, Ridgetown College, University of Guelph

ACTIVE	GLYPHOSATE	DIQUAT	GLUFOSINATE AMMONIUM	CARFENTRAZONE-ETHYL	FLUMIOXAZIN	SAFLUFENACIL
TRADE NAME	VARIOUS	REGIONE	IGNITE	AIM	VALTERA, VALOR	ERAGON
FAMILY	9	22	10	14	14	14
MODE	Translocated	Contact activated by sunlight	Contact	Contact	Contact	Contact
HARVEST TIMING	Typically 10 -21 days following application	5-7 days	9 (minimum) - 14 days	3 days PHI	Similar to Diquat	Similar to Diquat
BENEFITS/CAUTIONS	• Economical • Control of perennial weeds • Excellent control of regrowth. 2nd growth of indeterminate beans • Do not use on beans intended for seed	• Fast acting- "Designer frost" • Regrowth may occur following application if harvest is delayed. • Plants are susceptible to breakdown if harvest is delayed	• Quick burndown of beans and weeds • Regrowth may occur • No crop rotational restrictions	• Economical • Slightly faster dry down than glyphosate alone	• Delayed planting of winter wheat – 1 month and 1 inch of rain before planting (USA)	• No crop rotational restrictions • Limited plant regrowth
APPLICATION NOTES	• Stems are green to brown; all pods are mature (yellow-brown); 80% - 90% leaf drop. • Less than 30% seed moisture (hard dough stage) • **If application is made too early, seed residues may occur**	• Apply in evening or on cloudy days to allow time for product to spread over surface of leaf before sunlight activates the product • User exposure concerns	• Apply when approximately 50-75% of the bean pods have naturally changed colour from green to yellow or brown • Enhanced control when applied under hot, humid weather.	• Coverage is essential for good control • Apply when beans are mature, at least 80% of the pods are yellowing; and no more than 40% green leaves (determinate) or 30% green leaves (indeterminate)	• Registered as Valor in U.S. for preharvest treatment in dry beans • **Special sprayer cleanup procedures**	• Eragon cannot to be used as a dry bean desiccant until MRLs have been set
DESICCATION RATE	Very Slow	Excellent	Average - Good	Average	Very Good (U.S. data)	Very Good (U.S. data)

Always consult your dealer (or production contract) for any additional restrictions in desiccants available for use.

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OBG RESEARCH UPDATE

This past spring the **OBG** was awarded grants from the Agricultural Adaptation Council for three different projects.

These projects are:

1

ASSESSMENT OF HARD SEEDS IN ONTARIO NAVY BEANS:

During the Ontario Bean Growers October 2014 meetings in Europe where staff met with Ontario navy bean buyers, it was it became clear that the companies sorted beans into two categories – hard and soft. On average, Ontario beans tend to be harder when compared with other places they source their beans from in the west, such as Minnesota, North Dakota and western Canada. The companies test the bean seeds for hardness at delivery, involving a considerable amount of time and money. The beans then must be segregated into hard and soft beans for different cooking processes.

OBG designed a project with two objectives:

1. create a scale of hardness of Ontario grown navy bean cultivars *and*
2. determine environmental conditions during the growing season that impact seed hardness in navy bean cultivars.

Researchers will test the hardness of the most popular navy bean varieties grown in Ontario over a number of years. Weather data will be tracked over this period of time to determine the effect of weather on bean hardness in individual bean varieties. The first phase of the project will run for three years and, depending on the outcome, could be rolled out as a long term study.

This project will use navy bean cultivar samples harvested from up to seven sites in Ontario (for example: St. Thomas, Ilderton, Woodstock Research Station, Elora Research station, Blyth, Highbury and Kippen) and compare them to beans grown in Manitoba (Winkler, Portage, Carman and Morden). At each of the locations a Weather Innovations owned weather station will be installed to track daily weather data such as the amount of precipitation, sunlight hours, temperature, humidity etc.

2

BREEDING OTEBO BEANS FOR PRODUCTION IN ONTARIO

Professor Jim Kelly approached OBG to see if we would be interested in funding part of his Michigan State University Otebo bean breeding program since the program would be discontinued without our contribution as Otebo's are no longer grown in Michigan.

The objectives of this project are to breed upright Otebo bean types for improved yield, anthracnose resistance and better tolerance to white mold. In addition, milling and pasting studies of bean powder from all new otebo bean breeding lines to ensuring quality traits are retained will be conducted.

3

REPRODUCTIVE BIOLOGY AND OVERWINTERING SUCCESS OF THE WESTERN BEAN CUTWORM

OBG has partnered with the Grain Farmers of Ontario to do research on Western Bean Cutworm with Dr. McNeil from the University of Western Ontario.

Specific objectives for this project are:

1. to determine if both sexes of the WBC use long distance sex pheromones by comparing capture data in traps baited with virgin males and females, and with the commercial pheromone lure *and*
2. to determine the effects of temperature on the physiology and survival of the prepupae in both fall and spring under field conditions to test the hypothesis that high soil temperatures in fall and spring limit survival of WBC prepupae.

The results of this project are expected to lead to monitoring techniques that are better matched to the WBC biology and better reflect potential crop damage. This will provide an environmental benefit, restricting spraying before threshold is truly reached and informing scouting techniques as it relates to overwintering and immigrant populations.

» THESE PROJECTS WERE FUNDED IN PART THROUGH GROWING FORWARD 2 (GF2), A FEDERAL-PROVINCIAL-TERRITORIAL INITIATIVE. THE AGRICULTURAL ADAPTATION COUNCIL ASSISTS IN THE DELIVERY OF GF2 IN ONTARIO.

2015 LICENCE FEES

Licence fees for all market classes of dry beans will remain at $6.80 per MT for the 2015/16 crop year.

2015 DRY BEAN ACREAGE REPORT

	BLACK BEANS	CRANBERRY BEANS	DARK RED KIDNEY BEANS	LIGHT RED KIDNEY BEANS	NAVY BEANS	OTHER	TOTAL
ONTARIO	15,000	14,000	22,000		75,000	21,000	147,000
MANITOBA	14,700	4,200	17,600		42,000	47,000	132,000

The "other" category in the chart includes the Japanese types of beans in Ontario. Manitoba has 36,000 acres of pinto beans plus an additional 11,000 acres classified as other, which includes a mix of small red, great northern and pink market classes for a total of just over 130,000 acres in the province.

In the US, Michigan has planted 230,700 acres of beans – 110,000 acres of blacks, 80,000 acres of navies and 20,000 acres of small reds as the top three market classes. Minnesota and North Dakota have planted 821,900 total acres of dry beans – 360,900 acres of pintos, 175,000 acres of navies and 155,000 acres of blacks. Total US dry bean planted acres for 2015 is 1.563 million.

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BEANS *and* CHOLESTEROL LOWERING – *a* POTENTIAL HEALTH CLAIM

Pulse Canada has been investigating potential health claims for pulses based on existing research. The effect of bean consumption on cholesterol levels has been reported in several research publications. Based on a systematic search of published research in 2012 and appraisal of study quality according to the standards of regulatory bodies, there were 8 published studies that could be used towards substantiating a beans and cholesterol lowering claim.

These studies showed a highly consistent beneficial effect between bean consumption and a reduction in cholesterol, not considering statistical significance. Total cholesterol and LDL-cholesterol were reduced in 83.3% of high quality studies. However, according to Health Canada's standards, there was only a moderate *"strength of association"* between beans and total cholesterol lowering with 62.5% of studies showing a statistically significant reduction in total cholesterol. For beans and LDL-cholesterol, there was a low *"strength of association"* with 50% of the studies showing a statistically significant reduction in LDL-cholesterol.

Typically, a high strength of association (as supported by ≥75% of clinical studies reviewed) is a pivotal component of a health claim submission. However, the cholesterol lowering claim for flax that was approved by Health Canada in 2014 was based on 8 studies that showed a highly *"consistent"* effect of flax consumption on total and LDL-cholesterol (100% of studies), whereas only a very low proportion of studies showed a statistically significant reduction in total cholesterol (25%) and LDL cholesterol (0%) levels.

The number of publications used to substantiate other cholesterol lowering claims approved in Canada since 2010 has ranged from 8 to 84. The magnitude of the effect of beans on LDL-cholesterol levels in the 8 included studies is equal or even greater than effects seen from these other foods/food constituents that have approved health claims in Canada. Given the recent approval of the cholesterol-lowering claim for flax in Canada based on a similar number of studies and *"strength"* of evidence, a beans and cholesterol lowering health claim may also exist in the near future.

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FROM THE CHAIR

Message from Jim Gowland

Once again the summer slips by so quickly and fall harvest is now just around the corner. Not too many weeks ago, just prior to July 1st, there were many concerns of late planting issues and the reality of some acres not even getting planted. Now here we are hearing about some mid-May planted beans being harvested as of August 25th!

Despite many areas of Ontario with above normal precipitation throughout June, Ontario growers managed to seed over 140,000 acres of edible beans. Reports from growers and dealers indicate that an average crop is still possible in Ontario.

Your **Ontario Bean Growers** board and staff, along with dealers, are working hard to promote Ontario beans both domestically and internationally with numerous functions this summer, fall and on through the winter. Those functions include an incoming 9 member Mexican delegation for the first week of September, a large international food services company tour of farms and a dealer/processor in September, and a function with Heart and Stroke Foundation for medical professionals in Toronto. As well, OBG is participating with Pulse Canada in recognition of the 2016 International Year of the Pulse with a kick off in Toronto in early January, with numerous events also happening in 2016.

Ontario Bean Growers continues to fund significant research initiatives again this year, and is actively involved with the entire bean industry in positioning Ontario for the future with good varieties and traits that not only benefit growers but also are beneficial to end users and consumers. On behalf of OBG, I would like to recognize Brian Hall from OMAFRA for his many years of service to edible bean growers and wish him and his family all the best in his retirement. Thank you Brian!

I wish everyone the very best for a successful and safe harvest this fall.

JIM GOWLAND | CHAIR

2015 POOL BEANS

Ontario Bean Growers is accepting white pea beans into the pool for 2015. The initial payment for pool beans will be $451.93. For all beans in the pool, check the OBG website for the 2015 drying and shrink chart located at **http://ontariobeans.on.ca/resource_category/grower-resources/.**

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