



THE PULSE AGRONOMY NETWORK
PARTNERSHIP WITH INDUSTRY



PAN - All Pulse Bulletin #14 – October 5th, 2009

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Herbicide Carryover and Bioassay Services

Sandi Checkel, Alberta Research Council, Vegreville AB

Another dry year! Parts of Alberta have received less rainfall than the infamous 2002 drought, so it's time to be aware of herbicide residue affecting next year's pulse crops. Herbicides that are already under restrictions are likely to have delayed breakdown by the effect of drought. Depending on the sensitivity of the pulse crop grown, even low concentrations of herbicide residue may cause stunting and delayed maturity. Growers that used Everest® in areas where precipitation has been under the 10-year average, with lower than 4% organic matter and soil pH over 7.5 pH should test fields for Everest carryover if planting field peas. Recommendations for re-cropping are the minimum time required for herbicide breakdown, but unfavourable soil factors specific to your field may delay breakdown, even under good precipitation conditions. Generally, drought extends the carryover of the herbicides listed below. These herbicides already have 1-2 year restrictions and these are the ones of interest in a dry year.

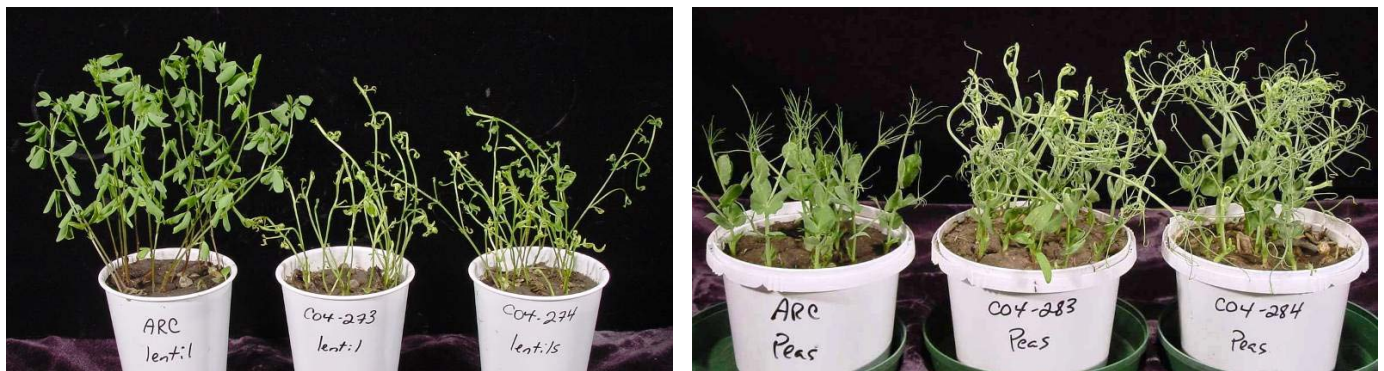


Figure 1. The impact of Group 4 herbicide residues on plant growth, the lentils on the left are affected by Lontrel and the peas are affected with Tordon. ARC check plants are on the left side of each picture.

Herbicide Group	Chemical Family	Herbicides in Chemical Family	Factors Influencing Carryover	Symptoms
2	Sulfonyureas	Ally®, Muster® Unity®	High pH > 7.5 and low organic matter	Prunes off meristem growth, plants produce weak side shoots.

2	Imidazolinone	Assert®	Carryover is worse under low soil pH < 6.5, low organic matter	Same as above.
2	Sulfonylamino-carbonyltriazolinones	Everest®	Low organic matter, low rainfall and high pH > 7.5.	Prunes off meristem, produces chlorotic plants.
4	Carboxylic Acids	Curtail M®, Flax Max DLX®, Prestige® Attain® Tordon®	Carryover is worse under dry conditions. Not subject to soil pH.	Can cause excessive swelling of stems.

Soil samples can be submitted to Alberta Research Council (Sandi Checkel) for herbicide bioassay testing at a cost of \$150 per sample. Herbicide bioassays use specific plant species to detect herbicide residues in soil. Plants can detect herbicide residues at concentrations far below the detection limits of soil chemical analysis. Both sensitive and target crops are grown and the development and/or symptoms are recorded. The bioassay results should always be used with current soil pH, organic matter and precipitation data to determine how high your risk of crop injury may be. For more information contact Sandi at (780) 632-8217 or sandi@arc.ab.ca.

**Peas Harvest Samples Needed –
CGC Harvest Survey Serves a Dual Purpose**

An extensive program to define the nutrient content of the major feed ingredients used in western Canada is underway at the University of Alberta. It is being performed so that the feed industry and growers have a better understanding of what these products, including peas, barley and wheat, are worth nutritionally and financially. The researchers are currently at the stage of developing tests that can rapidly and cheaply determine the nutritional quality of peas; however, they require samples with a wide range of nutrient levels in order to make this possible. Pea samples have proven especially challenging to source because two pea samples that look identical may be very different nutritionally, while samples from different grades may be nutritionally identical! Therefore, ACIDF has asked the Canadian Grain Commission to scan the samples collected in the Harvest Survey program, identify the samples most likely to be nutritionally unique, and to contact producers to see if they would be willing to sell a larger amount to the researchers.

This cooperative approach with the Canadian Grain Commission is exciting not only because it promises to be the most cost-effective way to identify and collect samples for the ACIDF project, but also because it holds the promise of reducing costs for future grower-funded research in peas and other crops. Please support this project by either submitting samples in the Canadian Grain Commission Harvest Survey envelopes prior to November 1/09, or by adding your name to the Harvest Survey sample list at: <https://grainscanada.gc.ca/wa-aw/hss-eri/nu-nu/newuser-nouvelutilisateur-eng.as>.

Coming Events:

Mark your calendar for the upcoming Zone Annual General Meetings and other upcoming events, where you could win admission to Farm Tech!

Agri-Trade 2009

November 11 – 14

9 am – 5 pm daily

Westerner Park, Red Deer

Zone 1 December 7, 2009

Time: 9:30 am Registration

Luigi's in Taber

Contact: Elizabeth Tokariuk

403-345-6550

email: conservation@platinum.ca

Zone 4 December 4, 2009

Time: 9:30 am Registration

Sexsmith Civic Centre

In Cooperation with Alberta Canola

Producers Commission

Contact: Linda Schmidt 780-836-2107

Zone 2 November 16, 2009

Time: 9:00 am - 4:00pm

Three Hills Community Hall

In Cooperation with Alberta Barley

Producers Commission and Alberta

Canola Producers Commission

Contact: Gerry Good 403-337-2212

Zone 5 November 17, 2009

Time: 9:00 am-4:30 pm

Vegreville Social Centre

In Cooperation with the Alberta

Canola Producers Commission

Contact: Wayne Wascherol

780-853-9467

Zone 3 November 18, 2009

Time: 11:30-4 Includes Lunch

Westlock Legion Hall

Contact: Cliff Cyre 780-349-4775

Alberta Pulse Growers Commission Annual General Meeting

1:00 pm, January 28, 2010

Mayfield Hotel Inn, Edmonton

Contact APG office for details

780-986-9398

1-877-550-9398

Previous PAN Bulletins

View Previous PAN Bulletins at:

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

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