



Over 50% of Alberta fields have herbicide resistant wild oats

CATEGORY [weeds](#) | Feb 13, 2019

Wild oat resistance has increased over three surveys conducted since 2001. In surveyed fields where wild oats were found, Group 1 wild oat resistance increased in Alberta from 11% in 2001 to 58% in 2017.

In 2017, 247 fields were randomly surveyed across Alberta prior to harvest. Weed seeds were collected and screened for herbicide resistance by Agriculture and Agri-Food Canada, Saskatoon.

Grassy weed resistance

In the 176 fields surveyed where wild oat was present:

- Wild oat from 102 fields (58%) were resistant to Group 1 herbicides.
- Wild oat from 71 fields (40%) were resistant to Group 2 herbicides.
- Wild oat from 51 fields (29%) were resistant to Group 1 + 2 herbicides

Table 1: Wild oat resistance (% of fields where wild oat was found) over time and in comparison to similar surveys in Saskatchewan and Manitoba

Herbicide Group	Alberta 2001	Alberta 2007	Alberta 2017	Saskatchewan 2014/5	Manitoba 2016
	(% of fields where found)				
Group 1	11	39	58	59	78
Group 2	13	12	40	32	43
Group 1+2	3	8	29	25	42

Source: Beckie et al.

Green foxtail resistant to Group 1 herbicides was reported in seven of the 33 fields where green foxtail was found (21%), compared to two fields in 2007.

Green foxtail resistant to Group 2 herbicides was found in two of 33 fields sampled (6%) – the first confirmed reports in Alberta.

In 2017 no resistance was detected in barnyard grass.

Group 2 broadleaf weed herbicide resistance

Broadleaf herbicide resistance continues to grow in Alberta. For the first time, a Group 2 resistant lamb’s-quarters population was confirmed in Alberta in the survey.

Table 2: Broadleaf herbicide resistance to Group 2 herbicides

Species	% in 2017	Number of fields where found	% detected 2007
Lamb’s-quarters	3	34	0
Chickweed	40	15	40
Cleavers	44	39	17
Narrow-leaved hawk’s beard	29	7	0
Shepherd’s purse	18	28	0
Pale smartweed	62	8	0
Spiny annual sow-thistle	36	11	100
Stinkweed	16	50	0

Source: Beckie et al.

In 2017 no resistance was detected in: flixweed, hemp nettle, redroot pigweed, or wild buckwheat. However, herbicide resistance was previously confirmed in hemp-nettle (Group 2 and Group 4).

The 2017 Alberta weed survey clearly shows that herbicide resistance continues to increase. Agronomists and growers need to use integrated weed management practices to limit the impact and growth of herbicide resistance.

