### Herbicide options to control glyphosate resistant weeds in soybean, winter wheat and corn.

Mike Cowbrough, OMAF/MRA (Guelph)

The following is a summary of trial data collected by the University of Guelph, Ridgetown Campus where they evaluated the control of glyphosate resistant Canada fleabane and giant ragweed.

#### **SOYBEANS**

**Table 1:** Control of glyphosate resistant Canada fleabane and giant ragweed in soybean with pre-plant herbicides that were tank-mixed with glyphosate

| Tank-mix partner with glyphosate | Rate                            | Canada fleabane control | Giant ragweed control |
|----------------------------------|---------------------------------|-------------------------|-----------------------|
| Metribuzin (e.g. Sencor)         | 600 g/ac                        | 98                      | 64                    |
| Eragon + Merge                   | 14.4 g/ac + 1% v/v              | 96                      | 76                    |
| Integrity + Merge                | 150 mL/ac + 1% v/v              | 96                      | 63                    |
| Amitrol 240*                     | 3.3 L/ac                        | 93                      | 92                    |
| Broadstrike RC                   | 35 g/ac                         | 91                      | 49                    |
| FirstRate + 28% UAN+ Agral 90    | 17 g/ac + 2.5% v/v + 0.25% v/v  | 87                      | 84                    |
| 2,4-D Ester (660 g/L)*           | 320 mL/ac                       | 85                      | 98                    |
| FirstRate + 28% UAN+ Agral 90    | 8.5 g/ac + 2.5% v/v + 0.25% v/v | 82                      | 77                    |
| Chlorimuron (e.g. Classic)       | 9 g/ac                          | 81                      | 49                    |

<sup>\*</sup>must be applied 7 days prior to planting soybeans

#### **WINTER WHEAT**

**Table 2:** Control of glyphosate resistant Canada fleabane and giant ragweed in winter wheat with post emergent herbicides.

| Product                     | Rate                  | Canada fleabane control | Giant ragweed control |
|-----------------------------|-----------------------|-------------------------|-----------------------|
| 2,4-D Ester (660 g/L)       | 520 mL/ac             | 94                      | 97                    |
| Infinity                    | 330 mL/ac             | 92                      | 83                    |
| Dichlorprop/2,4-D (610 g/L) | 480 ml/ac             | 90                      | 92                    |
| Trophy A + Trophy B         | 240 mL/ac + 450 mL/ac | 88                      | 90                    |

#### **CORN**

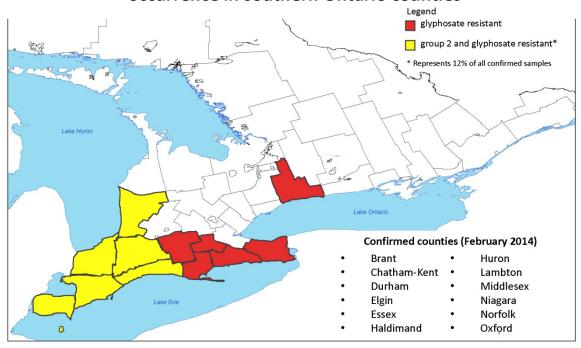
**Table 3:** Control of glyphosate resistant Canada fleabane and giant ragweed in corn with post emergent herbicides.

| Product                       | Rate                             | Canada fleabane | Giant ragweed |
|-------------------------------|----------------------------------|-----------------|---------------|
|                               |                                  | control         | control       |
| Marksman or Propero           | 1.8 L/ac                         | Excellent       | 92            |
| Banvel II or Oracle           | 500 mL/ac                        | Excellent       | 86            |
| Distinct + Agral 90 + 28% UAN | 115 g/ac + 0.25% v/v + 1.25% v/v | Excellent       | 82            |

#### References:

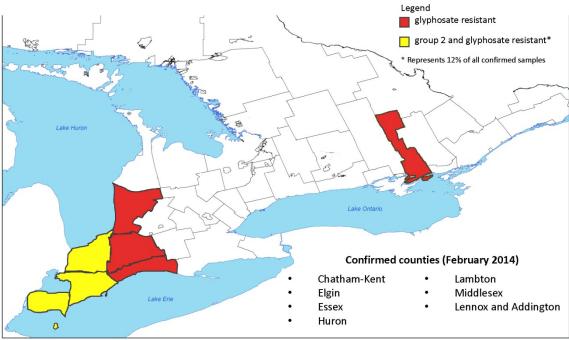
- 1. Byker et al. Can. J. Plant Sci (2013) 93(4): 659-667
- 2. Follings et al. Agricultural Science (2013) 4(4): 195-205
- 3. Vink et al. Can. J. Plant Sci (2012) 92(5): 913-922

## Herbicide resistant Canada fleabane occurrence in southern Ontario counties



Source: Dr. Peter Sikkema, University of Guelph Prepared by: Mike Cowbrough, OMAF/MRA

# Herbicide resistant giant ragweed occurrence in southern Ontario counties



Source: Dr. Peter Sikkema, University of Guelph Prepared by: Mike Cowbrough, OMAF/MRA





**CANADA FLEABANE** 





**GIANT RAGWEED**