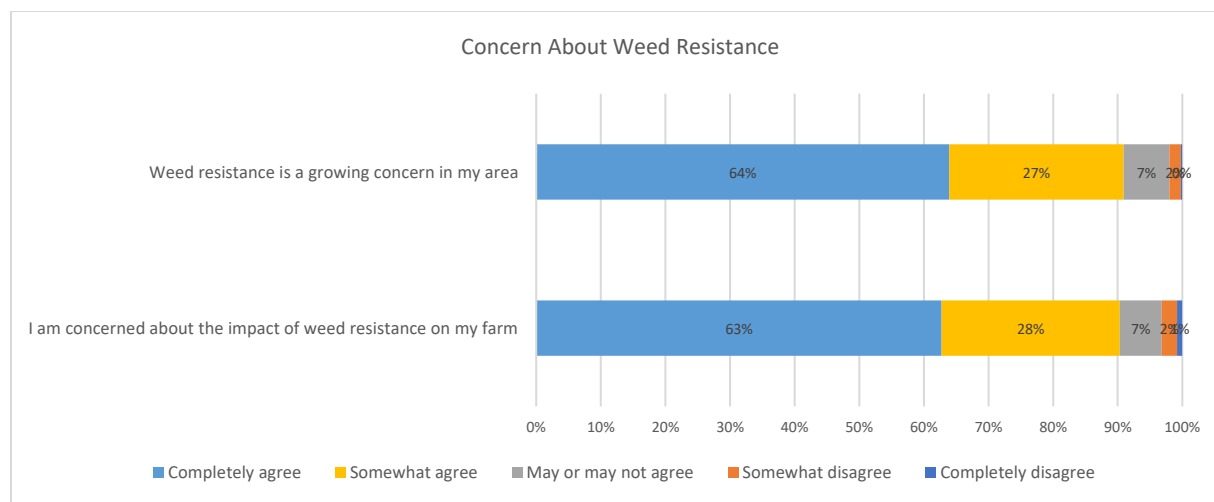


Weed resistance poses an immense challenge to yields and results in increasing costs for growing a crop. Farmers can manage weed resistance through various strategies, including rotating crops, using a diverse set of herbicides with different modes of action, integrating non-chemical control methods into their weed control programs, and carefully monitoring their fields for signs of resistance. The reality is that winning this battle with weeds is an ever-evolving challenge.

To learn more about this important topic, Nufarm partnered with RealAgristudies and conducted a survey with Canadian farmers through the RealAgristudies Insights Panel. The survey was conducted from June 22 – 27, 2023. There were 610 respondents that participated in the survey resulting in a degree of accuracy of +/- 4 % with 95% confidence.

In total, over 91% of farmers indicate that weed resistance is a growing concern in their area and the same amount indicate they are extremely concerned about the impact of weed resistance. **(Fig. 1)**

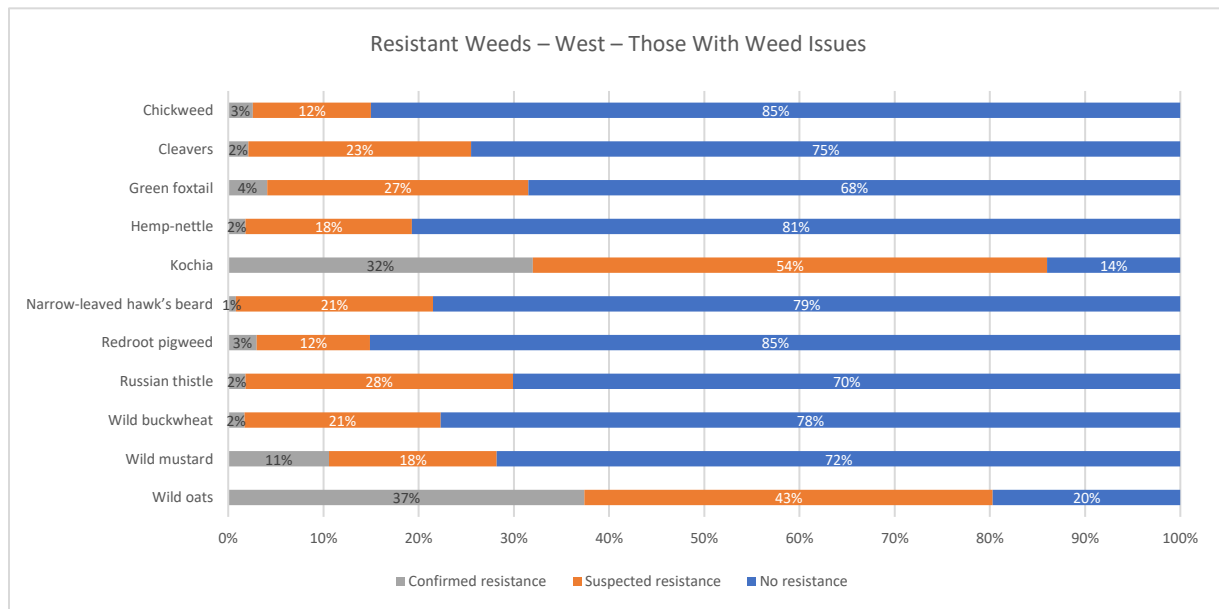
**Fig. 1 – Level of Concern About Weed Resistance**



The survey examined which weeds were of most significance with respect to resistance. Respondents were presented with a list of weeds relative to their geography and asked whether they had confirmed, suspected, or no resistance.

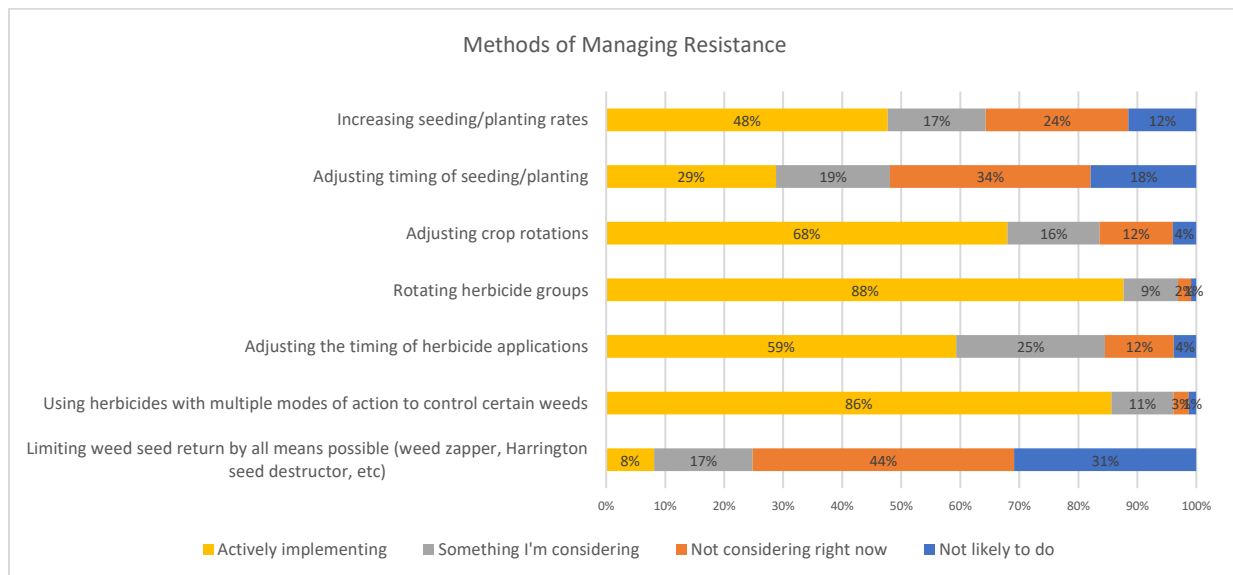
In Western Canada, 37% of respondents indicated they had confirmed resistance of wild oats, with 43% suggesting they had suspected resistance. This was followed by kochia, for which 32% indicated they had confirmed resistance and 54% had suspected resistance. Green foxtail, Russian thistle, and wild mustard were also commonly identified as having confirmed or suspected resistance.

**Fig. 2 – Western Canadian Resistance**



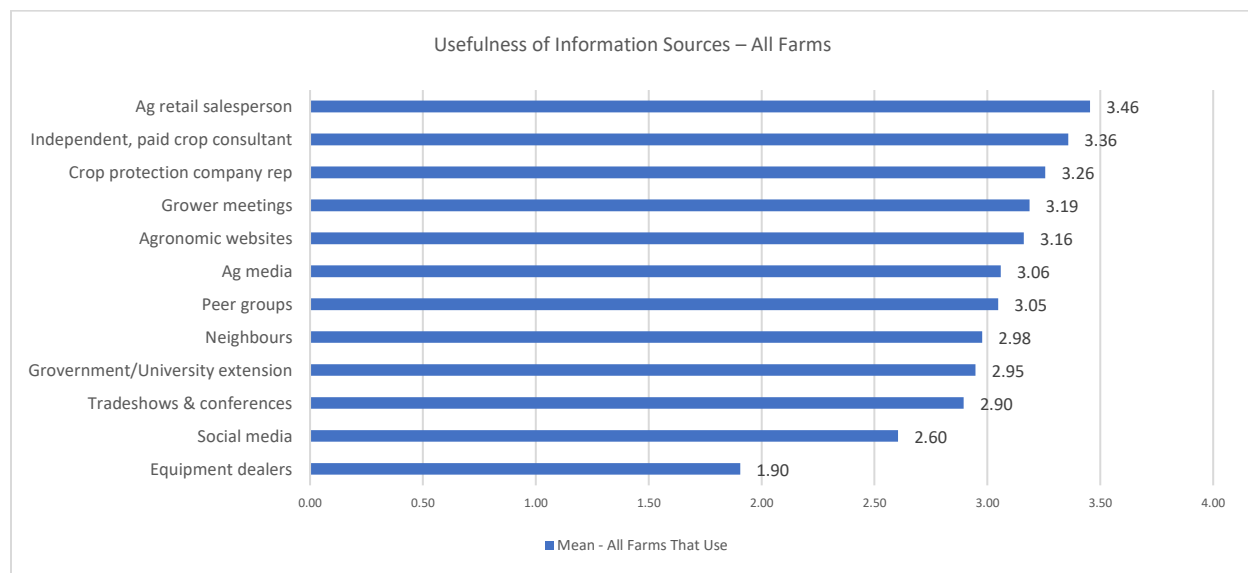
The most common method of managing resistance was adjusting chemical rotation with 88% of farmers indicating they were actively implementing this practice. The second most common method was using herbicides with different modes of action. Adjusting crop rotations and adjusting timing of herbicide applications were also identified as common methods of managing resistance. The least common practice involved using mechanical methods of control, like weed zappers and weed seed destructors, with 76% of respondents indicating it wasn't something they were considering or would not likely ever do. **(Fig. 3)**

**Fig.3 – Methods of Managing Resistance**



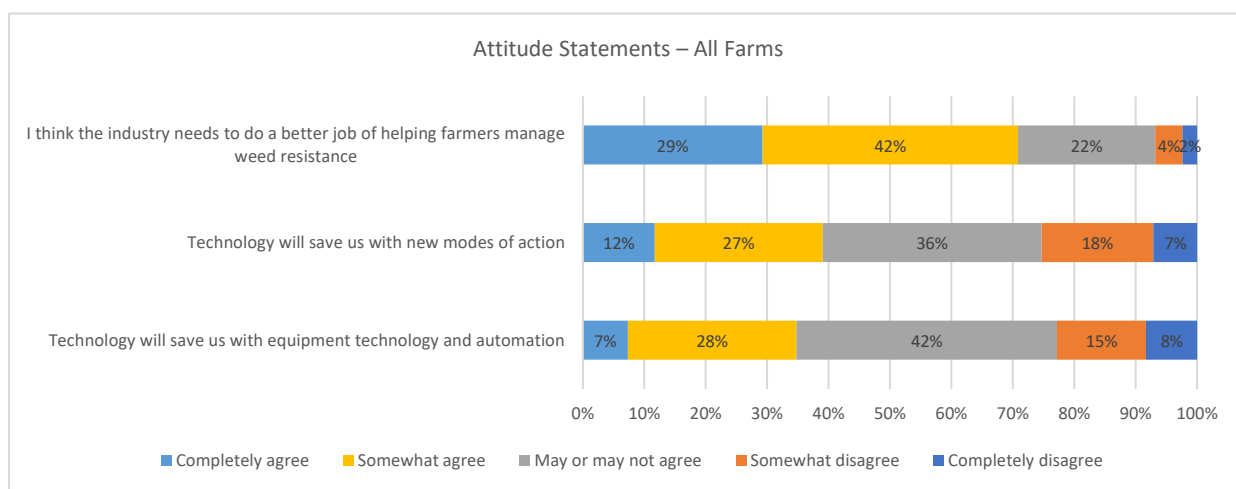
When it came to gaining knowledge on how to manage weed resistance, the most useful source of information was the ag retail salesperson, followed by crop protection company representatives. Grower meetings were also considered useful as were agronomic websites and ag media. Although fewer number of farmers participated in peer groups or used independent crop consultants, those that did utilize these resources found them to be very useful. (Fig. 4)

**Fig. 4 – Usefulness of Information Sources**



In the end, most farmers agree that the industry needs to take this issue seriously and help farmers better manage weed resistance, however less than 40% agree that technology in the form of modes of action or equipment would be the answer. (Fig. 5)

**Fig. 5 – Industry's Response to Combatting Resistance**



Questions regarding this study may be directed to Justin Funk of RealAgristudies (email: [jrfunk@agristudies.com](mailto:jrfunk@agristudies.com))