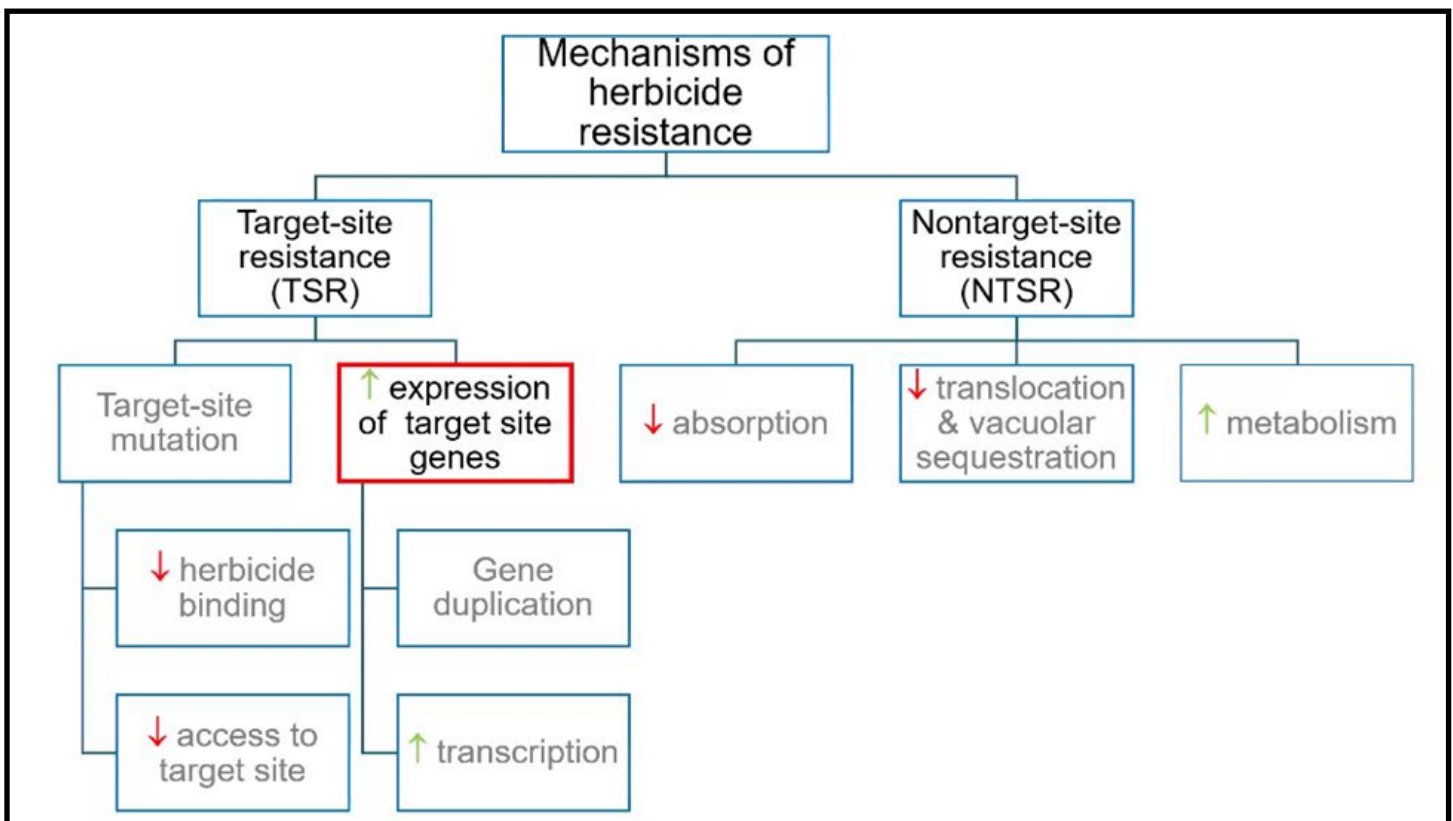


HERBICIDE RESISTANCE

Every year, it seems like we add new products to the ever expanding list of herbicides that have developed resistance issues. This year, that new herbicide active ingredient is pyroxasulfone, a Group 15 chemical that has recently shown wild oat resistance, primarily in southern Saskatchewan. This is not the first Group 15 wild oat chemical on the list, as Triallate (Avadex), which has been known to have resistance issues for many years, had its classification changed from Group 8 to Group 15 in 2021, but we can now add brand named products such as Authority Supreme, Fierce & Focus to the list. What is truly disturbing is that these products are neither widely used, nor have they been used in Prairie cropping systems for very long – hammering home the point that we are never going to spray our way out of weed resistance issues.

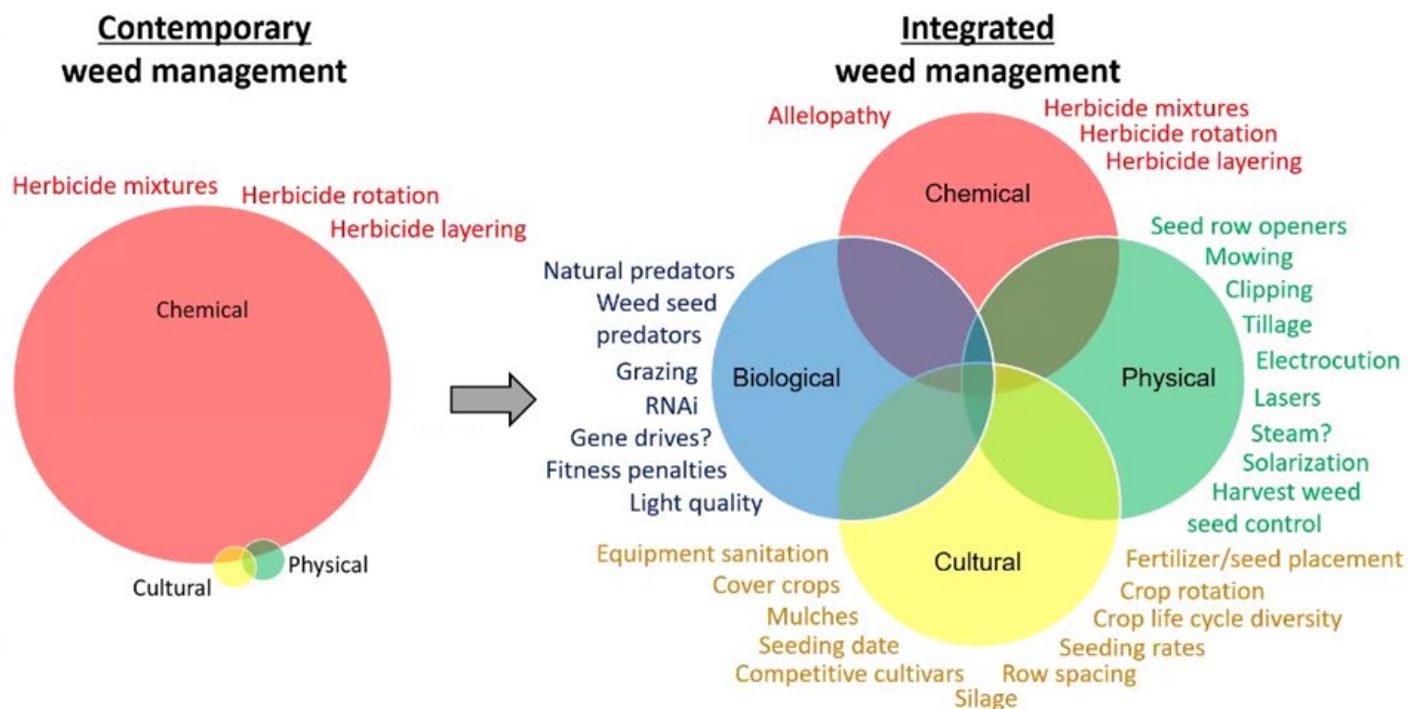
Last January, I went into some detail on different ways weeds can develop resistance to herbicides, so I won't repeat all that. But, by way of a summary, here is a slide taken from a recent presentation by Dr. Charles Geddes from Agriculture & Agri-Food Canada that outlines the two main pathways – target site and non-target site resistance.



Of the two mechanisms, non-target site resistance is the most concerning. In this pathway, resistance happens over time as a result of repeated exposure to sub-lethal doses of herbicide. The weeds develop mechanisms to either divert the herbicide's active ingredient from reaching the target site or metabolizing it before it can effectively inhibit the weeds' growth. This gives a weed population a mechanism for developing cross resistance; dealing with herbicides of more than one group at a time. This pathway also makes it possible that populations may successfully resist herbicide groups they have never been exposed to before, or even ones yet to be discovered.

For the most part we presently deal with herbicide resistance through chemical rotation, layering applications, or mixtures of herbicides with multiple modes of action. According to Dr. Geddes, until future strategies decrease dependency on chemicals, and incorporate physical, biological and cultural practices that would truly give us an integrated weed management plan, resistant weeds will continue to be an ever increasing problem, robbing yield and profit from your farm.

Need for IWM



Wayne Spurrill
P. AG

Agronomist

**BATTLE
RIVER**
IMPLEMENTS LTD.

Camrose Store: (780) 672-4463
Cell: (780) 679-8225
email: wspurrill@briltd.com

www.briltd.com
Toll Free: (877) 913-3373

Camrose • Killam • Provost • Wainwright