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MANAGING HERBICIDE-RESISTANT WEEDS IN THE PACIFIC NORTHWEST

Best Management Practices (BMPs) to manage herbicide-resistant weeds are critical to the long-term sustainability of wheat production in the Pacific Northwest. Using BMPs are the most effective way to manage weeds, including herbicide-resistant weeds, especially when incorporated into a long-term weed management plan.

Start clean!

- Plant into weed-free fields and keep them weed-free.
- Plant weed-free crop seed.
- Understand weed biology, particularly timing of seed germination, seed dormancy, and seed longevity.
- Prevent field-to-field and within-field movement by starting equipment usage in weed-free areas and by cleaning equipment after use.
- Control weeds in borders to prevent weed influx into the field.

Stay clean!

- Scout fields routinely, and closely monitor the outcome of herbicide treatments. The sooner problems are detected, the better the chance you can adjust your management strategy.
- **Use multiple herbicide mechanisms of action (MOAs) that are effective on troublesome or herbicide-resistant weeds.**
- Follow the herbicide label – use the correct rate at recommended weed sizes.
- Diversify weed management practices – prevent weed seed production and reduce weed seeds in the soil seed bank.
- Use crop competitiveness and other cultural management strategies, including crop rotation.
- Use mechanical management practices, as needed.
- Manage weed seed during and after harvest to prevent weed-seed bank buildup.
- Know and understand the effects of the weed management inputs on *each weed species*.

HERBICIDE RESISTANT WEEDS IN THE PACIFIC NORTHWEST

** Although there are no known herbicide resistant Canada thistle in the PNW, it is a critical export contaminant.*

If weeds are present after application, determine the reason! *Consider the following:*

- **Field History – has the treatment worked before?**
- **Weed Biology – were weeds present at application?**
- **Environment – weather conditions for herbicide activity?**
- **Application Problems – are there clear patterns?**
- **Crop Cultural Practices – is the crop vigorous?**
- **Herbicide Resistance – seek support for suspected herbicide-resistant populations!**

Seek support!

Contact your local cooperative extension office for help creating a weed management plan or if your current plan is ineffective, or see EM108: Advances in Dryland Farming in the Inland Pacific Northwest, Chapter 9, for an approach to creating such a plan.

EM108

Stay informed! Visit the resource pages of the respective universities:
UIdaho: extension.uidaho.edu/crops.aspx; OSU: agsci.oregonstate.edu/cbarc/weeds; WSU: smallgrains.wsu.edu
to stay current with developments in herbicide resistance and resistance management in the region.
For specific questions or concerns, contact the WSU Weed Science Team (509.335.1719; smallgrains@wsu.edu).