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.

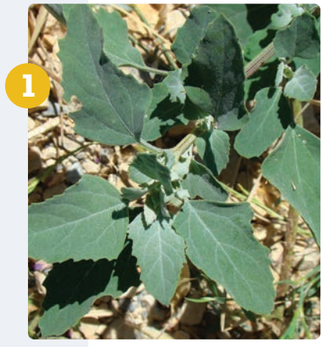
Using BMPs is the most effective way to address herbicide-resistant weeds, especially when incorporated into a long-term weed management plan.

Herbicide-resistant weeds in the Pacific Northwest

1. Common Lambsquarters
2. Downy Brome (Cheatgrass)
3. Italian Ryegrass
4. Kochia

Photo courtesy of WaNWCB.

5. Mayweed Chamomile
6. Prickly Lettuce
7. Russian Thistle
8. Tumble Mustard



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.
- Use crop competitiveness to suppress weeds.
- Diversify weed management practices - prevent weed seed production and reduce weed seeds in the soil seed bank.
- 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 you apply on each weed species.

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 (bit.ly/EM108ch9).

Stay informed! Visit the Herbicide Resistance Resources page of the WSU Wheat and Small Grains Website (bit.ly/wsu-herbres) to stay current with developments in herbicide resistance and resistance management in the region.

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