



Quarterly newsletter

This newsletter is designed to keep you updated on the latest information regarding resistance management. In this edition, we highlight the importance of preparing for resistance management before going into the field, showcase a new infographic on herbicide-resistant waterhemp and share the latest news and promotional materials.

We appreciate your support in sharing information to raise awareness of pest resistance and promoting the valuable resources available on the [Manage Resistance Now website](#). We welcome your suggestions for additional resources that would be helpful for you, your stakeholders, and Canadian growers.

Suggest a resource

Featured case studies



Dan Petker, Petker Farms Limited
Port Rowan, ON



Tracey Baute, Field Crops Entomologist
Ontario Ministry of Agriculture, Food and Rural Affairs

Ready for the season?

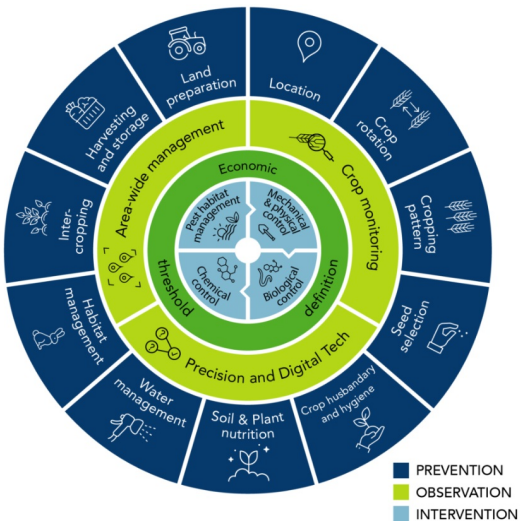
Planting and seeding are complete, so now it's time to sit back and watch the crops grow. Well, not quite, because it's not just crops growing – weeds and pests are thriving this time of year, too.

Keep pest resistance in check with these helpful post-emergence control tips reminders:

- Implement timely herbicide and/or pesticide applications as needed
- Rotate modes of action to avoid developing resistance
- Spot-treat areas of high weed or pest pressure
- Consider biological controls (natural predators or parasites) where appropriate
- Encourage beneficial insects to help with pest control

For more info, check out these resources:

- [Promoting healthy plants and evaluating the need for disease control](#)
- [How to manage herbicide resistance in your fields](#)
- [Follow insecticide best practices](#)



Don't forget to:

Practice Integrated Pest Management (IPM) - Slow the development of pest resistance by implementing a combination of cultural, biological, and mechanical controls to your crops. This can include harnessing the power of beneficial insects to support their populations in and around your fields. [Read this factsheet](#) to learn more about managing insect resistance with IPM.

Scout fields regularly – Monitor pest population growth weekly, including diseases, insects and weeds. Always be on alert for new or emerging resistance issues. Remember, [ManageResistanceNow.ca](#) is your go-to resource for information about

resistance issues and concerns.

New resource available

Waterhemp is one to watch. This annual weed is rapidly spreading across Canada, growing in fields and resistance to herbicides. In fact, most waterhemp found in Canada is resistant to two or more herbicide modes of action – and up to five modes of action in Ontario and Quebec.

Check out our latest factsheet – [Managing Herbicide-Resistant Waterhemp](#) – to learn more about how to identify this problem weed, best practices for managing herbicide-resistant waterhemp and what to do if you suspect or identify herbicide-resistant waterhemp in your field. French version coming soon!

MANAGE RESISTANCE

Protect your land, one field at a time

MANAGING HERBICIDE-RESISTANT WATERHEMP

WHY IT'S IMPORTANT

Waterhemp (*Amaranthus tuberculatus*) is a non-native annual weed rapidly spreading across Canada. Currently found in Ontario, Quebec, and Manitoba, waterhemp prefers moist or wet conditions with full or partial sun, similar to many economically important crops.

WHY WATERHEMP IS A PROBLEM

- Resistant to herbicides** – Most waterhemp in Canada is resistant to at least one herbicide mode of action, with multiple resistance common.
- Becomes resistant quickly** – Waterhemp can evolve resistance in three cycles of selection (by the same herbicide(s)) due to its extensive genetic diversity.
- Has a large emergence window** – From spring to early autumn.
- Fast growth** – 2.5 - 4 cms per day.
- Produces millions of long-lasting seeds** – Can produce up to 4.8 million seeds per female (300,000 - 1 million under the crop canopy), rapidly increasing the soil seed bank. Seeds become viable as soon as seven days after pollination and can persist in the soil for about eight years.
- Spreads easily** – Seeds are small (<1 mm), facilitating spread through the movement of plants, farm equipment, migratory animals and birds.

DEVELOPING HERBICIDE RESISTANCE

Waterhemp is dioecious (separate male and female plants), which contributes to high genetic diversity and rapid herbicide resistance development. As a member of the *Amaranthus* (pigweed) family, it resembles related species, including redroot pigweed, green pigweed and Palmer amaranth and may hybridize with other pigweeds. Hybrid pigweeds may inherit herbicide resistance from one or both parents and have mixed morphology making it even more difficult to identify species. See the [Palmer amaranth fact sheet](#) for identification help.

DETECTIONS IN CANADA

Most waterhemp found in Canada is resistant to two or more herbicide modes of action – and up to five modes of action in Ontario and Quebec.

Canadian Society for Horticultural Science & Canadian Society of Agronomy Annual Conference

CropLife Canada attended the joint meeting of the Canadian Societies of Agronomy of Horticulture Sciences from June 23 to 26, 2025. This conference brought together Canadian and international experts in various fields of crop sciences including plant breeding, soil health, plant biology and agronomy.



Cherry trees in a cooling facility before planting. Canada dominates the late cherry market thanks to its late season harvest varieties.

The event provided an excellent platform to connect with industry experts and scientific leaders to discuss best management practices for farmer and grower engagement to instill a culture of proactive resistance management and how the scientific community can engage in public consultations to ensure that science is taken into account in public policy and regulations.

[Click here for more event details](#)

Resource spotlight

Looking for more info on resistance management? Check out these links:

[Top Considerations of Early Season Weed Control in Cereals](#) – featuring nine considerations for early season weed control for cereal crops

[Canola Encyclopedia: Weed Management](#) – herbicide-tolerant tips for canola

The Canadian Plant Health Council’s (CPHC) Weeds Surveillance Community of Practice (WSCP) has focused on developing tools and resources to coordinate and facilitate national surveillance of *Amaranthus* species in Canada.

Their harmonized surveillance protocol includes guidelines for field scouting,



Photo credit: Manitoba Crop Alliance



Recommended reading

- [Superweeds: the Canadian prairie experience with herbicide resistant weeds](#)
- [A combination of planting timing and herbicide choice could help fight waterhemp in soybeans](#)
- [Kochia’s expanding herbicide resistance puts pressure on no-till systems](#)
- [What would happen if Roundup disappeared?](#)
- [Farmers, don’t get trapped by herbicide resistance](#)
- [Herbicide resistance across the Prairies](#)
- [DNA Analysis is the modern approach to early identification of resistant weeds](#)

Media kit

Download engaging content and shareable resources [here](#)!

If you would like to request hard copies or French resources, please [contact us](#).



Do you have content ideas, upcoming events or other resources to share? Contact the [**Manage Resistance Now Team**](#) with feedback and questions.

Upcoming events

Mark your calendar to attend these industry events:



Ontario Soil and Crop Improvement Association – Summer Farm Day & Tour

August 22, 2025
Stayner, Ontario

Sponsored in part by Manage Resistance Now, this event will include a presentation on program initiatives and grower resources. This event will enable us to showcase the resources available to growers, discuss best practices for knowledge transfer and to share more about the resistance management resources to growers and interact with our MRN partners.

[Click here for more information](#)

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Please feel free to share this newsletter with colleagues in your organization. If you have colleagues who would benefit from these updates, please email the [Manage Resistance Now](#) team to have them added to the distribution list.

