

# Answers to Your Weed Resistance Testing Questions

Testing for herbicide resistance can help determine which herbicides will provide effective weed control.

"Weed resistance testing is extremely important when it comes to selecting herbicide programs and trait platforms you can utilize for years to come," says Kelly White, U.S. Product Manager, Corn Herbicides, Corteva Agriscience.

White spent her time as an undergraduate student working for Michigan State University's Department of Plant, Soil and Microbial Sciences. As a research assistant, she was able to help students seeking master's degrees and doctorates with their research projects and was introduced to a vast amount of research on weed resistance management.

Sending a seed into the lab for testing may seem like a daunting process and you likely have questions about how it works. We sat down with White for a Q&A about testing weeds for herbicide resistance.

**Q:** *Why do you recommend sending in any weed samples that are suspected of being resistant?*

**A:** Farmers that suspect they have resistant weeds can send their samples in to ensure they are implementing the correct management programs. This also helps university extension programs understand where resistance may be spreading throughout the region.

**Q:** *What can farmers expect when they send weeds to a laboratory? What does the process entail?*

**A:** To screen for resistance, seeds are cleaned from dried plant material, treated for dormancy, grown in the greenhouse and treated with up to seven different herbicides. Herbicides are screened based on the species, cropping system, suspected resistance and quantity of seedlings.<sup>1</sup>

Mature, high-quality seed or seedheads should be collected from suspicious plants in the late summer or fall. Pooled samples with seed/seedheads from five or more plants will ensure adequate seed quantity.<sup>1</sup> Consult your local lab website to obtain specific information on packaging and shipping best practices for that specific testing location.

**Q:** *How long does it take to get results?*

**A:** Resistance screening can vary from a few weeks to a few months, depending on the individual weed species being examined, the modes of action being screened and the methodology of the screening process.

**Q:** *How can the information provided from the lab be used to improve weed control strategies?*

**A:** Test results will give farmers important knowledge about resistance or tolerances throughout their farm. They can then use different trait platforms, herbicide programs and cultural practices to better manage any resistant weed species.

**Q:** *Are there any common misconceptions about weed testing?*

**A:** Weed resistance can spread in multiple ways, from biological methods to wildlife migration, along with the use of equipment on multiple farms. Weed resistance on a farm is not a result of poor management, but it's important for farmers to equip themselves with the knowledge and resources to tackle difficult weeds moving forward.

For more information on weed testing options in your area, contact your local Corteva Agriscience representative or university extension agent.



<sup>1</sup> MSU Plant & Pest Diagnostics. Michigan State University. Accessed August 29, 2023. <https://www.canr.msu.edu/pestid/index>.

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