

Reducing Weed Seed Transfer at Harvest

Planning prior to harvest can help reduce the potential to spread weed seed during harvest, thus reducing the seed bank and the spread of hard-to-control or herbicide resistant weeds to new fields.

Proactive Weed Management

- Implement an effective weed management program that includes tactics during harvest.
- Allows for managing weeds before they become a problem in a field.
- Effective programs will provide season-long weed control and prevent weeds from producing seed that can be dispersed.

Fall harvest is an important time to evaluate weed management programs. The location of weedy areas should be documented at harvest to help develop a weed management plan for the following season. Scout fields prior to harvest, note the location of problematic weeds, and take steps to minimize the transfer of weed seeds.

Identify Weed Fields and Prioritize Harvest Schedule

Scattered weeds in fields could be removed prior to harvest and before they drop mature seed (Figure 1). A planned harvest order of fields can help to avoid the spread of weeds to un-infested fields.

- Harvest fields that are clean of weeds first, and harvest the weedy fields last. This is especially important if herbicide resistant weeds are suspected and not present elsewhere on the farm.
- If necessary, combine around heavily infested weedy areas in a field. Leaving large patches of weeds to remain in a field can help to reduce the amount of weed seed spread throughout the rest of the field.
- In summary, leaving the weediest fields for last helps to make harvesting operations more efficient and can be the best practice to minimize the spread of weed seed.



Figure 1. Weed escapes scattered throughout a field could be removed or "hand-rogued" prior to harvest before weed seed matures and drops in the field.

Reducing Weed Seed Transfer at Harvest (continued)

Clean Harvest Machinery

Weed seed can be dispersed within and between fields by all harvesting equipment.

- Prior to the first harvest, thoroughly clean all equipment including combines, tractors, trucks, wagons, augers, and tarps. Weed seeds can travel on tractor tires as well as on the combine.
- During harvest, equipment should be cleaned prior to moving to another field to help minimize the spread of weed seed (Figure 2). The most common and efficient methods of cleaning equipment include vacuuming, sweeping, and using compressed air or water. A limited cleaning procedure will generally take up to 30 minutes to perform in the field.
- For steps to conduct a limited cleaning, see [Recommended Procedures for a Between-field Combine Clean-out](#).¹ This procedure will help to reduce the quantity of weed seed moved from field-to-field by the combine. It will be more effective for removing large weed seeds like burcucumber than it will small weed seeds like Palmer amaranth. A more thorough, top-to-bottom cleaning of the combine can take up to 6 hours to perform and may not always be practical once harvest begins.² Consider thoroughly cleaning the combine after harvesting fields infested with weeds like Palmer amaranth, on rainy days, and again at the end of the season.



Figure 2. Clean combine especially after harvesting weedy fields.

Sources

¹ Anderson, M. and Hartzler, B. 2018. Harvest considerations to reduce weed seed movement. Iowa State University Integrated Crop Management. <https://crops.extension.iastate.edu>.

² Staton, M. and Sprague, C. 2017. Reducing spread of herbicide-resistant weed seed during harvest and tillage operations. Michigan State University. <http://msue.anr.msu.edu>.
Web sources verified 09/17/18.

Performance may vary, from location to location and from year to year, as local growing, soil and weather conditions may vary. Growers should evaluate data from multiple locations and years whenever possible and should consider the impacts of these conditions on the grower's fields. 130817013222 091718MJW