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Weed Seed Movement – a Wisconsin Case Study

There's been a lot of challenges in 2020, but one of the positives we saw (for the most part anyway...) was good weed control in field crops. Still, some weeds did survive, and that means the possibility that they've set seed and will give rise to more in the future.

Weed seeds that make it to maturity can also get spread to other locations. Migratory waterfowl are a known source. Feedstuffs with weed seeds gets moved from field to feeding area – and sometimes back again in manure. Soil left on equipment can move seeds, and combines are a big potential seed spreader – and one of the reasons for a University of Wisconsin study on weed seed movement potential from harvest equipment.

A link to full results can be found at our Meadowlark Extension District Crops & Soils page: <https://www.meadowlark.k-state.edu/crops-soils/index.html>, but here are a few highlights:

Samples (31) were collected from the combine head, feeder house, rock trap, and rotor area. Sample seeds were grown out and counted.

Viable weed seed was found in 97 percent of the samples.

Header samples contributed to 49 percent of the weeds emerged. The feeder house contributed another 30 percent.

Why is this important? Herbicide resistance occurs naturally in weed populations, and spreading weed seeds increases the chances of further herbicide resistance issues. Spreading may not be limited to your fields alone, as transport can dislodge seeds as well.

To help reduce the spread of weeds – and herbicide resistance – University of Wisconsin researchers recommend harvesting the cleanest fields first, moving to weedy fields as harvest progresses. In addition, make sure combines are cleaned thoroughly before moving from field to field. When time is limited, focus on the head and feeder house areas first.

It's been a pretty good year for weed control, but every seed counts. Make sure harvest operations aren't contributing to greater weed pressures in the future.

Garden Tillage Best Done in the Fall

It can be tempting to walk away from the garden at season's end without another thought. After all, we've already spent hours out there, and nothing is still growing. That's not the best approach for a successful start to 2021, however.

If you typically work your garden prior to the next crop, fall is the preferred time. Soils are typically drier – a better option to keep tillage from destroying soil structure. If we till in the fall and *do* happen to cause issues, freeze/thaw action in the winter typically helps correct them. Insect and disease pressure can be reduced by working garden debris under as well.

Fall tillage also can help you increase organic matter. Old debris is a good source of organic matter. Tree leaves, too. Incorporating organic matter now might even allow you a second chance to add more organic matter in the spring.

If organic materials are larger in size, mowing can help reduce their size, resulting in better breakdown. KSU Horticulture Specialist Dr. Ward Upham suggests adding two inches of organic material and tilling it in. Avoid overtilling, stopping when particles are the size of grape nuts – or larger (if you get to dust – you've gone too far...).

The growing season might be done, but 2021 is just beginning – plan to till soon.