

Weekly Article

Do You Know Your Herbicides?

3-2-2021

Hello, my Name is Richard Purdin with OSU Extension, Ag and Natural Resource Educator and Community Development Educator for Adams County. I hope to better inform local producers and the public of the latest news in the world of Agriculture. What a change we have experienced in the last 10 days, almost 50° swing in temperatures and even some glimpses of Spring. March looks like it is going to come in like a lamb with some above normal temperatures and unfortunately above normal precipitation. As the warm weather arrives, I have taken time to scout some winter wheat and other cereal grain cover crops to evaluate winter survival. For the most part the early planted wheat looks to be healthy and strong, some of the later planted what looks to have some water and cold injury. As I was scouting, I also evaluated winter annual weed growth and have noticed many of our friendly weed have survived winter quite well too. With that said today I want to explain Herbicide families and how some weeds have become resistant to many groups of herbicides.

Herbicides are placed into groups based on Mode of Action (MOA) or Site of Action (SOA). This is how the herbicide works within the plant to disrupt growth and eventually kill the target weed (this is the goal). There are many groups of Herbicides but today I want to focus on the groups that have become weak over many years of use and many of our hard to kill weeds have become resistant to. First and foremost the day of spraying one single herbicide such as glyphosate every year and maybe two to three times a year are over. Producers should be using an herbicide mix with several Modes of Actions.

- Glyphosate (Roundup) Group 9 herbicide EPSP SYNTHASE INHIBITOR, in simple terms glyphosate disrupts amino acids synthesis, is one reason why it takes about 7-10 days for glyphosate to kill a plant and better kills will take place during sunny and warm conditions because as the plant conducts more photo synthesis the better the chemical works. Currently there is about 17 weeds resistant to Glyphosate!
- Group 2 herbicides include Imidazolinone (pursuit), Sulfonylurea (beacon and many more). These herbicides also disrupt the amino acid synthesis process and are consider ALS inhibitors. There are a whopping 51 weeds that show resistance to these herbicides.
- Group 5 herbicides include the triazine family (atrazine and simazine) and urea family (lorox and lenex). These groups of herbicides directly inhibit the photosynthesis process of the plant. Therefore, most of these

herbicides cause yellowing or peaked color in the target plant. There are about 28 weeds that have shown resistance to these herbicides.

- Finally, is one group of herbicides that have been around a long time but have found a new fame with technologies like extend soybeans and enlist soybeans. Group 4 herbicides include the Phenoxy and Benzoic acid herbicides (2-4-D and Dicamba) These herbicides are growth regulators targeting synthetic auxins. Currently there are 10 weeds that show resistance. Remember to change up your herbicide program and use multiple Modes of Actions.

Some other details to go over:

- 2021 Fertilizer/Pesticide Private Applicators in person course is planned for March 9th at the Cherry Fork Community Center (gym) 5:00pm – 9:00pm. If you need recertified, you should get an invitation in the mail. (due to covid19 date is tentative and susceptible to change)
- March 15th is the deadline to sign up for the 2021 Farm Bill safety net programs including ARC-CO, PLC, and ARC-IC. If you have questions, give me a call, and call the FSA office to sign up at (937) 544-2033.
- CRP Grasslands signup will begin March 15th,2021 and conclude April 23rd,2021 contact the farm service agency for assistance in signing up for these programs.
- March 15th is the deadline to Purchase Noninsured Crop Disaster Program (NAP) coverage through the local Farm service Agency (FSA). This provide covers losses from natural disasters for crops not covered by federal crop Insurance. This includes spring planted specialty crops grown for food use. Contact the FSA office at (937) 544 -2033 opt 2 for details.
- Ohio Beef Expo is a go and yes, it is in person, March 17th -March 21st at the Ohio Expo Center in Columbus Ohio. Go to ohiobeefexpo.com to learn more.