



## Field Notes for The Week Of 1-2-2023

### Avoid Resistance In 2023

Happy New Year! 2023 has arrived and with it comes many challenges and opportunities as well. The last few days of 2022 felt more like spring with highs in the mid 50's and of course some precipitation to boot. Friday, December 30<sup>th</sup> brought steady soaking rains to the area, making mud season official for many livestock producers. 2022 wants to go out with a bang with a close to 60° F change in temperature in less than seven days. This has created quite a challenge for livestock managers not only to adjust their own bodies to the change but their livestock as well. I was able to talk to a few producers about their winter Bomb Cyclone experience, for the most part, many fared well with just a few setbacks such as frozen water hydrants and some slight wind damage. I was able to have a minor experience that I often heard from my father and grandfather about the blizzard of 1978, dad talked about breaking frozen silage off the side of the silo wall with an axe! If you are around me very much you will often hear me say that you must have a special frame of thinking to raise livestock and that was surely the case in the last couple of weeks. That is all water under the bridge now, time to look forward to 2023, and what better way to plan for a new year than to look at your current weed control and management plan (or do you have one?).

Weed resistance is one of the most looming challenges facing row crop and livestock farmers today. Weeds are simply plants that compete for critical plant nutrients such as water, sunlight, macro, and micronutrients. If weeds are allowed to become established and grow, they can eventually out compete for crops in turn having a detrimental effect on yields and your bottom line. Some weeds have become well known for their ability to outsmart some of us humans, some are even called smartweed! Weeds can become resistant to many herbicide control options that have become critical in producers' weed control management plans. Last fall I did my annual weed scouting project where I identified what weeds were present in many fields from the northern half to the southern half of the county. Some of the biggest concerns I took note of during my scouting efforts were the many populations of water hemp, palmer amaranth, common ragweed, johnsongrass, and fall panicum. Many of these weeds have shown resistance to many of our popular herbicides. Herbicide-resistant weeds are plants that acquire the heritable ability of a weed population to survive an herbicide to which it was previously susceptible in the past. This can also be referred to as selection pressure. Weeds can have multiple types of resistance such as single, this is when a weed is resistant to only one herbicide mode of action. Cross-resistance is when the weed is resistant to two or more herbicide families with the same mode of action. The last form is multiple herbicide resistance, this is when the weed is resistant to multiple herbicide families with different sites of action. Some steps you can take to break the weed-resistant chain in 2023 can be using an integrated pest management approach. IPM steps include scouting routinely, crop rotation, cover crops, soil fertility, mechanical, and use of multiple sites of action herbicides. Also delaying herbicide application closer to planting and weed emergence (critical for water hemp and palmer). Time is changing in weed control; the days of roundup cure-all approach are long gone! Have a safe and happy **WEED-FREE** New Year!

