



TO SPRAY OR NOT TO SPRAY... THAT IS THE QUESTION

In a dry growing season, the decision of when to spray existing weeds and layer additional residuals requires careful consideration. Water plays a vital role in activating herbicides and ensuring effective weed control. The amount of water required for herbicide activation varies depending on factors such as the specific herbicide formulation, weed species, and environmental conditions. Some herbicides can “reach back” or “recharge” on small annual weeds when rainfall occurs.

Single Active Ingredient Products	Precipitation Required for Activation
Metolachlor (Dual)	0.5 inches on coarse soils, 1 inch on fine textured within 2 days after application
Dimethenamid-P (Outlook)	Nothing about precipitation amounts mentioned
Acetochlor (Harness/Degree)	0.25 to 0.75 inches within 7 days after application
Pyroxasulfone (Zidua)	0.5 inches before weed emergence
Atrazine	Nothing about precipitation amounts mentioned
Isoxaflutole (Balance)	Most effective in controlling weeds when adequate rainfall is received within 14 days after application.

Layering Residual Herbicides

Most growers have come to understand that to achieve satisfactory weed control there is a need to layer residual products. As a rule of thumb, each inch of weed competition growth hurts soybean yields by 1 bushel per acre. It truly pays to keep weeds under control all season long. Heritage agronomists recommend products such as Warrant to provide longer season residual control of grasses and waterhemp species to name a few.

Utilizing tank mix tools

Ensure your residual herbicides selected are legal tank mix partners by checking [Xtendimax®](#) and/or [Enlist One®](#) website. Only certain products are approved through a spray analysis system that can be mixed with these products.

Selecting the right adjuvant

Adjuvants are an essential tank mix partner for effective weed control. But not all adjuvants work the same, so it's important to work with your Heritage agronomic advisor to choose the right products for your specific needs.

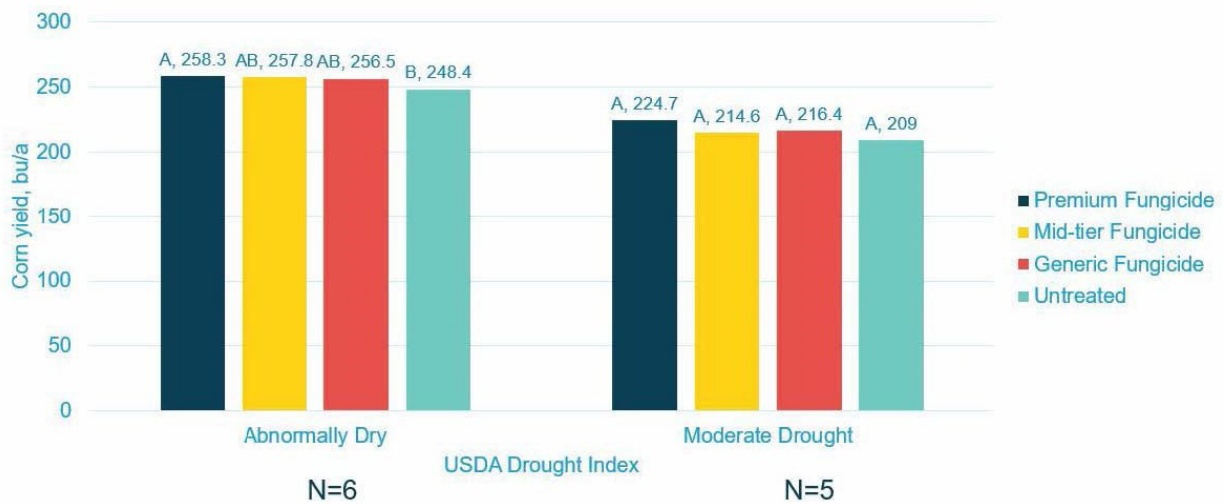


What About Stress?

Every grower will be different on how they want to invest in their crop as the dry weather persists. If history tells us anything it is that it repeats itself. What we mean by this is that growers who kept with their plans on making plant nutritional and fungicide applications during the last drought, in 2012, reaped the reward when the combine rolled through the field! Other tank mix partners that you can mix with early fungicide applications such as [Delaro](#) or [Protegam YLD](#) are stress mitigation products like Voyagro.

Two hybrids were tested along with 9 different treatments with an untreated in an Answer Plot Corn Performance Trial (CFP) from 2018-2020. As you can see from the slide below, regardless of what type of fungicide you used, any of the treatments protect more bushels than applying none at all.

Insights from CFP trial



Abnormally dry locations have short-term dryness and a Palmer Drought Severity Index (PDSI) between -1.0 and -1.9 whereas Moderate drought will have some damage to crops and pastures with a PDSI between -2.0 and -2.9. Drought classification of the locations during Mid-July were used to determine the level of drought at the Answer Plots. Abnormally Dry locations include the following 2020 corn fungicide performance trial Answer Plot dryland sites: Attica, OH, Enderlin, ND, Fennimore, WI, Pleasant Plains, IL, Washington, IA, and Watertown, SD. Moderate Drought locations include the following corn fungicide performance trial Answer Plot dryland sites in 2018: Edgeley, ND, Springfield, IL, and Warner, SD and the following locations in 2020: David City, NE and Washburn, ND. Different letters indicate statistically significant differences at $p < 0.10$.

Ultimately, a well-informed and balanced approach is crucial to strike the proper weed control in dry growing seasons. Connect with your Heritage agronomist to discuss your weed control and in season plant health strategy today.