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## Herbicide Applications in Dry Conditions

The lack of precipitation in Indiana is dominating the thoughts and conversations of agriculture producers in the state. We have received a few calls and request for our thoughts on how the dry conditions can affect post emergence herbicide efficacy. Simply put, tough to control weeds will become even tougher to control in the dry conditions. Species such as lambsquarter, fall panicum, yellow nutsedge, and morningglory among other hard to control weeds will become tougher to control with the dry conditions.

The majority of postemergence herbicides are systemic in activity and are more effective on actively growing plants. In the currently dry conditions producers need to increase herbicide rates and make applications at the most favorable time for increased efficacy. These favorable times include applying to smaller weeds, waiting a few days for potential rain, and making applications in the morning when weeds are most active and before leaves begin to curl and roll. The post grass herbicides (Assure, Select, Fusion, ect.) are most susceptible to decreased efficacy in dry conditions. Postemergence contact herbicides are less effected by drought stress, but should be applied at higher carrier volumes and in the morning when leaf surface exposure is most favorable for contact.

Lastly producers should maximize adjuvant loads to increase the amount of herbicide crossing the thick cuticles of drought stressed weeds. Non-ionic surfactants can be increased form 0.25% to 0.5% v/v or replaced with COC or MSO to increase herbicide efficacy. Rates of MSO and COC can also be increased form 0.5% to 1% v/v.

All in all the mentality of herbicide applications in dry conditions should not be much different than what we are already promoting on tough to control weeds. That is to make applications to small actively growing weeds using full-labeled herbicide rates and applying early in the day when plants are most active. Increases in herbicide rates, adjuvants, and adjuvant types should be considered when applying in the dry conditions. If all else fails, looking at the weather forecast and praying the 40% chance of rain in three days increases to 100% can never hurt.

