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Herbicide applications on stressed corn

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Herbicide applications on stressed corn

Abstract

The prolonged cool, wet weather has complicated application decisions for postemergence herbicides. The stressful conditions may have reduced crop tolerance and prevented timely herbicide applications. Most growers realize that it would be wise not to treat corn under these conditions, but they may not have the flexibility to delay applications because of time limitations, crop stage, or weed size. A frequently asked question is how many days of warm weather are needed before the crop will regain its vigor? Unfortunately, there is no simple answer because many interacting factors affect the crop's recovery. However, the following are guidelines that may help in the decision process

Keywords

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INTEGRATED CROP MANAGEMENT

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A frequently asked question is how many days of warm weather are needed before the crop will regain its vigor? Unfortunately, there is no simple answer because many interacting factors affect the crop's recovery. However, the following are guidelines that may help in the decision process:

1. Treat fields in which weeds are reaching maximum size for effective control first. Maximum size is dependent upon your herbicide selection. Weeds should be more susceptible than normal because of the environment, which may provide a little flexibility.
2. Consider relative safety of herbicide treatment. Combinations of ALS inhibitors and dicamba pose the greatest risk to corn under stress.
3. Contact herbicides generally should create less stress than systemic herbicides, but the contact herbicides can cause greater leaf burn than normal because of the environmental conditions.
4. Two days of favorable growing conditions should significantly improve corn tolerance to postemergence herbicides. Delay applications until this time if possible.

Another consideration is the affect of the weather on corn development. Be sure to determine the corn stage of development by counting visible leaf collars when making treatment decisions. Due to the prolonged cool period the corn may be more physiologically mature than it appears based on corn height. The advanced development of the corn influences crop injury potential because the small plants may be initiating reproductive structures at the time of herbicide application. Ear shoot initiation and tassel formation are completed around the V5 stage (five visible leaf collars). Many herbicide labels specify application timing based on both corn height and leaf number. For example, the Accent Gold label specifies application to corn up to 12 inches in height or with five collars, whichever is more restrictive. Ensure that the stage of the corn is within the restrictions of the herbicide label to avoid significant risk of crop injury.

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