

SWEET CORN HYBRID TOLERANCE TO HERBICIDES

Chris Boerboom¹

Mesotrione (Callisto, Camix, and Lumax), foramsulfuron (Option), and dicamba + diflufenzopyr (Distinct) are active ingredients that are being evaluated for potential registration on sweet corn. Camix and Lumax would provide new preemergence broadleaf weed control options in sweet corn. Callisto and Distinct would be alternatives to other postemergence broadleaf herbicides. Option would provide a similar spectrum of postemergence grass weed control as Accent. Crop injury is a concern with any new herbicide and this includes sweet corn. In addition, sweet corn hybrids have shown differential tolerance to certain herbicides. Consequently, we evaluated sweet corn tolerance to these three herbicides with two or more hybrids. A summary of the treatments, differential hybrid injury, and yields are provided on the following pages.

Of these herbicides, Lumax applied preemergence did not injure any of the sweet corn hybrids. This is similar to previous years where preemergence applications of any mesotrione formulation were safe to sweet corn. The postemergence application of Callisto with atrazine caused noticeable chlorosis to three of the six hybrids. This injury did not affect yield, which is consistent with previous experiments. Option caused significant stunting of the two hybrids tested. The temperature was below average the night before and the day of the application. These conditions may have contributed to the level of injury. The addition of Permit, Callisto, or Permit to Option did not increase the level of injury. Option's injury did not reduce sweet corn yield. Distinct treatments caused epinasty, stunting (data not shown), and leaf wrapping, which are consistent with Distinct's mode of action. The two hybrids evaluated differed in their tolerance to Distinct. These results suggest that additional research should be conducted on hybrid tolerance to postemergence applications of these herbicides.

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¹ Extension Weed Scientist, Agronomy Dept., University of Wisconsin - Madison, 1575 Linden Drive, Madison, WI, 53706.