

RESPONSE OF TEN CORN INBRED LINES TO POSTEMERGENCE APPLICATIONS OF HALOSULFURON, DICAMBA AND NICOSULFURON. M. Wayne Bugg, John Eberwine, Clint Pilcher and Chris Eichhorn, Technology Product Managers and Corn Breeder, Corn States Hybrid Services and Holden's Foundation Seeds, Des Moines and Williamsburg, IA.

Chemical weed control in inbred corn fields is an extra challenge compared to hybrid corn because of reduced canopy and increased herbicide sensitivity. This study was conducted at three locations in IL, IN and IA examining 2X normal use rates of halosulfuron, dicamba and nicosulfuron applied to 12 and 24 inch corn. Visual evaluations were made of vegetative injury and grain yields were measured. Results showed significant differences in response for both inbreds and herbicide treatments. Injury was greater with applications to 24 inch corn than to 12 inch corn. Growth reduction estimates taken 13-18 days after treatment showed the greatest separation between inbreds. Observations of chlorosis and malformation were variable across locations and differences between inbreds were not significant. Relative rankings of the 10 inbreds for vegetative tolerance correlated well with relative rankings based on yield. The relative safety of the herbicides based on yield response with the 24 inch applications was halosulfuron > dicamba > nicosulfuron. Inbreds with 'B73' in their background showed better tolerance than inbreds with 'LH82' in their background.