MESOTRIONE EVALUATIONS IN SWEET CORN FOR PROCESSING AND FRESH MARKET.
Stephen M. Sanborn and Michael D. Johnson, Syngenta Crop Protection, Greensboro, NC 27419.

Mesotrione (2-[4-methylsulfonyl-2-nitrobenzoyl]-1,3-cyclohexanedione) applied preemergence and postemergence was evaluated for crop selectivity in sweet corn. Preemergence applications were made using a 32:320:120 g/l mesotrione:s-metolachlor:atrazine co-formulation. Application rates were 2760 g ai/ha on soils having less than 3.0 % organic matter and 3300 g ai/ha on soils with 3.0 % organic matter or more. Postemergence applications were made with a tank mix of 105 g ai/ha mesotrione + 280 g atrazine + 1 % v/v COC was tested. Sweet corn hybrids and trial locations were chosen based on their commercial importance in the processing and fresh market industries in the United States. Few negative effects were detected of preemergence applications of the mesotrione co-formulation on sweet corn emergence, early season injury, or yield at harvest. Epinasty was detected on two hybrids at one test location. Postemergence applications of mesotrione + atrazine + COC caused significant injury (bleaching) in some hybrids at some locations. Differences between hybrids within locations were observed. There were also considerable differences between locations in the level of symptoms observed. Sweet corn yields generally were not reduced following postemergence applications of mesotrione + atrazine, regardless of observed injury level. Results of these studies indicate that mesotrione has good potential for weed control in sweet corn for the processing or fresh market industries.

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