

SPRAGUE, CHRISTY L. \*, KAREN A. RENNER, and GARY E. POWELL, Michigan State University, Plant and Soil Sciences Building, East Lansing, MI 48824. **Overcoming azoxystrobin interactions with micro-rate herbicide applications in Michigan sugarbeet production.**

Rhizoctonia root and crown rot (*Rhizoctonia solani*) and weed control are two major challenges in Michigan sugarbeet production. Azoxystrobin (Amistar), a commonly used fungicide for Rhizoctonia management, when applied with micro-rate herbicide applications of desmedipham & phenmedipham (Betamix) + triflusaluron (UpBeet) + clopyralid (Stinger) + methylated seed oil or desmedipham & phenmedipham & ethofumesate (Progress) + triflusaluron + clopyralid + methylated seed oil has been shown to cause excessive sugarbeet injury. Field trials were conducted at the Saginaw Valley Bean and Beet Research Farm in 2003 and 2004 to examine methods to reduce sugarbeet injury caused by this interaction. In 2003, azoxystrobin was applied in combination; at 3 d and 1 d prior to; and at 1 d, 3 d, and 7 d after a micro-rate herbicide application. In 2004, azoxystrobin was applied in combination; and at 2 d, and 4 d after the third micro-rate herbicide application. In 2003, applications of azoxystrobin 1 d and 3 d prior to the micro-rate herbicide application lessened sugarbeet injury compared to a tank-mixture of azoxystrobin and the micro-rate herbicides. However, sugarbeet injury from these treatments was still greater than the micro-rate herbicide treatment alone. Sugarbeet injury from azoxystrobin applied after the micro-rate herbicides was similar to the micro-rate herbicide treatment alone. In 2004, azoxystrobin applied after a micro-rate application was less injurious than the fungicide-herbicide tank mixture. Furthermore, applying azoxystrobin 4 d after was safer than 2 d after the micro-rate herbicide application. Therefore, we recommend for growers in Michigan that use micro-rate herbicide treatments to apply azoxystrobin for Rhizoctonia management no less than 3 d prior to or 3 d after a micro-rate herbicide application.