

Benefits of Tank Mixing Cercospora Leaf Spot Fungicides

Tank mixing sugarbeet fungicides with different modes of action can improve Cercospora leaf spot control, provide micronutrients and delay fungicide resistance.

In Michigan over half of the beet acreage is planted to moderate or highly susceptible Cercospora leaf spot varieties. Season long disease control for these varieties is more difficult but can be achieved by following a recommended fungicide spray program. All leaf spot fungicides applied to sugarbeets should be tank mixed with another fungicide of a different mode of action. This will generally be a systemic fungicide mixed with a contact material such as an EBDC or copper. Michigan State University Extension Sugarbeet Advancement program has observed that only about half the fungicide applications are being tank mixed.

Most growers that are using a strobilurin fungicide (Headline, Gem) in their program are doing a good job of tank mixing with another fungicide during that application. These growers are aware of the Cercospora fungicide resistance that has developed with the strobilurins. However, it is common for producers to not mix anything with the triazoles (Inspire, Eminent, Proline, Enable, and Topguard). Be aware, in order to prevent/delay Cercospora fungicide resistance to triazoles, they must also be tank mixed with an alternative mode of action. By not tank mixing with the triazoles we certainly will develop fungicide resistance to that chemistry sooner than later. From trials done by Michigan State University and Michigan Sugar Company, there is some evidence that triazole effectiveness is already starting to decrease. When we lose the effectiveness of the triazoles, the spray programs for Michigan will be pretty weak.

The two most recommended products for tank mixing are the EBDC's and copper compounds. Both products are slow to mix and may require handling a relatively large volume of material. There are different types of these products including liquid, dry and other formulations. Growers will need to determine which product type they are best able to handle or if specialized equipment may be needed. These products are important tank mix companions and should always be used.

The obvious benefits of tank mixing different modes of action are improved Cercospora control and preventing/delaying fungicide resistance. Often, producers that always tank mix products have less leaf spot at the end of the season. This can equate to higher quality beets at harvest time and increased profit. Most producers are not aware that using an EBDC such as Manzate, Penncozebe and Dithane supply foliar manganese and zinc. These EBDC products contain about 15% manganese and 1.9% zinc. When EBDC's are used multiple times in fungicide applications, a significant portion of these nutrients are supplied to the crop.

Certainly copper compounds will also supply that nutrient to the plant. However, copper deficiency has rarely been seen on Michigan sugarbeets and we would not expect a yield increase. Research is currently looking at a different formulation of copper that may mix better in the tank. Remember copper compounds should never be mixed with glyphosate and AMS as severe leaf injury can occur.