Retailer Bulletin

Research Update: Manganese and glyphosate-tolerant soybeans
(part 2 of 2)

This is part 2 of a 2 part series examining manganese inefficiencies in glyphosate-tolerant soybeans.

Part 1 of this Research Update Series reviewed recent research data and discussed Wolf Trax® Manganese DDP® as a fertilizer coating and as a foliar application. You can find this Retailer Bulletin at www.wolftrax.com.

Recent studies have shown that glyphosate-tolerant soybeans seem to be less efficient in manganese uptake, which can seriously reduce yields in manganese deficient fields.

Manganese plays an important role in phytosynthesis, carbon and nitrogen metabolism as well as disease resistance. In fact, thirteen different processes are affected by manganese, from seed formation to root growth.

Researchers at two different universities have come to the conclusion that glyphosate-tolerant soybeans can be deficient in manganese, and that this tendency can significantly impact soybean yield to the tune of 11 bu/acre.

In independent testing at Kansas State University, researchers compared glyphosate-tolerant soybeans to conventional soybeans. They found that adding manganese gave a significant boost to glyphosate-tolerant soybean yield (see chart below). The workers found that yield increases occurred when soil applied manganese was applied as a broadcast treatment at rates up to 7.5 lbs/acre. The research also indicates you need at least 5 lbs per acre manganese when applied as a traditional granular type of micronutrient.

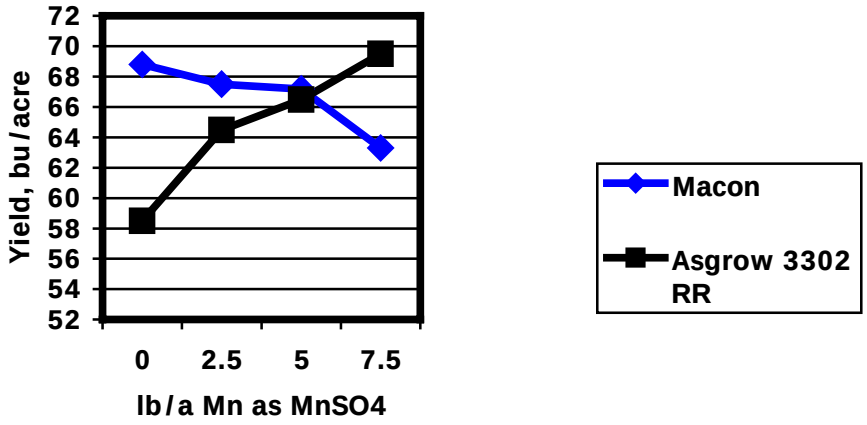

Chart 1 Manganese as a seed treatment may help to overcome the manganese inefficiencies of glyphosate-tolerant soybeans. The above Kansas State University data shows a need to correct manganese deficiency in glyphosate-tolerant soybeans.

(continued)

Wolf Trax Manganese DDP applied to glyphosate-tolerant soybean seed effectively corrects manganese deficiency

Work performed by Wolf Trax researchers on a glyphosate-tolerant soybean cultivar shows that Wolf Trax Manganese DDP applied to the seed is an excellent way to correct manganese deficiency. The study, performed in high pH soil (pH 8.1), shows that Wolf Trax Manganese DDP applied to the seed at rates as low as 0.4% w/w gave a solid boost to manganese levels in soybeans at the whole plant level and in the newest leaves.

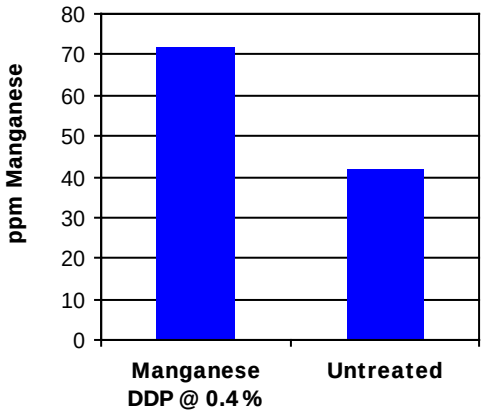

Chart 2 Wolf Trax Manganese DDP applied as a coating to seed of glyphosate-tolerant soybeans – Effects on manganese level in new leaves at 14 days after seeding

Wolf Trax Manganese DDP – an idea for the innovative retailer

Wolf Trax Manganese DDP can be used as a coating on seed, as a coating on fertilizer and as a foliar application (for more information on fertilizer coating and foliar applications, see Retailer Bulletin March 2006, available at www.farmtested.com/news.html). Wolf Trax Manganese DDP is the only formulation to provide this flexibility in use.

Wolf Trax Manganese DDP presents a great opportunity for you to set yourself apart in your market. If you have growers interested in glyphosate-tolerant soybeans on manganese deficient soils, you have the opportunity to carry one inventory item and use it in different combinations to develop a customized solution to help them maximize their yield and profit opportunity.

You and Wolf Trax....Growing Forward ® together.

For more information on the Wolf Trax DDP family of Innovative Micronutrients, please call 204-237-9653, or visit us at www.wolftrax.com.