
An evaluation system for the efficacy of foliar Mn fertilizers tank-mixed with glyphosate

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Manganese (Mn) containing water conditioners have been developed and marketed with the intent of simultaneously alleviating Mn deficiency symptoms in glyphosate resistant soybean and meeting the water conditioning requirements for glyphosate without sacrificing weed control. The objective of this study was to develop a system to evaluate materials for utility to meet both purposes. Manganese deficient field soils, with high organic matter content, of the same soil soil series, from three cropping histories, were used in greenhouse experiments. Soybeans grown in these soils showed variable Mn deficiency symptoms. Application of Mn in certain water conditioners, applied at the suggested dosage, in combination with glyphosate, applied at 1.1 kg a.e./ha, overcame the Mn deficiency in soybean plants. However, when these combinations were applied to velvetleaf (*Abutilon theophrasti* Medik), a reduction in glyphosate activity was often evident.

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