Soybean. (***Glycine max***),
Applications of Nutrisol Boron 9%
Treating Deficiency

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Treating Boron Deficiency in Soybean 2012

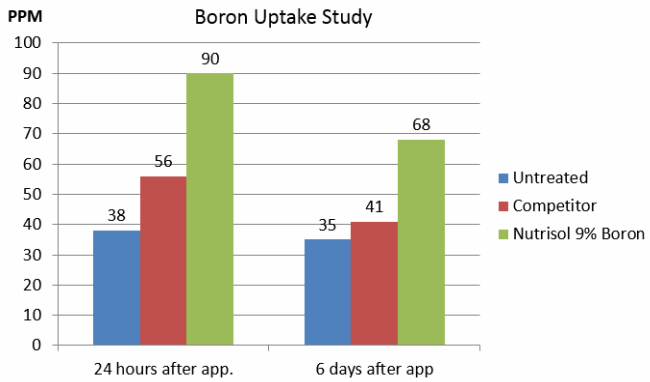
Boron is an essential element for soybeans and can be a serious yield limiting micronutrient for soybeans if not present. In general, soybeans have a high requirement for Boron. Boron regulates carbohydrate metabolism in plants. It is an essential element for protein synthesis, seed and cell wall formation, germination of pollen grains and growth of pollen tubes. Boron also aids in sugar translocation. Symptoms of Boron deficiencies in soybean can be observed as early as first trifoliate though maturity. Boron is a highly mobile nutrient similar to nitrogen and sulfur and can move through the soil profile. Soybeans also remove a lot of Boron through normal plant growth. Deficiencies may be more noticeable during extended wet periods. If Boron is limiting early in the development of soybeans, it is more difficult or slow for soybeans to recover from soil applications. Deficiency symptoms include interveinal chlorosis, poor root development, stunting, delayed maturity, reduced bloom and poor seed development. Nutrisol 9% Boron is a premium formulation derived from boric acid and designed for use in soil and foliar applications on crops requiring Boron.

In 2012 two studies were conducted to evaluate the effects of foliarly-applied Boron in soybeans. Both trials were located near Columbia, NC in Tyrell County. In both studies Nutrisol 9% Boron was applied at 1 qt/A and compared to an untreated check. The entire area at both locations was treated with Quantum at 1 gallon/A. In one study, yields were the main focus, and with just a single application of Boron, yields were increased by 1.57 bu/A (Table 1).

Table 1.

Treatment	Yield @ 13% Moisture	Increase over Check
Check	55.72 Bu/A	
9% Boron 1 Qt/A	57.29 Bu/A	1.57 Bu/A

In the second study, plant tissue samples were taken to determine the uptake of Nutrisol 9% Boron versus a local competitor. Tissue samples were taken 24 hours after application and again at 6 days after application (DAT). The data suggests that more Nutrisol 9% Boron was taken up by the soybeans 24 hours after application versus the competitor product, and by 6 DAT Nutrisol 9% Boron was 27 ppm better than the competitor (see graph below).



Nutrisol 9% Boron and Quantum are products of Coastal AgroBusiness, Inc.

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