



February, 2020

Zinc (Zn) and Boron (B) in Pre-bloom Almond Sprays

With spring fast approaching and almond bloom around the corner, it's time to start preparing for foliar application of zinc and boron on almonds.

Zinc is essential to many processes such as cell division, protein synthesis and auxin synthesis in growing points (flowers and shoots), and bloom is the time of the most growing points in a tree. Boron is essential for cell wall synthesis and division. Boron fertilization improves fruit or nut set compared to deficient plants in many crops, but only if applied in time to get B into swelling flower buds prior to bloom. Both Zn and B can be absorbed into leaves and translocated within almond trees.



Zinc and Boron are essential during almond bloom

Zinc deficiency produces "little leaf" symptoms, with trees showing summer leaf levels of 15 ppm Zn or less is considered deficient. Trees with hull B levels below 80 ppm B at harvest are thought to be deficient, but almond yield may benefit from B application if hull levels are below 120 ppm B. Boron deficiency is often expressed as reduced nut set.

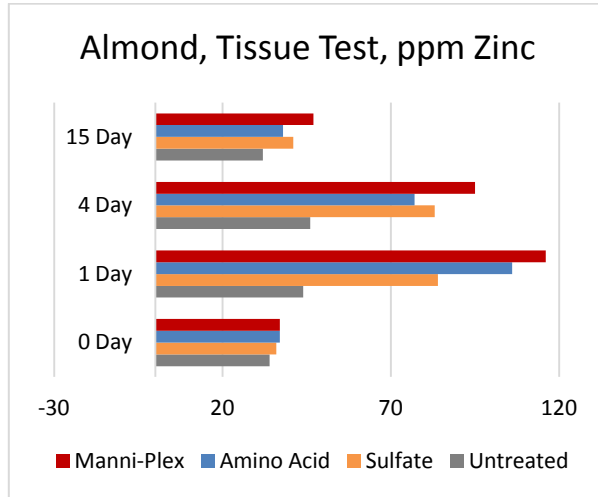
Foliar applications of both Zinc and Boron prior to bloom during pink bud stage are highly effective in improving almond pollination and nut set. Additional applications of zinc post-bloom during leaf-out will help establish a healthy canopy.

Pre-bloom or on spring foliage, Manni-Plex Zn applied at a rate of 1-2 quarts/acre and Smart B at a rate of 1 pint/acre are very safe and effective at supplying zinc and boron. These products will also tank mix well with any bloom-time fungicides that may be in the tank.



Manni-Plex & Smart B Technology

The MANNI-PLEX technology is designed to enhance absorption of nutrients through the leaf and enhance nutrient mobility and translocation through the plant phloem to the growing points. Unlike other nutrient forms, the nutrient elements in MANNI-PLEX formulations are complexed with sugar alcohol.



Manni-Plex delivery system increases the uptake of zinc through the waxy leaf cuticles. Improved tissue levels of zinc vs conventional products for a period of approximately 15 days.

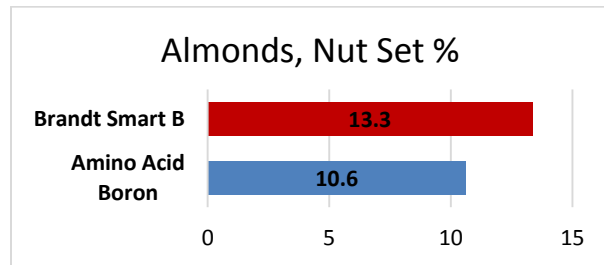
The proprietary complex has a very small molecular size and shape, which allows MANNI-PLEX to enter the plant through small stomata and transcuticular pores on the leaf surface and helps get more nutrients into the plant.

BRANDT's Smart Boron molecule is cross-linked, providing a protective "shield" for the boron that significantly increases foliar applied boron mobility. This allows the Smart Boron molecule(s) access to plant growing points quickly and easily, thereby providing the most benefit.

Product Information

<https://brandt.co/lines/brandt-manni-plex/>

<https://brandt.co/media/6732/brandt-smart-b-brochure.pdf>



Brandt Smart B Technology vs Amino Acid based delivery system. Improved boron mobility delivers more boron to the blooms.

