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Almond Bloom Considerations

by Robert Smith, Agronomist

As my good friend Rich Kreps would say, “KA-BLOOM!”. Almond bloom is the best time to start the season off strong. The bloom period for almonds is finally upon us. As the 2021 almond bloom begins, there are several considerations to keep in mind.

Several factors can be attributed to increasing bloom set. These include the presence and strength of bee colonies, post-harvest practices, and nutrient deficiencies. In the coming weeks you can have a positive influence on your crop with properly timed bloom sprays to influence flower fertilization, cell division and cell expansion.

The pink bud timing is the first point at which a treatment is considered. During this time period the nutrients of most importance are Phosphorus, Potassium, Calcium, Zinc and Boron.

Phosphorus is particularly essential in energy transport within the tree, for root development, and flower initiation.

Potassium, balanced with nitrogen, boosts growth – including better water utilization. It is particularly important and needed in large quantities for nut-fill and the highest yields.

Calcium helps build the tree and is particularly important for the development of good quality nuts with less disease.

Zinc helps to maintain growth processes, especially new tissue development.

Boron is important for flowering and pollination, to ensure a good fruit set.

Zinc and Boron, both need to be readily available before flowering.

In determining the need to add Zinc and Boron in a pre-bloom spray you need to consider tissue analysis levels taken during mid-summer. When Zinc levels are less than 25 ppm, it is likely to benefit from an early season foliar Zn spray. And for boron, a hull analysis at harvest is the best approach. If your hull Boron levels are below 120 ppm, a pre-bloom spray is likely to improve nut set this season. Some areas with naturally high Boron levels can be concerned with boron toxicity. Hull boron levels above 300 ppm may lead to excessive gumming from pruning wounds, spurs, and leaf scars, as well as more “stick tight” nuts.

Do not forget about the bees. Honeybees are brought into the orchard to provide pollination – a requirement for production of almond varieties, even self-fertile varieties seem to benefit from bees! Follow the Honeybee Best Management Practices when applying foliar products. Applications should only be made in the late afternoon or evening when bees and pollen are not present.

There has been discussion regarding bacterial blast. This disease seems to show up due to a combination of weather events and the presence of the bacteria, *Pseudomonas syringae.* It kills flowers and, thus, reduces crop set. This bacterium is naturally occurring on the tree, and only becomes a problem when conditions are favorable. Low temperatures (generally below freezing), are thought to damage the flower or flower bud, followed by rain, it often leads to greater levels of blast. Ask your Ultra Gro Crop Advisor about frost protection.