

DORMANT FUNGICIDE APPLICATIONS: NOW IS THE TIME.



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Bacterial blast in almonds and stone fruit is caused by the organism *Pseudomonas syringae* and has caused significant losses in west coast almonds and stone fruit, especially when cold and wet weather occurs during the winter and early spring seasons.

Control of bacterial blast is entirely preventative, as once the symptoms are visible the disease will spread rapidly and cannot be reversed. Dormant and pre-bloom applications of fungicide are a key component of a management strategy for this disease, especially in anticipation of wet and cold weather. There are not many choices for a grower to select from for control of bacterial blast, and while kasugamycin has gained in popularity recently, copper-based fungicides remain as a go-to option for control of *Pseudomonas*.

Resistance to copper has been documented for bacterial blast, so it is important to choose a product that delivers the highest copper-ion content without causing phytotoxicity to the crop. Albaugh's line of HiBio™ copper products fit this role perfectly. The HiBio designation refers to the special composition and processing employed for this line of copper fungicides that makes copper ions more readily available without the plant damage concerns that may occur with lower grade copper products, such as those made from refined metallic copper.

Refined metallic copper has already been processed to remove other metals and contaminants that contribute to lesser control and increased phytotoxicity, and HiBio copper uses premium-grade metallic copper as the base material. While this is a more expensive form to use as a base material, the result is an ultra-pure product with significantly improved crop safety. Additionally, the chemical and milling processes used in the manufacturing of HiBio products ensures a micro-fine particle size that suspends easily in the spray tank, will not clog filters or nozzles, and provides thorough coverage to treated surfaces.

All this adds up to more copper ions being absorbed by the bacteria to achieve maximum control of the disease. Because HiBio formulations are made with premium components and manufacturing, the use rate per acre is less than other products, thereby reducing the cost per application while delivering more disease control.

HiBio formulations are available in two products: Nu-Cop® HB, which has a 50 percent metallic copper equivalent, and Nu-Cop® 30HB which has a 30 percent metallic copper equivalent. NuCop 30HB does not currently have a California label for use on cherries but is available for most other uses. Albaugh also provides Nu-Cop® 50WP and Nu-Cop® 50DF, which are made to exacting quality requirements and provide crop consultants with options to use the finest copper available. Always read and follow the label for these products to better understand usage rates and timings.

