Technical Bulletin | Late Season Vines

# Minimize Damage from Summer Stress with Foliar Nutrition

### As the summer drags on, trees are faced with a variety of stressors: heat, deficit irrigation, pest and disease pressure, all while trying to satisfy the demands of the crop load.

After harvest, while still dealing with the effects of deficit irrigation, pests, and heat, the vines must actively increase their carbohydrate reserves to prepare for dormancy. The build up of stress causes an accumulation of reactive oxygen species (ROS) that reduce photosynthesis and carbohydrate production leading to reduced yields next year. Minimizing the effects of crop stress is the best strategy for promoting maximum carbohydrate storage by the vines going into dormancy. Foliar fertilizers can reduce the effects of damaging ROS, resulting in a productive and healthy canopy that doesn't defoliate ahead of schedule. Late season foliar applications also supply vines with additional nutrition that will be stored in the wood and used from bud-break to bloom time next year.

## How do imperfect conditions limit yield?

- Reduced uptake of water and nutrients weakens vines
- Harsh conditions lead to excessive production of toxic ROS
- ROS build-up damages cells and reduces carbohydrate production
- Premature defoliation leads to weak vines that struggle in spring

# The powers of PAC and ACE Technology:

- PAC-micronutrient chelates are derived from plant-based carbohydrates
- PAC-chelates are efficient, safe, and have excellent tank mix compatibility
- ACE limits ROS-induced damage brought on by adverse conditions
- ACE reduces yield loss associated with abiotic stress



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#### Alexin<sup>®</sup> Analysis:

Potassium (K <sub>2</sub> O)	8.0%
Calcium (Ca)	2.4%
Magnesium(Mg)	0.8%

Application Rate: 1.0 qt/ac

#### **Exclusive Technologies:**



ZincMax<sup>™</sup> Analysis: Zinc (Zn) 10.2%

And/Or

Application Rate: 1.0 qt/ac

#### **Exclusive Technology:**





## BoronMax<sup>™</sup> Analysis:

Boron (B) 8.1%

Application Rate: 12 oz/ac

#### **Exclusive Technology:**





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