



GREATER CALCIUM MOBILIZATION FOR REDUCED BITTER PIT

LALSTIM OSMO's active ingredient is an essential amino acid found naturally in many plant species. It is a source of nitrogen that provides energy for plant growth, aids in nutrient and calcium mobility and helps control plant stress during adverse abiotic environmental conditions.

LALSTIM OSMO ADVANTAGES

- Increases nutrient mobility, including calcium.
- Reduces abiotic stress, improves water uptake and maintains crop resilience.
- Translocates into the plant within 24-48 hours and provides persistent osmoprotection for several weeks.
- Compatible with most tank mix inputs and is highly stable.
- Minimizes yield losses caused by fruit injury such as bursting, mottling, and cracking.
- Minimizes post-harvest fruit decline by preserving stability of cellular osmotic pressure.

MODES OF ACTION

- Osmoprotectant, facilitates water uptake and retention, and adjusts the osmotic balance in plant cells and tissues.
- Improves photosynthesis, nitrogen metabolism, and nutrient translocation during adverse environmental conditions such as heat, cold, drought, and high salinity.
- Enhances the mobilization of nutrients such as calcium and trace elements.

CHARACTERISTICS

Active Ingredient

Glycine Betaine >97%

Package Sizes

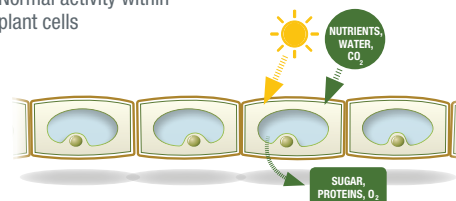
10 x 5 lbs

Storage Information

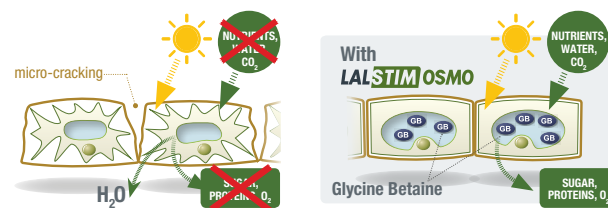
Store sealed in the original packaging in a cool, dry place (< 77°F) for up to 36 months

Always read and follow label instructions.

Normal activity within plant cells



ABIOTIC STRESS



Cell metabolism stops, microfissures appear and cell contents are lost particularly water

Cell metabolism is maintained and the physical integrity of plant tissue is preserved

BITTER PIT

Symptoms: Small, sunken pits on the surface of the fruit with discolored and dry flesh beneath the pits.

Origin: Poor distribution of calcium within the tree during fruit development, creating a calcium deficiency.

Factors: Abiotic Stress

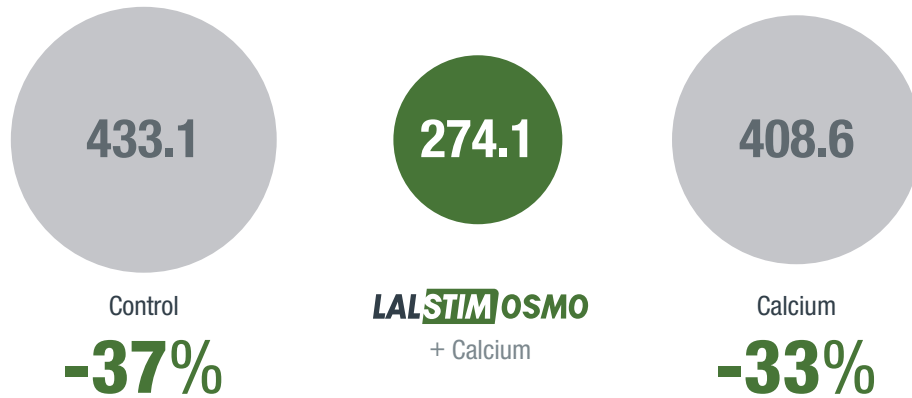
- Heat (Thermic) stress: hot and dry periods (high transpiration)
- Water (Hydric) stress: insufficient or poorly distributed irrigation
- High salinity: insufficient watering or high electrical conductivity due to important nutrient applications to the crop

LALSTIM OSMO PROVIDES GREATER CALCIUM MOBILIZATION BY PROMOTING RETENTION OR DIFFUSION OF WATER AND NUTRIENTS (CALCIUM AND TRACE ELEMENTS) THROUGH THE PLANT CELL MEMBRANE BY OSMOTIC PRESSURE MANAGEMENT.

✓ TRIAL RESULTS: INCREASE CALCIUM MOBILIZATION, REDUCTION OF BITTER PIT LESIONS

Variety: Golden Delicious

Number of lesions per 100 fruit



France

APPLICATION RATES

CROP	TARGET	TIMING	APPLICATION RATE LBS/AC	WATER VOLUME U.S GALLONS/ACRE
Apple Trees	Increase calcium content and reduce bitter pit in apples.	From fruit set and every 3 weeks afterwards. Add to each application of foliar calcium to stimulate calcium movement regularly.	0.5	50-100
	Tolerance to abiotic stress during flowering and frost.	Early flowering or at the latest 24 hours before the risk of frost.	2	20-1000

Refer to the product label for additional information on application and timing.

About Lallemand Plant Care

For over 100 years, Lallemand has been an expert in yeast and bacteria manufacturing. It is now a global leader in the development, production, and marketing of microorganisms for various industries. Using sound science and know-how, Lallemand Plant Care provides effective microbial-based solutions that deliver agronomic, economic, and sustainable value to growers.

Microbial by nature

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