

LALSTIM OSMO

Enhances plant growth during environmental stresses, such as heat, cold, drought, excess moisture, and salinity

READ ALL DIRECTIONS BEFORE USING THIS PRODUCT

CONTAINS NON-PLANT FOOD INGREDIENT

Soil Amending Guaranteed Analysis

Active Ingredient: Glycine betaine97%
Total Inert Ingredient (Water)3%

How It Works

Enhances plant growth during environmental stresses, such as heat, cold, drought, excess moisture, and salinity. Adjusts the osmotic balance inside plant cells and tissues exposed to hyperosmotic stress and injury. For use on vegetables, herbs, grapes, fruit and nut trees, ornamentals, turfgrass, small fruit, hemp, hops, roots and bulbs, potatoes, and tropical crops. For other uses, consult your crop advisor.

Precautions

KEEP OUT OF REACH OF CHILDREN

Do not breathe dust.

Application Method

Apply as a foliar spray to point of wetness. Use of a non-ionic adjuvant, added to the spray solution according to manufacturer's instructions, is recommended to optimize coverage and penetration of LALSTIM® OSMO into the plant. Compatible with pesticides and foliar fertilizers in a tank mix, except some formulations containing copper (Cu), where phytotoxicity may occur. It is advised to verify physical and chemical compatibility of tank mixes with LALSTIM® OSMO using a jar test before applying to any crop.

Application Timing And Rates

Timing varies by crop, stress and plant condition. Apply when relative humidity is high enough (e.g., late in the evening or early in the morning) to allow tissue to remain wet long enough to ensure better uptake of LALSTIM® OSMO by the plant. Repeat every 1–4 weeks. For more detailed information, consult your crop advisor.

Storage & Handling Recommendations

Store in dry place at room temperature. Shelf-life in unopened package is 3 years from production date, stored at room temperature and protected from humidity. Once opened, protect from moisture. Dispose of all waste (contents and container) in accordance with local, state, and federal regulations.

Net Contents/Net Weight: 5 lb

Production date and batch number: See package

LIMITED WARRANTY

Danstar Ferment AG / LALLEMAND PLANT CARE ("Danstar") warrants that this product (the "Product") conforms to the product description on this label and is reasonably fit for the purposes set forth on the label when used in accordance with it. Danstar makes no warranty as to the Product's performance since the storage, use and application of the Product are beyond the control of Danstar.

To the extent permitted by applicable law, Danstar makes no other warranties of any kind and hereby disclaims all other warranties, whether oral or written, expressed or implied, including without limitation, the implied warranties of the merchantability and fitness for a particular purpose and the warranty of non-infringement. Buyer of the Product assumes the risk to persons and real or personal property arising from the use, application or handling of the Product.

Buyer's exclusive remedy for any and all losses, injury or damages resulting from a breach of this Limited Warranty shall be, at the election of Danstar, either the price paid by buyer for the Product purchased directly from Danstar, or the replacement of such quantity of the Product. Danstar shall not be responsible for any liabilities, damages, expenses, costs or other losses, including without limitation, loss of profits suffered in connection with the use of the Product and in no event shall Danstar be liable for any incidental, consequential, special or punitive damages to the buyer or any third party.

Buyers of the Product are deemed to have accepted the terms of this Limited Warranty upon opening the container containing the Product. The terms of this Limited Warranty may not be varied by any oral or written agreement.

Information regarding the contents and levels of metals in this product is available on the internet at <http://www.aapfco.org/metals.html>

Guaranteed by:

Danstar Ferment AG / LALLEMAND PLANT CARE
Poststrasse 30
CH-6300 Zug, Switzerland

Marketed by and distributed by:

Lallemand Specialties, Inc. / LALLEMAND PLANT CARE
6120 West Douglas Avenue
Milwaukee, WI 53218 USA
1 -844-590-7781
crops@lallemand.com
lallemandplantcare.com

Crop	Application Rate (lb/ac.)	Application Volume (US gallons/ac.)	Target and Timing of Application(s)
Leafy Vegetables (e.g., lettuce, spinach)	0.5–4	20–100	<p>Frost, drought, heat and salt stress: Spray every 1–3 weeks from transplant or appearance of first true leaves through stress periods.</p> <p>Calcium imbalance from abiotic stress: Spray at 3–4 leaf stage and repeat 3 weeks later.</p>
Fruiting vegetables and cucurbits (e.g., tomato, bell pepper, eggplant, cucumber, squash, melons, watermelon)	0.5–6	20 – 100	<p>Frost, drought, heat and salt stress: Spray every 1–3 weeks after transplant or appearance of first true leaves through stress periods.</p> <p>Abiotic stress during flowering: Begin spraying at appearance of first flower buds and repeat every 1–3 weeks through flowering.</p> <p>Calcium imbalance from abiotic stress: Spray at least 24 hours before stress occurs (e.g., heat stress) and repeat 3 weeks later.</p> <p>Anti-cracking: Begin spraying at start of color development in fruit and repeat every 1–4 weeks through ripening.</p>
Herbs (e.g., basil, oregano, cilantro, sage, dill)	0.5–4	20 – 100	<p>Frost, drought, heat and salt stress: Spray every 1–3 weeks from transplant or appearance of first true leaves through stress periods.</p>
Grapevines	0.5–2	20–100	<p>Frost, drought, heat and salt stress: Spray every 1–4 weeks from planting or at bud break through stress periods.</p> <p>Abiotic stress during flowering: Spray at start of flowering and repeat every 1–3 weeks through petal fall.</p> <p>Anti-cracking: Spray at bunch closure (BBCH 77) and reapply at beginning of ripening (BBCH 81).</p>
Fruit and nut trees (e.g., apple, pear, apricot, peach, almond, citrus)	0.5–6	20–150	<p>Frost, drought, heat and salt stress: Spray every 1–3 weeks from transplant or at bud break through stress periods.</p> <p>Abiotic stress during flowering: Spray at start of flowering or at least 24 hours before expected frost and repeat every 1–3 weeks through petal fall or end of expected frost period.</p> <p>Calcium imbalance from abiotic stress: Spray at early fruit set and repeat every 1–4 weeks.</p> <p>Anti-cracking and improvement of post-harvest quality: Begin spraying at early color development of the fruits and repeat 4 weeks before harvest.</p>
Landscape ornamentals and turf (e.g., street, residential and park trees, established landscape turf, sport turf, sod and sod farms, perennial and annual ornamentals plantings)	0.5–6	20–150	<p>Frost, drought and heat stress: Spray every 1–3 weeks beginning at start of expected stress period through end of stress conditions.</p>

Crop	Application Rate (lb/ac.)	Application Volume (US gallons/ac.)	Target and Timing of Application(s)
Woody ornamentals (nursery)	1–4	40–100	<p>Frost, drought and heat stress: Spray every 2–3 weeks beginning at start of expected stress period through end of stress conditions.</p> <p>Abiotic stress during flowering: Begin spraying at start of flowering or at least 24 hours before expected frost and repeat every 1–3 weeks, through petal fall or end of expected frost period.</p> <p>Post-harvest cold, heat and drought stress (transport, handling and retail environments): Spray 1 month before expected harvest, 2 weeks before harvest and 1 day before shipping.</p>
Greenhouse ornamentals (e.g., poinsettia, chrysanthemum, bedding plants, foliage plants, cut flowers, vegetable transplants)	0.5–6	20–150	<p>Frost, drought, heat and salt stress: Spray every 1–3 weeks before start of stress period through end of stress conditions.</p> <p>Post-harvest cold, heat and drought stress (transport, handling and retail environments): Spray 1 month before harvest, 2 weeks before harvest and 1 day before shipping.</p>
Transplant propagation (e.g., seedlings, cuttings, sweet potato slips, tissue culture explants)	0.5–6	40–100	<p>Frost, drought, heat and salt stress: Spray every 1–3 weeks from transplant or appearance of first true leaves through stress periods or harvest.</p>
Cherry	2–6	50–150	<p>Frost during flowering: Spray at start of flowering and repeat every 1–3 weeks through petal fall.</p>
	2–6	25–150	<p>Anti-cracking: Spray at color change from green to yellow and repeat 7–10 days later.</p>
Small fruit (e.g., strawberry, raspberry, blueberry, elderberry, currant)	1–6	20–150	<p>Frost during flowering: Spray at start of flowering or at latest 24 hours before expected frost and repeat every 1–3 weeks through petal fall or end of expected frost period.</p> <p>Anti-cracking and improvement of post-harvest quality: Begin spraying at early color development of the fruits and repeat 4 weeks before harvest.</p> <p>Heat and drought stress: Apply every 1–3 weeks during hot months.</p>
Hemp and hops	1–4	20–100	<p>Drought, heat and salt stress: Spray every 2–3 weeks from transplant or appearance of first true leaves through stress periods or up to harvest.</p>
Root and bulb crops (e.g., sugar beet, ginseng, carrot, cassava, sweet potato, garlic, onion)	1–6	40–150	<p>Heat and drought stress: Apply every 2–3 weeks during hot months.</p>

Crop	Application Rate (lb/ac.)	Application Volume (US gallons/ac.)	Target and Timing of Application(s)
Potato	1–2	40–50	Abiotic stress tolerance: Spray at hook stage or walnut size and repeat 15 days later.
Tropical crops (e.g., acerola, avocado, banana, coffee, guava, mango, papaya, passion fruit, plantain, starfruit)	1–6	40–150	<p>Heat and drought: Spray every 1–3 weeks from transplant or appearance of first true leaves through stress periods.</p> <p>Improvement of post-harvest quality: Spray at the start of ripening and repeat 4 weeks prior to harvest.</p>

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