

NATURAL FORCES™

Sugar Esters

Biochemical Insecticide/Miticide for Nursery,
Greenhouse & Field Crop Use

The first sugar-based insecticides.



What are Sugar Esters?

- **Sugar based miticide / insecticide.**
- **Synthesized by reacting sucrose (corn, sugar cane, sugar beet) with fatty acid.**
- **Discovered and researched by USDA.**
- **Occur naturally in the leaf hairs (trichomes) of wild tobacco.**
- **Recognized internationally as food additives.**
- **Used as emulsifiers in baked goods.**
- **Desiccants that pierce wax layer of insects, drying them out with rapid mortality.**



Sugar Ester Properties

- **Fast Acting**
 - Stops insects/mites within minutes of application
- **Broad Spectrum Control**
 - Controls hundreds of soft-bodied insects and mites (Aphids, Thrips, Mealy Bug)
- **Gentle on beneficial insects**
- **No Known Resistance by insects**
- **Labeled on hundreds of crops and plants**
 - Greenhouses, fruit and vegetables, nurseries, etc.
- **Zero Harvest Interval**
 - Treat, harvest, and consume in the same day
- **Contact based substance w/no residual**
- **No Reports of Phytotoxicity**
- **Regarded by EPA as low risk**
- **Activity on egg, nymph, and adult stages**



Sugar Ester Insecticide Product Line

SucraShield (Sucrose Octanoate Esters)

- For Organic Production
- Active Ingredient – Sucrose Octanoate Esters
- WSDA/NOP listed for Organic production
- 48 hour Re-Entry Interval
- Supplemental label for mushrooms
- 40% Active Ingredient
- Mixed at 1% v/v solution
 - 1 gal SucraShield per 100 gal water
- Pack Sizes
 - 4x1 Gal \$89.95/gal case price
 - 8x1 Pint
 - 30 Gal Drum
 - 250 Gallon Tote

SorbiShield 90(Sorbitol Octanoate Esters)

- Fast Knockdown, no REI, Conv Acres
- Active Ingredient – Sorbitol Octanoate Esters
- Pending listing for Organic production by WSDA/NOP
- 24 hour Re-Entry Interval
- Not labeled for mushrooms
- 90% Active Ingredient
- Mixed at .5% v/v solution
 - Half gal SorbiShield 90 per 100 gal water
- Pack Sizes
 - 2x2.5 Gal \$59.95/gal case price
 - 4x1 Gal \$69.95/gal case price
 - 6x8 oz
 - 30 Gal Drum
 - 250 Gallon Tote

Insects/Mites Controlled

Soft bodied insects including
but not limited to:

- Mites
- Aphids
- Thrips
- Mealy bug
- White fly
- Scales
- Leafhoppers
- Psyllid
- Leafminer larvae

And hundreds of others



Plants and Crops Protected

- Vegetables, Herbs, and Spices (Greenhouse & Outdoor)
- Ornamental, Landscape, Trees and Shrubs
- Christmas Trees
- Roses
- Flowers
- Bedding Plants
- Fruit and Nut Crops
- Field Crops
- Mushroom Production

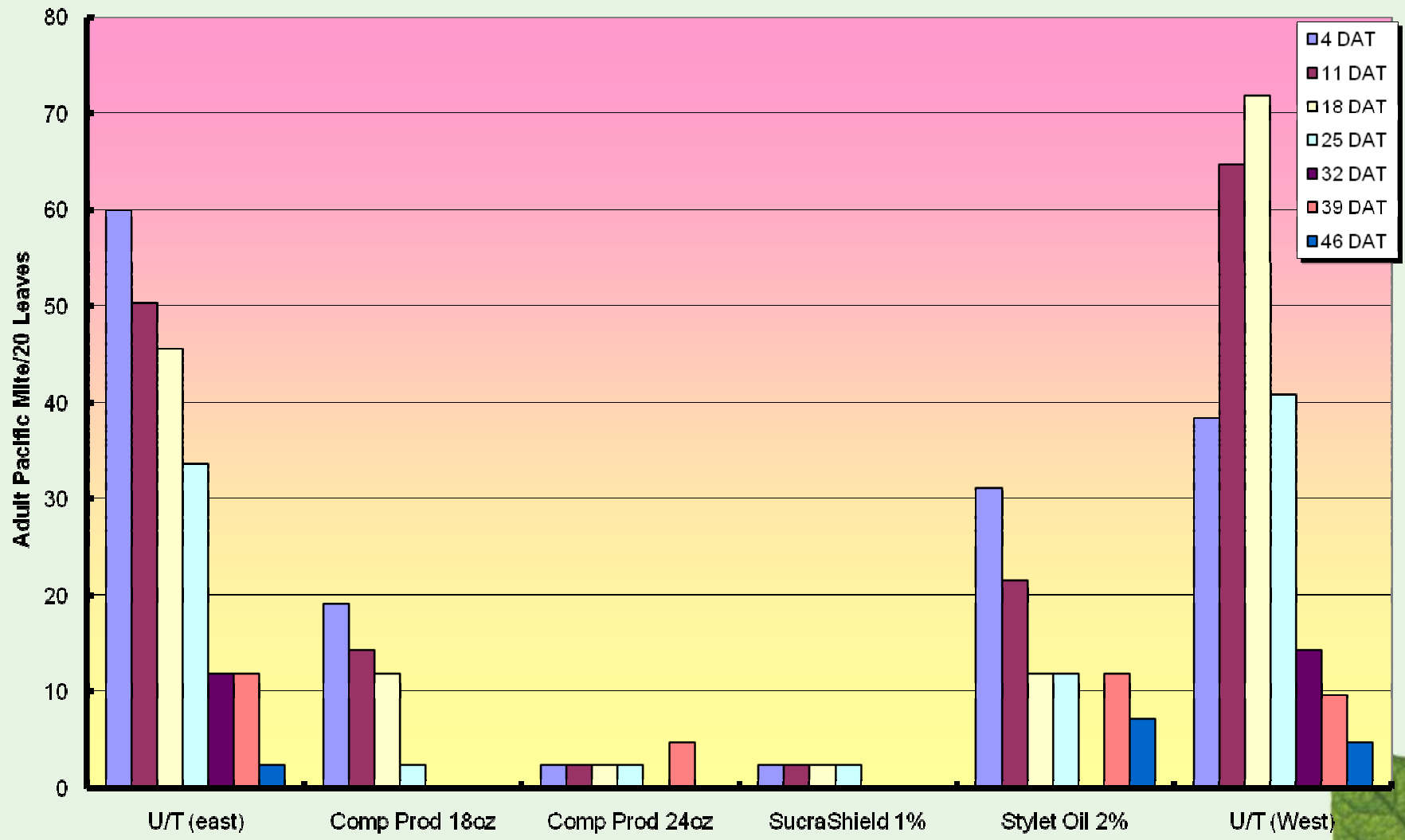


Performance Data

Trm t#	Treatment	7/22/08 4 DAT			7/29/08 11 DAT			8/5/08 18 DAT		
		Adults	Nymphs	Eggs	Adults	Nymphs	Eggs	Adults	Nymphs	Eggs
8	U/T (east)	60	96	72	50.4	93.6	62.4	45.6	36	36
1	Comp Prod 18oz	19.2	45.6	36	14.4	38.4	33.6	12	9.6	7.2
2	Comp Prod 24oz	2.4	7.2	9.6	2.4	7.2	2.4	2.4	0	0
4	SucraShield 1%	2.4	4.8	2.4	2.4	2.4	0	2.4	2.4	0
7	Stylet Oil 2%	31.2	36	38.4	21.6	33.6	19.2	12	7.2	7.2
9	U/T (West)	38.4	55.2	84	64.8	60	62.4	72	52.8	48

NATURAL FORCES

2008 Natural Forces Grape Miticide Study
 Steve Quashnick / Boskisch Vineyards
 Pacific Mite Counts - Adults / Leaf - All Intervals
 WECO-CPR08024



Additional Information

Call customer service at 866-853-9558

Or

Visit the website at

www.naturalforcesllc.com