

Simple Sprayer Calibration

- Calculate sq. ft. of one or more even rows
- Divide total sq. ft. by sq. ft. in acre (42,560 sq. ft.)= fraction of acre
- Start with know volume of water
- Spray row consistent RPM, Gear and ground speed
- Calculate water use, start gal – finish gal (start stop in exact same place and position)
- Multiply water used by fraction of acre = gal per acre

Simple Sprayer Calibration

Example:

- 10 ft. row 200 ft. long = 2,000 sq. ft.
- Sq. ft. in acre = 42,560
- $2,000 \text{ sq. ft.} / 42,560 = 0.045$ fraction of acre
- Multiplier fraction of acre to acre = $1.0 / .045 = 22.22$
- Water start 25 gal Water end 22.5 used 2.5
- 2.5 gal times multiplier factor 22.22 = 55.55 gal per acre

Simple Sprayer Calibration

- Approximate coverage ratios
 - Sion and cordons (Applaud) 25 – 35 gal per acre
 - Bud break 20 – 30 gal per acre
 - Three leaves and inflorescence 30 – 40 gal per acre
 - Half canopy 45 – 55 gal per acre
 - Full canopy 55 – 80 gal per acre
 - Walk behind the sprayers spraying water and LOOK!
 - Water sensitive paper also good
 - Different spray technologies use different amounts
 - Coverage is the goal not amount

Grapevine Insect Pests

Spring

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Branch and twig borer



Adult branch and twig borer,
Melalgus (=Polycaon) *confertus*.



Shoots Damaged by Branch and twig borer



Branch and twig borer larva



Branch and twig borer pupae



Check with UC IPM website

- <http://ipm.ucanr.edu/>



The screenshot shows the UC IPM website homepage. At the top, a blue banner features the text "UNIVERSITY OF CALIFORNIA AGRICULTURE & NATURAL RESOURCES" and "UC IPM Statewide Integrated Pest Management Program" with a green leaf logo. Below the banner is a navigation bar with links: "What is IPM?", "Identify & Manage Pests", "Research", "Publications", "Training & Events", "Links", "About Us", "Contact Us", and "Subscribe". A large image of a person in a field is on the right side of the banner.

Solve your pest problems with UC's best science

What's New

- **Pest Alert!** Agriculture: Peach Root-Knot Nematode Pest Alert. New nematode to California.
- Ag Pest Management: Citrus revised, Asparagus updated
- Pest Notes: Armillaria Root Rot added, Roses: Diseases and Abiotic Disorders, Plantains, Cockroaches, Deer, Roses: Insects and Mites revised
- Retail Nursery & Garden Center IPM Newsletter: Winter 2019
- Green Bulletin: Fall 2019
- Weed Photo Gallery: Italian thistle and

MAKE A GIFT | Support UC IPM's mission to make integrated pest management the way to manage pests

Home, Garden, Turf & Landscape Pests



Agricultural Pests



Grape Bud Beetle *Glyptoscelis squamulata*



An opening grape bud damaged by the chewing of an adult grape bud beetle



Grape Bud Beetle adult and eggs



To Detect New Infestations Monitor Vineyards for VMB Males

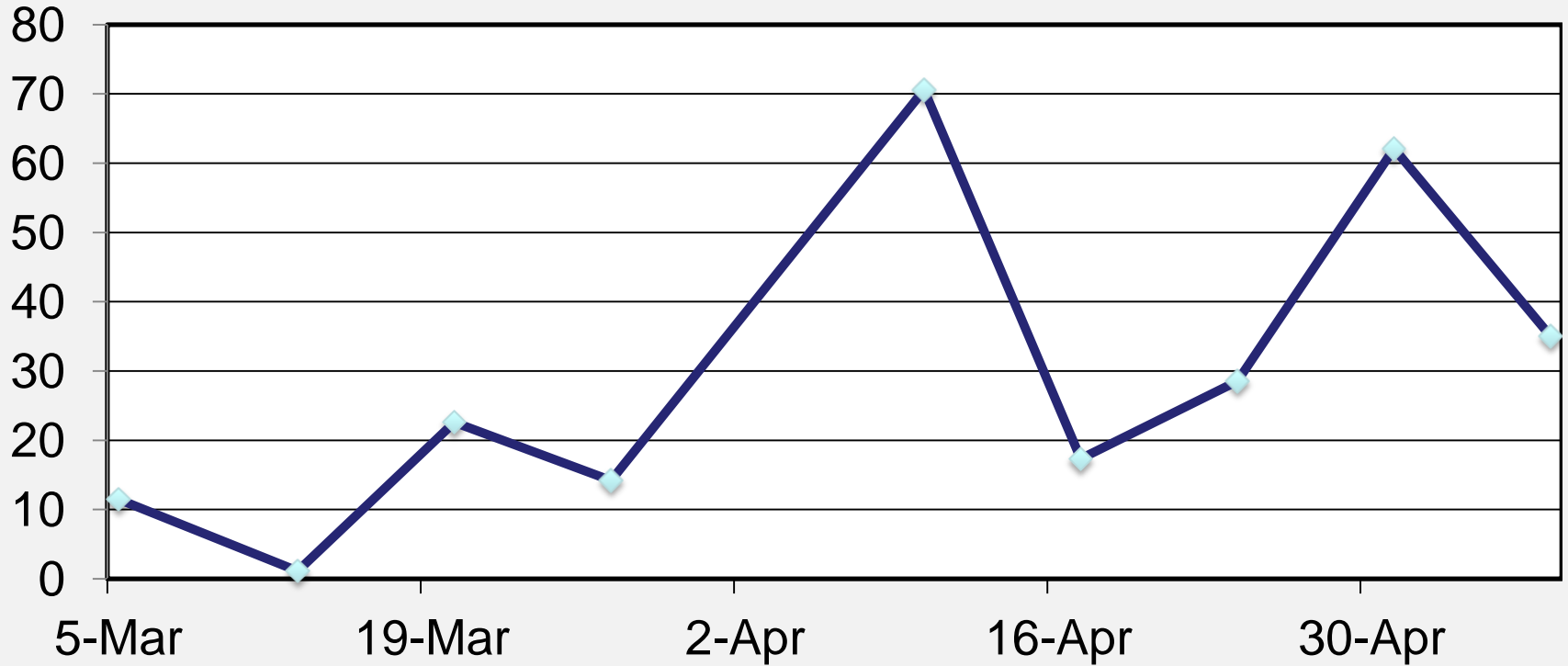


Photo: Kent Daane





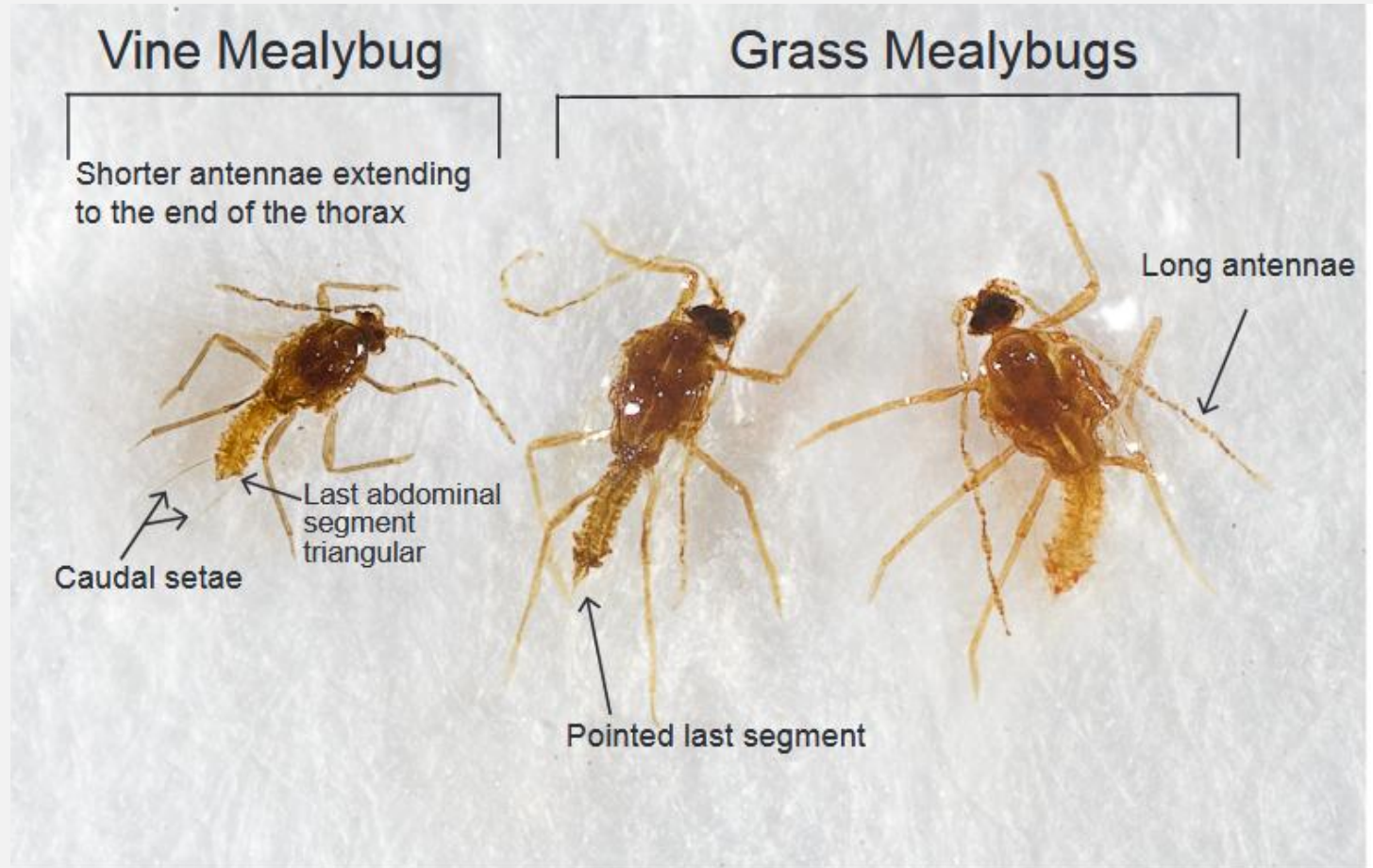
TOTAL #Males trapped Temecula 2017



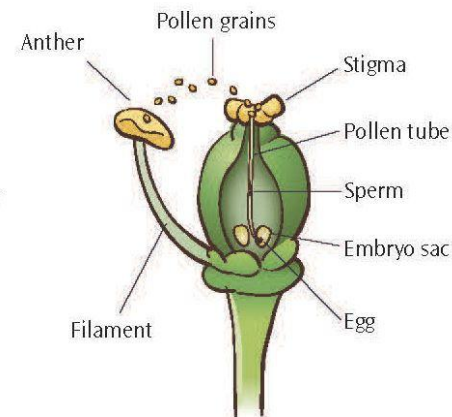
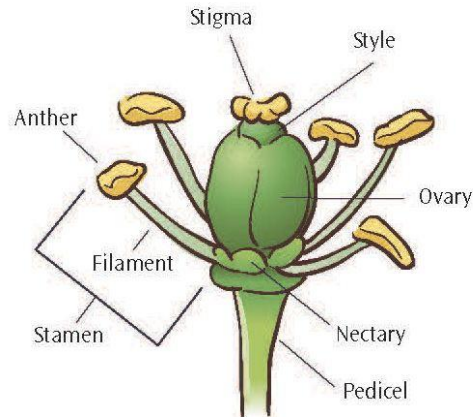
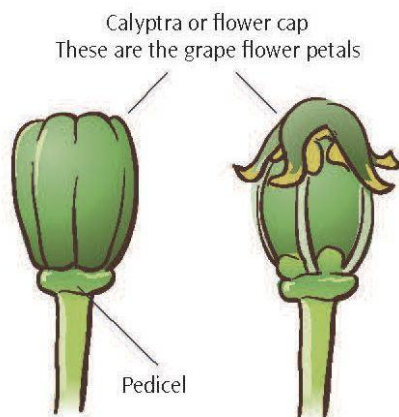
	5-Mar	13-Mar	20-Mar	27-Mar	10-Apr	17-Apr	24-Apr	1-May	8-May
MALES	12	1	23	14	71	17	29	62	35

Male Vine Mealybug Identification Sheet

University of California Cooperative Extension

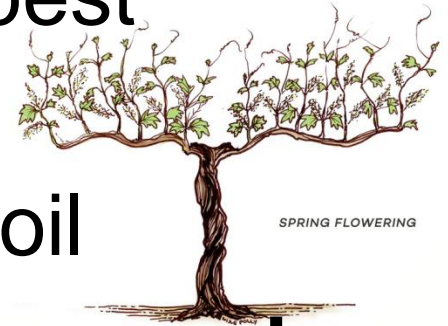


Early bloom fertility recommendations Temecula CA



Early bloom nutrients in Temecula CA

- Little Nitrogen at bloom – fall is best
 - Urea not ammonium
- Calcium all season – primarily Soil
- **Iron, Boron, Zinc, Boron, Copper and Molybdenum all at bloom**
- Sodium and Chloride build with irrigation
 - Humic acid & Compost
- Sulfur, Silicone and Phosphorus generally OK




Soluble Ca

- Soluble Gypsum
- CaTS – Calcium thiosulfate



Micro Pak



NutriSync Micro Pak

13-0-1


2.00% Zinc
FOLIAR NUTRIENT

GUARANTEED ANALYSIS

Total Nitrogen (N)	13.00%
4.0% Ammoniacal Nitrogen	
2.0% Nitrate Nitrogen	
6.0% Urea Nitrogen	
Soluble Phosphorus (P ₂ O ₅)	0.00%
Copper (Cu)	0.10%
0.10% Chelated Copper	
Iron (Fe)	0.10%
0.10% Chelated Iron	
Manganese (Mn)	0.10%
0.10% Chelated Manganese	
Zinc (Zn)	0.02%
0.02% Chelated Zinc	

Derived from: Urea, Ammonium Nitrate, Anhydrous Ammonia, Potassium Acetate, Copper Citrate, Ferrous Citrate, Manganese Citrate, and Zinc Citrate.
When used as directed this product does not supply all nutrients required by plants and is to supplement a soil fertility program based on soil tests.
Before using this product, read all precautions, directions for use, conditions of sale, limited warranty and limitations of liability and remedies.

KEEP OUT OF REACH OF CHILDREN



WARNING

Harmful if swallowed. Avoid contact with skin, eyes or clothing.

STORE IN COOL AND DRY CONDITIONS.

GENERAL INFORMATION

NUTRISYNCH MICRO PAK is a plant nutrient solution that contains a proprietary combination of anhydrous ammonia and zinc. It is a water soluble, neutral pH formulation. When used as a supplement to a regular fertilizer program, this product may improve vigor, quality, production and stress tolerance in a broad range of crops. It will not by itself provide all the nutrients normally supplied by crops.


General information for these applications is provided on this label. Consult current product literature for additional information.

Iron, copper and galvanized metals may be subject to mild corrosion from prolonged or repeated contact with this product.

COMPATIBILITY

NUTRISYNCH MICRO PAK can be applied alone or with other compatible spray materials. Ammonium polyphosphate fertilizers tend to be more compatible than orthophosphate types. Including soluble polyphosphates in the mixture often improves compatibility of orthophosphates.

F1548




Density: 9.95 lbs/gallon @ 68 °F

Liquid Measure: gallons (liters)

Net Weight: lbs (kg)

Product code: xxxxxxxxxxxx



Density: 9.95 lbs/gallon @ 68 °F

Liquid Measure: 250 gallons (946.35 liters)

Net Weight: 2,487.50 lbs (1,128.31 kg)

Product code: xxxxxxxxxx

(13) Berry and Small Fruit including Blackberry, Blueberry, Caneberry, Kiwi, Raspberry and Grape (except Strawberry)	2.0 to 6.0 pts	concentration of NUTRISYNCH MICRO PAK in the final solution. 1st: After transplant recovery. 2nd: 10 to 14 days later before bloom. Can repeat as needed every 14 to 21 until harvest. Co-factors in NUTRISYNCH MICRO PAK will perform best with minimum 1% concentration of NUTRISYNCH MICRO PAK in the final solution.
(14) Strawberry	2.0 to 4.0 pts	Remington at full leaf emergence. Avoid applications while

Boron



TREE, VINE AND FRUIT CROPS

Apples, Apricots, Avocados, Olives, Pistachios, Strawberries, Blueberries, Cranberries:

1 to 2 quarts/acre

Filberts, Almonds:

1 to 2 quarts/acre

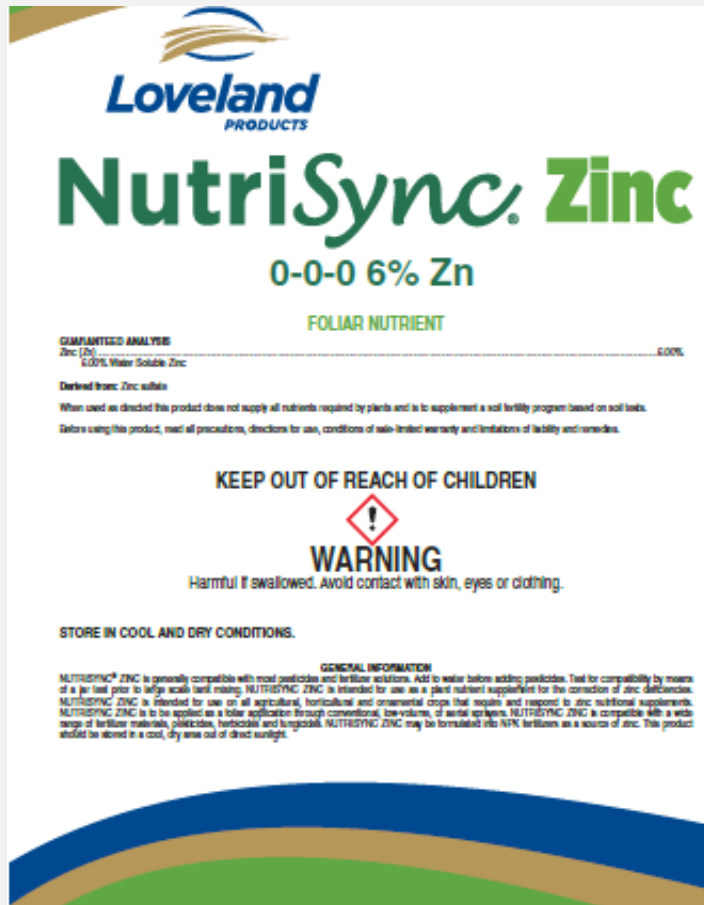
Caneberries, Grapes, Melons, Walnuts:

1 to 2 quarts/acre

Pears, Citrus Fruits, Cherries, Peaches, Plums, Prunes:

1 to 2 quarts/acre

Zinc



		Repeat applications at 14- to 21-day interval as needed.
(13) Berry and Small Fruit including Blackberry, Blueberry, Caneberry, Grape, Kiwi, and Raspberry (except Strawberry)	1.0 to 4.0 qts	Start applications from vegetative to flowering stage. Repeat applications at 14- to 21-day interval as needed.
(14) Tree Nuts including Almonds	1.0 to 4.0 qts	Start applications from vegetative to flowering stage

Seaweed Bio stimulant



acadian

100% LIQUID SEAWEED CONCENTRATE
0.1 | 0.0 | 5.0

GUARANTEED ANALYSIS

Total Nitrogen (N) 0.1%

0.1% Water Soluble Nitrogen

Soluble Potash (K_2O) 5.0%

Derived from *Ascophyllum nodosum*

Manufactured by:

**A Acadian
Seaplants**

PRODUCT OF CANADA

Guaranteed by:

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Tel.: +1 902 468 2840
Fax: +1 902 468 3474
www.acadianseaplants.com

A1211_0116

Grapes
(Wine)

64 TO 128 OUNCES PER ACRE

1st application: 1-4 inch shoot growth (foliar and soil) 2nd application: 10-12 inch shoot growth (foliar and soil) 3rd application: 5 days pre-bloom (foliar)
Avoid foliar pre-bloom application in varieties that are prone to under shatter. Use high rate in pre-bloom sprays on varieties that tend to over shatter.
4th application: 'BB' sized berries (2-3 mm) (foliar) 5th application: veraison (foliar and soil) Repeat: every 2-4 weeks during summer months
Post-harvest application: 2-4 weeks after harvest

Grapes
(Table, Raisin and Juice)

64 TO 128 OUNCES PER ACRE

1st application: 1-4 inch shoot growth (foliar and soil) 2nd application: 10-12 inch