With data from over 1500 trials, Marrone develops biological pesticides that are safe for workers, consumers, and the environment. We have pioneered techniques to provide uniquely powerful crop protection. From field to greenhouse, our award-winning biopesticides control insects, mites and disease, safely and sustainably while offering a better ROI, with great return on investment.

**Defend Your Crops USING BIO WITH BITE.**

**PROTECT STRAWBERRIES FROM:**
- Spotted Wing Drosophila
- Botrytis Fruit Rot
- Powdery Mildew
- Anthracnose
- Aphids
- And many more...

**GRANDEVO**

Grandeo is an advanced bioinsecticide that suppresses or controls early insect populations, protecting your strawberries and helping to prolong the lifespan of other pesticides.

**BENEFITS:**
- Broad spectrum protection against sucking and chewing insects
- Easy on pollinators and beneficial insects
- Multiple modes of action
  - Repellency
  - Ingestion
  - Reproduction Disruption
- No effect on pollination and fruit set

**BASIC USE INSTRUCTIONS:**
Apply 1-3 lbs per acre on a 7-day interval from pre-bloom to harvest

**KEY TARGET PESTS:**
- Spotted Wing Drosophila
- Lygus
- Armyworms
- Aphids
- Cutworms
- Leafrollers

**GRANDEVO CONTROLS 66% MORE MITES**

<table>
<thead>
<tr>
<th>Date</th>
<th>Grandevo</th>
<th>Untreated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct 14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oct 17</td>
<td></td>
<td></td>
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<tr>
<td>Oct 18</td>
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<tr>
<td>Oct 20</td>
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</tbody>
</table>

Adult & Nymph Two-spotted Spider Mites (per 10 plants)

**ROTATING IN GRANDEVO BOOSTS YIELD BY 15%**

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Strawberry Fruit Yield (# per 30 plants)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Untreated</td>
<td></td>
</tr>
<tr>
<td>Spinetoram</td>
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</tr>
<tr>
<td>Grandevo Program</td>
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</tbody>
</table>

800-1000
Regalia is a proven component in Powdery Mildew and Anthracnose Fruit Root management programs. Use Regalia early for disease prevention and overall plant health, and through the season for continued disease control.

**BENEFITS:**
- Better yield and harvest quality for conventional and organic strawberries
- Apply early for late residue management
- Stimulates plant immunity and prevents disease
- Unique FRAC P5 Classification

**BASIC USE INSTRUCTIONS:**
Tank Mix: 1qt/ac, 7-10 day interval unless tank-mix partner says longer
Rotational: 2qt/ac alternate w/ other fungicide, 7-10 day interval
Pre-Plant Dip: 0.5% v/v suspension (2qt/100 gal H₂O) to plant, roots, crown for 5 min right before transplant
Chemigation: 2qt/ac, 3 wk interval at end of irrigation set, min 3 applications

**KEY TARGET PESTS:**
- Powdery Mildew
- Botrytis Fruit Rot
- Anthracnose

Venerate XC is your go-to broad-spectrum in-season bioinsecticide. Venerate XC is an excellent addition to existing IPM and resistance management programs.

**BENEFITS:**
- Broad spectrum protection against sucking and chewing insects, mites and certain weevils
- Multiple modes of action
  - Exoskeleton degradation
  - Ingestion
  - Molting interference
- Non-toxic to fish, birds, and most beneficial insects, including honey bees
- Flexibility of application with activity against adults and nymphs

**BASIC USE INSTRUCTIONS:**
Apply 1-4 quarts per acre on a 7-day interval. No limit on number of applications per season. No spray buffer needed.

**KEY TARGET PESTS:**
- Spotted Wing Drosophila
- Thrips
- Leafrollers
- Lygus
- Whiteflies
- Armyworms

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**REGALIA-TREATED STRAWBERRIES 69% HEALTHIER**

<table>
<thead>
<tr>
<th>Program with Regalia</th>
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<tbody>
<tr>
<td>Bacillus subtilis Product</td>
<td></td>
</tr>
<tr>
<td>Streptomyces lydicus Product</td>
<td></td>
</tr>
<tr>
<td>Phytophthora Inoculation</td>
<td></td>
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</tbody>
</table>

Diseased plants

**UNTREATED**

**REGALIA DIP**

**VENERATE XC CONTROLS 33% MORE THRIPS**

<table>
<thead>
<tr>
<th>1 WEEK</th>
<th>Untreated</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Venerate XC</td>
<td>Spinosad</td>
<td></td>
</tr>
<tr>
<td>2 WEEKS</td>
<td>Untreated</td>
<td></td>
</tr>
<tr>
<td>Venerate XC</td>
<td>Untreated</td>
<td></td>
</tr>
<tr>
<td>3 WEEKS</td>
<td>Untreated</td>
<td></td>
</tr>
</tbody>
</table>

Control of Western Flower Thrips (%)

Towards the end of our season on our conventional side, the two-spots had gotten so bad. We’d thrown everything else we had at them, so I used Venerate to try to draw back the populations back and finish out the season. Going forward into another season Venerate will be the insecticide I go to for my organic side and it will be part of my conventional program as well.

—JOEL CONNELL, GRIMES FARMS
Majestene is a bionematicide that controls or suppresses crop damaging nematodes to improve root health and increase strawberry yields.

**BENEFITS:**
- Economically sustainable liquid bionematicide
- Can be applied at planting and in-season for whole-season nematode control or suppression
- No plant-back restrictions
- Flexible application: soil drench, in-furrow, or chemigation like drip or sprinkler irrigation

**BASIC USE INSTRUCTIONS:**
Apply Majestene as part of an irrigation event.

**At Planting:** apply 2 gallons per acre in furrow.

**Sprinkler irrigation:** apply 2.5 - 4 gallons per acre at 21-day interval

**KEY TARGET PESTS:**
- Root Knot Nematode
- Dagger Nematode
- Needle Nematode
- Lesion Nematode
- Stem Nematode

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**MAJESTENE REDUCES NEMATODES BY 80%**

<table>
<thead>
<tr>
<th>Untreated</th>
<th>Program with Majestene</th>
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</thead>
<tbody>
<tr>
<td>1,3-Dichloropropene, Chloropicrin</td>
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</table>

Root Knot Nematodes (# per 500 ml soil)

**0**

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It’s important to have relationships with companies like Marrone who look for alternative methods, chemistries and processes for safer products. Their people are experienced and know how best to use biologicals and on which target insects. Marrone helps us move forward to better meet consumer demand.

– Jeff Lewis, Riverview Flower Farm

My spray regimen always has biologicals in it. Every time I spray, I’ve got biologicals in my spray. Every time the tank goes out, it’s got it in there, and I’m keeping it on there. I’ve cut back my spray this year. I’ve done it three years in a row and I totally stand by it.

– Matt Parke, Parkesdale Farms

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“MARRONE HELPS US MOVE FORWARD”

“MY SPRAY REGIMEN ALWAYS HAS BIOLOGICALS IN IT”
### TIMING OF APPLICATION

<table>
<thead>
<tr>
<th>PLANTING</th>
<th>PREBLOOM</th>
<th>FLOWERING</th>
<th>FIRST HARVEST</th>
<th>HARVEST</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
<tr>
<td>Majestene</td>
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</tr>
<tr>
<td>Grandevo</td>
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<td></td>
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</tr>
<tr>
<td></td>
<td>Venerate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regalia for Powdery Mildew</td>
<td>Regalia for Botrytis</td>
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</tbody>
</table>

**“YOU WON’T GET BETTER RESULTS”**

You can take a biological and do three or four applications for the same price as you can one traditional chemistry. I would challenge you to say that you won’t get better results if you use that as a program approach.

- **JOSH YOUNG, CROP PROTECTION SERVICES OF FLORIDA**

**“A WHOLE NEW FRONTIER FOR TRADITIONAL GROWERS”**

Biological solutions present a whole new frontier for traditional growers. They prevent the same problems traditional growers would be looking to prevent but in a way that is softer on the planet, the environment, the farmworkers, and the watershed.

- **DAVID KNAUS, APICAL CROP SCIENCE**

If you haven’t tried one of our products, we want to talk to you! Give us a call at (530) 750-2800 or visit us at marronebio.com