Fine Americas, Inc.

Falgro: Grape Label Review
Gibberellic acid (GA$_3$)

- Originally discovered as a secretion from rice pathogen *Gibberella fujikori* in 1898
- Naturally occurring
- Produced by fermentation
- Absorbed through leaf, branches & fruit and transported to actively growing plant tissue


Gibberellic acid (GA$_3$)

- **Primary Physiological Effects:**
  - Promotes cell growth
  - Promotes cell elongation
  - Accelerates fruit growth
  - Delays maturation i.e. prolongs the time fruit remains on the tree
Falgro

- Made by Fine Agrochemicals, the second largest gibberellin producer in the world.
  - Using *Gibberella monoliforme*
  - Fine Agrochemicals proprietary strain
- 25 years of experience in PGRs
- Quality assured production to ISO 9002 standards
- Available as a 20% Soluble Powder & 4%
Spray Guidelines of Seedless Grapes
Stretch Spray

- For cluster elongation and looser clusters
- Reduce thinning costs
- Allows better air circulation to aid in the control of bunch rot
- Increases light penetration to aid in sugar development
Falgro Rate Converter

<table>
<thead>
<tr>
<th>Grams ai/ A</th>
<th>PPM (based on a 100 gal/A spray volume*)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>20</td>
</tr>
<tr>
<td>12</td>
<td>30</td>
</tr>
<tr>
<td>16</td>
<td>40</td>
</tr>
<tr>
<td>24</td>
<td>60</td>
</tr>
<tr>
<td>32</td>
<td>80</td>
</tr>
<tr>
<td>64</td>
<td>160</td>
</tr>
<tr>
<td>128</td>
<td>320</td>
</tr>
</tbody>
</table>

100 Gallons/A (GPA) = 935 liters/hectare
Spray Guidelines of Thompson Seedless Grapes

Stretch Spray Guidelines

**Rate**: 8-24 g ai/Acre

**Timing**: Make first application before bloom when clusters are 2-7 inches long

**Applications**: 1-3 sprays as needed
Spray Guidelines of Thompson Seedless Grapes

Stretch Spray Timing
Spray Guidelines of Seedless Grapes

Thinning Spray

Decreases berry set, reduces thinning costs and hastened maturity.

Reduces berry set to thin bunches thus allowing for more room on the rachis for berries to reach their maximum size.

NOTE: Higher amounts or multiple applications may cause an excess of shot berries or over thinning, especially in young vines or vines with high vigor.
Thompson Seedless Grapes
Thinning Spray Guidelines

Rate  8-20

Timing  During bloom

Applications  1-4 sprays
Thompson Seedless Grapes
Thinning Spray Timing
Thompson Seedless
‘Bump’ Spray

Objectives/benefits include to help initiate the beginning of berry growth.
Thompson Seedless
‘Bump’ Spray

Dosages: Apply 16-24 g ai / Acre in sufficient volume to ensure through wetting

Timing: Apply between last Bloom spray and first sizing spray
Spray Guidelines of Seedless Grapes

Sizing Spray

Increases berry size and clusters when used in conjunction with established girdling and thinning practices.
Thompson Seedless Grapes
Sizing Spray Guidelines

Rate: 32-128 g ai/Acre

Timing: Make first application when average berry size is 3-5mm in diameter

Applications: 1-4 sprays
Thompson Seedless Grapes
Sizing Spray Guidelines
Thompson Seedless Grapes
Sizing Spray Guidelines
Thompson Seedless Table Grapes
Falgro Spray Summary

1-3 stretch sprays @ 8-24 g ai/Acre

1-4 thinning sprays @ 8-20 g ai/Acre per application

1 Bump spray @ 16-24 g ai/Acre

1-4 sizing sprays @ 32-128 g ai/Acre per application
Spray Guidelines for Flame Seedless Grapes
Flame Seedless Grapes
Stretch Spray Guidelines

Rate 8-24 g ai/Acre
Timing Before bloom when clusters are 2-7 inches long
Applications 1-3 sprays
Flame Seedless Grapes
Stretch Spray Timing
Flame Seedless Grapes
Thinning Spray Guidelines

- Rate: 3-16 g ai/Acre
- Timing: During bloom
- Applications: 1-4 sprays
Flame Seedless Grapes
Thinning Spray Timing
# Flame Seedless Grapes

## Sizing Spray Guidelines

<table>
<thead>
<tr>
<th>Rate</th>
<th>20-128 g ai/Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timing</td>
<td>Make first application when average berry size is 6-9mm in diameter</td>
</tr>
<tr>
<td>Applications</td>
<td>1-4 sprays</td>
</tr>
</tbody>
</table>
Flame Seedless Grapes
Sizing Spray Timing
Flame Seedless Grapes
Falgro Spray Summary

1-3 stretch spray @ 8-24 g ai/Acre

1-4 thinning sprays @ 3-16 g ai/Acre per application

1-4 sizing sprays @ 20-128 g ai/Acre per application
## Perlette Grapes
### Stretch & Sizing Spray Guidelines

<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rate</strong></td>
<td>Stretch @ 8-24 g ai/Acre</td>
</tr>
<tr>
<td></td>
<td>Sizing @ 32-128 g ai/Acre</td>
</tr>
<tr>
<td><strong>Timing</strong></td>
<td>Stretch when clusters are 2-7”</td>
</tr>
<tr>
<td></td>
<td>Sizing @ 4-5 mm berry size</td>
</tr>
<tr>
<td><strong>Applications</strong></td>
<td>Stretch @ 1-3 sprays as needed</td>
</tr>
<tr>
<td></td>
<td>Sizing @ 1-4 sprays as needed</td>
</tr>
</tbody>
</table>
# Thompson Seedless for Raisins Stretch Spray Guidelines

<table>
<thead>
<tr>
<th>Rate</th>
<th>8-24 g ai/Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timing</td>
<td>Make first application when clusters are 2-7 inches long</td>
</tr>
<tr>
<td>Applications</td>
<td>1-3 sprays as needed</td>
</tr>
</tbody>
</table>
## Thompson Seedless for Raisins
### Thinning Spray Guidelines

<table>
<thead>
<tr>
<th>Rate</th>
<th>3-12 g ai/Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timing</td>
<td>Make first application when bunches are 60-80% bloom</td>
</tr>
<tr>
<td>Applications</td>
<td>1-3 sprays</td>
</tr>
</tbody>
</table>
Thompson Seedless for Raisins
Sizing Spray Guidelines

Rate: 4-20 g ai/Acre
Timing: Make first application when average berry size is 3-5 mm in diameter
Applications: 1-4 sprays
Thompson Seedless for Raisins
Falgro Spray Summary

1-3 stretch application @ 8-24 g ai/Acre

1-4 thinning sprays @ 3-12 g ai/Acre per application

1-4 sizing sprays @ 4-20 g ai/Acre per application
Benefits for Using Falgro for Quality Raisin Production

- Reduces bunch rot
- Enlarges raisins
- Hastens maturity
Falgro for Thinning Other Seedless Table Grapes

For decreased berry set, reduced hand thinning costs.

Apply 0.5 – 12 g ai/ac.
<table>
<thead>
<tr>
<th>Crimson</th>
<th>Centennial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ruby</td>
<td>Autumn Royal</td>
</tr>
<tr>
<td>Superior</td>
<td>Black Seedless</td>
</tr>
<tr>
<td>Princess</td>
<td>Black Maroo</td>
</tr>
<tr>
<td>Beauty</td>
<td>Others</td>
</tr>
</tbody>
</table>

Falgro for Other Seedless Table Grapes
Falgro for Other Seedless Table Grapes
Sizing Spray

Make 1-4 applications depending upon variety.

Apply 8-60 grams active ingredient per acre @ 3-14mm berry size.

Timing of the subsequent sprays will be dictated by experience in the vineyard and temperatures occurring between sprays.
## Summary of Falgro Application Rates for Seedless Grapes

<table>
<thead>
<tr>
<th></th>
<th>Stretch Grams ai/A</th>
<th>Thinning Grams ai/Acre</th>
<th>Sizing Target</th>
<th>Gram ai/Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perlette</td>
<td>8-24</td>
<td>*</td>
<td>4-5mm</td>
<td>32-128</td>
</tr>
<tr>
<td>Flame</td>
<td>8-24</td>
<td>3-16</td>
<td>6-9mm</td>
<td>20-128</td>
</tr>
<tr>
<td>Thompson</td>
<td>8-24</td>
<td>8-20</td>
<td>3-5mm</td>
<td>32-128</td>
</tr>
<tr>
<td>Raisin</td>
<td>8-24</td>
<td>3-12</td>
<td>3-5mm</td>
<td>4-20</td>
</tr>
<tr>
<td>All others</td>
<td>**</td>
<td>0.5-12</td>
<td>3-14mm</td>
<td>8-60</td>
</tr>
</tbody>
</table>

*No recommendation available for this variety/timing at this time

**Variable depending on variety
Falgro for Seeded Table Grapes
Sizing Spray

**Rate**
Apply 2-20 grams active ingredient per acre as dilute or concentrate
40-50 ppm direct spray to the clusters or dipped.

**Timing**
Generally two weeks after shatter or when berry diameter is between 12 and 18 mm depending upon variety.
Timing will differ according to each varieties: Emperor, Red Globe, Calameria, Christmas Rose, Rogue, Queens.

**Note:** Whole vine sprays may reduce fruitfulness the following year
Falgro for Wine Grapes

Application of Falgro increases cluster length and improves air circulation and light penetration within the cluster, reducing the incidence of bunch rot and sour rot.

Make a single spray application.

Yield reduction may result from an increase in shot berries in the year of application, and/or a reduction in fruitfulness in the first and second year following the application.
# Falgro Application Rates and Timing for Wine Grapes

<table>
<thead>
<tr>
<th>Variety</th>
<th>Rate g ai/A</th>
<th>Timing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Palomino Sauvignon Blanc</td>
<td>0.4-1</td>
<td>Spray when average flower cluster length is 3-4 inches. Use is based on 100 gallons of water per acre.</td>
</tr>
<tr>
<td>Tinta Madeira</td>
<td></td>
<td>Do not make application less than three weeks before full bloom.</td>
</tr>
<tr>
<td>Aleatico Carignane Chenin</td>
<td>1-2</td>
<td>Spray when average flower cluster length is 3-4 inches. Use is based on 100 gallons of water per acre.</td>
</tr>
<tr>
<td>Blanc French Colombard</td>
<td></td>
<td>Do not make application less than three weeks before full bloom.</td>
</tr>
<tr>
<td>Pinot Noir Valdepenas</td>
<td></td>
<td>Use is based on 100 gallons of water per acre.</td>
</tr>
<tr>
<td>Barbera Petite Sirah Zinfandel</td>
<td>2-4</td>
<td>Spray when average flower cluster length is 3-4 inches. Use is based on 100 gallons of water per acre.</td>
</tr>
<tr>
<td>Green Hungarian</td>
<td>4-8</td>
<td>Spray when average flower cluster length is 3-4 inches. Use is based on 100 gallons of water per acre.</td>
</tr>
<tr>
<td>Grenache Alicante</td>
<td>8</td>
<td>Spray when average flower cluster length is 3-4 inches. Use is based on 100 gallons of water per acre.</td>
</tr>
<tr>
<td>Salvadore</td>
<td>8-16</td>
<td>Spray when average flower cluster length is 3-4 inches. Use is based on 100 gallons of water per acre.</td>
</tr>
</tbody>
</table>
Falgro Application Considerations

Timing

pH 5.5 to 8.0

Adjuvants
Major Benefits from the Use of Falgro

- Reduces thinning costs
- Increases size and quality
- Cost effective
- More economic return per acre
- Compatible with most other products
- Approved organic material
- Environmentally friendly
- More air & light movement
- Aid in the control of bunch rot
- Aid in sugar development
Bloom and Thinning Considerations

Temperature 68°F (20°C)
Center of cluster begins first
Onset at Calyptras cracking
Weather dependent responses:
  Cool and wet: 10-14 days +
  Hot and dry: 1-5 days
Normal: 5-10 days
General Spray Guidelines for Grapes

For optimum effectiveness, thorough spray coverage must be achieved.

All parts of the plant or crop must receive the spray or desired results will not occur.

Prepare solution concentrations by mixing the required amount of product with water in a clean, empty tank.
General Spray Guidelines for Grapes

- Applications under slow drying conditions will increase absorption by the plant, thus optimizing effectiveness.
- Nighttime applications are encouraged when daytime conditions are not conducive to slow drying conditions.
- Ground sprayer is recommended.
- Apply as a concentrate or dilute in sufficient water volume to insure through wetting.
- Wet all flower clusters & berries thoroughly.
Questions?

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Technical Services Manager

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Thank You!