



**Tree Fruit Foliar Nutrient Applications  
and**

**Foliar Nutrients & PGRs for Frost/Freeze Situations**

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| <b>Timing</b>         | <b>Material</b>         | <b>Rate/100 gal<br/>(Use 300<br/>gal/acre or TRV)</b> | <b>Comments</b>  |
|-----------------------|-------------------------|---|--|
| Tight cluster         | Solubor (boron)         | 1 lb  | Aid for freeze/frost damaged live buds OR where indicated by foliar analysis.<br>Care should be taken when making applications to apricots and peach due to sensitivity issues.  |
|                       | Zinc EDTA               | 1 lb or 1 qt  | Aid for freeze/frost damaged live buds OR where indicated by foliar analysis.  |
| Pink                  | Urea (lo biuret)        | 3 lbs   | Aid for freeze/frost damaged live buds.<br>Helps to strengthen buds particularly during a cool drawn out bloom period. NOT recommended on stone fruit  |
| Bloom                 | Promalin                | 1-2 pts/acre  | Apply within 24 hours prior to or after a frost event when the majority of the crop is between early bloom and full bloom.<br>Adjuvant not recommended.  |
| Petal fall            | Epsom salts (Magnesium) | 15 lbs  | Apply where foliar analysis indicated a need.<br>Avoid applications under slow drying conditions or temperatures above 80°F. See note at end of table.   |
|                       | Urea (lo biuret)        | 5 lbs   | See note above   |
| 1 <sup>st</sup> Cover | Epsom salts (Magnesium) | 15 lbs  | Apply where foliar analysis indicated a need.<br>Avoid applications under slow drying conditions or temperatures above 80°F.   |
|                       | Solubor (boron)         | 1 lb  | Aid for freeze/frost damaged live buds OR where foliar analysis indicated a need.<br>Care should be taken when making applications to apricots and peaches due to sensitivity issues.  |
|                       | Calcium                 | 2 lbs   | Varieties that tend to be large, AND/OR where bitter pit (calcium deficiency) has been a problem, AND/OR non-irrigated blocks particularly during a drought. Do not apply under slow drying conditions, when temperatures exceed 80°F or with high humidity. |
| 2 <sup>nd</sup> Cover | Epsom salts (Magnesium) | 15 lbs  | Apply where foliar analysis indicated a need   |
|                       | Solubor (boron)         | 1 lb  | Apply where foliar analysis indicated a need   |
|                       | Zinc EDTA               | 1 lb or 1 qt  | Apply where foliar analysis indicated a need   |
|                       | Calcium                 | 2 lbs   | See note above   |

|  |         |           |                |
|--|---------|-----------|----------------|
| 3 <sup>rd</sup> Cover                            | Calcium | 2 lbs     | See note above |
| 4 <sup>th</sup> Cover                            | Calcium | 2 lbs     | See note above |
| 5 <sup>th</sup> and<br>6 <sup>th</sup><br>covers | Calcium | 3 – 4 lbs | See note above |

**Special Considerations** – Dr. Warren Stiles, Professor Emeritus, Cornell University

- Urea, Solubor and Zinc EDTA are safe in a pre-bloom tank mix on apples & pears.
- Petal fall: Urea + Epsom salts tank mixed may cause foliar injury on young apple trees. Suggest separate applications.
- Solubor and boron should not be tank mixed with pesticides in water-soluble-packets.
- Solubor should not be tank mixed with oil.
- 2<sup>nd</sup> cover: Epsom salts, Solubor and Zn EDTA are compatible in a tank mix. However this combination PLUS pesticides may want to be avoided to reduce the amount of material in the tank. If your foliar analysis indicated a need for all three, move the Zn EDTA and/or Solubor to the 3<sup>rd</sup> cover spray or in a separate spray.
- Calcium chloride plus Epsom salts may, under some conditions, react to form a calcium sulfate precipitate.

**Read the label BEFORE mixing for any known compatibility issues.**

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