

Foliar Nutrient Spray Guide

BASIC PROGRAM

OKTF, Field Service, 2007

Spray Options	Silver Tip	Loose Cluster	Pink	Full Bloom	Petal Fall	1/2 inch Fruitlet	1 inch Fruitlet	2 inch Fruitlet	Pre Harvest	Post Harvest
<p><i>Zinc is difficult to get into the tree and is chronically deficient in the Okanagan. Recommend 2 pre bloom and one post harvest spray be done annually. A good supply of Zinc increases winter hardiness, bud strength, return bloom, fruit size and density.</i></p>										
1. ZINC (Product Option B) Zinctrac - Spray #1, #2 & #3 at 1 lt/ha		#1	#2							#3
2. ZINC (Product Option A) Zinc Sulfate - Spray #1 at 40 kg/ha or 95 litre/ha - Spray #2 at 15 kg/ha or 35 litre/ha (Note: Zinc Sulfate burns green leaf tissue)		#1								#2
<p><i>Boron is essential for strong flowering and fruit set. Timing corresponds with the needs of the flowers and next year's buds. Boron is easily taken up by the fruit and tree, so beware of Boron toxicity. Apply Boron on the ground ONLY if a soil analysis indicates a deficiency!</i></p>										
3. BORON (Product Option A) Borisol or Bortrac - Sprays #1 & #2 at 1 lt/ha - Spray #3 at 2 lt/ha (Product Option B) Solubor - Sprays #1, #2, & #3 at 5 kg/ha (Note: Boron should not be applied on the fruit because it can negatively effect fruit quality)			#1	#2						#3
<p><i>Nitrogen is essential for fruit set and fruit size. Foliar Urea actually increase the uptake of elements applied with it. Combine Urea with any Boron, Zinc or Magnesium product to improve uptake.</i></p>										
4. NITROGEN (Product Option A) Urea (45-0-0) - Sprays #1 #2 & #3 at 6 to 8 kg/ha - Spray #4 at 10 to 25 kg/ha (Note: 46-0-0 (for ground application) is not to be used on foliage due to fruit russet potential)		#1	#2			#3				#4
5. NITROGEN (and more) (Product Option B) 20-20-20 - Spray #1, #2, #3 & #4 at 12 kg/ha						#1	#2			#3
<p><i>Magnesium is chronically deficient in the Okanagan. Magnesium is essential for photosynthesis and in the use of Phosphorous and Nitrogen. Apply Magnesium early in the season because when it is applied to the fruit, it reduces total Calcium and increases green skin colour. Apply an extra post bloom spray if Spring conditions are cool for a prolonged period.</i></p>										
6. MAGNESIUM (Product Option A) Epsom Salts - Sprays #1, #2, #3 & #4 at 15 to 20 kg/ha (Note: aim to apply a total of 40 Kg/ha of Epsom Salts over the spring period)						#1	#2	#3	#4	#5
7. MAGNESIUM (Product Option B) Hydromag - Sprays #1, #2, #3 & #4 at 2 lt/ha (Note: aim to apply a total of 4 lt/ha of Hydromag over the spring period)						#1				#2

Foliar Nutrient Spray Guide

BASIC PROGRAM

OKTF, Field Service, 2007

Spray Options	Silver Tip	Loose Cluster	Pink	Full Bloom	Petal Fall	1/2 inch Fruitlet	1 inch Fruitlet	2 inch Fruitlet	Pre Harvest	Post Harvest
<p><i>Calcium increases fruit quality by making cell walls stronger.</i></p> <p><i>Calcium increases fruit storability by inhibiting fungal infections and most storage disorders.</i></p> <p><i>Read the Production Guide for the safe use of Calcium products.</i></p>										
8. CALCIUM						4 to 6 Sprays				
(Product Option C) Calcium Chloride - Spray at 5 to 10 kg/ha (or up to 9 kg/1000 lt) (Product Option D) Cor-Clear - Spray at 4 to 8 kg/ha (or up to 7 kg/1000 lt) (Product Option E) PitStop or Stopit - Spray up to 10 lt/ha (or 10 lt/1000 lt) (Note: Start application early to maximize calcium uptake and minimize rots)										
9. CALCIUM						#1	#2	#3	#4	
(Product Option B) Caltac - Spray #1, #2, #3 at 3 lt/ha (Note: Stop application 1 month prior to harvest to limit residues) (Note: Start application early to maximize calcium uptake and minimize rots)										
10. CALCIUM						#1				
(Product Option A) Calcium Nitrate - Spray #1 at 5 to 7 kg/ha (or 6 to 8.5 kg/1000lt). (Note: Do not apply after 1 inch fruit size because the Nitrogen will negatively effect fruit colour)										
<p><i>Phosphorous is needed for cell division to give firmer fruit and increased storability.</i></p> <p><i>Evidence shows fruit bruising is reduced and pressure drop in storage is slower.</i></p> <p><i>Phosphorous is also a key component in red colour and can be applied to intensify EXISTING red colouration.</i></p>										
11. PHOSPHOROUS (For Cell Division)						#1	#2	#3		
(Product Option A) Seniphos - Spray #1, #2 and #3 at 5 lt/ha (Product Option B) Nutriphos 24 - Spray #1 & #2 at 12 kg/ha (Product Option C) 20-20-20 - Spray #1 & #2 at 12 kg/ha (Note: Use this timing to enhance cell division)										
12. PHOSPHOROUS (To Intensify EXISTING Red Colour)						3 or 4 Sprays				
(Product Option A) Seniphos - Spray at 5 lt/ha (Note: NorCal plus P and Seniphos are compatible with Calcium Chloride, but not with Norcal or Caltrac) (Product Option B) Nutriphos 24 - Spray at 12 kg/ha (Note: Nutriphos 24 is an excellent source of Phosphorous and Calcium) (Product Option C) 20-20-20 - Spray at 5 kg/ha (Note: 20-20-20 is a good source of Nitrogen, Phosphorous and Potasium, not compatible with Calcium Chloride)										
13. PHOSPHOROUS (As Tank Acidifier)						Multiple Sprays As Tank Acidifier				
(Product Option A) Seniphos - Spray at 2lt/1000lt (500ml/100gal)										
<p><i>Sampling shows cronically low levels of copper in many of our orchards.</i></p>										
14. COPPER									#1	
(Product Option A) Copper Oxi Chloride - Sprays #1 at 5 kg/ha (Product Option B) Coptrel - Sprays #1 at 500 ml/ha										

OPTIONAL PROGRAM

OKTF, Field Service, 2007

15. IRON						#1				#2
(Product Option A) Nutriphos Fe - Spray #1 at 8 kg/ha - Spray #2 at 15 kg/ha (Product Option B) One of several Iron chelates (see label rates)										

Foliar Nutrient Spray Guide

CAUTIONS AND BAD MIXES

GENERAL CAUTIONS

Solubags do not dissolve when loaded after Boron is in the tank
{Sovran} *applied on or drifted on cherries will cause defoliation*
{Success 480} *Do not use a tank acidifier like Seniphos or ZKP, rapid breakdown below pH 6.6*
{Admire} and any nutrients - *No mixes supported by the company*
Spring Applied Zinc Sulfate - *No Mixes Recommended and apply before oil is applied.*

KUMULUS

DO NOT APPLY WITHIN 30 DAYS OF OIL

CAPTAN AND MEASTRO

DO NOT MIX OR APPLY {Captan or Meastro} and {Oils or Immediately Following Oil}
DO NOT MIX {Captan or Meastro} and {Strong Alkiline Solutions - Lime Sulfer or Boron or Calcium Chloride}

CORCLEAR AND CALCIUM CHLORIDE

DO NOT SPRAY WHEN TEMPERATURES ARE OVER 27 degrees C
DO NOT MIX WITH 1) any Sulfur or Sulfate Based Chemistry or Boron or Zinc eg Epsom Salts or Kumulus
DO NOT MIX WITH 2) Admire or Captan or Maestro or Cygon or Nova or Sevin XLR
DO NOT MIX WITH 3) Oils or Emulfified Concentrates or Sticker Spreaders

OTHER BAD NUTRIENT COMBINATIONS

DO NOT MIX {Epsom Salts} and {Boron}
DO NOT MIX {Seniphos} and {Caltrac or Bortrac}
Not Recommended {Seniphos} and {Zintrac}
Not Recommended {Foray or Dipel or Bioprotec} and {Boron}
Not Recommended {Diazinon} and {Hydromag}

HORMONE SPRAY COMBINATIONS

Not Recommended Giberlic Acid (GA) and any other product or nutrient
Not Recommended {NAA} in the same growing season as {ACCEL}
Not Recommended {NAA} and {anything other than Sevin XLR}

Foliar Nutrient Spray Guide

>>>> CAUTION <<<<<

ANY COMBINATION OF 2 OR MORE CHEMICALS CAN CAUSE
DAMAGE UNDER ADVERSE SPRAYING, SLOW OR FAST DRYING CONDITIONS

>>>> USE AT YOUR OWN RISK <<<<<

COMMONLY USED MIXES

GENERAL RULE OF ADDITION TO TANK

1st Add Water, then Oil, then Pesticide, then Nutrients (Boron is always last)

{Oil} PLUS {Sovran, Nova, Nustar, Polyram, Diathane} PLUS {Zintrac or Zinc 50} PLUS {Borisol or Bortrac or Solubor}
{Foray or Dipel or Bioprotec} PLUS {Diazinon}
{Foray or Dipel or Bioprotec} PLUS {Seniphos}

{Codling Moth Insecticides} PLUS {Urea (45-0-0) or 20-20-20} PLUS {Hydromag or Epsom Salts}
{Codling Moth Insecticides} PLUS {Caltrac or Calcium Chloride or Stopit or PitStop}
{Codling Moth Insecticides} PLUS {Nutriphos 24}

{Sovran, Nova, Nustar, Polyram, Diathane} PLUS {Urea (45-0-0) or 20-20-20} PLUS {Hydromag or Epsom Salts}

{Polyram, Diathane} PLUS {Caltrac or Calcium Chloride or Stopit or PitStop}
{Seniphos at 1 to 2ltr per 100gals} PLUS {Caltrac or Calcium Chloride or Stopit or PitStop}

{Ethrel} PLUS {Seniphos}
{Accel} PLUS {Seniphos}
{Sevin XLR} PLUS {NAA}
{Sevin XLR} PLUS {Accel} PLUS {Seniphos}

{CorClear or Calcium Chloride} PLUS {Zinab or Diathane or Manzate or Polyram or Ferbam or Thiram or Ziram}
{CorClear or Calcium Chloride} PLUS {Diazinon or Thiodan or Imadan or Guthion or Sniper or Zolone}

POST HARVEST MIXES PER 100 GALLONS - DO NOT APPLY ON OR DRIFT ON FRUIT

- 1) Urea @ 5 to 10kg, Epsom Salts @ 3 to 15 kg, Zinc 50 @ 2 kg, Solubor @ 1kg, Fixed Copper @ 2kg
- 2) 20-20-20 @ 2 to 5kg, Epsom Salts @ 3 to 15 kg, Zinc 50 @ 2 kg, Solubor @ 1kg, Fixed Copper @ 2kg
- 3) Urea @ 5 to 10kg, Hydromag @ 1.5 lt, Botrac @ 1lt, Zintrac @ 1lt

NON BEARING TREE MIXES PER 100 GALLONS - DO NOT APPLY ON OR DRIFT ON FRUIT

- 1) 20-20-20 @ 4 kg, Kumulus @ 1kg, Epsom Slats @ 3kg, Zinc 50 @ 1kg and Solubor @ 100gm
- 2) Urea @ 2.5 to 5 kg, Kumulus @ 1kg, Epsom Slats @ 3kg, Zinc 50 @ 1kg and Solubor @ 100gm
- 3) 20-20-20 @ 4 kg, Kumulus @ 1kg, Hydromag @ 400ml, Zintrac @ 100ml and Bortrac @ 100ml
- 4) Urea @ 2.5 to 5 kg, Kumulus @ 1kg, Hydromag @ 400ml, Zintrac @ 100ml and Bortrac @ 100ml