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AUTUMN 2011

Post Harvest Pome and Stonefruit Technical Bulletin



Post harvest nutrient management can influence your yield and quality for the coming season. What happens post harvest can influence bud fertility and crop development in spring. Are you getting the balance correct?

Working with SLTEC's agronomy team can help make this a reality. Our team of agronomists can assist you maximise the factors that are in your control.

www.sltec.com.au

Pome & Stonefruit Post Harvest Nutrition

As the harvest season comes to a close, attention should be given to next year's crop potential, including beginning the correction of any nutrient issues that may have been diagnosed during the season and from summer tissue testing. It is now widely accepted that post harvest foliar nutrition as soon as possible after harvest is a key tool in providing adequate bud nutrient levels through to petal fall.

Nitrogen (N):

Post harvest Nitrogen applications via both foliar and soil application are proven to increase flower duration, the length of time for pollination and subsequent fruit set. Cherries and early season apple varieties rely heavily on post harvest Nitrogen applications, while some vigorous varieties such as Fuji, may receive up to 60 - 80% of their seasonal Nitrogen allocation post harvest, depending on the site, rootstock and previous crop load.

Trace Elements

Foliar application of trace elements with low - biuret urea is highly beneficial in most situations as the Nitrogen stimulates uptake. The two most important elements to apply at this time are Boron and Zinc. Movement of both Boron and Zinc is minimal in the tree until extension growth commences.

Boron (B):

Boron is involved in Calcium mobility, cell membrane integrity and cell wall polysaccharides and is well known to influence good pollination, seed set and fruit shape. It is prone to leaching and during winter levels can fall below the desired requirements for fruit production.

Zinc (Zn):

Zinc is essential for the production of the primary growth hormone - auxin and is required by a large number of enzymes and for chlorophyll production. Only small amounts are taken up by roots and deficiency is common in pears resulting in blind buds and small leaves.

Magnesium (Mg):

It is also common to apply Magnesium at this time although it is quite mobile and deficiency can usually be corrected relatively easily during the growing season. Magnesium is part of the chlorophyll molecule and is subsequently critical for photosynthesis.

Manganese (Mn) & Iron (Fe):

Manganese and Iron are also essential in photosynthesis through enzyme activation and electron transfer respectively. Iron has limited mobility in plants and both Iron and Manganese uptake can be easily affected by high pH soil conditions.

SLTEC have developed a wide range of products for both foliar and fertigation applications that can assist in your post harvest and seasonal nutrition programs.

Some general guidelines include;

Foliar Applications

Low Biuret Urea:

Common foliar application rates are 15 to 20 kg/ha for one to two sprays in combination with trace elements as soon as possible after harvest. Options include - addition of Boron Complex, Manganese complex, Cal Mag & Boron or addition of TE blends 6 or 10 as illustrated in Table on Page 3.

For Pome Fruit a further spray of 4 to 5 kg Low Biuret Urea / 100 L applied as a dilute volume with 1000 to 2000 L of water per ha is recommended based on a tree row volume for mature trees. This application can be applied as a final spray at leaf fall to aid in leaf decomposition.

Fertigation Applications

Baseline Plus at 30-70l/ha over two to three consecutive irrigations will provide a full range of NPK plus trace elements with added biological stimulants to replenish major quantities of nutrients removed with the crop during the growing season.

If you prefer a balanced foliar approach, Baseline Plus can also be applied as a foliar at 1-7l/ha with 800 to 1000 l/ha water.

For those crops that require nitrogen only we recommend an application of 35 – 80 l/ha of Calcium Nitrate over two to three consecutive irrigations.

Suitable for Post Harvest Application to Pome & Stone Fruit

Product Code	Name	N% (w/v)	P% (w/v)	K% (w/v)	S% (w/v)	Ca% (w/v)	Specific Gravity (kg/L)	pH Range	Typical Fertigation Application Rates (L/Ha)	Typical Foliar Application Rates (L/Ha) (Note: Seek Agronomic Advice for Crop Specific Rates)
SNPK0016	Manganese Complex Mn 17.3%	-	-	-	10.6	-	1.42 - 1.44	6.0 to 7.0	5 to 10 L/Ha (Fertigated)	2 to 7 L/Ha with 100 to 1,000 L/Ha Water
SNPK0026	Zinc & Fulvic Acid Zn 15.9%, Fulvic Acid 0.5%	-	-	0.1	7.8	-	1.36 - 1.38	2.0 to 3.0		1 to 3 L/Ha with 100 to 1,000 L/Ha Water
SNPK0028	Zinc & Manganese & Fulvic Acid Mn 4.8%, Zn 7.7%, Fulvic Acid 0.5%	-	-	0.1	6.9	-	1.32 - 1.33	5.0 to 6.0		2 to 5 L/Ha with 100 to 1,000 L/Ha Water
SNPK0013	Mag K Plus Mg 4.9%, Fulvic Acid 0.5%, Kelp 1%	0.01	0.005	9.5	7.7	0.005	1.29 - 1.33	5.5 to 6.5	25 to 60 L/Ha	1 to 7 L/Ha with 500 to 1,000 L/Ha Water. When applying multiple applications, allow 5 - 7 days between applications, unless there has been rain.
SNPK0046	TE Blend 6 + Fulvic Acid N as NO ₃ 2.6%, Mg 2.4%, Mn 3.1%, Zn 3.1%, Cu 0.5%, Mo 0.02%, B 0.2%, Fe 0.7%, Co 0.05%, Fulvic Acid 0.5%	2.6	-	0.1	4.2	-	1.28 - 1.29	1.0 to 2.0	10 to 20 L/Ha (Fertigated)	
SNPK0047	TE Blend 10 + Fulvic Acid N as NO ₃ 3.3%, N as NH ₄ 0.5%, N as Urea 0.9%, Mg 2.6%, Mn 3%, Zn 3.3%, Cu 1%, B 0.5%, Fulvic Acid 0.5%	4.7	-	0.1	4.0	-	1.32 - 1.33	1.0 to 2.0		
SNPK0025	High Mg, B & Fulvic Acid N as NO ₃ 5.5%, Mg 4.9%, B 0.3%, Fulvic Acid 0.5%	5.5	-	0.1	-	-	1.22 - 1.23	3.0 to 4.0	N/A	
SNPK0050	Boron Complex N as Amine 6%, B 15%	6.0	-	-	-	-	1.34 - 1.38	7.5 to 8.5	5 to 10 L/Ha (Fertigated)	
GG0009	Baseline Plus N as NO ₃ 0.02%, N as Urea 11.7%, P as PO ₄ 4.9%, Mg 0.2%, Mn 0.01%, Zn 0.01%, Cu 0.005%, B 0.02%, Fe 0.01%, Fulvic Acid 0.01%, Fish Emulsion 0.4%, Humic Acid 0.3%, Kelp 0.4%, Molasses 0.4%	11.7	4.9	13.6	2.0	0.01	1.29 - 1.32	8.0 to 9.0	30 to 70 L/Ha	2 to 7 L/Ha with 500 to 1,000 L/Ha Water. When applying multiple applications, allow 5 - 7 days between applications, unless there has been rain.
GGCB0087	Baseline Plus (Phosphonic Acid) N as NO ₃ 0.02%, N as Urea 11.8%, P as PO ₄ 2.5%, P as Phosphonic Acid 2.4%, Mg 0.2%, Mn 0.01%, Zn 0.01%, Cu 0.01%, B 0.02%, Fe 0.01%, Fulvic Acid 0.01%, Fish Emulsion 0.4%, Humic Acid 0.3%, Kelp 0.4%, Molasses 0.4%	11.8	4.9	13.7	2.0	0.01	1.28 - 1.29	7.5 to 8.5		3 to 7 L/Ha with 500 to 1,000 L/Ha Water. When applying multiple applications, allow 5 - 7 days between applications, unless there has been rain.
SNPK0036	Turbo Zinc Foliar N as NO ₃ 10.6%, N as NH ₄ 7.7%, N as Urea 0.7%, Zn 6.6%	19.0	-	-	-	-	1.33 - 1.34	3.0 to 4.0	5 to 10 L/Ha	1 to 5 L/Ha with 800 to 1,000 L/Ha Water
SNPK0021	Urea Foliar (Low Biuret)	22.2	-	-	-	-	1.12 - 1.13	6.0 to 7.0	25 to 70 L/Ha	5 to 25 L/ha 1,000-1,500 L/ha Water for Tree Crops/Vines.





FERTILIZERS

For more information about this Product Advisory or any of our products or services:

Call the SLTEC Team

Sustainable Liquid Technology Pty Ltd
Free Call: 1800 768 224
Phone: 03 5859 1323
Fax: 03 5859 1363
2055 Finlay Road,
TONGALA
VICTORIA 3621
PO Box 43,
TONGALA
VICTORIA 3621

Email: enquiries@sltec.com.au

Web: www.sltec.com.au

ABN: 632 340 733 78 ACN: 113 670269

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Resources

The following additional resources are available via our website (www.sltec.com.au) or by calling 1800 768 224

- SpringStart® Product Advisory
- Green & Gro® Product Advisory
- SprayNPK® Product Advisory
- Sustain & Gro® Product Advisory
- Turf & Landscape® Product Advisory
- Fertigation Tank & Accessories Product Advisory
- Balanced Agronomy Services Advisory
- SLTEC Agronomist and Customer Service Support

SLTEC Fertilizers Deliver:

- Performance Seed Dressings
- Cost Effective Nutrient Solutions for Planting
- Foliar Top Dress Options including Chelated Trace Elements and Organic Stimulants
- An Experienced Agronomy Team
- A wide range of nutrient blends (traditional and sustainable), to suit your specific crop needs
- State of the Art Liquid Fertilizer Manufacturing Technology
- Bulk Fertilizer Storage Tanks – 5,000 L to 32,000 L (rental or purchase options available)



Tim Brown
Regional Agronomist - Sunraysia/
Riverland
0407 318 813
E: tim.brown@sltec.com.au

Andrew Hall
Regional Agronomist
TAS/Sth VIC
M: 0447 317 011
E: andrew.hall@sltec.com.au

Brad McMaster
Regional Agronomist SA
0407 317 242
E: brad.mcmaster@sltec.com.au

Jamie McMaster
Senior Agronomist
0407 317 288
E: jamie.mcmaster@sltec.com.au

Phil Peterson
Regional Manager - NSW
0407 317 713
E: phil.peterson@sltec.com.au

James Scambler
Logistics Coordinator
0407 117 189
E: james.scambler@sltec.com.au

Steven Thomas
Regional Agronomist
Goulburn Valley
M: 0437 317 020
E: steven.thomas@sltec.com.au