

# Champ<sup>++</sup>ION<sup>®</sup>

Exclusive to Farmlands stores

**Farmlands**  
co-operative



**NOW REGISTERED  
FOR THE CONTROL  
OF PSA IN KIWIFRUIT**



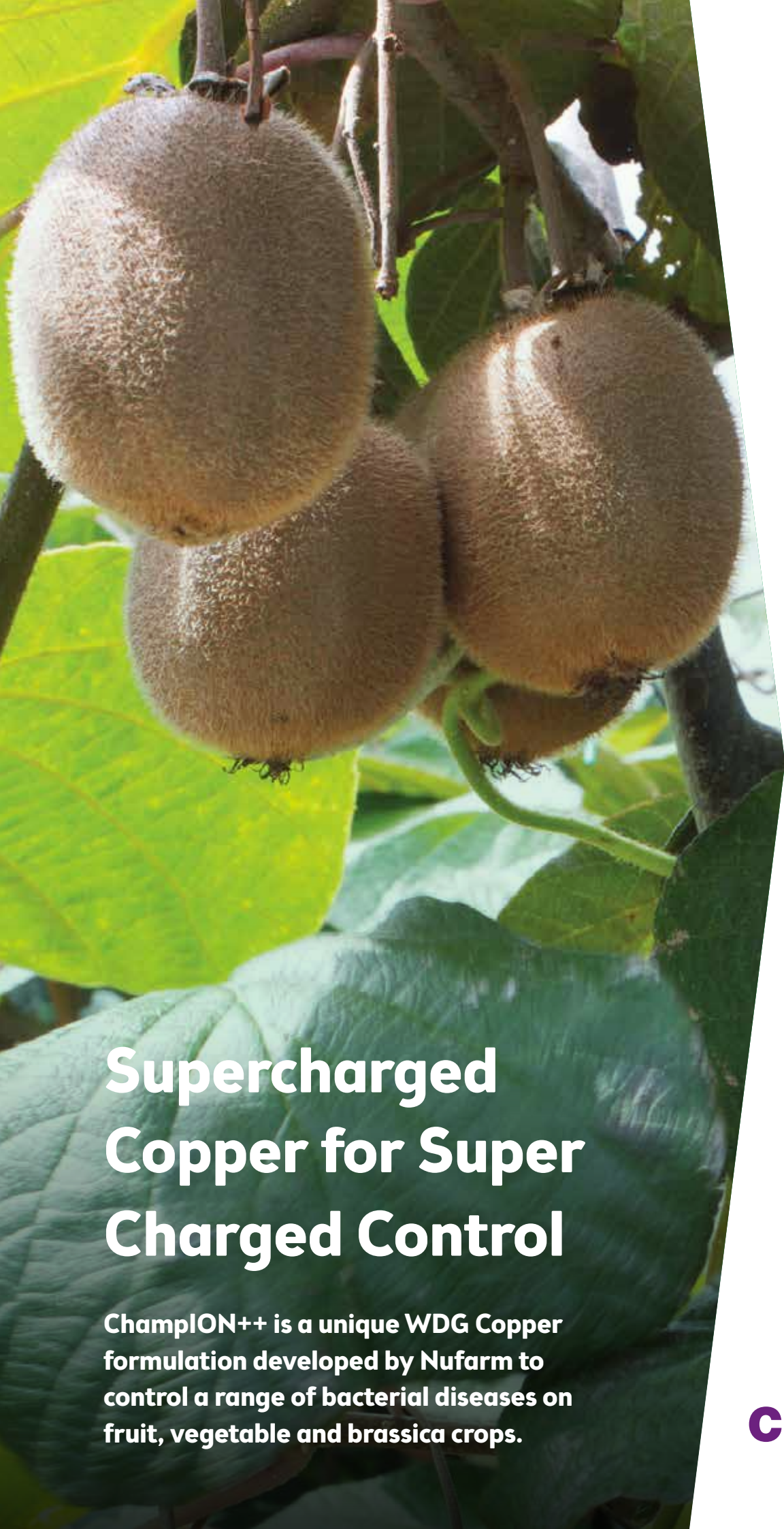
# WE'VE GOT YOU COVERED

**BETTER DISEASE CONTROL STARTS  
WITH A BETTER COPPER FORMULATION**



**Nufarm**

**Grow a better tomorrow.**



# Supercharged Copper for Super Charged Control

ChamplON++ is a unique WDG Copper formulation developed by Nufarm to control a range of bacterial diseases on fruit, vegetable and brassica crops.

Champ **ION**<sup>++</sup>®

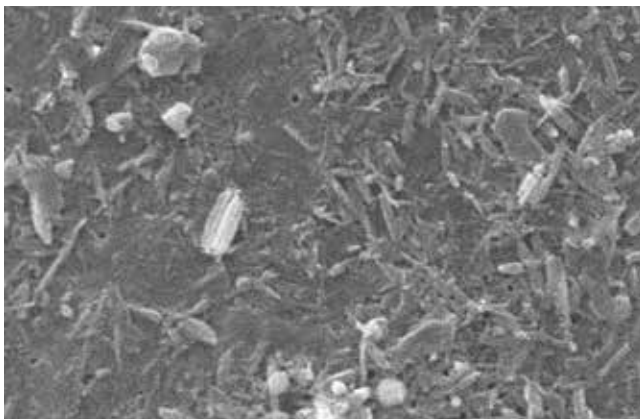
## SUPERIOR COVERAGE AND CONTROL

- Stable WDG formulation that pours easily and disperses quickly
- Small particles give excellent coverage and disease control at low rates
- Providing excellent coverage and disease control with low use rates
- Less environmental load than high dose copper products
- Contains a highly efficient environmentally friendly biodispersant suitable for conventional or organic use
- BioGro Approved

## SMALLER PARTICLE SIZE = EXCELLENT COVERAGE

A key to disease control is coverage: the better the leaf is covered the better the performance. ChamplON++ sets a new standard in delivering a greater number of smaller, more precisely shaped particles.

A smaller particle size also means a larger surface area resulting in more available  $\text{Cu}^{++}$  ions for better coverage and disease protection.



Electron micrograph taken at 10000x magnification. Mean particle size 1.1 microns (Malvern Mastersizer 2000, September 2016).



# Application Rates

| CROP                                 | DISEASE   | RATE           |                       | COMMENTS   |
|--------------------------------------|---|----------------|-----------------------|--|
|                                      |   | PER 100L WATER | PER HECTARE           |  |
| <b>FRUIT CROPS</b>                   |   |                |                       |  |
| Apples<br>Pears<br>(including Nashi) | Black spot  | 110g           | 2.2kg minimum         | Apply as a full cover spray. Make application between silver tip and green tip.<br><b>CAUTION: Late application may cause phytotoxicity. Discontinue use when green tip is 1cm.</b>  |
| Avocados                             | Anthrachnose  | 70-90g         | 2kg minimum           | Apply at monthly intervals from flowering to harvest. During prolonged wet weather reduce application intervals to 14 days.  |
| Bushfruit                            | Cane wilt<br>Leaf spot<br>Cane spot<br>Spur blight                    | 70-90g         | 0.65kg minimum        | Apply at bud burst and green tip and continue at 10-14 day intervals.  |
| Citrus                               | Melanose<br>Verrucosis  | 45-90g         | 1.75kg (mature trees) | Apply during pre and post bloom periods.   |
|                                      | Brown rot   | 90-110g        | 1.75kg (mature trees) | Apply in the autumn and continue as necessary. Spray the skirts of trees to at least 1 metre high and also treat the ground out to 0.5 metres beyond the skirt. Copper marking may occur on sensitive varieties or under slow drying conditions.   |
| Feijoas                              | Leaf spot<br>( <i>Glomerella sphaceloma</i> )                         | 79-90g         | 1kg minimum           | Apply and repeat as necessary.   |
| Grapes                               | Black spot<br>Downy mildew  | 65-130g        | 0.9kg minimum         | Begin at budbreak and continue during the pre and post bloom periods at 10-14 day intervals. Discontinue use if signs of injury appear.  |
| Kiwifruit                            | Leaf spot<br>( <i>Phomopsis</i> sp & others)<br><i>Botryosphaeria</i> | 70-90g         | 1.3kg minimum         | Apply as a dormant season spray only. Apply after harvest but before leaf fall, after pruning and as two sprays one month apart before bud burst.  |
|                                      | Psa<br>( <i>Pseudomonas syringae pathovar actinidiae</i> )            | 70-90g         |                       | Apply after harvest but before leaf fall, after pruning and as two sprays one month apart before budburst. Pre- and Post-flowering. DO NOT apply to open flowers. Apply as a protectant treatment prior to a significant rain (infection) event or immediately after when the crop is dry. Use a full dilute water rate, appropriate for the size of canopy, to give complete coverage. WARNING: Higher rates, multiple applications, poor drying conditions and/or tank mixtures may result in leaf drop, leaf marking and marginal leaf burn. Fruit marking may occur from any application post flowering. Apply alone post-flowering to minimize the risk of crop injury. |
| Passionfruit                         | Septoria spot<br>Brown spot<br>Grease spot                            | 45g            | 0.44kg minimum        | Apply at 2-4 week intervals alternating with mancozeb from November to March. Where grease spot is a problem 2 week intervals may be necessary.  |

|                            |   |        |                |   |
|----------------------------|---|--------|----------------|---|
| Strawberries               | Leaf spot                                   | 70-90g | 0.65kg minimum | Apply when plants are established and continue on a weekly schedule throughout the season. Use the higher rate early season or under high disease pressure. Discontinue use if signs of crop injury appear.   |
| Tamarillos                 | Leaf spot                                   | 70g    | 0.9kg minimum  | Apply as necessary.   |
| Pears<br>(including Nashi) | Fire blight<br>( <i>Erwinia amylovora</i> ) | 25-45g | 1.4kg minimum  | <b>Bearing Trees:</b> Make one application between the silver leaf and green tip period. On smooth skinned varieties do not apply between green tip and harvest as russetting may result.<br><b>Non Bearing Trees:</b> Maintain a protective cover of regular sprays at 14-21 day intervals until active vegetative growth ceases. Reduce interval between sprays if wet weather prevails.<br><b>Post Harvest:</b> Apply at 21 day intervals from harvest to leaf fall. Reduce interval between sprays if wet weather occurs and vegetative growth is active. |
| Stonefruit                 | Leaf curl<br>Shot hole<br>Bladder plum      | 110g   | 2.2kg minimum  | Apply at bud movement but before and within one week of buds opening. Make a second application at 70-90g/100 litres 10-14 days later.  |
|                            | Bacterial blast                             | 312g   | 6.25kg minimum | Apply at leaf fall and repeat at monthly intervals throughout the winter until bud movement, then treat as for leaf curl.   |

## VEGETABLES

|  |  |          |                            |  |
|--|--|----------|----------------------------|--|
| Asparagus  | Stemphylium leaf spot  | 250-375g | 2.5kg minimum              | Commence spraying at first appearance of disease after closing up and repeat at 14 day intervals to maintain disease control. Ensure good plant coverage. Under high disease pressure a programme of up to 6 applications may be necessary.  |
| Beans  | Bacterial blight<br>(Halo & common)                              | 250-310g | 1.36kg minimum             | For protective sprays apply at 7-14 day intervals from when plants are 15cm high.  |
| Brassicas:<br>Cabbage<br>Cauliflower<br>Broccoli<br>Brussels sprouts | Downy mildew   | 70-90g   | 0.3kg minimum              | Apply after crop emergence and/or transplanting at 10-14 day intervals as necessary.   |
| Celery   | Septoria leaf spot   | 90g      | 0.44kg minimum             | Apply as soon as plants are established in the field then at 5-7 day intervals. An approved mineral crop oil may be added at 1%.   |
| Cucurbits  | Angular leaf spot<br>Downy mildew                                | 70-130g  | 0.65kg minimum             | Apply at 7 day intervals after plants have started to vine.  |
| Lettuce  | Downy mildew   | 70-110g  | 0.33kg minimum             | Begin treatment from crop emergence and repeat every 7-10 days as required to suppress the disease.  |
| Onions   | Downy mildew<br>Bacterial blight                                 | 90g      | 1kg minimum                | Apply on first appearance of disease and repeat every 10-14 days while conditions favour disease development.  |
| Peas   | Downy mildew<br>Leaf spot  | 70-90g   | 0.66kg minimum             | Begin treatment from crop emergence and repeat at 7-14 day intervals depending on disease severity.  |
| Potatoes   | Early blight<br>Late blight                                      | 130-200g | 1.3kg minimum              | Apply every 7-10 days from when plants are 15cm high until 2 weeks before harvest.   |
| Tomatoes   | Early blight<br>Late blight<br>Bacterial speck<br>Bacterial spot | 70-130g  | 0.8kg increasing to 1.75kg | Apply at 7-10 day intervals. Reduce spray interval if conditions are favourable for development of the disease. Ensure spray volumes of 1500 litre/hectare as crop reaches maximum growth and ensure full coverage of upper and lower leaf surfaces. Repeat application after more than 13mm rain or irrigation. |



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PARTNERSHIP**

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6 Manu Street, Otahuhu  
PO Box 22407, Auckland 1640, New Zealand  
09 270 4150  
[info@nz.nufarm.com](mailto:info@nz.nufarm.com)  
[www.nufarm.co.nz](http://www.nufarm.co.nz)

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