



Esteem[®]

Effective powdery
mildew control
in apples

LOCAL INTELLIGENCE.
GLOBAL SCALE.

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ACTIVE INGREDIENT

Esteem is the effective new fungicide, based on the active ingredient Polyoxin D zinc salt, in a 52g/L suspension concentrate formulation. This chemistry group (FRAC group 19 peptidyl pyrimidine nucleoside) has not previously available in New Zealand.

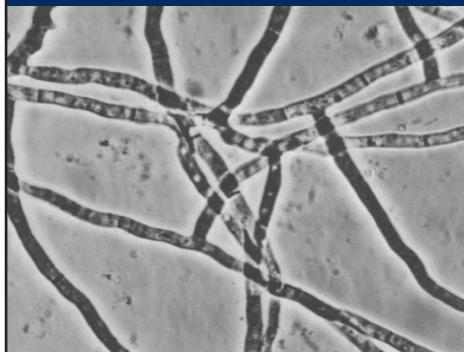
MODE OF ACTION

The mode of action delivered by Esteem (Polyoxin D zinc salt) is chitin biosynthesis inhibition. The production of chitin is stopped and glucosamine can not be incorporated into the fungi cell wall, which is an essential process for cell wall and membrane development of the disease causing fungi. Esteem has activity at a number lifecycle stages, from sporulation, spore germination and germ tube elongation, through to hyphal invasion, hyphal growth and lesion formation. This delivers effective powdery mildew (*Podosphaera leucotricha*) disease control in apples.

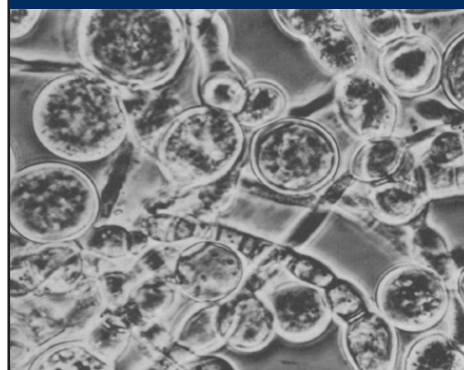
RESISTANCE MANAGEMENT

Esteem has been extensively tested and commercially used in the field over several seasons and has proved to be an important tool in the management of powdery mildew. Esteem is best applied preventatively, early in the disease development cycle, before symptom expression. Use no more than four applications in a single season. Use two consecutive applications before using alternative fungicides.

NORMAL GROWTH



AFFECTED GERM TUBES



RESIDUES

Esteem has an excellent residue safety profile with a short pre-harvest interval (export PHI: 1-25 days, country dependent). Esteem has been tested - Amino alcohol free.



BENEFICIAL SAFETY

It is important to note that the mode of action for Polyoxin-D zinc salt, chitin biosynthesis, is a different biochemical pathway to insect and crustacean chitin production, so it has a favourable safety profile for beneficial insects within the orchard. Beneficial insect testing has included; bees, lady birds, lacewings, *Aphelinus malai* and predatory mites to name a few.

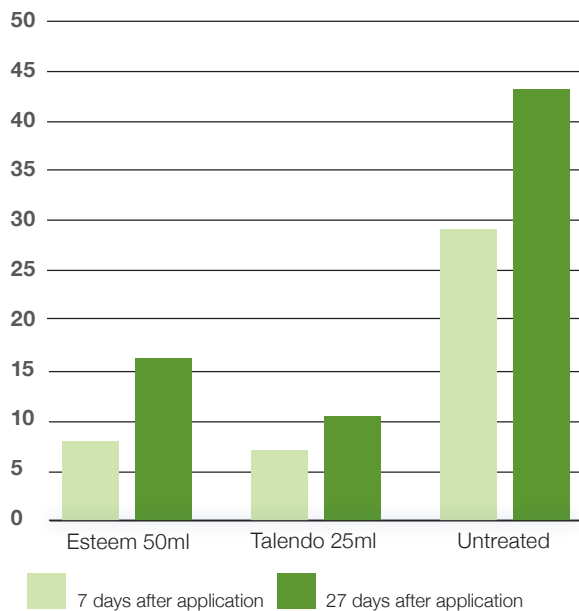
CROP SAFETY

Tank mix compatibility and fruit finish trial work has shown Esteem to be safe when used either on its own or combined with commonly used tank mix products.

FIELD TRIAL DATA

This graph shows the disease control achieved with Esteem. Treatments are significantly different to untreated. No significant differences between treatments.

POWDERY MILDEW % LEAF INCIDENCE Trial 6233



GETTING THE BEST OUT OF

Esteem[®]

Esteem is a new powdery mildew fungicide with a unique mode of action, for protection of apples.

Application: Esteem can be applied as a high volume or concentrated spray, via all conventional equipment. Apply as a full canopy spray to ensure complete coverage.

Timing: Use Esteem from November (fruit 20mm) onwards to pre-harvest. Re-apply every 7 to 14 days to maintain protection, using the close spray interval during periods of rapid growth, after significant rain, or when disease pressure is increasing. Use two consecutive applications before using alternative fungicides and no more than four applications in total, in any single season.

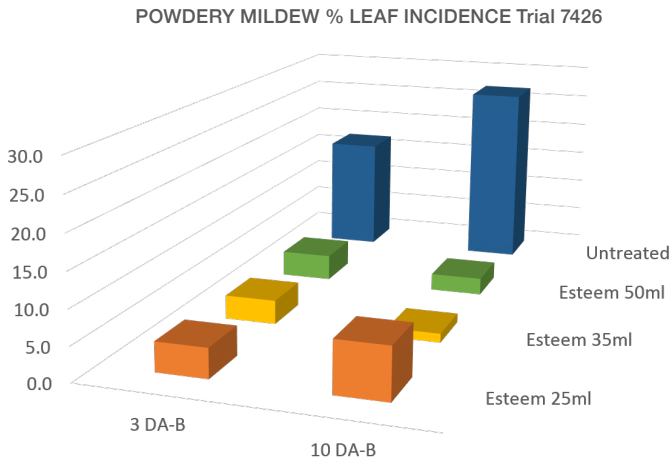
Rate: Use 25 - 50 ml/100 litres as a dilute spray to the point of runoff. Use close spray interval and high rate during rapid growth, when disease pressure is high or after significant rain. Concentrate application rates have to be adjusted from equivalent dilute rates determined for your particular canopy architecture.

Surfactant: Additional surfactant is not required.

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FIELD TRIAL DATA

Esteem treatments; 25ml, 35ml and 50ml/100L. Assessed at 3 days and 10 days after the second application. As disease pressure increases, the 25ml isn't as robust as 35ml and 50ml rates.



THE ESTEEM ADVANTAGES

- ✓ New chemistry, with a unique mode of action
- ✓ Proven field efficacy over several seasons
- ✓ Effective resistance management tool
- ✓ Compatible with commonly used crop protection products
- ✓ Short pre-harvest interval
- ✓ Beneficial friendly



Arxada is a company of high-performing teams who are encouraged to act with an entrepreneurial spirit, on behalf of customers.

Arxada delivers solutions for crop protection, specialising in fungicides, insecticides, herbicides, foliar nutrients and additives. With a strong focus on the development, marketing and technical support of a broad range of smart agrichemical products targeted to the needs of farmers and growers. For more information visit www.arxada.co.nz

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