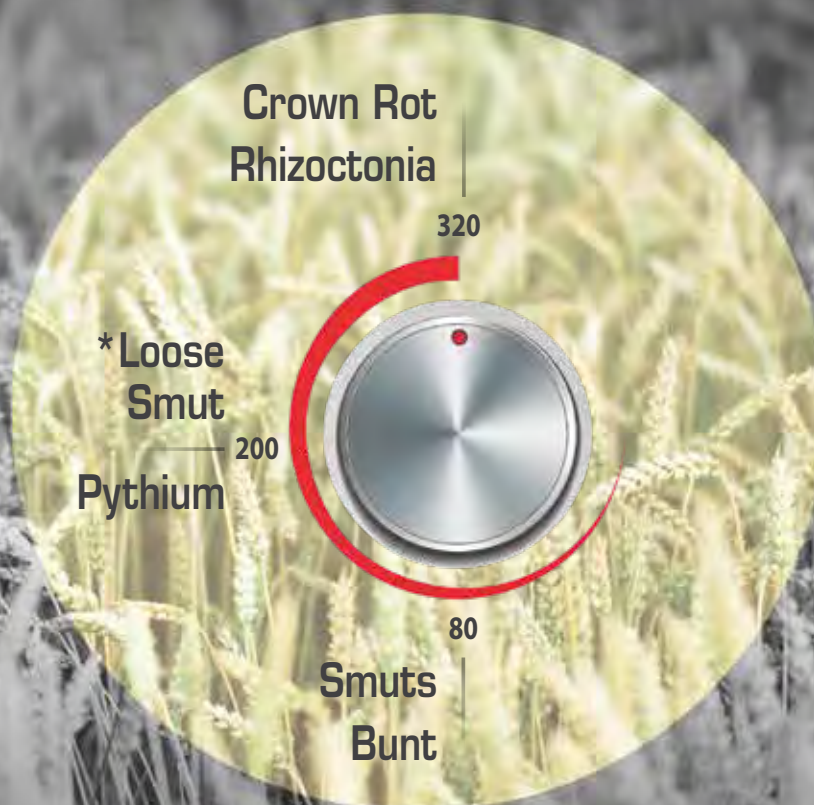




THE
DRUM THAT
DOES
IT ALL

PRODUCT GUIDE



The Seed Protection Specialists
1800 078 007 | www.upl-ltd.com/au

* Loose smut in Barley rate range is 80-200 mL/100 kg seed,
higher rate is recommended for susceptible varieties.





Smuts

Bunt

Pythium

Rhizoctonia

Crown Rot

ACTIVE CONSTITUENT:

25g/L Ipconazole

20g/L Metalaxyl

FORMULATION:

Micro-emulsion

REGISTERED IN:

Wheat

Barley

Oats

*Low dust, superior formulation
– made to flow*

GROUP 3 FUNGICIDE

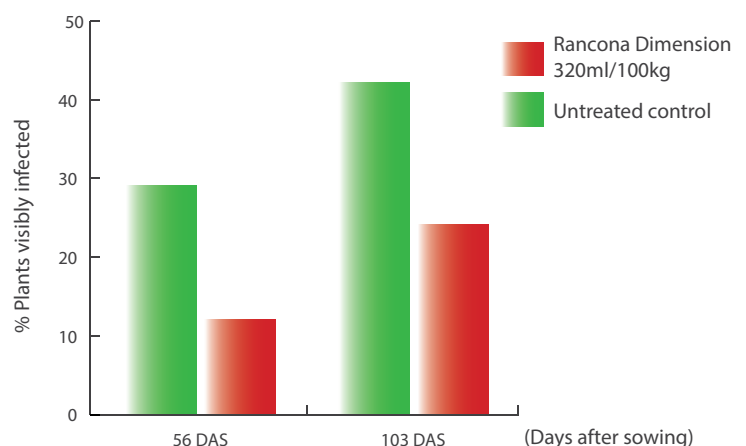
GROUP 4 FUNGICIDE

Rancona® Dimension contains two powerful fungicides for broad spectrum protection from yield robbing disease. It offers growers smut and bunt control in wheat, barley and oats, plus pythium control and rhizoctonia and crown rot suppression in wheat and barley.

The formulation of Rancona Dimension is unique - along with Rancona C - it is the only seed treatment registered in Australia with a Micro-emulsion (ME) formulation. The ME formulation provides: uniform seed coverage for better protection from disease; easy wash down; and produces less dust off during application and handling than traditional seed treatment formulations.

In fields trials, Rancona Dimension has shown to be superior to the untreated control with yield benefits of up to 30%. Rancona Dimension has shown to be comparable or in many cases better than industry standard seed treatments for wheat and barley.

Crown Rot Incidence on wheat cv Janderoi
Tammin, WA 2012



Trial conducted by Peracto

Root comparison in barley
Westmere, VIC 2016

Rancona Dimension's combined disease protection and seed safety results in optimal plant performance – faster emergence, excellent seedling establishment, healthier and more vigorous plants – for maximum yield potential.



Vibrance™
@ 180ml/100kg

Rancona Dimension
@ 200ml/100kg

Trial conducted by Southern Farming Systems

RANCONA DIMENSION - BROAD SPECTRUM PROTECTION

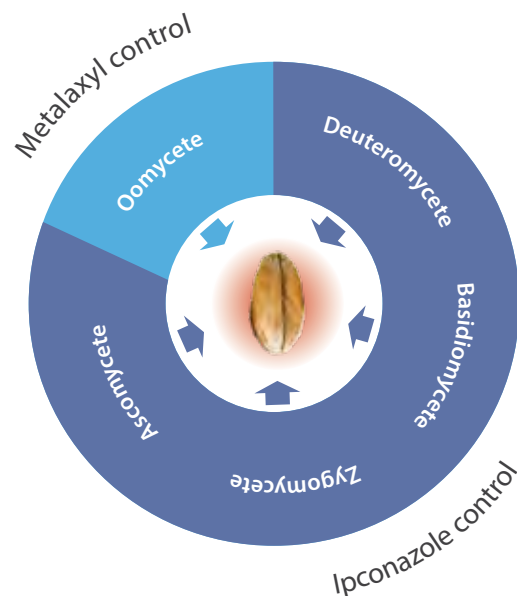
There are 5 major classes of fungal pathogens

- Iaconazole has activity on 4 of the 5 classes
- Metalaxyl is active on the fifth class - Oomycetes

MODE OF ACTION:

Iaconazole blocks the action of an enzyme in the ergosterol pathway which is essential for the functioning of the membranes of the cell walls of the mitochondria of fungi. Triazole fungicides lead to the depletion of ergosterol and accumulation of toxic intermediate sterols, causing increased membrane permeability and inhibition of fungal growth.

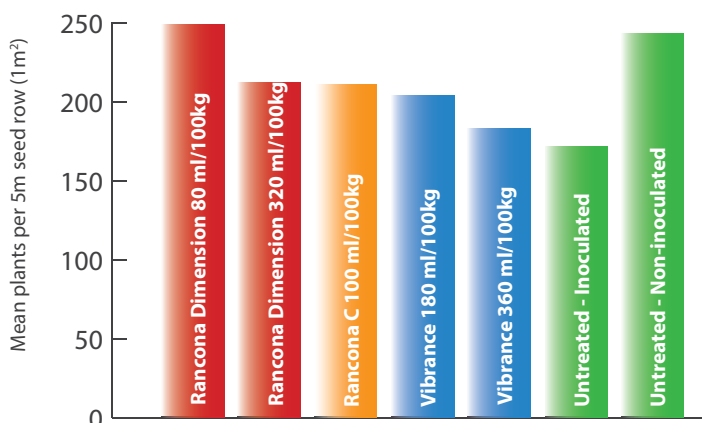
Metalaxyl enters the fungal cell walls and interferes with the synthesis of DNA which inhibits the growth of mycelium (vegetative part of the fungus), spore (reproductive body of fungus) germination and haustorium formation.



	Iaconazole	Rancona Dimension	Metalaxyl
Mode of action	DMI, G3	mult-site	RNA synthesis, G4
Resistance risk	medium	low	high
Systemic	+++	++++	++++
Contact	+++	+++	+
Disease spectrum	++++	+++++	+
Inhibit spore	+/-	+++	+++
Inhibit mycelium	++++	++++	+++
Seed safety	++++	++++	++++

IPCONAZOLE
+
METALAXYL
=
SEAMLESS
PROTECTION
OF SEED &
SEEDLINGS

Plant establishment on wheat cv Eradu, after 13 days
Rhizoctonia inoculated trial - Tammin, WA 2013



SEED SAFETY & PLANT ESTABLISHMENT

Rancona Dimension has superior seed safety compared to other triazole based seed treatments, with no negative effects on seedling coleoptile length.

This can improve emergence and plant establishment, plus early plant vigour.

Trial conducted by Peracto



FEATURES:

- Small emulsion droplet size
- Acts like a true liquid
- Doesn't stick to inorganic material
- Minimal effects on seedling coleoptile length
- Systemic + contact action

BENEFITS:

- ✓ Extremely low dust off
- ✓ Exceptional seed flow
- ✓ Easy clean down of machinery after use
- ✓ Excellent seed safety
- ✓ Root & shoot protection
- ✓ Improved seed coverage & adhesion - more active ends up on your seed and not your equipment

Get more from your seed treatment investment

SYSTEMIC + CONTACT ACTIVITY

Rancona Dimension has both contact and systemic activity. It provides outside sterilisation of the seed as well as killing the mycelium inside the seed and translocating into the seedling for shoot and root protection.

1. Inhibits spore germination

Fungal spores are microscopic particles that allow fungi to reproduce. Rancona Dimension inhibits the germination of these spores which prevents the fungi from reproducing.

2. Inhibits mycelium growth

Mycellium is the vegetative part of the fungus that is made up of a mass of hyphae. Rancona Dimension inhibits the growth of mycelium preventing the development of the fungus.

Due to combined systemic and contact activity, Rancona Dimension acts as both a protective and a curative fungicide.

Figure 1. Contact fungicide activity on the seed surface

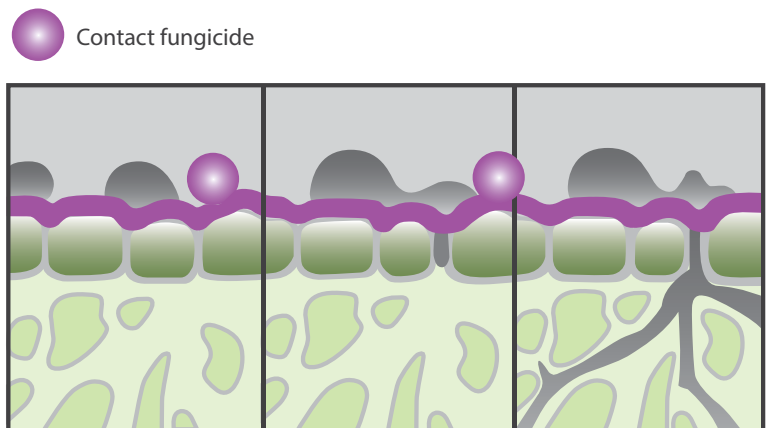
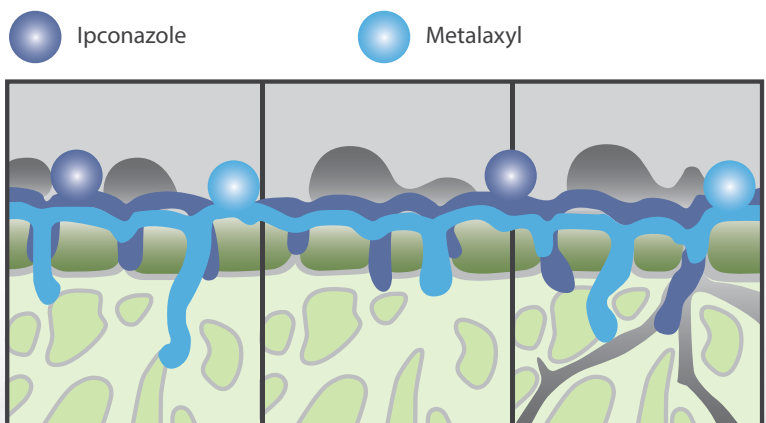


Figure 2. Rancona Dimension activity on the seed surface



Rancona Dimension...

"removed the issues that we had with the opposition products - resulting in no dust problems and good flow through our air seeder."

Eric Patterson, Katanning WA

UNIQUE MICRO-EMULSION (ME) FORMULATION

Rancona Dimension's ME formulation has 125 times more surface contact than a flowable formulation. This means:

- Smaller liquid particles (0.01 - 0.1 microns vs 0.1 - 10 microns (SC))
- Better active ingredient distribution
- Better contact with fungal pathogens

Superior coverage and adhesion means more active ingredient ends up on your seed and not your equipment - so you get more out of your seed treatment investment.

More convenient. More effective.



**Market
standard
SC formulation**



**Rancona
Dimension
ME formulation**

EASE OF USE

The formulation of Rancona Dimension is unique to seed treatments in Australia. It offers ultimate properties for seed treating – the dispersion of one liquid phase in another liquid so that there are no solid particles.

Rancona Dimension provides considerably less dust off compared to traditional seed treatment formulations.

The Rancona Dimension formulation does not stick to inorganic material, making seed treatment machinery easy to wash down after application.

LOW DUST-OFF

The Heubach Dustmeter Type II was used to measure fine dust (<200µm approx.) levels abraded from untreated seed, and following the application of Rancona Dimension and Evergol® Prime to wheat seed.

Wheat seed was treated with Rancona Dimension at 320ml/100kg of seed and Evergol Prime applied at 80ml/100kg of seed.

USE WITH OTHER SEED TREATMENTS

Rancona Dimension may be used with other seed treatments:

- For added protection against insect pests of stored grain, aphids and barley yellow dwarf virus (BYDV), Rancona Dimension may be used with Guardian® seed treatment insecticide.
- For added crop nutrition and disease management, Rancona Dimension may be used with Zincflo® Plus liquid fertiliser.
- Seed treatments should not be tank mixed prior to application unless otherwise recommended.

Figure 3. Heubach dust test - Wheat

Comparing dust from untreated and treated seed



Untreated Rancona Dimension Evergol Prime

Figure 4. Heubach dust test - Barley

Comparing dust from untreated and treated seed



Untreated Rancona Dimension Evergol Prime

Figure 5. Application residue comparison

Rancona Dimension versus an SC formulation seed treatment



Rancona Dimension
- after 14 batches



SC formulation
- after only 2 batches

"Rancona Dimension has greatly reduced the amount of dust and residue that remains on machinery. In addition to the normal smuts and bunt control we now get pythium and crown rot, but most pleasing is the reduction in rhizoctonia patches.

We like Rancona Dimension for the ease of handling and the peace of mind."

Geoff Stade, Katanning WA



FLEXIBLE PROTECTION

Dial the rate up or down according to your crop protection needs in each paddock.



DISEASE MANAGEMENT

✓ SMUTS & BUNT @ 80–200ml*/100kg

- Sow clean seed
 - Consider time of sowing - crops sown early when weather is still warm are likely to escape infection
 - Sow resistant varieties to combat flag smut in wheat
 - Use a fungicide seed treatment i.e. Rancona Dimension at 0.8L/T
- * The higher rate of 200ml/100kg is recommended for loose smut in barley when susceptible varieties are grown

✓ PYTHIUM @ 200ml/100kg (wheat and barley)

- Integrated management of crop rotations
- Use Rancona Dimension seed treatment at 2L/t of seed.

✓ RHIZOCTONIA @ 320ml/100kg (wheat and barley)

- Ensure adequate crop nutrition
 - especially Nitrogen, Phosphorous and Zinc
- Apply a zinc seed treatment to improve early plant health and the plants resistance to attack by disease i.e. Zincflo® Plus at 3.0L/T
- Reduce level of infected plant residues
- Control summer and autumn weeds early
- Have a four week weed-free break prior to sowing
- Cultivate 2.5 to 5 cm below seedling depth (can be up to 10cm – dependent on soil type)
- Retain stubble and organic matter to maintain / improve soil health
- Avoid using sulphonylurea herbicides or herbicides that can restrict root growth
- Use a seed treatment that will help suppress the infection of roots by the Rhizoctonia solani fungus i.e. Rancona Dimension at 3.2L/T

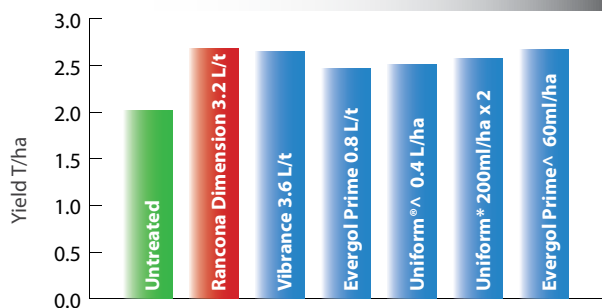
✓ CROWN ROT @ 320ml/100kg (wheat and barley)

- Reduce levels of the fungus in your paddocks by rotating with crops such as field peas, faba bean, canola, mustard, lentils, chickpea, mungbean, sunflower or sorghum
- A two year grass-free broad leaf crop or pasture rotation is required where disease levels are high
- Ensure adequate nutrition, especially with zinc i.e. use Zincflo Plus seed treatment at 3.0 L/T
- Sow varieties with partial resistance to crown rot
- Burning stubble will help reduce infection levels, but does not guarantee freedom from crown rot as it only removes the above-ground inoculum
- Sow between rows of last cereal crop and ensure good weed control over summer/autumn and in-crop
- Plant at the start of the sowing window for the selected variety
- Manage moisture stress in your wheat or barley crop
- Conduct a PreDicta B soil test to determine levels.
- Use the above management measures as well as applying seed treatments to suppress crown rot i.e. Rancona Dimension at 3.2L/T

*Barley rate range is 80-200 mL/100 kg seed, higher rate is recommended for susceptible varieties.

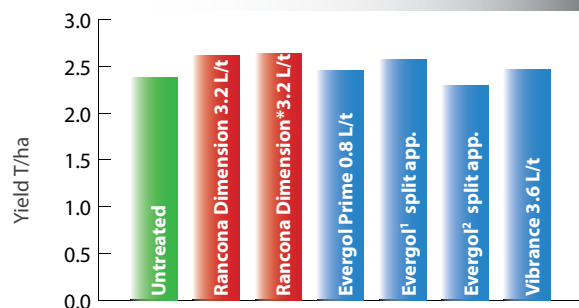
TRIAL RESULTS

Comparing Yield T/ha on Wheat cv EGA Gregory
Rhizoctonia - Forbes, NSW 2015



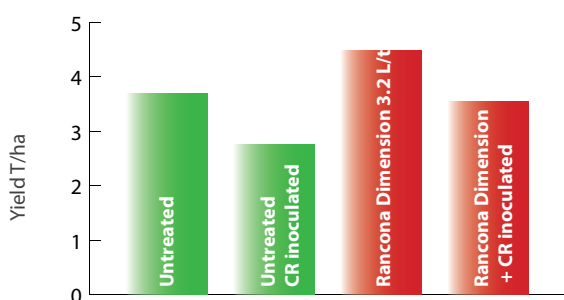
* Split application in furrow and surface band
^ In furrow application

Comparing Yield T/ha on Wheat cv Mace
Rhizoctonia - Dowerin, WA 2015



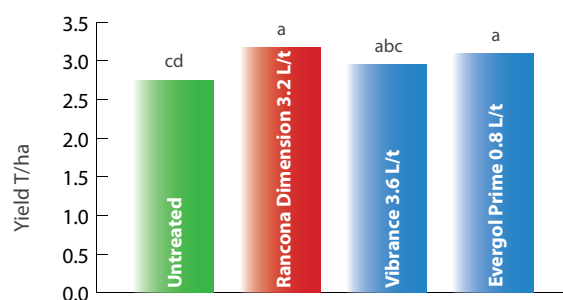
* Plus Zincflo Plus 3L/t
¹ 0.4 L/t + in furrow 60 ml/ha
² 0.4 L/t + in furrow 120 ml/ha

Comparing Yield T/ha on Wheat cv EGA Gregory
Crown Rot - Bellata, NSW 2015



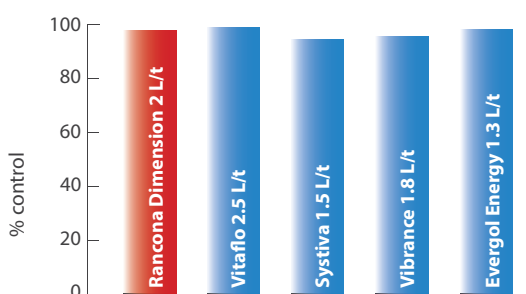
Trial conducted by Crown Analytical Services

Comparing Yield T/ha on Wheat cv Scout
Rhizoctonia - Redbank, SA 2015



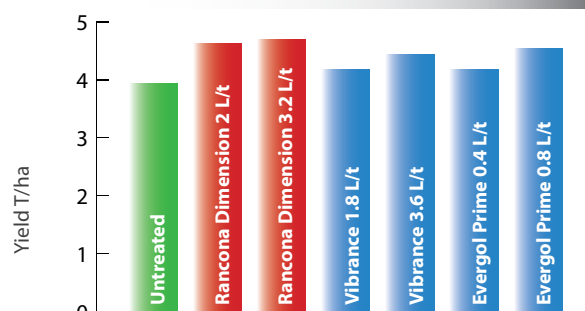
Trial conducted by Eurofins Agrisearch

Comparing Loose Smut Control in Barley
Summary of 4 trials, WA 2018



Trials conducted by Kalyx & the DPIRD WA

Comparing Yield T/ha on Barley cv Hindmarsh
Barooga, NSW 2015

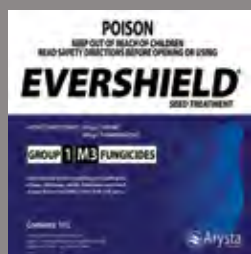


Trial conducted by independant reseller

"Rancona Dimension is an excellent product and it has altered the way I can crop my sandy loam country. This is because we are on a two year rotation which means rhizoctonia has always been a consideration, as it causes yield losses."

Lynton Barrett, Lameroo SA

The Seed Protection Specialists



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