

OPERA®

SPECnote

Combination of two active ingredients in Opera® creates a robust fungicide for wheat, barley, oats and oaten hay producers.

Introduction

Opera is formulated as a suspo-emulsion containing two active ingredients; pyraclostrobin at 85 g/L and epoxiconazole at 62.5 g/L. The epoxiconazole component has been available to Australian cereal growers in recent years under the trade-mark of OPUS® 125. The second component, pyraclostrobin, has not previously been available in the Australian cereal market, but is widely used in horticultural crops. Pyraclostrobin is one of the world's leading strobilurin fungicides for use in cereals. Pyraclostrobin is an ideal partner to mix with epoxiconazole for use in cereals.

The combination of two active ingredients in Opera creates a robust fungicide for wheat, barley, oats and oaten hay producers.

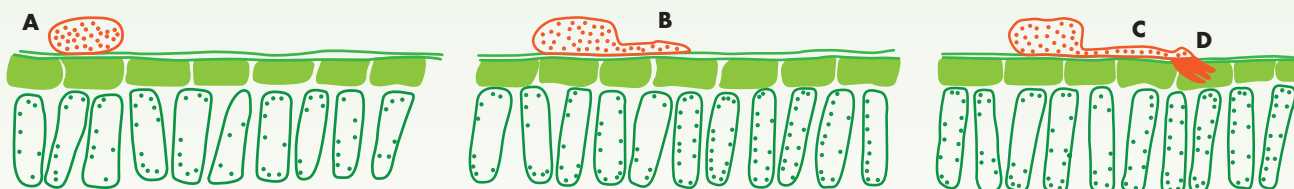
How does Opera work?

The active ingredients in Opera fungicide affect different processes in fungal development and provides an excellent anti-resistance strategy.

Epoxiconazole

Epoxiconazole is a demethylation inhibitor (DMI), often referred to as a Triazole or Azole fungicide. Triazole chemistry disrupts the biosynthesis of ergosterol, an essential component for fungal cell membrane development.

Diagram: Fungal spore germination and development



1. Spore infection
A - Spore lands on leaf
Activity:
Strobilurins Yes
Triazoles No

2. Spore germination
B - Germination tube
Activity:
Strobilurins Yes
Triazoles ½

3. Fungal penetration
C - Appressorium
D - Infected Cell
Activity:
Strobilurins No/limited
Triazoles Yes

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When should Opera be applied?

Opera should be applied strategically as a protectant fungicide, i.e. prior to the presence of disease. Applying Opera in this fashion allows both active ingredients to achieve their maximum potential on the key pathogens. The window for application varies between cereal crops, based primarily on the disease(s) that growers are targeting and the yield contributing leaves they are trying to protect. Traditionally, the more advanced protectant fungicides have tended to be used from late stem elongation onwards with the aim of protecting yield contributing leaves. However, often protectant fungicides are more effective when applied at an earlier crop stage for a range of diseases. Trials conducted by Nufarm R&D have shown the effectiveness of Opera when applied around early stem elongation in cereals (Z31-32).

Table one below shows the effect of Opera application within the early and late stem elongation windows against barley

leaf rust. This trial (WA-2009) compared both efficacy and the green leaf retention provided by Opera, applied at either the Z32 or Z37 growth stages. The remaining window was protected with Throttle® 500 (propiconazole). Results showed that the best time to apply Opera was at the Z32 stage. This relates to a protectant timing for Opera, the most effective way to use this product in cereals.

Summary

Opera combines two highly effective active ingredients for cereal disease control.

Opera offers an excellent level of activity across a broad range of cereal diseases.

Opera is best when used in a protectant fungicide program. Application prior to infection allows both of the active ingredients to perform at optimal levels for residual protection of the cereal crop.

Table one: NUFARM-WA-2009, % leaf area disease (%LAD) for Barley leaf rust vs green leaf area (GLA) retention var. Baudin, VS for barley leaf rust, assessed 17 days after Z37 application

(Untreated: BLR Infection F-1 12%LAD, F-2 33.2 %LAD, F-3 GLA 9.4%)

