

WHEAT CROP GUIDE



Aviator
Xpro



PROLINE

Aviator Xpro and Proline

Choosing the best fungicide programme for Wheat

When developing fungicide programmes for your wheat crops, Aviator Xpro and Proline from Bayer provide you with the disease control and flexibility you need to develop the correct fungicide programme for any disease threat you face.

Wheat can be attacked by a number of key diseases in New Zealand: Septoria leaf blotch, stripe rust, leaf rust and ear disease complex being the main ones.

For the past few years Septoria leaf blotch has been the main threat and guidance around fungicide use has reflected the concern about Septoria. Now though the threat from Septoria seems to be more variable season to season which allows the emphasis to move to other areas such as promoting general crop health through enhanced “greening”. For spring 2016, paddock inspections are indicating post-winter levels of Septoria leaf blotch are quite high and that this could be a “Septoria” year.

This guide aims to help you through the decision making process when deciding which fungicides to use and when. Should you require further information please go to www.arablefungicides.co.nz

SPRING 2016



The key wheat diseases for 2016

Septoria Leaf Blotch



Don't drop your guard

The threat from Septoria Leaf Blotch is always present and regular paddock inspections should be performed to ensure infection doesn't go unnoticed as Septoria can have a devastating impact on yield.

Septoria leaf blotch infection results from airborne spores, the majority of which tend to "lift-off" from stubble soon after harvest. While this means crops emerging during April and May are at the greatest risk, it doesn't mean that later planted crops can't be infected.

Septoria leaf blotch has a long infection period. The period between disease infection and the disease becoming visible is temperature dependent and it can take as long as 50 days during early spring. During this time the disease cannot be seen, plants look healthy but the disease is developing within the leaves.

This was graphically demonstrated in 2015 with a trial carried out by Bayer at the Aorangi Research Station near Palmerston North. In this trial, the untreated crop which looked to have low disease pressure in early October went on to develop one of the worst Septoria infections Bayer staff have seen in New Zealand. As stated earlier, regular paddock inspection is key to effective disease control.

Stripe Rust



2016 could favour this disease

The other key early season disease of wheat is stripe rust, a disease which used to be a common and a serious challenge to wheat production in New Zealand but is now one which is rarely seen due to the widespread use of the Bayer seed treatment Galmano®.

Stripe rust is a disease which enjoys mild, moist conditions. Winter 2016 has been the warmest on record, rainfall patterns are predicted to return to normal and crops are very forward. These conditions favour stripe rust development. This is especially the case as the protection offered by Galmano only lasts until GS30, and some early planted crops reached that stage in late June this year.

It will pay to be vigilant when inspecting paddocks as crops this winter (August 2016) are already infected with Septoria leaf blotch, leaf rust and powdery mildew.



Leaf Rust



It has serious impact

Leaf rust is a late season disease that thrives under hot, humid conditions. While leaf rust will infect all leaves, it is the serious impact it can have on the flag leaf and leaf 2 that reduces yield. These upper leaves produce around 70% of a crop's yield and so it is important to protect these leaves proactively with a preventative fungicide application. In a Bayer trial carried out near Palmerston North in 2015, not controlling leaf rust adequately reduced yield by over 3 t/ha.

Ear Disease Complex



Just a nuisance?

Ear diseases are often seen as being just a nuisance but they do impact the quality of grain. Not only is it true to say that good looking grain is always the easiest to sell but having nurtured your crops all season it can be very upsetting to see them turn black almost as you watch.

Later in the season leaf rust and ear diseases such as glume blotch and sooty moulds increase in importance as they thrive under warm, moist conditions. If these diseases are allowed to attack they can undo all of your earlier fungicide investment.

Aviator Xpro and Proline in action



Aviator
Xpro



PROLINE



Untreated crop showing severe Septoria leaf blotch infection on the lower leaves



An Aviator Xpro based fungicide programme has resulted in excellent Septoria leaf blotch control and enhanced green leaf retention

Aviator Xpro Benefits

Powerful disease control of all key wheat foliar diseases means Aviator Xpro will help your crops achieve their full yield potential.

With impressive plant physiological effects including enhanced "crop greening" Aviator Xpro delivers positive, economic yield responses even when disease infection is low.

The Leaf Shield™ technology developed by Bayer ensures Aviator Xpro is rainfast after it is applied to a dry crop, increasing spray opportunities.

Containing both prothioconazole (DMI) and bixafen (SDHI) Aviator Xpro is formulated in the correct ratio to minimise the risk of resistance developing.

Aviator Xpro is locally supported by the expertise of one of the world's leading agrochemical companies.

Proline Benefits

The impressive broad spectrum disease control delivered by Proline ensures it is the foundation of disease control programmes.

Proline has gained the trust of New Zealand farmers who know they will consistently receive a high quality formulation.

The flexibility of Proline means it is the perfect partner for Aviator Xpro, reducing the number of fungicides you need to stock.

Straight forward recommendations ensure Proline is simple and convenient to use.

Proline is locally supported by the expertise of one of the world's leading agrochemical companies.



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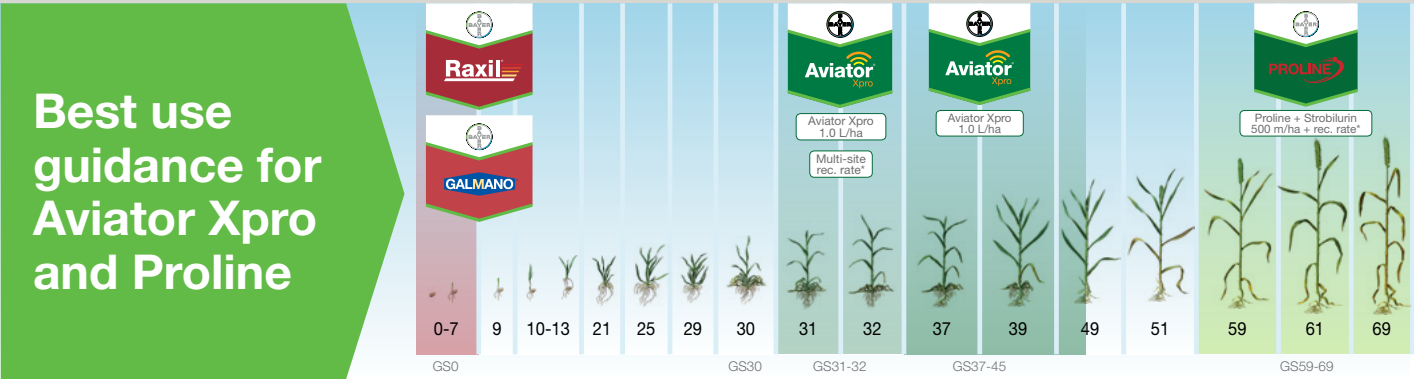
Choosing the right fungicide

Aviator Xpro and Proline are both very effective fungicides that will control the key wheat diseases.

Aviator Xpro is the powerhouse of the Bayer fungicide portfolio. It contains the market leading DMI fungicide prothioconazole in mixture with a very active SDHI fungicide, bixafen. It not only delivers excellent control of all key wheat diseases, it provides very strong physiological activity helping to produce large yield responses even when disease levels are low. With wheat it is critical to keep the upper leaves and ear healthy and green by protecting against disease infection. This means the perfect timing for Aviator Xpro is from flag leaf emergence and beyond.

Proline also controls all of the key wheat diseases extremely effectively and is the perfect foundation to use in mixture with fungicides of a different mode of action early in the season.

By following the fungicide programme below you will match the strengths of Aviator Xpro and Proline with the key disease threats you encounter whilst also adopting a sound resistance strategy



*Apply rate recommended by your advisor.

Applying Aviator Xpro at 1.0 L/ha at GS31-32 ensures Septoria leaf blotch and stripe rust will be controlled. Robust control when the canopy starts to develop ensures the crop is clean throughout. (The multi-site fungicide folpet can be added if the pressure from Septoria leaf blotch is very high).

Applying Aviator Xpro at 1.0 L/ha at GS37-45, followed by a mixture of Proline at 500 ml/ha plus an appropriate dose of a strobilurin fungicide 21-25 days later at GS60-69, ensures Septoria leaf blotch, tan spot, leaf rust and any stripe rust present will be controlled. Always ensure that the interval between fungicide applications does not exceed 25-28 days.

The threat of disease resistance

All fungicides carry a risk that diseases will either become resistant or more tolerant to them.

SDHI fungicides	DMI fungicides
<p>In the case of SDHI fungicides, such as Aviator Xpro, it is resistance that develops and if this were to occur, not only would Aviator Xpro become ineffective, but so too would other products containing SDHI fungicides. To guard against this happening it has been agreed that in cereals no more than two applications of a SDHI fungicide will be made each year and that SDHI fungicides will always be mixed with a fungicide with a different mode of action. Aviator Xpro contains the highly active DMI prothioconazole, in mixture with the powerful SDHI fungicide bixafen and the two fungicides have been formulated in the correct ratio to help guard against resistance.</p>	<p>For DMI fungicides it is increased tolerance that develops. In other words a higher dose is needed to obtain adequate disease control.</p> <p>An effective way to help reduce this risk is to apply Proline in mixture with a fungicide with a different mode of action. It is important to ensure though that both Proline and the partner fungicide control the target diseases and for a similar length of time.</p> <p>By following the fungicide programme above you will match the strengths of Proline and Aviator Xpro with the key disease threats you will encounter whilst also adopting a sound resistance strategy.</p>



AVIATOR XPRO AND PROLINE: USE AT A GLANCE FOR WHEAT

	PROLINE	AVIATOR XPRO
DISEASE	A range of diseases (see table below)	
RATE	400-800 ml/ha	1.0 L/ha
APPLICATION TIMING	Apply at the first sign of disease. Re-apply 3-4 weeks later if required	
APPLICATION WATER VOLUME	Ground: 200 L/ha Aerial: 50 L/ha	Ground:120 L/ha Aerial: 50 L/ha
RAINFESTNESS	Rainfast 1 hour after application to a dry crop	Rainfast immediately after application to a dry crop
WITHHOLDING PERIOD	56 days (grain) or 42 days (forage)	
COMPATIBILITY	Compatible with a wide range of commonly used herbicides, fungicides and insecticides	Compatible with a wide range of commonly used herbicides and insecticides
PACK SIZE	20 litres and 5 litres	20 litres* *once 15L and 5L have sold out
APPROVED HANDLER	Approved handler status is required	
SUMMARY OF DISEASES CONTROLLED:		
	Septoria leaf blotch	Septoria leaf blotch
	Stripe rust	Stripe rust
	Leaf rust	Leaf rust
		Tan spot

Territory Sales Managers

Upper North Island	Phil Bertram	021 426 825
Gisborne/Hawke's Bay/Nelson/Marlborough	Marc Fox	021 426 823
Lower North Island	Jeff Smith	021 426 824
North and Mid Canterbury	David Parker	021 760 794
Mid and South Canterbury	David Weith	021 426 096
Otago and Southland	Daniel Suddaby	021 426 822
South Island, Seed Treatment Specialist	Colin Dunstan	021 323 147

Insist on Wheat fungicides from Bayer.

www.cropscience.bayer.co.nz

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