

Crop Alert

Protecting your crops against disease

Disease pressure continues to rise

Wheat rusts

Victorian wheat crops are currently exposed to unprecedented rust pressure. This has resulted from two consecutive wet summers that have enabled rust levels to build up over the past two years.

Inspections of crops and trials across western Victoria have confirmed the need for growers to be proactive in their rust management.

Stripe rust is appearing in crops about 3 to 4 weeks earlier than normal. It is widespread across Victoria and hot spots are becoming evident in Wimmera crops (Figure 1). The earlier that rust appears in a crop the greater the damage if it is not controlled. The potential yield loss from stripe rust in wheat varieties with different levels of rust resistance is shown in Table 1.

Table 1. Example yield losses based on 2005 data from Horsham in the presence of stripe rust

Stripe Rust Rating	Potential yield loss
R	0%
R-MR	3%
MR	6%
MR-MS	13%
MS	24%
MS-S	34%
S	45%
S-VS	56%
VS	84%

Leaf rust is widespread in susceptible varieties in the Mallee. This is unusually early for this disease to occur in Victoria and it will become more important as the weather warms during spring. Growers need to plan to manage this disease in susceptible varieties.

Observations of stem rust in Yitpi crops in the Mallee provide another warning of the potential risk from this disease in unprotected susceptible crops. Without effective management, stem rust will be explosive in susceptible crops when the weather warms to its ideal temperature (15-30°C) in the late spring. Now is the time for growers to implement their stem rust management plan.



Figure 1. Stripe rust hot spot, Horsham August 2011

In light of these early rust reports and the potential damage to crops it is important that growers take the following action:

1. Review the resistance ratings of cultivars to the three rusts in the [Cereal Disease Guide 2011](#).
2. Monitor all wheat crops weekly for early signs of rust (including resistant crops in case of a change in the pathogen, and there is "resistance breakdown").
3. Revise rust management strategies for the remainder of the season and consider:

Fungicide applications at both full flag leaf emergence (GS39) and again a full ear emergence (GS59) for effective rust control. Since stem rust continues into warmer temperature it will be necessary to apply fungicides post ear emergence in susceptible varieties.

That foliar fungicides will provide the best control when used proactively instead of reactively. That is, apply fungicides to the crop before the disease takes hold.

That this year it is likely that earlier and/or more fungicide sprays will be required.

There are limits to the total amount of the active ingredient "tebuconazole" that can be applied to crops as a foliar fungicide. See [DPI Taking Care With Foliar Fungicides](#).

Disease pressure continues to rise

Barley diseases

Scald, the spot form of net blotch (SFNB) and leaf rust will need to be managed during 2011.

Scald symptoms are starting to appear in susceptible barley varieties, and will continue to develop and become severe with the onset of warmer weather.

Control scald early using foliar fungicide application between GS31 (stem elongation) and GS39 (flag emergence). A second application may be necessary where symptoms persist past GS39.

Spot form of net blotch is also widespread within crops of Gairdner and Hindmarsh showing symptoms on the lower leaves of seedlings. SFNB can be suppressed using foliar fungicide application between GS31 and GS39.

Barley leaf rust is present throughout the Victorian barley growing regions, and will develop into an epidemic in the Wimmera and Western districts if favourable weather conditions persist into spring. Application of foliar fungicide will reduce inoculum levels and provide several weeks of protection.

Pulse diseases

Ascochyta and Botrytis grey mould will need to be managed in most chickpea and lentil crops in 2011.

Chickpeas: The season has been favourable for the development of Ascochyta blight, and it is recommended that chickpea crops be actively monitored. Early infections have been detected on the variety Slasher. Varieties with low resistance like Howzat will need to be closely monitored and sprays to control Ascochyta may be necessary.

Botrytis grey mould is also likely to become an issue if seasonal conditions continue to favour this disease.

Lentils: Ascochyta blight has been detected in the variety Flash. The canopies of many early sown lentil crops have started to close or have already closed. It is imperative that fungicides are applied before canopy closure to manage Botrytis grey mould.

Faba beans: Rust, chocolate spot, Ascochyta and Cercospora have been detected early this season.

Early spraying of fungicides is warranted as these diseases can develop rapidly. Experience suggests that late sprays are not as effective. Rust in particular can develop rapidly when temperatures are over 20°C, cycling every 10 days.

Correct disease identification of faba bean diseases is important (Figure 2) as fungicides can be disease specific.

For information on permits and the registration status of the different fungicides used for disease control in faba beans see [Pulse Australia Crop Protection Products](#).



Figure 2. Faba bean diseases - 1. Cercospora (top left), 2. Ascochyta (top right), 3. Rust (bottom left) and 4. Chocolate spot (bottom right)

Viruses: Even though reports of viruses in pulses crops have been low so far this season, favourable spring conditions will see a build up of aphids, and the potential for spread of associated viruses.

Growers should be on the look out for aphids, as we move into spring. Spraying with insecticides may be necessary in some situations.

Further advice

Consult your agronomist on the disease management strategy for your farm. See DPI Fact Sheets www.dpi.vic.gov.au/graindiseases.

Contact/Services available from DPI

DPI Field Crop Pathology, Grains Innovation Park, 110 Natimuk Rd, Horsham 3400. Tel (03) 5362 2111, or the DPI Customer Service Centre 136 186.

Acknowledgement

This Information Note was prepared by Dr Grant Hollaway with assistance from Mark McLean, Helen Richardson and Frank Henry, DPI Field Crops Pathology, Horsham. The support of the Grains Research and Development Corporation, is gratefully acknowledged.