

10 Point Plan for Managing HRZ Foliar Disease in Cereals 2009.

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Without a doubt, there has been a large ‘**understanding the use of fungicides in the HRZ**’ campaign from projects funded through GRDC and delivered to farmers from Southern Farming Systems over the last 6 years. The information extended has sometimes varied during this time and now can be summarised in the following 10 point plan.

10 key items and ready reference points to observe before using fungicides in the HRZ:

1. **Understand** that **variety resistance** will influence if there is a need for fungicide use and timing/s of application. *Adult Plant Resistance may no longer be effective in many older varieties due to fungal mutations and fungicides may be a necessary last line of defence.*
2. **Upfront** fungicide seed or fertiliser treatments can be used to delay the stripe rust epidemic in varieties with poor resistance, *but are likely to need a follow up in crop foliar fungicide to protect the upper leaves of the canopy.*
3. **Monitor** for and know your crop growth stages from 12-14 weeks post sowing; key timings include early extension (**GS30/31**) through to ear emergence (**GS 50/51**) for various fungicide programs. Know when the first node appears and what the flag leaf is, the flag -1 and flag -2; their need for protection, and contribution to yield differs for wheat when compared to barley.
4. **Barley vs Wheat** – applications at timing GS33 in barley can help protect flag-1 (largest contribution to yield) for leaf rust and powdery mildew. In wheat, a single fungicide application at GS39 will protect the important flag leaf and can be effective in drying Springs.
5. **Timing is everything.** Try to match the timing/s of application and protective ability of the product with green leaf retention potential; determined by soil water availability and seasonal temperature, remembering that this might include a two spray fungicide program.
6. **Product choice** – whilst can be important based on severity of disease at timing of application, it is considered more important that you apply fungicides as per growth stages to protect strategic leaves of the variety chosen. *New generation fungicides do appear to have better performance capabilities.*
7. **Rusts aren’t rusts** – Stripe rust is usually the first to appear in crops. Many varieties are now susceptible to stripe rust, with leaf rust often prevalent 3-4 weeks after the first fungicide timing in susceptible varieties like Kelallac, with fewer crops susceptible to stem rust, which can appear just prior to harvest.
8. **Rainfall, Humidity & Temperature** all influence the potential for disease. A humid Spring will be in large contrast to the relatively dry finishes experienced in the last 5 years. Monitor, monitor, monitor for disease post

- rainfall events, especially if you have not implemented a timely fungicide program.
9. *Fungicides only protect an inherent yield potential* that would have been expressed in the absence of disease. Look in the future to purchase new varieties with highest resistance and yield potential.
 10. *New strains of rust occur by a function of population.* Controlling disease using fungicides can reduce the potential for these mutations and needs to be considered as part of an integrated disease management plan.

Obviously not an exhaustive list, but this may help prompt some thoughts to help maximize yield and minimize the presence of disease in your paddock situations. Further details on fungicide use and timings should be obtained from you local agronomist or by contacting myself at the address below.

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