Plant Science into Practice

MONITORING YIELD RESPONSE TO FUNGICIDES IN WINTER BARLEY

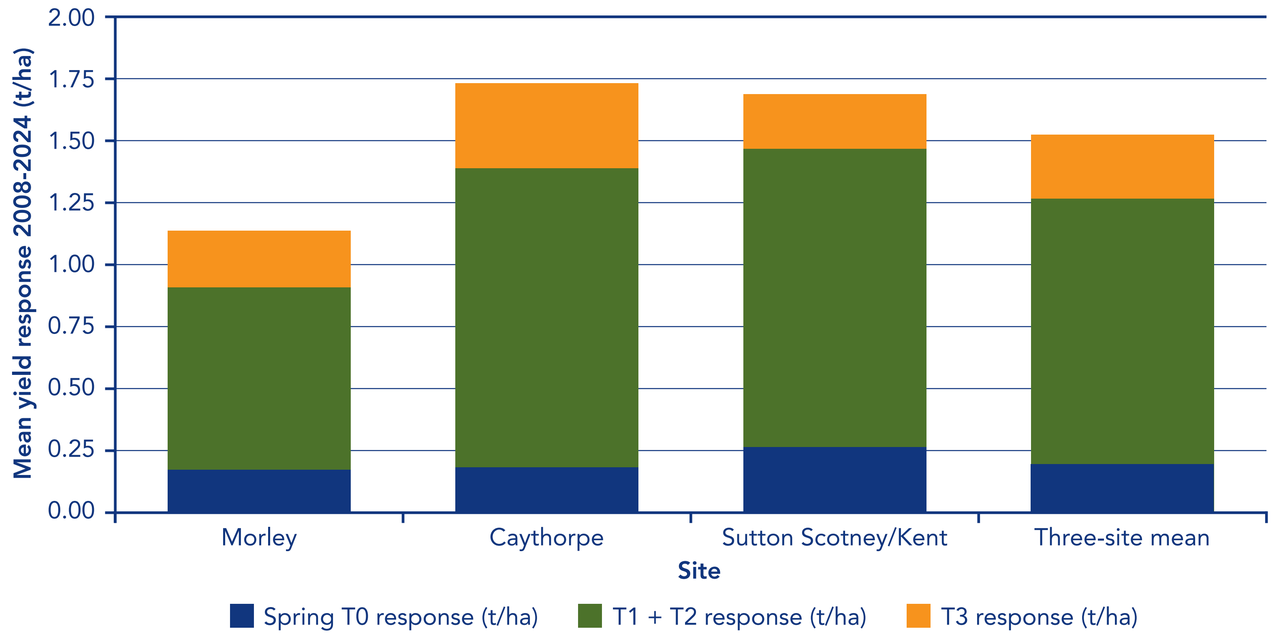
Niab has performed fungicide response trials in winter barley since 2008 at Morley (Norfolk) and since 2011 at other Niab sites. These long-term trials monitor yield responses to each spray timing within a range of fungicide programmes. The studies provide benchmark data to put seasonal responses to fungicides into long term context.

- The average yield response to a 3-spray programme = 1.6 t/ha.
- A spring T0 has provided an average of 0.2 t/ha, and the T3 of 0.3 t/ha.
- Average response to a T1 and T2 programme = 1.1 t/ha.
- Comparing responses between T1 versus T2: proven roughly equal, demonstrating the importance of both timings.

The biggest determinant of fungicide response across seasons has been the weather and location. Agronomically, managing weather risk and yield responses on a given site can be a challenge. Long-term means, alongside local knowledge, provide valuable information to determine where fungicide spending should be pitched.

In barley, products vary in their efficacy on different diseases, but a good range of available actives means it is possible to use effective SDHIs, strobilurins and azoles in balanced mixtures and sequences across a two or three spray programme.

Figure 1. Multi-year mean responses at each timing and site 2011-2024



Net blotch (Pyrenophora teres)

Rhynchosporium commune

Ramularia collo-cygni