

MONITORING YIELD RESPONSE TO FUNGICIDES IN WINTER BARLEY

Niab has performed fungicide response trials in winter barley since 2008 at Morley in Norfolk and since 2011 at other Niab field trials sites across the UK. The studies provide benchmark data to put seasonal responses to fungicides into long-term context.

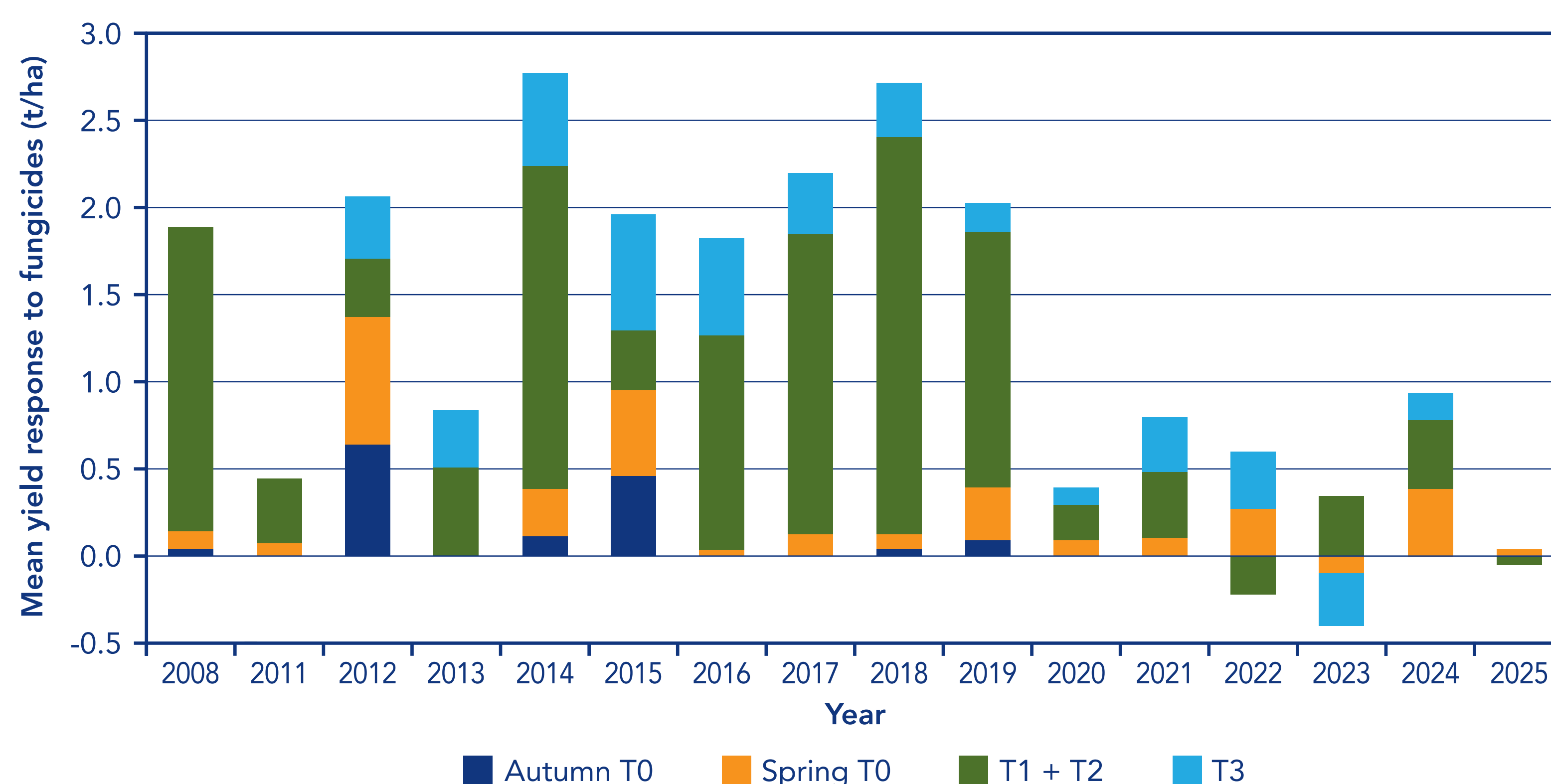
Winter barley can show significant yield responses to fungicides even when apparent disease appears low. Over 15 years of trials has shown that the average yield response to a three spray programme fungicide use is 1.6 t/ha.

A spring T0 spray has provided an average of 0.2 t/ha, and T3 spray 0.3 t/ha. The average response to a T1 and T2 programme has been 1.1 t/ha. When comparing responses from a T1 versus a T2 they have proven roughly equal, demonstrating the importance of both timings.

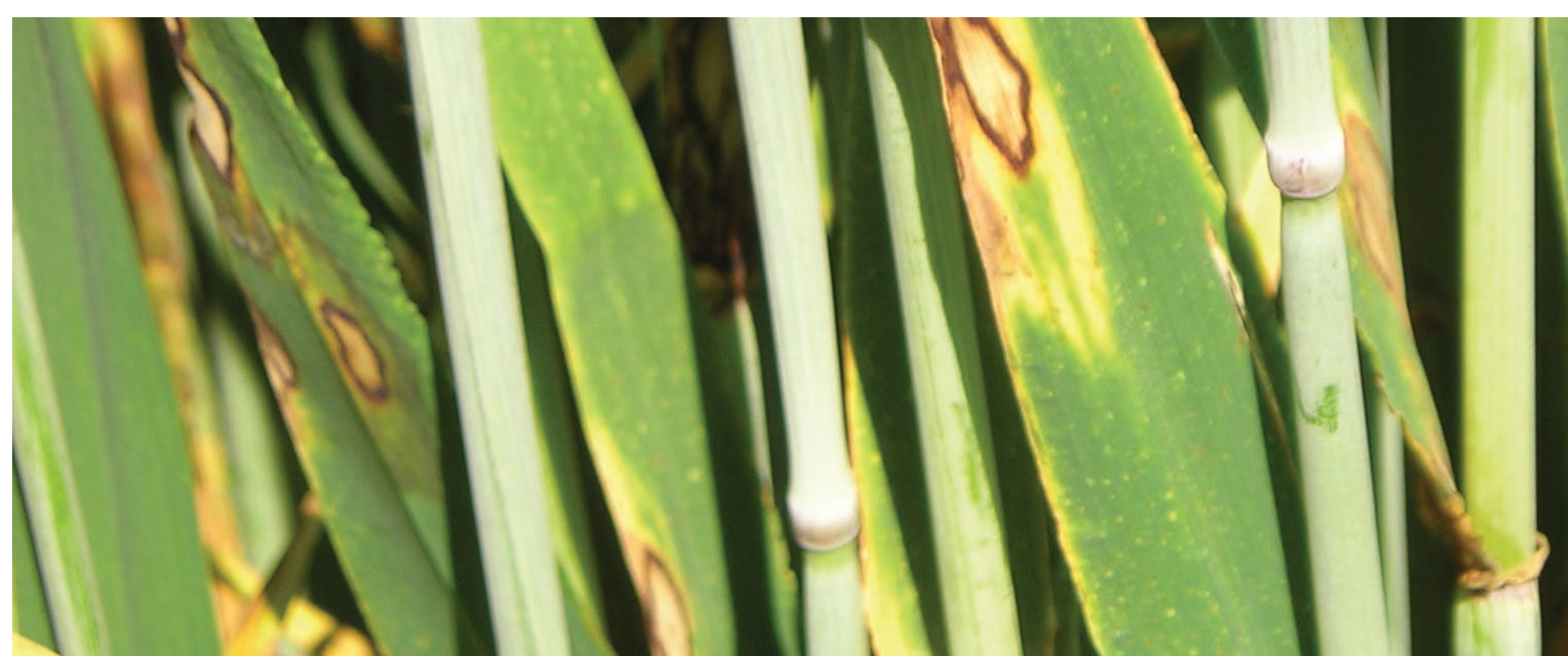
The biggest determinant of fungicide response across seasons has been the weather and location. Agronomically, managing weather risk and yield responses on a given site can be a challenge. Long-term means, alongside local knowledge, provide valuable information to determine where fungicide spending should 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 fungicide yield response 2008-2025 at Morley, Norfolk. Trials have used winter barley varieties with moderate to high fungicide responses



Net blotch (*Pyrenophora teres*)



Rhynchosporium commune



Ramularia collo-cygni

