

MONITORING YIELD RESPONSE TO FUNGICIDES

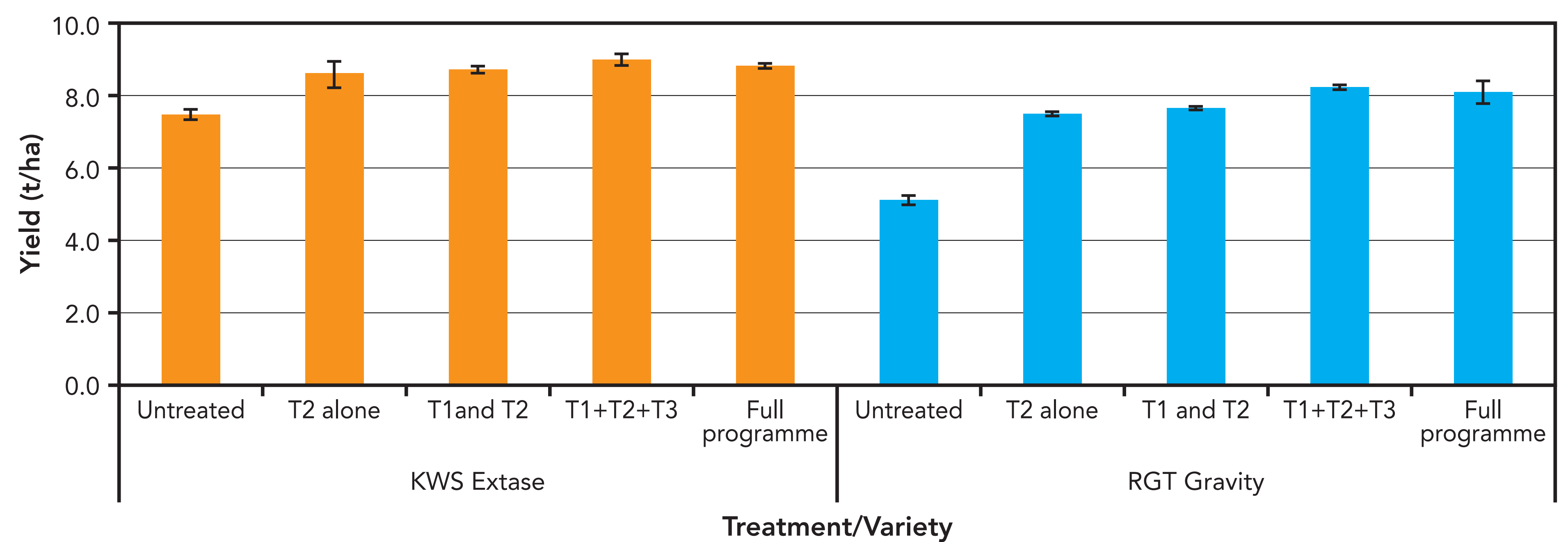
Fungicide response trials have run at Morley since 1986 for winter wheat and since 2008 for winter barley. The Morley Long-Term Studies (LoTS) programme, managed by NIAB, monitors yield responses to each spray timing within a range of fungicide programmes. The studies provide benchmark data to put seasonal responses to fungicide programmes into long-term context.

Detecting the undetectable with molecular pathogen diagnostics

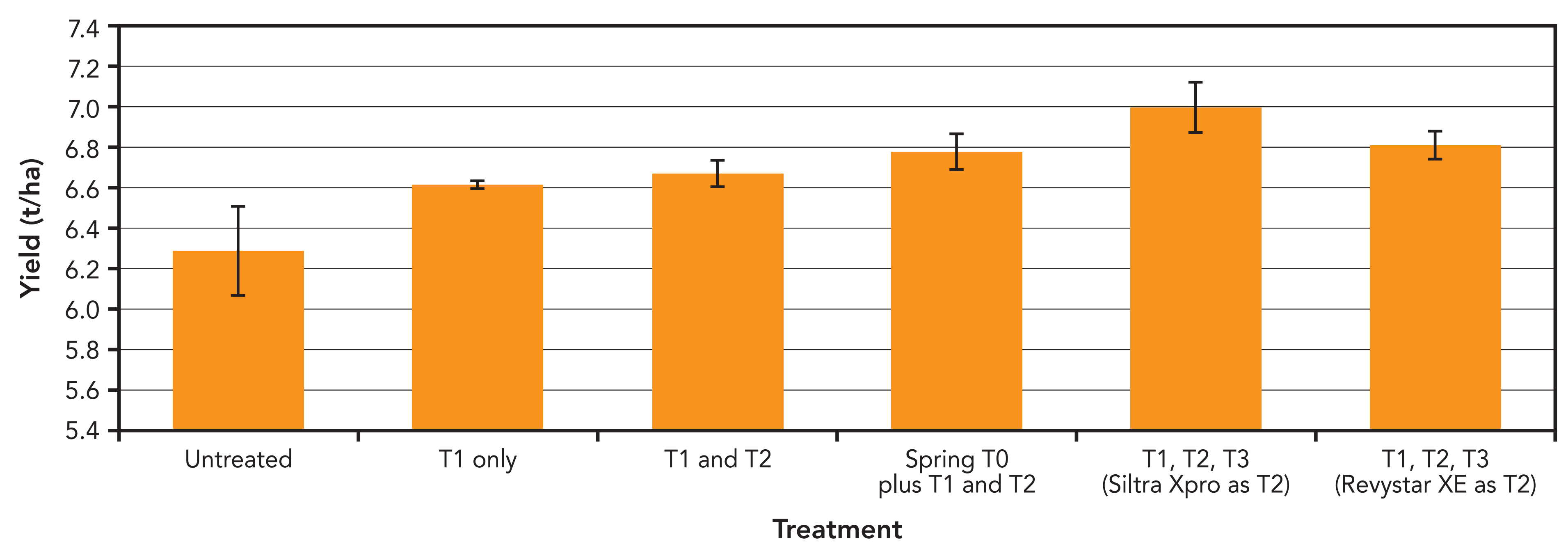
In 2020, The Morley Agricultural Foundation supported a molecular analyses of leaf and stem samples to identify the presence of diseases in wheat and barley that may not be visually observed in the field. Four stem-based pathogens: *Rhizoctonia cerealis* (sharp eyespot), *R. solani* (root rot) *Fusarium graminearum* (head blight) and *F. culmorum* (foot and root rot) were identified in wheat samples despite not showing any showing visible symptoms. *Ramularia collo-cygni* was also detected in barley. The next step is to gain further insight using molecular disease diagnostics, and how it might impact future disease control strategies on farm.

The Morley Long-term studies (LoTS) programme is delivered through NIAB, supported by The Morley Agricultural Foundation.

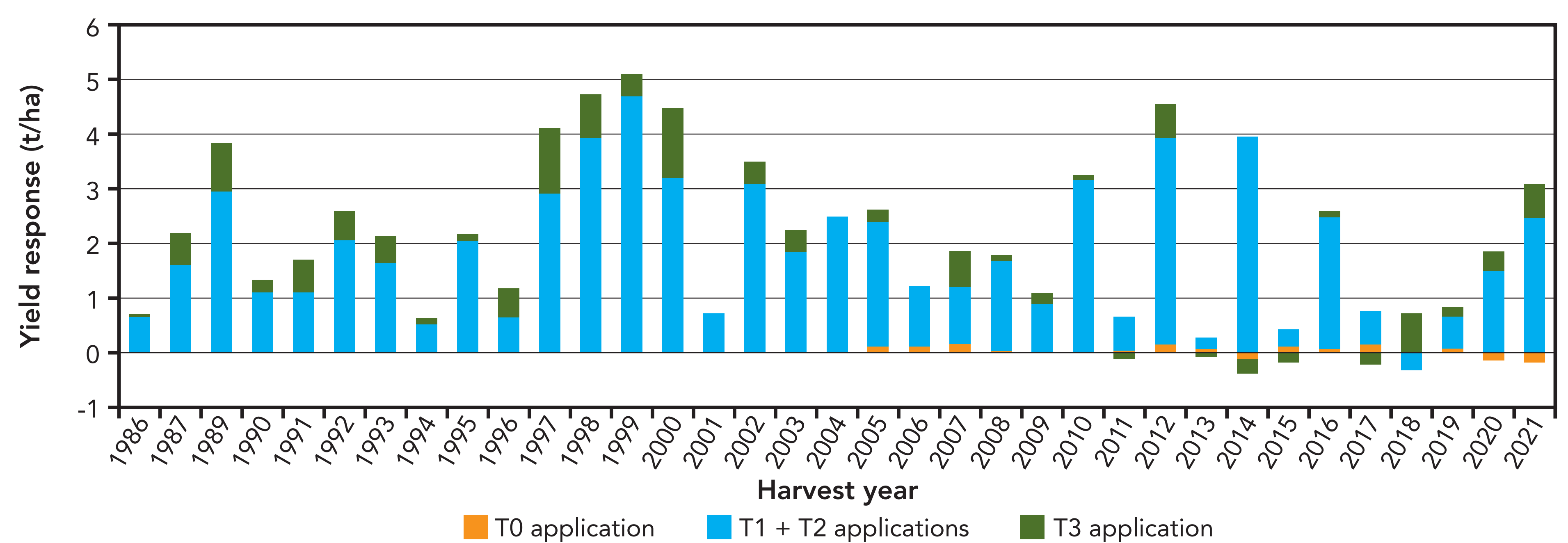
Yield (t/ha) ± SE of KWS Extase and RGT Gravity at Morley in 2021



Yield (t/ha) ± SE for Craft at Morley in 2021



Winter wheat long-term fungicide yield response at Morley (1986-2021)



Winter barley long-term fungicide yield response at Morley (2008-2021)

