

Tackling climate-driven resurgence of a forgotten foe

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Scientists fear resurgence of devastating wheat disease in Britain & Europe



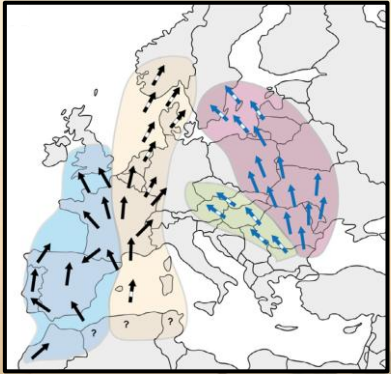
REUTERS



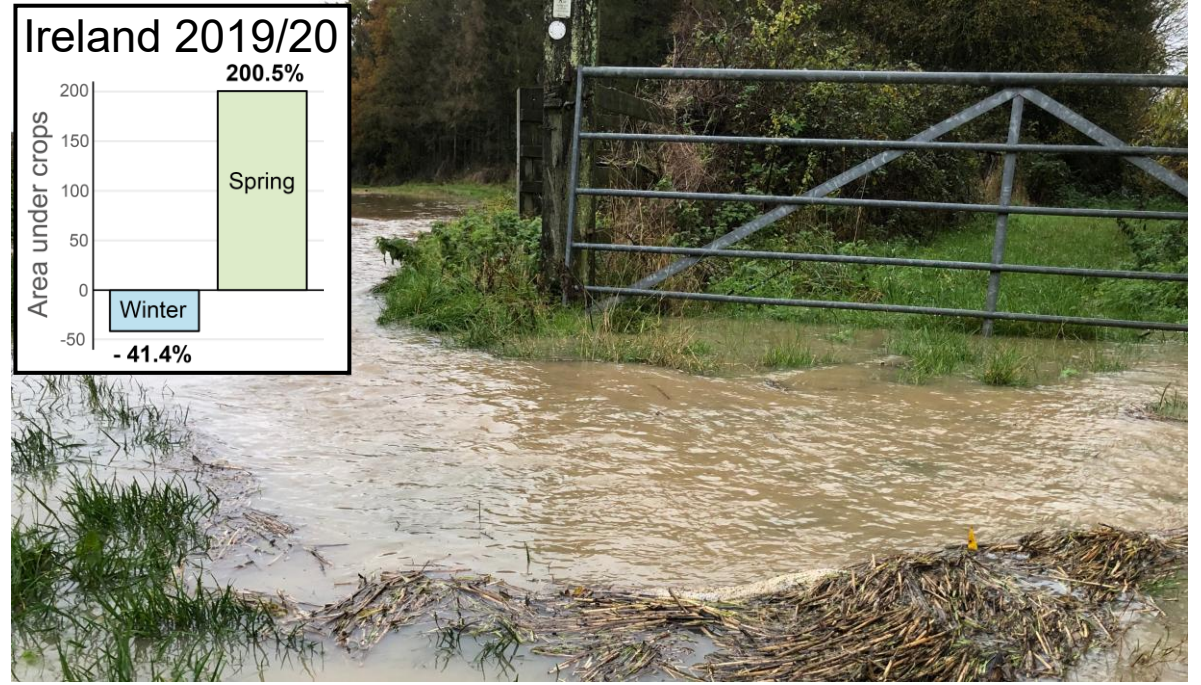
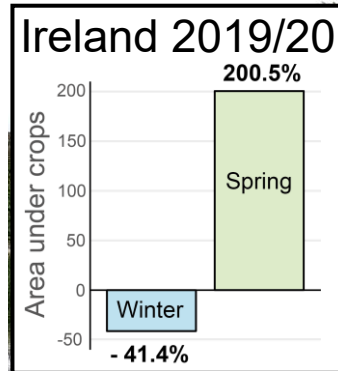
2022: First large-scale stem rust outbreak in UK in recent history

Wheat stem rust

Climatic and environmental risk factors for wheat stem rust infection



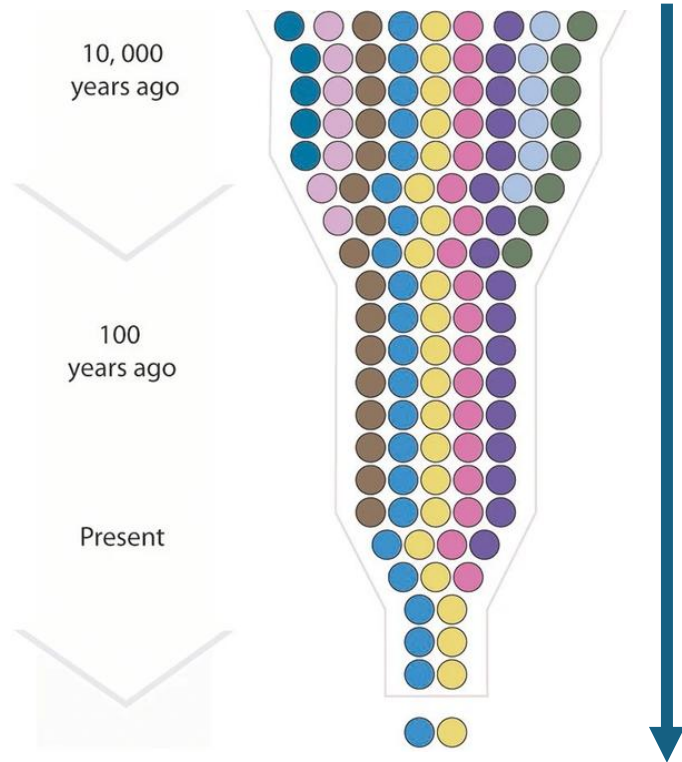
Saharan dust clouds
facilitates influx of rust spores



Increased spring planting
Greater infection risk

With 96% of UK wheat varieties susceptible to stem rust infection we need new sources of resistance

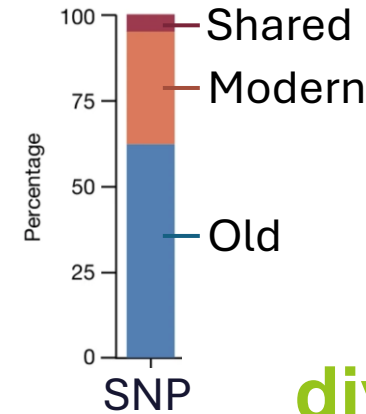
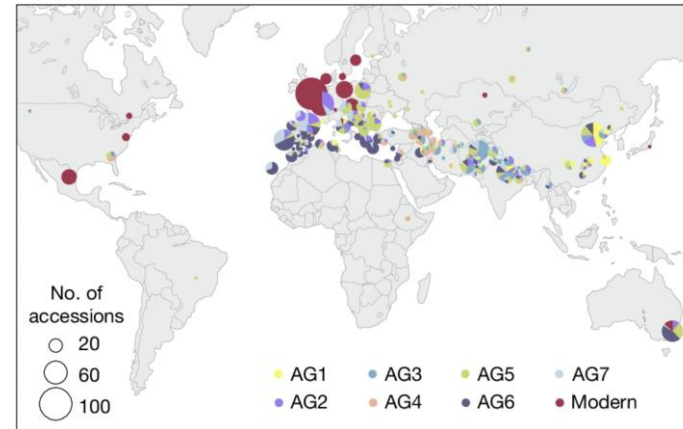
Utilizing “lost” genetic variation to safeguard future wheat production



Modern British wheat varieties

Severe reduction in wheat diversity

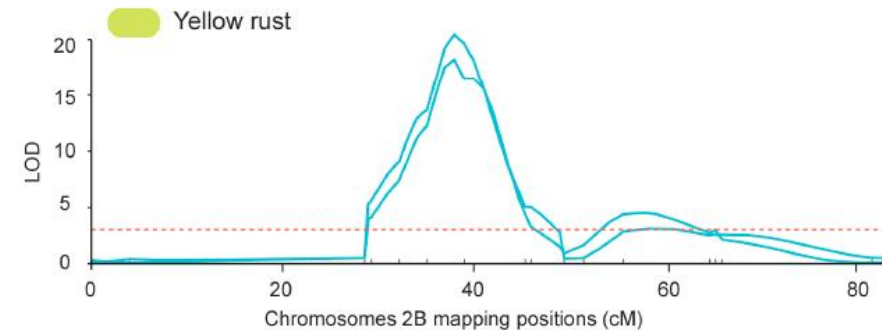
Sequence 827 old and 208 modern wheat varieties



Over 60% of diversity untapped



Shifeng Simon
Cheng Griffiths



33 accessions with ‘Warrior’ YR resistance

Thousands of genetic effects identified that are useful for UK wheat breeding!