

# DESIGNING FUTURE WHEAT

Wheat is a vital commercial crop in the UK and globally. The BBSRC-funded Designing Future Wheat (DFW) programme is supporting eight UK research institutes and universities, including NIAB, to develop the material and techniques required by plant breeders to sustainably address future agriculture production challenges.



## Focus on NIAB research

NIAB, in collaboration with partners, is:

- applying extensive phenotyping expertise to maximise output from experimental wheat lines, developed at NIAB, derived from resynthesised hexaploid and tetraploid wheats for a range of important traits including environmental adaptation, drought tolerance and hybrid breeding potential
- developing wheat with starch characteristics that improve the processing ability and digestibility of wheat
- characterising the novel genetic diversity captured from resynthesised hexaploid and tetraploid wheats. We are working to better understand the genetic components of this novel diversity and its use as a source of genetic disease resistance, or traits to facilitate low input agriculture.



Resynthesised wheat ears



DFW wheat nursery

## DFW toolkits

The 'toolkits' supply novel material and genetic markers to the wheat research and commercial breeding community. Particularly promising germplasm is multiplied and trialled in multi-site trials by our research partners, and by commercial breeders as an annually evolving toolkit series to deliver gains to wheat improvement.

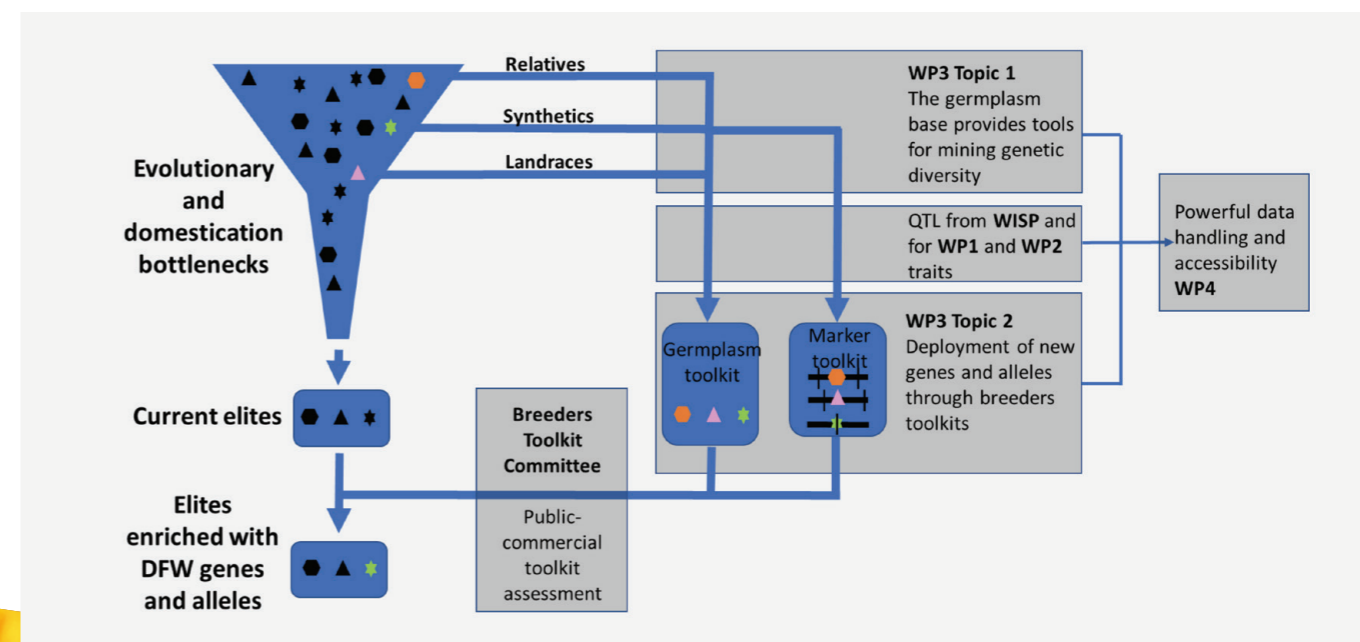


Image from Dr S. Griffiths, JIC