‘Diversity Breeding’: Recovering desirable traits from crops’ wild relatives

A genetic toolbox held at the fingertips of plant breeding scientists is set to completely revolutionise the way crops are grown in UK fields over the next 20 years.

This was the topic of the first of five Farmers Weekly Arable Horizons interactive lectures, in association with Syngenta, examining some of the most exciting and innovative scientific research in agriculture.

Speaking at the lecuture, Alison Bentley, director of genetics and breeding at Niab, outlined the advances driving crop improvements and the changes that could be seen on farm within in the next 15 years.

Dr Bentley said these advances can overcome growing resistance to key pesticides and the challenge of breaking the grain yield plateau as pressure mounts on natural resources such as land and water.

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[One of the genetic tools driving crop improvement]: Diversity Breeding.
Modern wheat has relatively little genetic diversity for breeders to select from compared to its wild relatives.

To address this, scientists are using diversity breeding to effectively go back in time and “re-synthesise” the evolution of wheat by crossing durum wheat with wild goat grass relatives in an attempt to reintroduce genetic traits desirable to modern agriculture, such as disease resistance or drought tolerance.

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion and analysis. Read full, original post: Arable Horizons: How science is revolutionising crop growing