

Newly discovered 'gene conversion' mechanism could lead to high-yielding wheat

When it comes to breeding better wheat varieties....we seek to introduce desirable genes that increase yield, [but] these can come along with less wanted genes [that] reduce some other vital plant function.

This is known as linkage drag, and it's something that's hard to break: especially in crops that show relatively low rates of recombination. The goal, in elite wheat varieties, is to stably stack desirable genes together.

One way of breaking up these linked regions is....'gene conversion,' which essentially sees one version of a gene (allele) being converted to another during double stranded DNA break repair.

[R]elatively little has been known about the genes that control genome-wide gene conversion or the high level of gene conversion in wheat. This latest study, [published in Genome Biology](#), provides a positive step towards being able to overcome a lack of recombination as a limit to breeding efforts.

The data gleaned from the [study] allowed the team to identify a gene, ReqQ, that was experimentally validated to be involved in gene conversion and crossover frequency....This gene....might therefore be harnessed to break linkage-drag in future wheat breeding efforts.

Read full, original article: [Linkage is a drag: First wheat gene to rapidly convert defective traits for new](#)