

0203-FR-073 Resistance to FHB in wild barley associated with leaf rust locus Rph15.

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PROJECT ABSTRACT

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The development of barley (*Hordeum vulgare*) cultivars with improved Fusarium head blight (FHB) (*Fusarium graminearum*) resistance is slow because FHB resistance is difficult to evaluate, is quantitatively inherited, and is associated with genes for spike type, plant height, and maturity in chromosome 2H. This study will evaluate material in which FHB resistance from wild barley (*H. v. spp. spontaneum*) could have been incorporated into cultivated barley (*H. v. spp. vulgare*). The *Rph15* (resistance to leaf rust) gene is located on chromosome 2H near *vrs1-Eam6* region for spike type and maturity genes. Since this region is associated with FHB responses, lines with *Rph15* lines may also have FHB resistance. Possible alleles at the *Rph15* locus have been backcrossed into the cultivar Bowman. They include 41 lines from different accessions with four or more backcrosses to Bowman. This study will evaluate the FHB responses and deoxynivalenol (DON) levels in the lines. This information will also determine the value of specific *Rph15* lines in barley breeding programs.