

**Article title:** QTL mapping and successful introgression of the spring wheat derived QTL *Fhb1* for Fusarium head blight resistance in three European triticale populations

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**ESM3 Variance component estimates of genotype  $\sigma^2_{\text{Genotype}}$ , year  $\sigma^2_{\text{Year}}$ , block within year  $\sigma^2_{\text{Block within Year}}$ , genotype  $\times$  year  $\sigma^2_{\text{Genotype} \times \text{Year}}$  and the residual effects  $\sigma^2_{\text{error}}$  for FHB severity (AUDPC, WKS), plant height and flowering date across three experiments for populations T, AG, E**

Tulus x G8.06 (T) population

Trait	Variance component				
	$\sigma^2_{\text{Genotype}}$	$\sigma^2_{\text{Year}}$	$\sigma^2_{\text{Block within Year}}$	$\sigma^2_{\text{Genotype} \times \text{Year}}$	$\sigma^2_{\text{error}}$
FHB severity (AUDPC)	4.41E+03	1.13E+05	9.17E+02	2.26E+03	8.39E+03
FHB severity (WKS)	9.79E-01	3.53E-07	1.40E-01	2.68E-01	3.68E-01
Plant height	3.17E+01	9.47E+01	1.09E+01	2.06E+00	2.87E+01
Flowering date	8.99E-01	6.54E+00	4.14E+00	4.10E-16	1.20E+00

(Agostino x Grenado) x G8.06 (AG) population

Trait	Variance component				
	$\sigma^2_{\text{Genotype}}$	$\sigma^2_{\text{Year}}$	$\sigma^2_{\text{Block within Year}}$	$\sigma^2_{\text{Genotype} \times \text{Year}}$	$\sigma^2_{\text{error}}$
FHB severity (AUDPC)	5.77E+03	1.29E+05	3.11E+03	3.35E+03	7.02E+03
FHB severity (WKS)	6.93E-01	<1.0E-8	3.13E-01	1.08E-01	3.21E-01
Plant height	2.19E+02	9.62E+01	2.05E+01	1.68E+01	2.04E+01
Flowering date	5.76E-01	9.57E+00	1.69E+00	1.28E-01	9.87E-01

El Paso x G8.06 (E) population

Trait	Variance component				
	$\sigma^2_{\text{Genotype}}$	$\sigma^2_{\text{Year}}$	$\sigma^2_{\text{Block within Year}}$	$\sigma^2_{\text{Genotype} \times \text{Year}}$	$\sigma^2_{\text{error}}$
FHB severity (AUDPC)	2.89E+03	4.47E+04	3.86E+03	1.41E+03	5.33E+03
FHB severity (WKS)	3.62E-01	8.92E-02	1.37E-01	7.21E-02	2.19E-01
Plant height	5.16E+01	8.34E+01	2.14E+01	1.25E+00	2.66E+01
Flowering date	6.26E-01	7.84E+00	1.97E+00	2.00E-10	1.11E+00