

**Table S1 Characteristics of the 135 BC1 individuals**



**Table S2 Statistical analyzes comparing data between 2010-2011 and 2011-2012 experiments**

The non-parametric Wilcoxon signed-rank test was performed on four traits: root system development (RD), weight of the roots (RW), nematode reproduction factor (RF) and gall index (GI)

Signif.codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 - *NS*, not significant

**Table S3 Spearman correlations of the four criteria (RD – RW – RF – GI) in response to *X. index***

 Signif.codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1

**Table S4 Results of the proportion test performed on 60 BC1 individuals in response to *X. index***

The results presented are related to the markers for which the p-values are statistically significant at α = 5%

**Table S5 Characteristics of the experiments in response to *X. index* carried out over five independent years**

RF: reproduction factor, GI: gall index, RW: root weight, RD: root development, R/S: resistance *vs.* susceptible qualitative phenotyping



**Table S6 Primers characteristics**