

SSR MARKERS ASSOCIATED WITH THE RESISTANCE OF RAPESEED TO THE ATTACK OF *SCLEROTINIA SCLEROTIORUM* (LIB.) DE BARY

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Abstract

Sclerotinia sclerotiorum (Lib.) de Bary is one of the most important pathogens of the rapeseed crop worldwide. Depending of the environmental conditions, the yield losses can get up to 100%. Until now, no oilseed rape cultivars are marked as having resistance to this pathogen. Genetic resistance is considered to be the most efficient way of protecting the plants from this pathogen. The aim of this study was to identify SSR markers for white rot resistance in a collection of 130 rapeseed cultivars, from the Centre for Genetic Resource of Netherlands. There were made correlations between the genotypic and the phenotypic data obtained for the artificial infection with the pathogen and there were revealed 5 SSRs significantly associated with rapeseed resistance to white rot. The artificial infection was made on detached leaves, in controlled environmental conditions. The fungus was grown on solid medium PDA. There were put 2 plug discs of PDA medium with mycelia near the main vein of the leaves. On the control leaf there were put 2 discs of PDA medium, without mycelia. The diameter of the lesions was measured 72 h after inoculation, with a linear ruler. For the genetic analysis, there were used 51 SSR markers, that amplified 139 polymorphic fragments. The fragments ranged between 80 and 340 bp. In order to correlate the data, we used the *ANOVA* method, in the *SPSS* v.13 software. The identification of these SSRs will enhance the breeding for white mold resistance in *Brassica napus* L.

Key words: *rapeseed, SSRs, resistance*
