Czech Journal of GENETICS AND PLANT BREEDING

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Czech J. Genet. Plant Breed.

...ej M., Hunady I.:

Faba bean (*Vicia faba* L.) breeding for resistance to anthracnose (*Ascochyta fabae* Speg.) in the Czech Republic

Czech J. Genet. Plant Breed., 43 (2007): 61-68

In 2003−2005 faba bean accessions were evaluated in laboratory and field inoculation tests with a mixture of differently virulent isolates for susceptibility to anthracnose caused by the fungus *Ascochyta fabae* Speg. All tested commercial faba bean cultivars, both colour and white flowering, were found to be susceptible or highly susceptible. The highest level of resistance was found only in declared sources of resistance: 29H, L-8 and Petra. Segregation of F_2 plants derived from the cross of cultivar Merlin

(susceptible, white flowering) with line Petra (resistant, colour flowering) was observed. The plants were moderately susceptible to highly susceptible. This finding indicates a multigenic character of resistance. Repeated selection cycles with the selection of resistant plants in F_2 and F_3 generations were performed. In the F4 generation, colour flowering lines with a high level of resistance, nearly at the same level as in line Petra, were obtained. In comparison with the parental cultivar Merlin an increase in the resistance of selected white flowering lines was proved. Resistance will be increased/stabilized in further repeated selection cycles.

Keywords:
faba bean; *Vicia faba*; *Ascochyta fabae*; anthracnose; sources of resistance; plant breeding

[fulltext]