

## Usporedba otpornosti linija kukuruza prema antraknozi lista i antraknozi stabljike

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### Sažetak

Antraknoza, koju uzrokuje gljiva *Colletotrichum graminicola* (Ces.) G. W. Wils., je svjetski značajna bolest kukuruza. U Hrvatskoj antraknoza kukuruza je važna bolest u monokulturi i uskom plodoredu. Uzročnik može zaraziti sve dijelove biljke kukuruza, ali najčešće se radi o antraknozi lista i antraknozi stabljike. Najbolja zaštita od antraknoze je oplemenjivanje na otpornost. Cilj ovih istraživanja je da se u uvjetima umjetne infekcije s *C. graminicola* uspoređi otpornost većeg broja linija prema antraknozi lista i antraknozi stabljike. Kroz tri godine ispitana je otpornost ukupno 143 linije kukuruza prema antraknozi lista. Stupanj otpornosti linija kretao se od 1,0 do 8,6. Najotpornije prema antraknozi lista bile su linije SP288, LB31, Bc 61473-4, Bc 74104-1, Bc 65741-23, Bc 65073-4 i Bc 721636. Također u uvjetima umjetne infekcije ispitana je otpornost 135 linija kukuruza prema antraknozi stabljike na osnovu vanjskog obojenja. Stupanj otpornosti kretao se od 1,1 do 8,2. Najotpornije prema antraknozi stabljike su linije: Bc 10, Bc 63478-13, Bc 72195, Bc 63478-10, Bc 241212 i Bc 241142. Izvori otpornosti Bc 10 i SP288 kao i nekoliko drugih linija otporno je prema antraknozi lista i stabljike. Nije ustanovljena korelacijska povezanost između otpornosti linija prema antraknozi lista i antraknozi stabljike ( $r = 0,00$ ;  $r = 0,28$ ;  $r = 0,22$ ) što znači da u oplemenjivanju na otpornost treba posvetiti pozornost na obje bolesti.

**Ključne riječi:** kukuruz, otpornost, antraknoza lista, antraknoza stabljike

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## **Comparison of maize inbreds for resistance to anthracnose leaf blight and anthracnose stalk rot**

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### **Summary**

Anthracnose, caused by the fungus *Colletotrichum graminicola* (Ces.) G.W. Wils. is a maize disease of a worldly importance. In Croatia, maize anthracnose is an important disease when maize is grown in monoculture and narrow crop rotation. The pathogen can infect all parts of a maize plant, however, most often its leaves and stalk. The best anthracnose control is breeding for resistance. The aim of this investigation was to compare a large number of inbred lines for resistance to anthracnose leaf blight (ALB) and anthracnose stalk rot (ASR) under conditions of artificial inoculation with *C. graminicola*. In this investigation 143 maize lines were tested for resistance to ALB. Resistance degree of the lines ranged between 1,0 and 8,6. The most resistant lines to ALB were SP288, LB31, Bc61473-4, Bc74104-1, Bc65741-23, Bc65073-4 and Bc721636. Also, 135 maize lines were tested for resistance to ASR under conditions of artificial inoculation based on outer discoloration. Resistance degree of the lines ranged between 1,1 and 8,2. The most resistant lines to ASR were Bc 10, Bc 63478-13, Bc 72195, Bc 63478-10, Bc241212 and Bc 241142. Sources of resistance, Bc 10 and SP288, as well as several other lines were resistant both to ASR and ALB. Correlation association between line resistance to ALB and ASR was not found ( $r = 0,00$ ;  $r = 0,28$ ;  $r = 0,22$ ). This means that in breeding for resistance attention should be paid to both diseases.

Key words: maize, resistance, ALB, ASR

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