

DETEKCIJA ALELNE VARIJABILNOSTI U LOKUSIMA PŠENICE ZNAČAJNIM ZA OTPORNOST NA *Fusarium* ssp. PRIMENOM MOLEKULARNIH MARKERA – MIKROSATELITA

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Fuzarioza klasa predstavlja jedno od najrasprostranjenijih gljivičnih oboljenja pšenice, a najčešće ga izaziva *Fusarium graminearum*. U uslovima povišene vlažnosti i temperature, ova gljiva često prouzrokuje negativne efekte na prinos i kvalitet zrna, a naročito se ističe štetan uticaj mikotoksina koji se nakupljaju u zrnima. Stvaranje sorti otpornih na fuzarijum smatra se jednim od najefikasnijih rešenja u suzbijanju ove bolesti. Sa ciljem iznalaženja mogućnosti primene molekularnih markera – mikrosatelita u oplemenjivanju pšenice na ovo svojstvo, analizirana je alelna varijabilnost lokusa heksaploidne pšenice značajnih za otpornost na fuzarijum, i to primenom dva mikrosatelitna markera: GWM533 (3B) i GWM156 (5A). Pri detekciji alelnog polimorfizma, kao standardi korišćene su najpoznatije sorte izvori otpornosti: Sumai3, Frontana i Amigo. Razdvajanjem na poliakrilamidnom gelu, kod 24 francuskih i 27 novosadskih genotipova pšenice utvrđeno je prisustvo 4 alela (GWM533) i 6 alela (GWM156). U radu su detaljno analizirani dobijeni rezultati i mogućnosti njihove primene u MAS (Marker Asistiranoj Selekciji) pšenice na ovo svojstvo.

DETECTION OF ALLELIC VARIABILITY AT WHEAT LOCI ASSOCIATED WITH RESISTANCE TO *Fusarium* ssp. USING MOLECULAR MARKERS – MICROSATELLITES

Fusarium head blight (FHB), caused primarily by *Fusarium graminearum*, is one of the most important fungal diseases of wheat. It may cause severe yield and quality losses in humid and warm conditions. However, the most important concern is the mycotoxin contamination of grain. Breeding of cultivars resistant to FHB is the best way to control the disease. In order to examine possibilities for application molecular markers – microsatellites in selecting for resistance to FHB, allelic variability at wheat loci associated with resistance to *Fusarium* ssp. was studied using two microsatellite markers: GWM533 (3B) and GWM156 (5A). Detection of the allelic polymorphism was conducted compared to the cultivars Sumai3, Frontana and Amigo which are widely used as FHB resistance sources. By separation on polyacrilamide gel in 24 French genotypes and 27 genotypes developed at the Institute of Field and Vegetable Crops in Novi Sad, 4 alleles (GWM533) and 6 alleles (GWM156) were detected. In full text of the paper, obtained results are analysed together with estimation of possibility for their application in MAS (Marker Assisted Selection) for wheat breeding purposes.