ZBORNIK APSTRAKATA

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i

VII SIMPOZIJUMA SEKCIJE ZA OPLEMENJIVANJE ORGANIZAMA

DRUŠTVA GENETIČARA SRBIJE

BOOK OF ABSTRACTS

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and

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ANALIZA GENOTIPA, SREDINE I NJIHOVE INTERAKCIJE NA SVOJSTVA SEMENA KONZUMNOG SUNCOKRETA

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Oplemenjivanje konzumnog suncokreta odlikuje se činjenicom da različita tržišta imaju različite zahteve u pogledu veličine semena, boje ljuske i drugih osobina, što ovaj proces čini težim i skupljim. Krupne frakcije semena se otkupljuju, prže i pakuju pojedinačno, dok se sitnije frakcije semena koriste u proizvodnji hladno ceđenog suncokretovog ulja i pogače. Prerađivačka industrija, odnosno male fabrike, otkupljuju seme krupne frakcije za pečenje i pakovanje. Da bi se razumeo doprinos genotipoa, spoljne sredine i njihove interakcije na varijabilnost osobina, korišćen je REML slučajni model za procenu komponenti varijanse faktora za svaku osobinu. Efekat genotipova (G), spoljašnje sredine (E) i njihove interakcije (GE) upoređeni su uzimajući u obzir njihov doprinos ukupnoj varijansi za udeo jezgra i ljuske ,dužine, širine i debljine semena. Kod nekih ispitivanih osobina G efekti su veoma visoki u poređenju sa E i GE efektom, a kod nekih su bili relativno niski. G efekat udela jezgra, udela ljuske i dužine semena objašnjavaju više od 70% ukupne varijacije. Između 36,69% i 50,26% ukupne varijacije širine i debljine semena objašnjeno je G glavnim efektom. Ukupna varijacija debljine semena objašnjena je E glavnim efektom (47,17%) i njegov doprinos varijansi je bio veći od G glavnog efekta (36,30%) i GE efekata (16,53%). Nastaviće se istraživanja NS konzumnih hibrida kako bi se procenio uticaj genotipa, spoljašnje sredine i njihove interakcije na udeo jezgra i ljuske, dužinu, širinu i debljinu semena konzumnog suncokreta.

Ključne reči: konzumni suncokret, REML, udeo jezgra, udeo ljuske, dužina ,širina i debljina semena

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ANALYSIS OF GENOTYPES, ENVIRONMENTS, AND THEIR INTERACTION ON CONFECTIONARY SUNFLOWER SEED TRAITS

Nada Hladni[1], Samet Salgam[2], Veljko Petrović[3], Siniša Jocić[1], Milan Jocković[1], Sandra Cvejić[1], Aleksandra Radanović[1], Vladimir Miklič[1], Dragana Miladinović[1]

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Confectionary sunflower breeding is characterized by different markets having different demands for seed size, hull color, and other traits, thus making this process more difficult and costly. Large seed fractions are purchased, roasted, and packed individually, while smaller seed fractions are used in the production of cold-pressed sunflower seed oil and oil cake. The processing industry, that is, small factories, buy large seed fractions for backing and packaging. To understand the contribution of genotypes, years, and their interaction to the variability of traits, REML random model was used to estimate the variance components of factors for each trait. The effect of genotypes (G), environments (E), and their interaction (GE) was compared by considering their contribution to the total variance for kernel and shell ratio, seed length, width, and thickness. For some investigated traits, G effects were found to be very high compared to the E and the GE effect, and in some, it was relatively low. The G effects on kernel ratio, shell ratio, and seed length explained more than 70% of the total variation. Between 36.69% and 50.26% of the total variation seed width and thickness were explained by the G main effect. The total variation in seed thickness was explained by the E main effect (47.17%), and its contribution to the variance was higher than the one of the G main effect (36.30%) and the GE main effect (16.53%). The research of NS confectionery hybrids will continue to evaluate the influence of genotype, environment, and their interaction on kernel and shell ratio, seed length, width, and thickness of confectionary sunflower.

Key words: confectionery hybrids, REML, kernel ratio, shell ratio, seed length, width, and thickness

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