

ZBORNİK APSTRAKATA

X SIMPOZIJUMA DRUŠTVA SELEKIONERA I SEMENARA REPUBLIKE SRBIJE

i

VII SIMPOZIJUMA SEKCIJE ZA OPLEMENJIVANJE ORGANIZAMA
DRUŠTVA GENETIČARA SRBIJE

BOOK OF ABSTRACTS

X SYMPOSIUM OF THE SERBIAN ASSOCIATION OF PLANT BREEDERS AND
SEED PRODUCERS

and

VII SYMPOSIUM OF THE SERBIAN GENETIC SOCIETY
SECTION OF THE BREEDING OF ORGANISMS

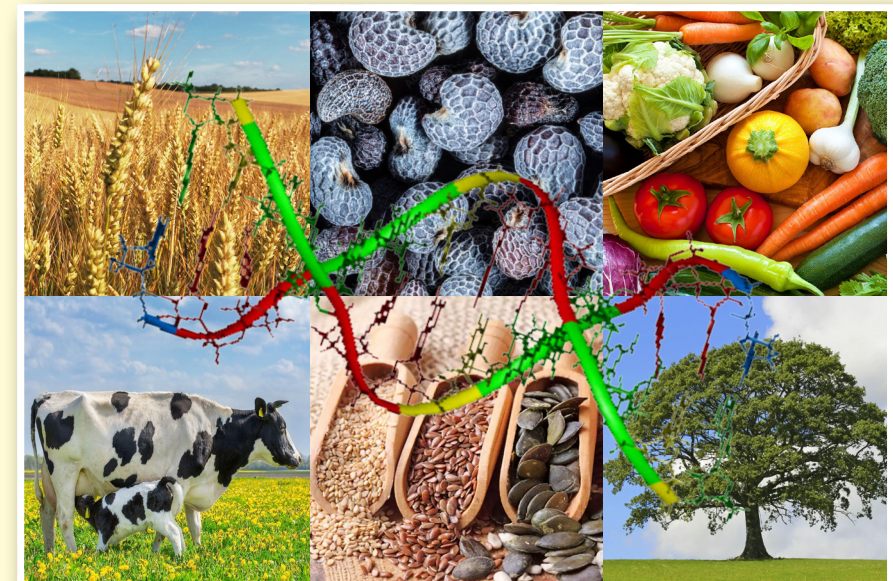
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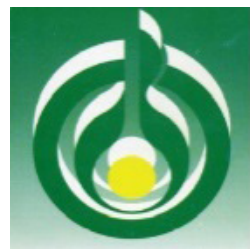
SERBIAN ASSOCIATION OF PLANT
BREEDERS AND SEED PRODUCERS



VRNJAČKA BANJA, 16. - 18. OKTOBAR 2023.

VRNJAČKA BANJA - SERBIA, 16 - 18 OCTOBER 2023

ORGANIZATORI:



SPONZORI:



Република Србија
МИНИСТАРСТВО НАУКЕ,
ТЕХНОЛОШКОГ РАЗВОЈА И
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Beograd/Belgrade
2023.

Izdavač/Publisher

Društvo genetičara Srbije, Beograd
Serbian Genetic Society, Belgrade

Društvo selekcionera i semenara Republike Srbije
Serbian Association of Plant Breeders and Seed Producers, Belgrade

Urednici/Editors

dr Vesna Perić, dr Vojka Babić, dr Sandra Cvejić

Priprema za štampu i realizacija štampe

ABRAKA DABRA, Novi Sad

Tiraž

150

Ova publikacija je štampana uz finansijsku pomoć Ministarstva nauke, tehnološkog razvoja i inovacija

Simpozijum je organizovan u saradnji sa Institutom za kukuruz "Zemun Polje", Beograd i Institutom za ratarstvo i povrtarstvo, Institutom od nacionalnog značaja za Republiku Srbiju, Novi Sad

ISBN: ISBN-978-86-87109-17-9

Beograd/Belgrade

2023.

X SIMPOZIJUM DRUŠTVA SELEKCIONERA I SEMENARA REPUBLIKE SRBIJE i VII
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PRODUCERS and VII SYMPOSIUM OF THE SERBIAN GENETIC SOCIETY SECTION OF
THE BREEDING OF ORGANISMS

Vrnjačka Banja - Serbia, 16-18 October 2023

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OCENA STABILNOSTI PRINOSA SEMENA I KOMPONENTI PRINOSA NS KONZUMNIH HIBRIDA SUNCOKRETA PRIMENOM AMMI ANALIZE

Nada Hladni¹, Samet Salgam², Veljko Petrović³, Siniša Jocić¹, Milan Jocković¹, Sandra Cvejić¹, Aleksandra Radanović¹, Vladimir Miklič¹, Dragana Miladinović¹

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Povećana upotreba biljnih proteina u prehrambenoj industriji postavila je nove ciljeve oplemenjivačkom programu konzumnog suncokreta. Ispitivanje adaptabilnosti novih konzumnih hibrida suncokreta je važan deo programa oplemenjivanja. Petnaest NS konzumnih hibrida suncokreta ispitivano je tri godine na lokaciji Rimski Šančevi, u ogledu postavljenom kao randomizovani blok dizajn sa tri ponavljanja. REML slučajni model je korišćen za procenu efekata hibrida, godina i njihove interakcije, dok je AMMI analiza primenjena za određivanje interakcije genotipa i okruženja. Upoređen je efekat genotipova (G), okruženja (E) i njihove interakcije (GE) s obzirom na njihov doprinos ukupnoj varijansi. Za prinos semena glavni efekat E (49,32%) je bio važniji od GE (38,98%) i G efekata (11,70%), što pokazuje da prinos semena ispitivanih genotipova suncokreta više zavisi od uslova sredine nego od genotipa. U pogledu sadržaja proteina i ulja u semenu, efekat G (52,2%;70,63%) je imao značajniju ulogu od efekata E (17,0%;19,36%) i GE (30,8%;10%). AMMI analiza je pokazala da je hibrid NS H7 imao najveću stabilnost prinosa semena i sadržaja proteina u semenu kao i veći sadržaj ulja u semenu u poređenju sa drugim ispitivanim hibridima. Konzumni hibrid NS H15 je perspektivan hibrid, koji je pokazao nizak sadržaj ulja i visok sadržaj proteina u semenu i visoku stabilnost u datim uslovima. Nastaviće se sa ispitivanjem NS konzumnih hibrida primenom AMMI analize kako bi se procenio višegodišnji uticaj genotipa, sredine i njihove interakcije na prinos semena, sadržaj proteina i ulja u semenu.

Ključne reči: konzumni hibridi, prinos semena, sadržaj proteina i ulja u semenu, REML, AMMI

Zahvalnica: Rad je podržalo Ministarstvo prosvete, nauke i tehnološkog razvoja republike Srbije, ugovor broj 451-03-68/2022-14/ 200032, Fond za nauku R. Srbije, program IDEJE, br. 7732457 (SmartSun), Evropska komisija kroz projekat Tvinig zapadnog Balkana CROPINNO, br. 101059784, Centar izuzetnih vrednosti za inovacije u oplemenjivanju biljaka tolerantnih na promene klime - Climate Crops, Institut za ratarstvo i povrtarstvo, Novi Sad, Srbija.

ASSESSMENT OF STABILITY OF SEED YIELD AND YIELD COMPONENTS IN NS CONFECTIONERY SUNFLOWER HYBRIDS USING THE APPLE AMMI ANALYSIS

Nada Hladni¹, Samet Salgam², Veljko Petrović³, Siniša Jocić¹, Milan Jocković¹, Sandra Cvejić¹, Aleksandra Radanović¹, Vladimir Miklič¹, Dragana Miladinović¹

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The increased use of vegetable proteins in the food industry has imposed new goals on the confectionery sunflower breeding program. Testing the adaptability of new NS confectionery sunflower hybrids is an important part of the breeding program. Fifteen NS confectionery sunflower hybrids were tested over a period of three years in an experiment set up as a randomized block design with three replications at the Rimski Šančevi location. The REML random model was used to evaluate the effects of hybrid, year, and their interaction, while AMMI analysis was applied to determine the interaction between genotype (G) and environment (E). The effect of G, E, and their interaction (GE) was compared with respect to their contribution to the total variance. For seed yield, the main effect of E (49.32%) is more important than the GE effect (38.98%) and G effect (11.70%), which shows that sunflower seed yield, of investigated hybrids, depends more on environmental conditions than on genotype. Regarding the content of protein and oil in the seeds, the effect of G (52.2%; 70.63%) had a more significant role than the effects of E (17.0%; 19.36%) and GE (30.8%; 10%). According to AMMI analysis, hybrid NS H7 had the highest stability of seed yield and seed protein content, as well as higher seed oil content compared to other tested hybrids. The confectionery hybrid NS H15 is a promising hybrid, which showed low oil content and high protein content in the seeds and high stability in the given conditions. The examination of NS confectionery hybrids will continue using AMMI analysis in order to evaluate the multi-year influence of genotype, environment, and their interaction on seed yield, protein, and oil content in seeds.

Key words: confectionery hybrids, stability, seed oil and protein content, REML, AMMI

Acknowledgments: The research in this paper was supported by IFVCNS, the Ministry of Education, Science and Technological Development of the Republic of Serbia, grant number: 451-03-68/2022-14/200032, and Science Fund of Serbia, project SmartSun, grant number 7732457. European Commission through the Twinning Project for Western Balkans CROPINNO, no. 101059784, Center of Excellence for Innovation in Breeding Climate Change Tolerant Plants - Climate Crops, Institute for Field and Vegetable Crops, Novi Sad, Serbia.