



Green Room and University of Montenegro



GREEN ROOM SESSIONS 2018

**International GEA (Geo Eco-Eco Agro) Conference
1-3 Novembar 2018, Podgorica, Montenegro**

**Plant production, Plant protection & Food safety, Genetic resources
Phytochemistry and Medicinal Plants, Animal husbandry and Dairy production
Rural development and agro-economy, Rural Environments and Architecture
Environment protection and natural resources management, Forestry**

GREEN ROOM SESSIONS 2018

Book of Abstracts



Podgorica, Montenegro, 2018

www.greenrooms.me

GREEN ROOM SESSIONS 2018
International GEA (Geo Eco-Eco Agro) Conference
1-3 November 2018, Podgorica, Montenegro

BOOK OF ABSTRACTS

University of Montenegro, Faculty of Philosophy, Geography, Montenegro
University of Montenegro, Faculty of Architecture, Montenegro
University of Montenegro, Biotechnical Faculty, Montenegro
University of Montenegro, Institute of Marine Biology, Montenegro
Perm State Agro-Technological University, Russia
Voronezh State Agricultural University, Russia
Faculty of Agricultural Sciences and Food, Skopje, Macedonia
University of Zagreb, Faculty of Agriculture
Aleksandras Stulginskis University, Lithuania
University of Sarajevo, Faculty of Agriculture and Food Science, B&H
Tarbiat Modares University, Faculty of Natural Resources, Iran
Watershed Management Society, Iran
University of Banja Luka, Faculty of Natural Sciences and Mathematics, RS, B&H
University of East Sarajevo, Faculty of Agriculture, RS, B&H
Institute of Field and Vegetable Crops, Novi Sad, Serbia
Balkan Scientific Association of Agricultural Economists
University of Dzemal Bijedic, Mostar, Agromediterranean Faculty, B&H
University of Kragujevac, Faculty of Hotel Management & Tourism Vrnjacka Banja
Institute of Meteorology and Seismology of Montenegro
National Parks of Montenegro
Put Gross, Montenegro
Eko ekvilibrijum, Montenegro
National Association of Sommeliers of Montenegro
Centar za samorazvoj i unapredjenje drustva

Editor in Chief: Velibor Spalevic

Publisher: Faculty of Philosophy, University of Montenegro

Printing house: Grafo group doo Podgorica

Circulation: 250

Website: www.greenrooms.me

Photo front page: Aleksandar Jaredic / Ribo Raicevic

CIP - Каталогизacija u publikaciji
Nacionalna biblioteka Crne Gore, Cetinje

ISBN 978-86-7798-112-9

COBISS.CG-ID 36811792

(3) Genetic resources

Genetic characterization of Montenegrin grapevine varieties and their conservation Vesna Maraš, Milena Mugoša, Tatjana Popović, Vladan Božović, Anita Gazivoda, Jovana Raičević, Mirko Perišić	85
Potato diversity in Montenegro Zoran Jovović, Novo Pržulj, Ana Velimirović, Vera Popović, Vera Đekić.....	86
Analysis of spike related traits in barley landraces indicates their usefulness as a source of a new variability in breeding Aleksandra Miletić, Dejana Panković, Miroslav Zorić, Novo Pržulj, Gordana Šurlan Momirović, Marija Jovanović, Bojan Radisavljević, Dragan Perović	87
Evaluation of genetic diversity in sugar beet (<i>Beta vulgaris</i> L.) inbred lines by SSR markers Larysa Prysiazniuk, Mykola Roik and Yuliia Shytikova	88
Identification of drought resistant maize lines with DNA markers Larysa Prysiazniuk, Yirii Honcharov and Oksana Piskova.....	89
Pedigree analysis of Nonius horse in Vojvodina Ljuba Štrbac , Snežana Trivunović, Denis Kučević, Stevan Stankovski, Gordana Ostojić, Božidarka Marković and Milan Marković	90
Molecular characterization of Multidrug resistant <i>Pseudomonas aeruginosa</i> isolated from burn infection Hasan Solmaz, Narmin Saed Merza, Marwan Khalil Qader	91
Evaluation of oil and protein content in oilseed rape Dragana Rajković, Ana Marjanović Jeromela, Nada Grahovac, Nada Lečić, Vera Popović, Dragan Živančev and Vladimir Miklič.....	92
Chemical characteristics of fruit of some genotypes of wild apple (<i>Malus sylvestris</i> Miller) grown in conditional of Bijelo Polje Gordana Šebek and Stoja Lutica	93
Yield components and genetic potential of two-rowed barley Kamenko Bratković, Vera Đekić, Kristina Luković, Dragan Terzić, Zoran Jovović.....	94
Organoleptic evaluations and juice composition of Kardinal variety and his clones Sami Kryeziu, Petar Hrstov, Mihail Petkov, Krum Boskov, Zlatko Prcelovski	96
Organoleptic evaluations and juice composition of Muscat Italia variety and his clones Sami Kryeziu, Petar Hrstov, Mihail Petkov, Krum Boskov, Zlatko Prcelovski	97

Evaluation of oil and protein content in oilseed rape

Dragana RAJKOVIĆ¹, Ana MARJANOVIĆ JEROMELA^{1*}, Nada GRAHOVAC¹, Nada LEČIĆ¹, Vera POPOVIĆ¹, Dragan ŽIVANČEV¹ and Vladimir MIKLIČ¹

¹ Institute of field and vegetable crops, Novi Sad; dragana.rajkovic@nsseme.com

* Correspondence: ana.jeromela@ifvcns.ns.ac.rs; Tel.: +381-21-489-8111

Abstract

Oilseed rape is the most significant member of *Brassicaceae* family in terms of economic value. Its oil is the third largest source of vegetable oil in world (USDA, 2016) after palm and soybean oil. This industrial crop is cultivated for high quality oil used in human nutrition, as well as for biodiesel production. High level of monounsaturated and omega-3 polyunsaturated fatty acids makes rapeseed oil good for heart health. After oil extraction from seed, remains meal which is rich in proteins and is used as feed. At a moment in Europe, there is limited output of vegetable proteins used as feed (Jasinski et al, 2018). Breeding efforts are focused not only on higher yield, but also in improving oil and meal quality of oilseed rape. Main goal of this research was to examine oil and protein content of 39 genotypes (lines, cultivars and one hybrid) from IFVCNS (Institute of Field and Vegetable Crops in Novi Sad) collection of oilseed rape. Oil content was determined by magnetic resonance analyzer (Newport 4000 NMR). Determination of total protein amount was performed with standard Kjeldahl (1883) method. Average contents of rapeseed oil and proteins are 40-45% and 18-25%, respectively. In this study, oil content was presented as percentage of seed and varied from 28,70% in NS-H-R3 father line to 48,51% in cultivar Jovana. Four genotypes, Zorica, 36R, 37R and Jovana had more than 45% of oil. Protein content ranged 19,22-26,02% with lowest value in genotype 37R and highest value recorded in NS-UR-14 father line. NS-UR-14 and Galickij had more than 25% of proteins. According to our results, contents of oil and proteins were in high significant negative correlation ($r=-0,717$). This study pointed out on rapeseed genotypes with higher levels of oil and proteins than average and thus gave us guide marks for further breeding.

Keywords: oilseed rape; oil content; protein content

Aknowlegment: This work is the result of research under the project TR 31025, financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia.

References

- USDA (2016) Oilseeds: World markets and trade. USDA-FAS September 2016. Avialable at: <http://usda.mannlib.cornell.edu/usda/fas/oilseed-trade//2010s/2016/oilseed-trade-09-12-2016.pdf> (accessed 10 February 2017)
- Jasinski, S., Chardon, F., Nesi, N., Lecueuil, A. & Guerche, P. (2018): Improving seed oil and protein content in Brassicaceae: some new genetic insights from *Arabidopsis thaliana*. *OCL-Ol Corps Gras Li*, <https://doi.org/10.1051/ocl/2018047>.
- Kjeldahl, J. (1883): Neue methode zur bestimmung des stickstoffs in organischen Körpern. *Z. Anal. Chem.* 22: 366-383.