

**Faculty of Agriculture
Goce Delcev University - Stip**



**2nd INTERNATIONAL MEETING
AGRISCIENCE & PRACTICE
(ASP 2019)**

BOOK OF ABSTRACTS

**12th April 2019
Stip, Republic of North Macedonia**

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GOCE DELCEV UNIVERSITY - STIP, REPUBLIC OF NORTH MACEDONIA
12 April 2019, Stip, Republic of North Macedonia**

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AGRICULTURAL ECONOMICS

CHEMICAL COMPOSITION OF OATS GROWN IN CONDITIONS OF ORGANIC PRODUCTION Adrijana Burovska^{1*}, Dragica Spasova¹, Biljana Atanasova¹, Dusan Spasov¹, Mite Ilievski¹

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Abstract

The research was conducted in 2015 and 2016, at 11 oats genotypes in terms of organic production. Three of the populations were domestic: Krivogashtani, Trebenishta and Kuchevishte. The rest were introduced varieties, including Rajac, Slavuj and Lovcen from Serbia and varieties: Kupa, Baranja, Explorer, Shampionka and Istra from Croatia. On average, for both years, the variety Shampionka has the highest protein content (14.80%), which indicates that the grain has a high nutritional value. There is a statistically significant difference among the examined genotypes. The percentage of fat in oats, grown organically, in both years of research is statistically different in different genotypes. On average, in both years of research, the fat content ranged from 2.31% in the population Trebenishta, up to 4.47% in the population of Krivogashtani. The variety Baranja is with the highest ash content in the grains (4.35%) in average, for the research period. In the same group a, is ranked variety Shampionka, with 4.30%. Among the genotypes there is statistically significant difference. It is characteristic that for the period 2015-2016, all examined genotypes belong to group a, that is, all varieties and populations contain high cellulose content. A statistically significant difference between varieties and populations was established. Analysis of variance for the quality of oats grain shows that the content of protein, fat and ash values are relatively constant in the years examined. The conditions in the years of research had a weaker effect on the genotype. The strength of the genotype is 65.06%, 67.06% and 72.04%, respectively. The three properties are influenced by the interaction between the genotype and the conditions of the year.

Key words: variety, population, proteins, fats, ash, cellulose