

Annotation

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Grain quality of spring wheat samples

Durum wheat is characterized by increased protein content. It is well suited for food flour varieties. Starch grains are hard and do not crumble during milling. Durum wheat varieties are highly valued at the international market. Their grain is used to make the best varieties of wheat farina and pasta. In the State Register of plant varieties suitable for extensive use in Ukraine in 2016, there are 413 varieties of different wheat species. The share of durum wheat varieties is only 7.5%.

Globally, in the last 15 years the area under durum wheat was expanded from 15.5 to 18.3 million hectares which is about 5-7 per cent of the total world wheat field.

At the Department of Genetics, Plant Breeding and Biotechnology of Uman National University of Horticulture the samples of spring wheat of different geographical origin were analyzed. Along with other economically valuable indicators we examined the quality of grain elements. During 2015 and 2016 4 samples of durum spring wheat were analyzed and compared with Naschadok variety. Among the grain quality parameters such as size, vitreosity and grain unit were analyzed.

Thousand-kernel weight of Naschadok durum wheat amounted to 38.7 g on average for two years varying from 34.5 to 42.8. This indicator averaged 37.2 - 47.0 concerning analyzed selective samples. This feature was dependent on the genotype, as well as on the growing conditions. Selection number 31/16 was characterized by the highest thousand-kernel weight. Samples 31/16 and 32/16 responded to changing environmental conditions less and were characterized by stability of thousand-kernel weight.

Vitreous standard during on average for two years amounted to 79.1%. Vitreosity of the analyzed samples on the average amounted to 46.6 - 88.0%. The highest rate was observed in selection numbers 31/16.

Grain unit of durum spring wheat of Naschadok variety on average for two years amounted to 769 g / l. As to selection samples 31/16 and 33/16, it exceeded the standard rate by 20 and 8 g / l. Grain unit of numbers 32/16 and 34/16 corn on the average amounted to 762 g / l.

Key words: durum wheat, thousand-kernel weight, selective samples, vitreosity, grain unit.