

ASSESSMENT OF GRAIN SORGHUM (*SORGHUM BICOLOR* (*L.*) *MOENCH*) HYBRID COMBINATIONS

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Abstract. Grain sorghum is a very prospective plant in Europe and the potential role of this crop can be enhanced by sorghum. In this study eleven sorghum hybrids were evaluated. During this experiment some morphological parameters, starch- and protein contents were assessed. Starch contents were carried out by using polarimetric method while Kjeldahl method of nitrogen content was used to determine the protein content. Based on the measured data, heterosis values were calculated and ANOVA was applied in order to determine the potential differences appeared among the hybrids. From the viewpoint of the investigated aspects significant differences were found. Parameters of the investigated morphological parameters differed in a large scale, while in the case of the starch content Hybrid 6 obtained the highest values with a remarkable 26.19% heterosis value. Protein contents ranged from 10.59% to 14.25%. The highest value for protein content was obtained by Hybrid 2 with 12.59% value of heterosis.

Keywords: grain sorghum, threshing %, starch content, protein content, plant breeding

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