



Agronomic Parameters Characterization of Some Maize (*Zea mays* L.) Hybrid Growing in Agro Ecological Conditions of Kosova

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Abstract: The experiment was based on a randomized complete block design with 3 replications was used for hybrids evaluation. The plot size was 15 m², the distance between rows was 70cm and the distance within rows was 25 cm (57.000 plants ha⁻¹). The experiment included fourteen (14) commercial maize hybrids belonging to different FAO groups (200, 300, and 400), originating from Agricultural Research Institute of the Hungarian Academy of Sciences in Martonvasar (Masuk-180, MV-241, MV-251, Bodrog, MV-255, MV-277, Amanita, Somacorn, MV-350, MV-343, Hunor, Tarjan, MV-404, Miranda) and Colombo from Pioneer Hi-Bred Int., (Austria). The same hybrid was also short statured (201.86 cm plant height) with the desirable ear height of 61.94 cm. However, the maximum grain yield (GY) of 11.82 t ha⁻¹ was produced by maize hybrid MV-350 followed by MV-343 (11.61 t ha⁻¹) and MV-277 (10.87 t ha⁻¹). The mean ear plant height (EPH) of the genotypes ranged from 61.94 cm for maize hybrid Masuk-180 and the hybrid Miranda 90.83 cm. Significant differences were observed among genotypes for Leaf area per plant (LA) which ranged from 4512.41 cm² per plant⁻¹ till 5986.48 cm² per plant⁻¹. The differences between them were + 1474.07 cm² per plant⁻¹, or with genetic variation 26.93%. The significant differences among the maize hybrids were also found in other investigated traits such as Leaf Area Index (LAI) and Leaf Area ration (LAR). The experimental average value for LAI was 3.11, while for LAR the experimental value was 5.62. The maximum yield per ear (YE) was obtained in maize hybrid MV-350 (207.89 g per ear), while the minimum was recorded in the maize hybrid Masuk-180 (110.41 g per ear). The maize hybrids Tarjan produced significantly higher Biological Dry Matter (BDM) on value 1407.88 g per plant⁻¹, while the maize hybrid Masuk-180 realized the lowest value for BDM (564.57 g plant⁻¹). The differences among the maize genotypes were +843.31 g plant⁻¹ or with genetic variation 83.63%.

Keywords; *Maize, hybrids, grain yield, leaf area, leaf area ratio.*

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