Carpici EB, Celik N, Bayram G (2010). Yield And Quality of Forage Maize As Influenced By Plant Density and Nitrogen Rate. Turkish Journal of Field Crops 15(2):128-132.

Abstract

The producers of silage maize need more information on agronomic managements such as plant density and nitrogen fertilization. Field studies were conducted in Bursa to evaluate dry matter yield and forage quality responses of silage maize to plant density and nitrogen rate. Five densities of 60 000, 100 000, 140 000, 180 000 and 220 000 plants ha^{-1} and five rates of 0, 100, 200, 300 and 400 kg N ha^{-1} were applied with split block design of three replications. As plant density increased, dry matter yield, stem percentage and ADF increased, but leaf number $plant^{-1}$, stem diameter and ear percentage decreased with the highest dry matter yields of 180 000 plants ha^{-1} and 220 000 plants ha^{-1}. However, there were no effects of plant densities on plant height, leaf percentage, crude protein and NDF. The dry matter yield, plant height, leaf number $plant^{-1}$, stem diameter, leaf percentage, ear percentage, crude protein content and NDF responded linearly to nitrogen rates with the highest dry matter yields at 300 and 400 kg N ha^{-1}, respectively. However, stem percentage decreased and ADF did not change as nitrogen rates increased. In conclusion, 180 000 plants ha-1 and 300 kg N ha-1 may be recommended for cultivation of silage maize under drip irrigation at Southern Marmara Region.