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Effect of different potassium levels and varieties on the yield of hybrid maize under field condition at South Sulawesi, Indonesia

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In order to investigate the effect of different potassium levels and hybrid maize varieties on the yield and yield components of maize, an experiment was carried out at the Bajeng Experimental Station, Indonesian Cereals Research Institute, Gowa, South Sulawesi, from May to September 2017. The level of K on site of the experiment is 0.26 mg kg^{-1}. The potential grain yield of three hybrid maize varieties has different. Nasa-29 has potential grain yield (13.5 t ha^{-1}), Bima-20 (12.8 t ha^{-1}) and Bima-4 (11.7 t ha^{-1}). The experiment was laid out in randomized split plot design with three replications having a plot size of 9 m×6 m with planting density 75×25 cm. The main plot was 6 levels of potassium (0, 20, 40, 60, 80 and 100) kg K_2O ha^{-1}. The sub plot was 3 hybrid maize varieties (Nasa-29, Bima-20 and Bima-4). Results indicated that the interaction of different levels of potassium and hybrid maize varieties significantly influenced maize plant height, cob diameter, weight of 1000 grains, and grain yield. The application of potassium at the rate of 60 kg K_2O ha^{-1} and Nasa-29 variety resulted in the highest grain yield (11.33 t ha^{-1}) under field condition the agro-ecological of Gowa, South Sulawesi.

Biography

Akil is working as a senior Researcher in the Division of Ecology and Physiology, Indonesian.Cereals Research Institute (ICERI), Maros, South Sulawesi, Indonesia. He is soil and agronomist scientist. He obtained Ph.D (Crop Science – Agronomy) from Central Luzon State University (CLSU), Munoz, Nueva Ecija, Philippines on November 1999. He worked as researcher in the Maros Research Institute for Food Crops (MORIF), now Indonesian Cereals Research Institute (ICERI).

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