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Influence of farmyard manure and nps fertilizer on hot pepper (capsicum annuum I.) growth and yield variables at Western Ethiopia

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Hot peppers are important vegetable crops widely grown in Ethiopia. Investigation into the economic, nutritive and therapeutic purposes of the pepper plant is extremely limited. Thus, a field trial was piloted to assess the influence of NPS (compound fertilizer containing three important plant nutrients of nitrogen, phosphate, and sulphur with the ratio of 19% N, 38% P2O5, and 7% S.) and Farmyard Manure (FYM) fertilizer on of Hot pepper at the Dambi Dollo University research field for two consecutive years (2020 and 2021) under rain fed. The finding was systematized in a Randomized Complete Block Design with three repetitions and variety of Marako Fana hot pepper was assessed. NPS fertilizer at four level (0, 100, 200, 300 kg N ha⁻¹) and four FYM levels (0, 2.5, 5, 7.5, 10 t ha⁻¹ were owed to the study area and a total of 20 treatments. The research results revealed that farmyard manure and NPS mineral fertilizer interacts to affect positively (P<0.05) maximum parameters without unmarketable harvest which was influenced through the single effect of NPS and FYM. The highest marketable pod yield (2.28 t ha⁻¹) and total pod harvest (2.72 t ha⁻¹) was recorded through NPS rates of 100 kg ha⁻¹ applied with 5 t ha⁻¹ of farmyard manure. Consequently, it is likely to determine that hot pepper farmers can use NPS mineral fertilizer rate of 100 kg ha⁻¹ with 5 t ha⁻¹ of FYM that would expand yield of the hot peppers in the study area with similar agro-ecological conditions.

Biography

Chala Kitila Dinka is a Horticulture by profession and works in government institutions in Ethiopia. He holds a BSc and MSc in Horticulture from Jimma University and Haramaya University respectively and currently working as a lecturer and researcher at Dambi Dollo University, Ethiopia.