

IMPACT OF DIFFERENT NUTRIENT SUPPLY LEVELS ON YIELD PARAMETERS OF ORGANIC KAPIA PEPPER IN PLASTIC TUNNEL

Orsolya Papp^{1*}, Katalin Allacherné Szépkuthy¹, Miklós Gulyás², Attila Ombódi³, Nuri Nurlaila Setiawan¹, Ilona Kaponyás⁴, Ferenc Tóth¹

¹Hungarian Research Institute of Organic Agriculture, Budapest, HUNGARY

²Department of Soil Science, Institute of Environmental Sciences, Hungarian University of Agriculture and Life Sciences (MATE), Gödöllő, HUNGARY

³Department of Vegetable and Mushroom Production, Institute of Horticultural Sciences, Hungarian University of Agriculture and Life Sciences (MATE), Gödöllő, HUNGARY

⁴Independent advisor, Velence, HUNGARY

*corresponding author: orsolya.papp@biokutatas.hu

The use of commercially available, easily applicable, pelleted manure for nutrient supply has become a common practice of Hungarian organic vegetable growing farms, although nutrient mineralization of these products is little known. In our research, the yield, and the parameters of kapia pepper under different level of nutrient supply and the speed of nutrient release of the applied products in the soil were investigated. The experiment was carried out in an unheated, 196 m² plastic tunnel on a certified organic farm. The soil was loam, pH_{KCl} is 7.4, with humus content 2.7%, low N and high P and K content. The ‘Kapirex’ pepper plants were planted in 40+80×25 cm spacing in May 2022. Three nutrient supply levels were set up with increasing nutrient content in 4 repetitions. According to the results, a basic nutrient supply (with 22 kg/ha N) with manure pellet on a soil with average humus content can achieve the average yield expected in organic farming, but lower quality can be expected. The intermediate technology (with 78 kg/ha N) with alfalfa pellets showed that it is worthwhile to choose alfalfa meal or other more rapidly revealing nitrogen sources instead of alfalfa pellets. The professional technology, with frequently repeated fertilisation (126 kg/ha N) resulted only 3.6% higher yield, but there was a noticeable effect in early ripening, in higher number and size of fruits, but above average infestations of thrips species and *Helicoverpa armigera*.