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“Filling gaps and removing traps
for sustainable resource management”

Prospect of Organic Agriculture in Achieving Food Security in the Least Developed Countries

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Abstract

Organic agriculture (OA) is praised unequivocally for its environmental and health benefit. But OA, is questioned about its potential impact on global food security due to its low yield reported in many systematic yield studies in developed countries, more specifically USA, Canada and Europe. There is very limited study on the yield of OA and or its socio-economic impact of OA in Least Developed Countries (LDCs). LDCs have a high prospect of conversion to OA because of a very low level of external inputs such as synthetic chemical fertilisers and pesticides use in their agriculture system. At the same time, a haphazard use of these external inputs are having serious consequences on human health as well as the environment. This paper aims to analyse prospects of OA in achieving food security goal of LDCs. FAOSTAT data on food balance and literature are the main source of data. Yield ratios of crops show higher yield from OA compared to conventional agriculture in LDCs. Food supply is growing at higher rate in LDCs than Northern America between 1961 and 2011. However, growth rate in nutrient supply in LDCs is meager. Hence, current food supply in the region is not able to supply the standard nutrient requirement. Cereal is the single most important food item contributing to nutrient supply in LDCs indicating lack of nutrient diversity. Under such context OA would increase food supply of all food categories. Consequently, LDCs can achieve the standard nutrient requirement and help in dealing with persistent undernourishment in LDCs. However, concerted effort is necessary for wider acceptability of OA in LDCs.

Keywords: Food production, food supply, North America, nutrient supply, yield ratio