



Tropentag, September 19-21, 2016, Vienna, Austria

“Solidarity in a competing world —
fair use of resources”

Crop and Soil Response on Fecal Sludge Derived Fertiliser in the Intermediate Climate Zone of Sri Lanka

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Abstract

Trials in Ghana and Sri Lanka showed that co-composted fecal sludge (FS) and organic municipal solid waste (MSW) revealed high potential to be used as an agricultural resource. Besides options for cost recovery in waste management, closing the nutrient and carbon cycles between urban and rural areas, substitution of mineral fertilisers, reduced pollution and the restoration of degraded arable land are possible benefits.

In order to enhance their properties, MSW compost and FS-MSW co-compost were enriched with ammonium sulphate to 5% total N and rice flour was added to enable faster disintegration and pelletized.

Two field experiments were conducted to assess the effect of nine different treatments in terms of several phenological parameters, plant nutrition and short-term effects on the soil properties (Luvisol) in intermediate zone of Sri Lanka.

The application amount of each treatment was based on local Nitrogen recommendations for farmers, which served as control. In addition, a poultry litter treatment was used as cheapest available organic alternative.

All inputs were analysed on their plant nutritional values and possible contaminants.

As a short term crop *Raphanus sativus* 'Beeralu rabu' was cultivated for 50 days using a randomised complete block design (RCBD). Similarly, the second field trial, *Capsicum annum* 'CA-8', was planted as RCBD, using the same treatments, for a cultivation period of 120 days. The results of these trials are currently analysed and will be presented at the conference. The trials will be followed by others, including plantation crops to assess long term effects of crop production and soil fertility.

Keywords: Capsicum, compost, crop response, fecal sludge, field experiment, pelletizing, plant nutrient, radish, soil response