



Generation of Paddy Straw Composts in Rice Based Integrated Farming System and Evaluating in Organic Production of Fodder Maize

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Abstract: The experiment was carried out in a rice based integrated farming system (IFS) at the Integrated Farming System Research Station, Kerala Agricultural University (KAU), Thiruvananthapuram, India in establishing the potential of IFS in supporting organic crop nutrition. In this study, nutrient rich composts were generated from discarded paddy straw by way of co-composting using organic inputs viz., cow dung, goat manure and poultry manure generated from livestock components within farm. These composts were evaluated for major properties and were utilized for organic nutrition of test crop Fodder Maize grown as summer crop in paddy field. Nutrient rich compost generated by co composting paddy straw with goat manure and poultry manure (4:1:1 on volume basis) when used in organic nutrition of fodder maize, could produce higher and comparable yields as that with the KAU recommended integrated nutrient management practice. Two other composts (generated from paddy straw : cow dung : goat manure ; paddy straw : cow dung : poultry manure in the ratio 4:1:1 on volume basis) also produced quality composts and could register comparable growth and yield of fodder maize as that with the recommended nutrient management. Status of major soil nutrients N, P and K after the harvest of test crop was improved under organic crop nutrition using the above mentioned composts. The study therefore highlights the potential of IFS in ensuring bio recycling within farms for supporting organic crop production, registering higher crop yields and improving the soil nutrient status.

Keywords: Fodder maize, Organic nutrition, Paddy straw compost, Growth, Yield, Crude Protein
