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Vegetable production under organic farming system

Organic farming; farming without the use of synthetic chemicals is becoming increasingly popular. Even in Sri Lanka interest in this method of farming seems to be gaining importance. Two separate field experiments were conducted on a Reddish brown latosolic soil at Gannoruwa in the midcountry wet zone, to obtain data on vegetable yields obtainable in organic systems and to study the impact of continuous application of cattle manure (20, 30 and 40 t/ha) and poultry manure (10, 20 and 30 t/ha) on the soil. A chemical fertilizer treatment was also included in each experiment. In each manure treatment the entire quantity of manure was applied as basal prior to planting each vegetable crop. In the chemical fertilizer treatment urea, triple superphosphate and muriate of potash were applied according to recommendations for each crop. In both experiments the four treatments were tested in separate blocks. Each block was planted with a different vegetable crop to minimize pest and disease incidence that

usually occur in monocrop cultivation. Neem seed water extract was used regularly as a pest control measure.

Bean yields did not show a marked response to the application of increasing rates of cattle and poultry manure. However, yields of the other three crops showed a better response. Range of bean, brinjal, cabbage and tomato yields obtained were 6.5-9.5, 14.2-18.2, 68.2-73.8 and 10.7-17.4, t/ha respectively. These yields were comparable to those obtained with NPK chemical fertilizers under the same system of farming. Thus both cattle and poultry manure seem suitable nutrient sources for organic vegetable production. Soil test data showed a significant build up in available P and K due to the continuous application of 30 t/ha poultry manure. With lower rates of manure application such a build up was not evident.