

NOTE

Participatory Assessment of Nutrient Management in Paddy-Field Pea (Paira) System

S. C. MOHAPATRA AND B. S. BISHOYI

*Krishi Vigyan Kendra, Orissa University of Agriculture & Technology
Sonepur 767017, India*

Abstract

Four different combinations of nutrients treatments along with the farmers own practice was tested onfarm basis during 2006 and 2007. Two years pool data revealed that farmers got highest productivity of paddy (35.9 q/ha) when 6 t/ha FYM and 100% recommend dose of fertilizer (RDF) applied to paddy only (T_3). Field pea as paira crop yielded highest green pod (30.5 q/ha) when it treated with 100% RDF to each crop (T_4) also by this treatment maximum net return (Rs 27,785/ha) was achieved in the system. However highest benefit cost ratio (2.57) was obtained in the treatment having 6 t/ha FYM to paddy and 50% RDF to each crop (T_5) of the system.

Key words : PRA, Paddy-Field pea, Paira cropping system, Nutrient management.

Participatory rural appraisal (PRA) technique is an effective and convenient mechanism to get an insight in to the farmers' perception. Mono-cropping of paddy is a common practice in Tarva, Sonepur and Ullunda block of Subarnapur district of Orissa. Farmers of this region in peri-urban area are growing field pea as second crop in succession to paddy in mid-low land (*Bahal*) under rainfed condition as paira crop. Seeding of a short duration winter crop in the standing rainy season paddy crop 10–15 days before its harvest with an eye to high demand of green peas in

the local vegetable markets. However they are least concern about the proper nutrient management of both these crops. To harness better yield and profit, we organized a full participation of farmers for imparting better management practice to them.

A complex, diverse and risk prone village named panisiali dominated by small and marginal farmers nearer to district headquarter was adopted by KVK (OUAT), Sonepur. The village was surveyed based on PRA tools. Out of many field and social problems of them, no and low use of nutrient in paddy-field

Table 1. Performance of paddy– field pea (paira) system as influenced by nutrient management during 2006 and 2007. Local market rate of paddy = Rs 650/q, Green pea pod = Rs 800/q. Recommended dose of fertilizer (RDF) to Paddy = N:P₂O₅ : K₂O = 60 : 30 : 30 Kg/ha. Recommended dose of fertilizer (RDF) to field pea = N : P₂O₅ : K₂O = 20 : 40 : 0 kg/ha. (Mean of two years).

Treatment	Yield (q/ha)		Net return (Rs/ha)	B : C
	Paddy	Green pea pod (fresh weight)		
T ₁ = Farmer's practice (FYM = 0-10q/ha + 30-40 kg/ha urea +5-10 kg/ha MOP to paddy only)	22.3	13.5	11295	1.80
T ₂ = 100% RDF to paddy only	31.2	19.7	19540	2.18
T ₃ = FYM 6 t/ha + 100% RDF to paddy only	35.9	21.4	22855	2.29
T ₄ = 100% RDF to paddy and field pea (each)	32.9	30.5	27785	2.54
T ₅ = FYM 6 t/ha to paddy + 50% RDF to paddy and field pea (each)	30.4	28.3	25900	2.57
CD (<i>P</i> = 0.05)	2.04	2.76	–	–

pea (paira) system was prioritized first (1). During 2006 and 2007 an on farm trial was laid out in randomized block design with four replications with the help of four farmers (two small and two marginal) in the mid-low land (*bahal*) patch of same village. The five different treatments applied and the assessing parameters of two years average are presented. Paddy variety Lalat and field pea variety Rachana were used in this trial.

Highest yield (35.9 q/ha) of paddy was obtained when the crop was fertilized with 6 t/ha FYM with 100% RDF. It was followed by the treatment receiving the 100% RDF to both the crops. The treatment having 6 t/ha FYM to paddy and 50% RDF to both the crops was at par with 100% RDF to paddy only with respect to yield of paddy.

Field pea paira crop recorded highest green pod yield (30.5 q/ha) in the treatment having 100% RDF to paddy and field pea each. Which was at par with the treatment receiving 6 t/ha FYM to paddy and 50%

RDF to each crop of paddy and field pea. Farmers received maximum return (Rs 27,785/ha) when they applied 100% RDF to both the crops. However, over their investment farmers could get maximum benefit (B : C = 2.57) when they applied 6 t/ha FYM to paddy along with 50% of the RDF to both the crops.

Maximum benefit over the investment could be obtained when the soil was fertilized with both organic manure (FYM 6 t/ha) and chemical fertilizers (50% of the scheduled dose) to both the crops in paddy –field pea (paira) system. The feed back collected from the farmers over this issue that depicted they accepted this treatment whole heartedly over their prevailing practice.

Reference

1. Barik T. 2002. Farmers participatory research in CDR village of Orissa. Extended summaries 2nd Int. Agron. Cong., Nov 26—30, New Delhi, India. 2 : 1481—1482.