

Promoting improved agriculture and allied sector technologies

in Khordha district through Farmer FIRST Project

H K De*, P K Sahoo, P C Das, S Sarkar, I Sivaraman, J Debbarma and D P Rath

ICAR-Central Institute of Freshwater Aquaculture, Kausalyaganga, Bhubaneswar, Odisha 751 002

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Location and selection of area

The project has covered 4 villages of Khordha district i.e. Kantia Talasahi and Uparasahi (Block-Jatani), Jagannathpur (Block-Balianta) and Dorbanga (Block-Balipatna). The project location falls into the East & South Eastern Coastal Plain which includes Kendrapara, Khordha, and Jagatsinghpur, part of Cuttack, Puri, and Nayagarh. The zone is being hot and humid.

Number of farm families

More than 400 beneficiaries including small, marginal farmers, landless labours and women are selected for implementation of the project.

OBJECTIVES

- To conduct technology assessment and refinement of selected agriculture and allied sector technologies.
- To develop specific technology modules for small holder and marginal farmers.
- To facilitate regular scientist-farmer interface for better learning and sharing of knowledge.

INTERVENTIONS

Crop based module

Introduction of powdery mildew resistant variety (TARM 1) as Rice fallow pulse.

Rationale of the intervention:

Most of the areas of Khordha district lie fallow after harvesting of paddy. The soil moisture was not used properly by raising a second crop. The challenge faced by farmers of the village was to overcome the discontinuity of green gram cultivation and its cultivation in a profitable way. Green gram was introduced in rice fallow after harvesting of rice and the seeds were procured from Odisha State Seed Corporation Limited. A powdery mildew resistant variety i.e. TARM 1 cultivar of green gram was introduced in the adopted villages. Awareness meetings were also conducted on seed treatment and use of bio-fertilizer for seed dressing and its advantages. Seed dressing with insecticides and seed inoculation with Rhizobium, Phosphobactor and Trichoderma was practiced for the

first time by the beneficiaries. All the farmers irrigated the crop twice and followed package of practices as informed and trained by the scientists.

Outcome: TARM 1 cultivar bears 10–11 numbers of seeds per pod whereas local cultivar bears 8–9 seeds per pod. Farmers realized an average yield of 6.25 q/ha compared to 3.75 q/ha of average production in local cultivar. The market price was ₹ 3500-4000/q of green gram. So, the beneficiaries get a good income (B:C ratio was 1.82). The big size seeds fetch a good price in the market and very much acceptable by the farmers.

TRAINING

Regular training, demonstrations and scientists-farmer interfaces were conducted on seed treatment and use

Sri Sarat Chandra Nayak (48), an enterprising and progressive farmer of Dorbanga village, Balipatna block, Khordha owns a land of 1.5 acre. He led the initiative to cultivate the green gram in rice fallow in 2017 with the support of Farmer First project. He was able to attract the attention of other farmers because of bumper production of green gram from the land where nothing used to be grown after paddy. Other farmers soon followed suit and today around 200 acres are cultivated with TARM 1 in the village. He attended all the training programmes and was able to learn about the details of the variety, seed treatment and inoculation with bio fertilizers, irrigation and mulching. He worked as a technology agent and become a source of an inspiration for the fellow farmers.



Technology	Yield (q/ha)		Gain in yield (%)
	Farmers' practice	Recommended practice	
Green gram in rice fallow	3.75	6.25	66.67

of bio-fertilizer for seed dressing. The advantages of using these bio-fertilizers and seed inoculants were discussed with the farmers during interfaces. On-field demonstrations were conducted to teach them the proper scientific practices. Advantages of raising nodular crop in terms of improving soil health were explained to them.

IMPACT

Around 200 farmers from the adopted villages practiced the intervention after 3 years of demonstration. Most of the farmers have adopted HYV variety of green gram replacing the local cultivar. In addition to green gram the farmers are increasingly growing black gram

with improved cultivars. Seed inoculation and seed treatment was regularly practiced by the farmers to get better yield. These changes – horizontal spread of the technology, extent of adoption, rise in yield and income happened due to the intervention of Farmer FIRST project. Unlike other crops the farmers never had any issue with marketing and realized remunerative price for grams.

DRAWBACKS AND LESSONS LEARNT

Non-availability of the desired variety of green gram is the major problem. Lack of seriousness of farmers for raising rice fallow crop is another hurdle for the technology. Lands lying fallow after rice

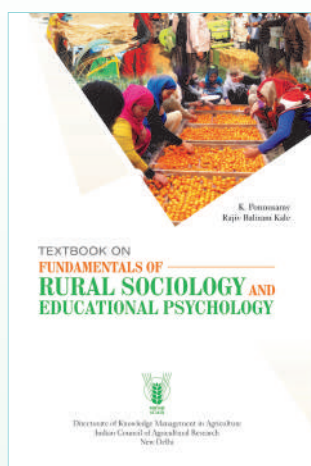
cultivation is being utilized and provided a higher remuneration.

WAY FORWARD

- Availability of improved seeds to be ensured.
- Production of bio-fertilizers to be encouraged locally.
- With more area coming under TARM 1 and other improved cultivars establishing mini dal processing plants to be considered.
- Efforts may be made to have completely organic mode of green gram production. This would help meet the demand of urban, health conscious consumers and at the same time earn premium price for the produce.
- Establishing a farmers producers company (FPC) in Dorbanga to deal with organic products as well as its marketing.

*Corresponding author's email: Himansu.De@icar.gov.in

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TECHNICAL SPECIFICATIONS

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