

Promoting Pulses for Sustainable Food Systems

Mailam pulses

Raising Pulses Productivity, Participation in the value chain and Enhanced Income Boosts the Production of Pulses among Small Farmers

Context ●●●

Pulses are an important source of proteins, vitamins, and minerals, predominantly cultivated in rainfed agroecology. They are best suited to be cultivated in both Kharif and Rabi seasons in diverse cropping systems as sole crops, intercropping, relay crops, rice fallow crops, mixed crops, etc. India is the largest producer, consumer, and importer of pulses. Tamil Nadu has 4.08 per cent of the total cultivated area under pulses. To boost the production of pulses FAO recognised the year 2016 as the 'Year of Pulses'. The main challenges faced by the pulses growing farmers are the availability of timely inputs at reasonable prices, access to credit services, site-specific suitable varieties, quality seeds, pests and diseases, and limited role in processing and value addition.

●●● Intervention

Black gram is an important pulse cultivated extensively by the small farmers from Mailam block, Villupuram District in Tamil Nadu under rainfed systems. However, the average yield of black gram was less than 600 Kg ha⁻¹ against a potential yield of 850-900 Kg ha⁻¹ in the state. The main reasons for the yield gap are lack of suitable variety, use of poor-quality seeds with low seed replacement ratio, inadequate nutrients, and poor pest management practices.



INTEGRATED CROP MANAGEMENT (ICM)
IN Black gram

86 ha to
420 ha

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Interventions focused on improving productivity through catalytic technologies, linkages with institutions for credit and insurance services, and promoting farmers' collectives to achieve the power of scale for post-harvest processing and marketing in addition to building the technical capacity of the men and women farmers. Participatory field experiments were conducted with catalytic technologies that improve productivity such as promoting improved varieties suitable to the location (identified through participatory varietal selection trials), quality seeds (promoting seed producers on suitable varieties), and nutrient management (adopting foliar application of soluble fertilisers), pest management (Integrated pest management with due importance to eco-friendly practices).





seed
production
unit

Outputs

- * Combined technologies resulted in achieving the grain yield of 1500 kg ha⁻¹, which is 37 per cent higher than the potential yield of the state.
- * 98 farmers evolved as seed producers for locally suitable varieties namely Vamban 4 and 6.
- * The farmers were organised into Nallavur Farmer producer Company, with 1000 shareholders (84 per cent are women).
- * Credit linkages were established with banks to access credit for pulses cultivation, especially Kisan Credit Card and availed Rs Two crores as crop loans
- * FPO, established a processing unit, market outlet, and warehouse for storing the products along with a brand name (Mailam pulses).

Outcomes

- Established a seed production unit by the FPO to sustain the practice of a higher seed replacement rate.
- Women farmers are recognised by the banks and the Department of Agriculture which improved their access to productive resources and most importantly their decision-making in agriculture has increased both in production and marketing roles.

The intervention resulted in out-scaling the production from 86 ha to 420 ha. Here FPO played a crucial role in up-scaling and sustaining the production. Primarily, the collective action has reduced transaction costs of agricultural extension services, and facilitated access to productive resources and services for smallholders, especially for women farmers. The collective action was promoted in the areas of (i) adopting technologies like using uniform variety, which is essential for value addition and marketing for a scale (ii) synchronising sowing time to ensure harvest window (iii) accessing credit through KCCs via banks (iv) collective purchase of inputs (v) training on improved technologies by conducting farmers field schools and field days (vi) use of machinery for harvesting (vii) aggregation of the harvested products by forming village level committee (viii) adopting a simple value addition to the primary products such as mini dhal mill through FPO and (ix) collective marketing by FPO.

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