

Enhancing Redgram Productivity through CFLD Pulses: Integrated Crop Management Practices of Variety LRG 52 in Krishna District

Introduction:

Pulses play a vital role in Indian agriculture as they not only serve as an affordable source of dietary protein but also improve soil fertility through biological nitrogen fixation. Among them, Redgram (*Cajanus cajan* L.) holds a prominent position in the rainfed cropping systems of Andhra Pradesh due to its drought tolerance and suitability to varied soil conditions. However, its productivity often remains low because of poor crop management practices, improper nutrient application, and inadequate pest control.



To address these challenges, a Cluster Frontline Demonstration (CFLD) on Pulses was conducted during 2024-25 at Budawada village, Jaggaiahpetta Mandal, Krishna District. The demonstration aimed to showcase the potential of the improved Redgram variety LRG-52 under Integrated Crop Management (ICM) practices. The objective was to enhance productivity and profitability through adoption of scientific methods such as line sowing, soil test-based nutrient management, timely irrigation, and effective pest control measures.

Crop and Variety: Redgram (*Cajanus cajan* L.), Variety- LRG 52

Particulars	Demonstration of LRG-52 with ICM practices
Farmer Name	: Gogulath Balaji
Crop & Variety	: Redgram - LRG-52
Method of Sowing	: Line sowing with seed drill
Method of irrigation (if applied)	: At flower bud initiation and pod development stage (flooding)
Farming situation	: Rainfed- Red soils
Previous Crop & Fertilizer use	: Vegetables- 2 bags urea + 2 bags DAP and 1 bag MOP
Seed treatment	: Mancozeb 3 g/Kg of seed.
Manures & Fertilizer applied for present crop	: Soil test based fertilizers - 25:50:0 NPK P-fertilizer as basal and Nitrogen in two splits i.e. at the time of sowing and at 50 DAS
Plant protection measures	: <i>Maruca</i> pod borer - Spraying of chlorpyrifos @ 500 ml + Novaluron 200 ml / acre and chlorantraniliprole @ 60 ml per acre at Flowering and pod development stage

Outcome:

Particulars	Demonstration	Farmer Practice
Yield (q/ha)	18.00	6.00
Cost of cultivation (Rs.)	25250	24500
Gross income (Rs.)	108000	36000
Net income (Rs.)	82750	11500
B:C ratio	3.2:1	0.50:1

The adoption of improved practices resulted in a 200% increase in yield and a net income gain of Rs. 71,250/ha compared to the farmer's practice.

Innovative practices adopted by farmer compared to others in the village

- Clipping of tips about one foot at 90 DAS
- Irrigation at flower bud initiation and pod development stage followed by manual harvesting

Impact: The demonstration convinced nearby farmers about the benefits of adopting improved Redgram variety LRG-52 along with ICM practices. The farmer, Shri Gogulath Balaji, has now become a model farmer in the village, inspiring others to follow the same approach. The intervention also demonstrated the importance of timely irrigation and shoot clipping in increasing pod formation and overall yield.

Conclusion: Farmer Shri Gogulath Balaji participated actively in the demonstration by adopting all the recommended practices. His farm served as a model site to exhibit how systematic management of crop inputs and timely interventions could significantly improve yield and income in rainfed Redgram cultivation. The CFLD on Pulses proved that adoption of improved Redgram variety LRG-52 with scientific crop management practices can substantially increase productivity, profitability, and sustainability under rainfed conditions of Krishna district.



Crop at vegetative stage



Flowering stage



Manual harvesting/Threshing