



Comprehensive Project on Rice-Fallow Management (2023-2024)

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Project Background

South Asia faces a significant agricultural challenge with an estimated 22.3 million hectares of rice-fallow land remaining uncultivated during the post-rainy season, predominantly concentrated in eastern India. The Comprehensive Project on Rice-Fallow Management, initiated by the Government of Odisha and implemented by ICRISAT across 93,850 hectares, addresses this issue through science-led interventions.

By introducing short-duration, climate-resilient crops, guided by GIS-based targeting and soil diagnostics, and improving access to inputs, the project demonstrates a scalable model for enhancing cropping intensity, improving farm incomes, and achieving better nutritional outcomes in rainfed agricultural ecologies.

This initiative highlights the potential of strategic agricultural interventions to transform underutilized land and improve livelihoods in the region.

Project Objectives

A Expand pulses and oilseeds cultivation in rice fallows using residual moisture.

B Restoring soil health by increasing the soil biomass and organic carbon of soil.

C Enhancing the livelihood of farmers through improved income and nutrition.

The specific objectives are as follows:

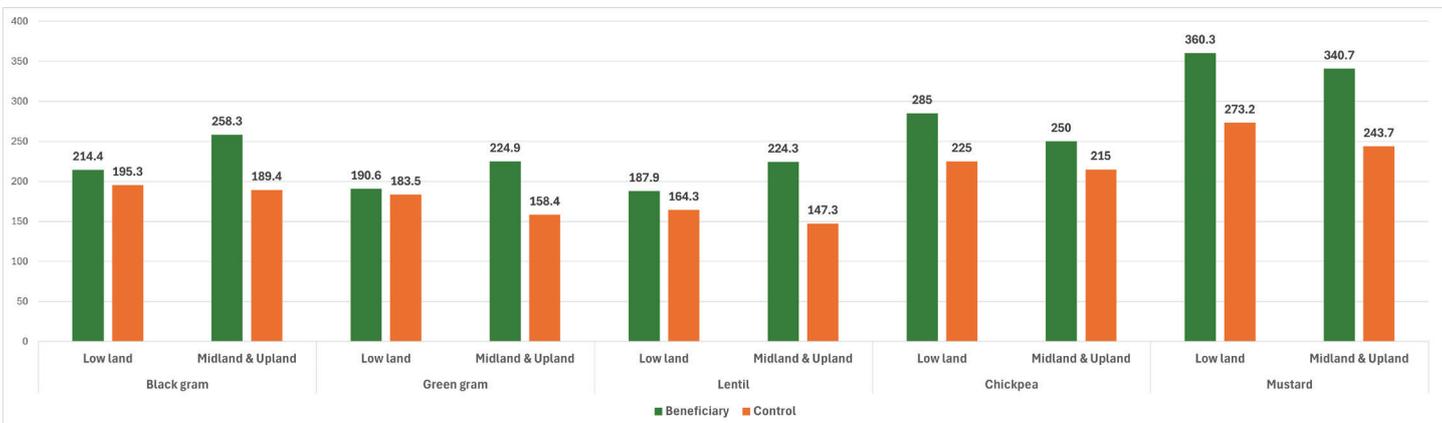
Improved Utilization of Fallow Lands



Crop-wise Increase in Yield Due to Technology Adoption

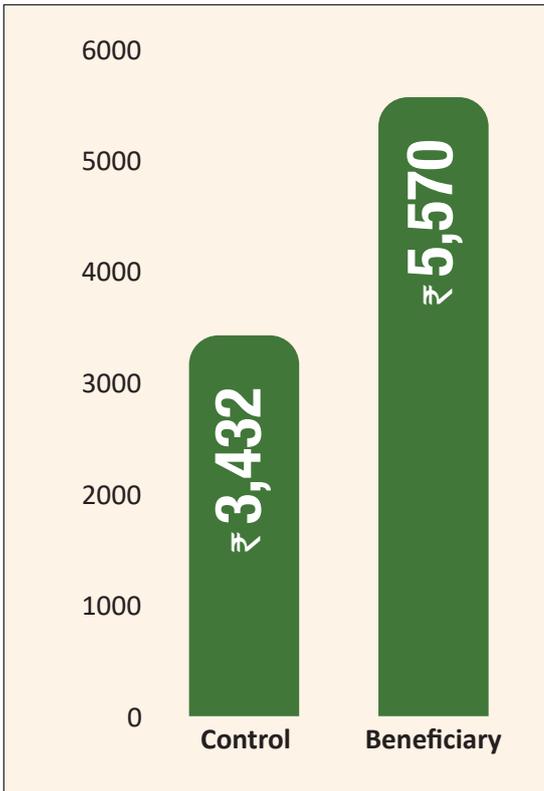


Land Category-wise Yield Performance



Short-duration green gram and black gram performed best in mid/uplands, while chickpea and mustard recorded higher yields in lowland ecologies

Livelihoods

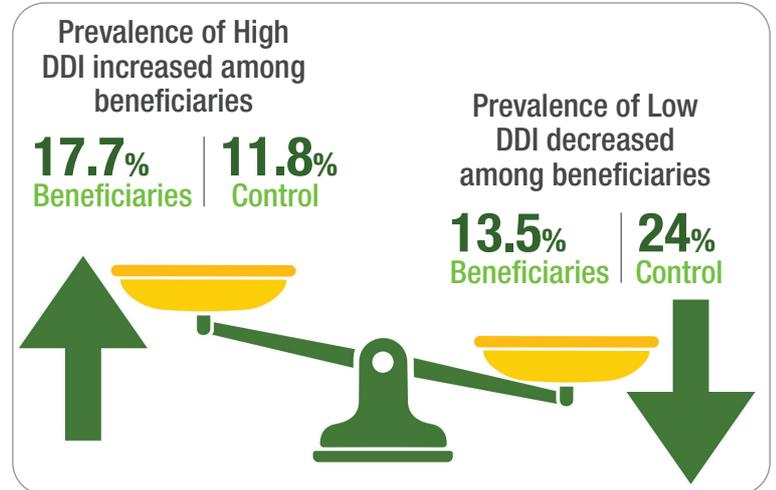


62.3%
Increase in farm income

From
₹ 3,432 to ₹ 5,570/acres

Nutrition & Food Security

Increased agricultural productivity, higher household incomes, and exposure to nutrition-sensitive interventions collectively contributed to improved Dietary Diversity Index (DDI) among beneficiary households.



41.5g/day
Per capita pulse consumption increased

(Surpassing the ICMR's recommended intake of 40g/day)

78.7% of women beneficiaries met the minimum dietary diversity (MDD-W) threshold.

Way forward

Target Smart, Target Right

- Use GIS-based land classification at district/block levels to prioritize midland ecologies with residual moisture.
- Promote crop varieties tailored to local soil and moisture conditions for better yields and resilience.

Empower Women with Knowledge

- Scale training for women farmers on agri-tech, markets, and practices.
- Close the gender gap for better productivity and equitable growth

Seed Systems Strengthening

- Build robust local seed networks through PPPs, women-led SHGs, FPOs, and certified producers.
- Ensure timely, quality seed delivery at the last mile to reduce dependency on informal markets.

Market-Driven Intensification

- Enable FPOs as aggregation hubs.
- Link farmers to structured markets, e-NAM, and buyers to drive commercialization.

Contact

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About

The International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) is a pioneering non-profit organization focused on scientific research for development, committed to transforming dryland farming and agri-food systems. Working with global partners, ICRISAT develops innovative solutions to address hunger, poverty, and environmental degradation, benefiting 2.1 billion people across the drylands of Asia, Africa, and beyond.

ICRISAT was established under a Memorandum of Agreement between the Government of India and CGIAR, dated 28 March 1972. In accordance with the Headquarters Agreement, the Government of India has extended the status of a specified "International Organization" to ICRISAT under section 3 of the United Nations (Privileges and Immunities) Act, 1947 of the Republic of India through Extraordinary Gazette Notification No. UI/222(66)/71, dated 28 October 1972, issued by the Ministry of External Affairs, Government of India.



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