

# Enhancing Rice Productivity in Lambung Village Through Climate-Resilient Farming

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## Introduction

Rice is the most important Kharif crop in Lambung village, Chandel, Manipur. Traditionally, farmers in the district have been cultivating local rice varieties such as Drum and Thoibi, along with some unidentified strains. However, these varieties are characterized by low yields and long growth durations. As a result, rice production in the region has remained largely for household consumption, with only a minimal surplus reaching the market.

Agricultural productivity in Lambung village faces several challenges, primarily due to the region's dependence on rainfall. Erratic and unseasonal rainfall, prolonged dry spells, low soil fertility, and acidic soil conditions have significantly hindered rice yields. Additionally, the high incidence of neck blast disease and limited adoption of modern farming techniques further contribute to low productivity. The poor economic returns from traditional rice farming have discouraged many farmers, particularly the younger generation, from continuing the practice. To address the food security concerns of the growing population in the fragile, rainfed uplands, it has become imperative to introduce improved rice varieties suited to the local environment.

Under the 'National Innovations on Climate Resilient Agriculture (NICRA)' project, implemented by Krishi Vigyan Kendra (KVK), Chandel, efforts have been made to equip farmers with knowledge and skills to enhance rice production. This initiative, regionally overseen by Zonal Project Directorates and centrally coordinated by the Central Research Institute of Dryland Agriculture, has provided extensive training to farmers in NICRA model village Lambung. Through capacity-building programs, demonstration plots, and continuous farmer-scientist interactions, KVK Chandel has actively promoted modern agricultural practices in the region.

In 2024, RCM-15 (RC-Maniphou-15), a high-yielding rice variety procured from ICAR, Manipur Centre, was introduced in Lambung village for the first time. KVK Chandel conducted specialized

training programs to familiarize farmers with the cultivation techniques of this variety. Regular follow-ups, field days, and interactive sessions further reinforced the adoption of best practices. These initiatives not only benefited the farmers directly involved in the demonstration plots but also influenced those from neighbouring villages.

RCM-15 has a medium-duration growth cycle, a high yield potential of 7.5 t/ha, and is resistant to neck blast disease. Demonstrations were conducted over 3.5 hectares, engaging six farmers from the village.



The results were promising – farmers achieved a yield of 61.23 quintals per hectare compared to 45.12 quintals per hectare from traditional varieties, marking a 35.7% increase in yield. The additional production of 15.11 quintals per hectare translated into a net income gain of Rs. 1,08,560 per hectare, with a benefit-cost ratio of 2.45.



## Conclusion

KVK Chandel remains committed to promoting RC Maniphou-15 across the district, with the goal of making rice cultivation more sustainable and economically viable for farmers. The intervention has not only increased cropping intensity, yield, and farm income but has also generated employment opportunities in the villages. Encouraged by these

positive outcomes, local farmers have recognized the advantages of cultivating improved rice varieties, ensuring better financial stability and food security for their communities.

With sustained efforts and continued support, the transition towards climate-resilient agriculture in Chandel district is well underway, paving the path for a more prosperous and self-sufficient farming future.

**Table. 1 Economics of the intervention**

Crop	Before intervention Yield (q/ha)	After intervention Yield (q/ha)	% increase	Gross cost (Rs/ha)	Gross return (Rs/ha)	Net return (Rs/ha)	B:C Ratio
RCM-15	45.12	61.23	35.70	75000	183560	108560	2.45

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