# Boosting Cauliflower Productivity Through Scientific Practices in Kandhamal District

*Mrs. Mamata Pradhan, Village: Gasaguda, Block: Tikabali,*
*Dist. : Kandhamal, State: Odisha, Age: 54 years,*
*Education: 10$^{h}$, Phone No. 8763671949*

**Crop: Cauliflower, Intervention: Integrated crop and nutrient management practices**
**Facilitating Institution: Krishi Vigyan Kendra (KVK), Kandhamal, OUAT**

## INTRODUCTION

The unique agro-climatic conditions of Kandhamal district are favourable for cultivating cole crops. Among them, cauliflower is a high-value vegetable, grown over in an area of 2,700 hectares in the district. However, the average productivity remains low at 120 quintals/ha, significantly below the state average. The key challenges leading to this low yield include:

- Inadequate nutrient management
- Use of low-yielding local varieties
- High incidence of pests and diseases.

To overcome these issues, Krishi Vigyan Kendra (KVK), Kandhamal initiated a Front-Line Demonstration (FLD) program under the Tribal Sub Plan (TSP) during 2024-25 in G. Udayagiri and Tikabali blocks covering 2.5 ha, benefiting 25 tribal farmers.

Mrs. Mamata Pradhan, a progressive farmer from Gasaguda village, Tikabali block was one of the key beneficiaries under TSP programme. She was cultivating turmeric, maize, and paddy during kharif and vegetables including cabbage, cauliflower, brinjal and tomato during Rabi season in an area of 1.5 ha. Despite her efforts, the income from traditional farming practices was not able to fulfill the requirement of her family.

## PLAN AND SUPPORT

During 2023-24, Mrs. Pradhan came in contact with KVK, Kandhamal, and attended a capacity-building programme on Integrated Nutrient Management (INM) for cole crops. Inspired by the scientific methods and with technical guidance from KVK, she agreed to participate in the FLD programme for cauliflower during rabi 2024-25.

The support provided included:

- Use of Hybrid Variety: Poornima
- Soil Testing: Application of fertilizer based on soil test recommendations
- Integrated Nutrient Management (INM): Application of FYM, biofertilizers, micronutrients
- Integrated Crop Management (ICM): Proper spacing, seed treatment and timely intercultural operations
- Integrated Pest and Disease Management (IPDM): Need-based application of chemicals
- Handholding support: Continuous support from KVK scientists
- Field Day: Organized for horizontal spread

**Technology Details under FLD:**

- Variety: Hybrid cauliflower (Poornima)
- Seed Rate: 0.3 kg/ha
- Spacing: 60 cm × 45 cm
- FYM: 5 t/ha
- Seed Treatment: Vitavax Power @ 2 gm/kg seed
- Biofertilizers: 12 kg/ha (Azotobacter + Azospirillum + PSB)
- Micronutrient: Boron @ 1 kg/ha
- Fertilizer Dose: 75% of recommended dose ($N:P_2O_5:K_2O$) as per soil test
- Plant Protection: Need-based application of fungicides and insecticides

**Farmer's Earlier Practice includes:**

- FYM @ 2.5 t/ha, Chemical fertilizer @ 50-20-20 kg $N-P_2O_5-K_2O$/ha, No seed treatment, no use of biofertilizers and micronutrients, Improper pest/disease management practices.


## OUTPUT AND OUTCOME

By adopting the improved package of practices, Mrs. Pradhan achieved a remarkable yield of 275.1 q/ha and net income of ₹3,47,760/ha as compared to her own practices of 182.4 q/ha and net income of ₹2,17,640/ha, respectively. She could able to market her produce in both local and nearby semi-urban markets at a better price.

## IMPACT

Mrs. Pradhan is now a role model for other farmers in her village and neighbouring areas. Her successful adoption of scientific practices under KVK's guidance has:

- Increased her confidence in new technologies
- Improved her family's income and livelihood security
- Inspired over 30 farmers in the nearby areas to adopt the same package of practices
- Contributed towards enhancing cauliflower productivity in the district

## CONCLUSION

This success story demonstrates how targeted technical interventions and continuous support from KVK can transform the productivity and profitability of small and marginal farmers. The improved package of practices for cauliflower not only helped Mrs. Pradhan but also created a ripple effect among other tribal farmers in the district.