

From Fields to Family Health: A Nutrition-Sensitive Farming Approach in Tribal Odisha

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ABSTRACT

Tribal regions of Odisha are rich in traditional crops such as millets, pulses, and green leafy vegetables, yet malnutrition remains a serious concern (National Family Health Survey-5). This article is based on a field-based research study conducted in Koraput district of Odisha, a predominantly tribal area. The study explores farmers' awareness, adoption behaviour, and constraints related to nutrition-sensitive agricultural practices. The findings reveal that while tribal farmers produce many nutritious foods, limited nutrition awareness, inadequate extension support, and resource constraints restrict their consumption at the household level. The article highlights how nutrition-sensitive agriculture, through practices such as homestead nutrition gardens, crop diversification, and nutrition education, can improve dietary diversity and family health. It emphasizes the need to integrate nutrition goals into agricultural extension programmes so that farming not only ensures food availability but also leads to better nutrition and healthier tribal communities (Food and Agriculture Organization, 2017).

INTRODUCTION

Agriculture and Nutrition: A Tribal Paradox

Odisha has one of the highest tribal populations in India, with Scheduled Tribes constituting nearly 23% of the



state's population. In the tribal belts of southern Odisha, agriculture is not merely an occupation but a way of life deeply rooted in tradition and culture. Districts such as Koraput, Malkangiri and Kandhamal are known for their rich agro-biodiversity, where tribal farmers cultivate millets, pulses, leafy vegetables, tubers and indigenous rice varieties using traditional knowledge passed down through generations. Yet, despite this diversity in food production, malnutrition remains widespread among tribal households. This paradox of growing nutritious food while suffering from poor nutrition highlights a critical disconnect between agriculture and dietary outcomes. This paradox of "food availability without nutrition security" has drawn increasing attention from researchers and policymakers alike.

The Nutritional Reality in Tribal Odisha

The nutritional situation in tribal-dominated districts of Odisha continues to be alarming. According to the National Family Health Survey-5, Koraput district reports that more than forty per cent of children under five years of age are stunted, over one-third are underweight and nearly seventy per cent of women of reproductive age are anaemic. Similar trends are observed in other tribal districts of the state. The NITI Aayog has identified Koraput as a priority district for nutrition interventions due to low dietary diversity and persistent micronutrient deficiencies (NITI Aayog, 2023). These figures clearly indicate that food availability alone does not ensure nutritional security.

Understanding Nutrition-Sensitive Agriculture

Nutrition-Sensitive Agriculture (NSA) has emerged as a promising approach to address this gap between agriculture and nutrition. Unlike conventional agriculture, which focuses mainly on yield and income, NSA emphasizes the production and consumption of

nutrient-rich foods at the household level. It promotes diversified cropping, homestead nutrition gardens, small livestock rearing, and nutrition education, particularly for women and children (Food and Agriculture Organization, 2017). An extension worker from Koraput explained this shift by stating, "Earlier, we spoke only about seeds and fertilizers. Now, we also discuss what food helps children grow healthy." (Primary field interaction, Koraput, Odisha).

Traditional Crops but Limited Nutrition Awareness

Tribal farmers in Odisha already cultivate many nutritious crops such as finger millet, little millet, pulses, and green leafy vegetables. However, research indicates that awareness about the nutritional value of these foods is often limited, resulting in poor dietary choices even when nutritious food is available (Rao *et al.*, 2017). During field interactions, a tribal woman farmer remarked, "We used to sell millets and buy rice from the market because we did not know millets are healthier for our children." This highlights how lack of nutrition awareness can undermine the potential benefits of traditional farming systems.

Nutrition Gardens: Small Interventions, Big Impact

One of the most visible nutrition-sensitive interventions in tribal Odisha is the promotion of homestead nutrition gardens. Small backyard plots near households are increasingly used to grow vegetables and fruits throughout the year, improving access to fresh and diverse foods. These gardens reduce dependence on markets and help families include vegetables regularly in their meals. A farmer from a Koraput village shared, "Now vegetables are available near our house. Even if we do not have money, we can cook healthy food." Evidence from tribal Odisha shows that



combining agricultural training with nutrition education through participatory approaches significantly improves dietary diversity, especially among women and children (Kadiyala *et al.*, 2021).

Why Adoption Remains a Challenge

Despite the clear benefits of nutrition-sensitive practices, their adoption among tribal farmers remains limited. Small and fragmented landholdings, dependence on rainfed agriculture, lack of irrigation facilities, high labour requirements, and limited access to quality seeds and planting materials act as major constraints. In addition, extension services in remote tribal areas often focus more on crop productivity than on nutrition outcomes. Farmers frequently express these difficulties, with one respondent stating, “We want to grow vegetables and keep poultry, but water and labour are big problems for us.” Women’s limited participation in decision-making further restricts the adoption of household-level nutrition practices, even though women play a central role in food preparation and child care (Herforth & Ballard, 2017).

The Way Forward for Tribal Nutrition

Improving nutrition in tribal Odisha requires a holistic approach that integrates agriculture, nutrition, and extension services. Strengthening nutrition-focused extension programmes, empowering women through self-help groups, promoting millet-based farming systems, and ensuring convergence among agriculture, health, and rural development departments are essential steps. Experiences from Odisha indicate that when farmers clearly understand the link between agriculture and family health, their willingness to adopt nutrition-oriented practices increases. As one extension facilitator observed, “When farmers see that good farming leads to healthier children, they are ready to change.”

CONCLUSION

Nutrition-sensitive agriculture provides a culturally appropriate and sustainable pathway to improve nutrition among tribal communities of Odisha. By building on traditional knowledge, improving awareness, and ensuring institutional support, agriculture can move beyond feeding stomachs to nourishing lives. For tribal farmers of Koraput and similar regions, the journey from fields to plates begins with awareness, empowerment, and a renewed appreciation of their own food systems.

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