



Diversified Agriculture as a Pathway to Sustainable Farm Livelihoods, Food Security and Household Nutrition in Rural Chhattisgarh

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Agriculture remains the principal source of livelihood for a large proportion of rural households in India, particularly among small and marginal farmers. However, farming households increasingly operate under multiple uncertainties arising from climatic variability, rising cultivation costs, unstable market prices, limited irrigation facilities and seasonal employment. These challenges highlight the need for farming strategies that can strengthen livelihood security while making better use of available land, labour and other farm resources. Diversified agriculture offers a practical approach to address these challenges. It refers to the inclusion of different crops and allied agricultural activities within a farm household instead of depending mainly on a single crop or source of farm income. These activities may include cereals, pulses, oilseeds, vegetables, fruits, livestock, poultry, fisheries and other suitable farm enterprises. By creating multiple sources of production and income, diversification reduces the risk associated with crop failure, climatic variability and price fluctuations. It also provides more regular employment and income throughout the year, improve the use of available farm resources, and increase the availability of diverse foods for household consumption. Thus, diversified agriculture can contribute simultaneously to farm income stability, food security and household nutrition, particularly for small and marginal farming families. This approach is particularly relevant in Chhattisgarh, where agriculture supports a substantial rural population and crop production exists alongside livestock, horticulture and other allied activities. The diversity of household resources, landholdings, labour availability and market opportunities means that a single diversification model cannot be equally suitable for all farmers. Considering these challenges and the potential of diversified agriculture, a village-level study aimed to assess farmers' awareness and adoption of diversified agriculture, identify the major barriers affecting farm diversification, and promote locally feasible and low-cost diversified farming options was undertaken in selected villages of Raipur district, Chhattisgarh. The broader purpose was to understand how farm diversification can be promoted as a practical and adaptable strategy for strengthening rural livelihoods while supporting efficient resource use and household food needs.

Diversified Agriculture: Concept and Relevance

Diversification can operate through several complementary pathways. Crop diversification may combine cereals with pulses, oilseeds, vegetables or fodder according to land type, season, water availability and markets. Horticultural components can increase production diversity from relatively small areas, while kitchen gardens provide a practical household-level entry point. Livestock and allied enterprises can add milk, eggs, meat, fish, manure and periodic cash returns while using biomass that may have limited value in a crop-only system.

The choice of enterprise must nevertheless reflect feed, water, labour, veterinary support and market conditions rather than a standard package.

Study Area and Assessment Approach

The programme was conducted in Dharampura, Pirda and Nakti villages of Raipur district in the Chhattisgarh Plain agro-climatic region. Farmers and adult household members involved in agricultural decisions or farm operations were approached through personal interviews, structured interaction, informal discussion and field observation. Village-level information and interaction with local institutions supplemented the farm assessment. Awareness and Constraints of Diversified agriculture were examined through personal interviews and suggestions were prepared according to the farmers resources availability.

Activities for Promoting Diversified Agriculture

Extension activities were designed to translate a broad concept into manageable farm decisions. Village meetings used local-language discussion, posters, pamphlets and practical examples to explain that diversification can begin with one suitable complementary enterprise rather than a complete integrated farm. Small demonstrations involving vegetable or kitchen gardens, nursery activities, composting and other low-cost components provided opportunities to discuss management steps, input needs and linkages among enterprises. Waste-to-resource demonstrations emphasized the principle that a useful by-product from one activity can, become an input for another.



Locally Suitable Diversified Farming Options

The programme emphasized modular farm options rather than a universal model. A crop-vegetable-compost combination can be an accessible starting point where cultivable land and modest irrigation are available. Where cattle are already present, a crop-dairy-fodder-vermicompost model can strengthen links among crop residues, cultivated fodder, milk production and manure recycling. For households suited to small ruminants, crop-goat-fodder combinations may provide a saleable asset while returning manure to cultivated land, provided housing, feed and preventive animal health care are reliable. Kitchen and nutrition gardens were promoted as a low-area option for widening the range of household foods. Compost and vermicompost activities demonstrated practical recycling of locally available organic materials. Backyard poultry and other allied enterprises were discussed only where labour, feed, housing, health services and market conditions could support them. Farmers

were encouraged to seek component-specific guidance from Krishi Vigyan Kendras, the agricultural university and relevant departments for crops, horticulture, livestock and fisheries. Information on finance, markets, farmer organizations and government support was presented as a pathway to verified local services rather than as fixed scheme promises. Digital communication was also considered useful for follow-up through local-language advisories, short instructional material, training announcements and reminders. Such communication is most effective when it complements field contact and provides timely troubleshooting after a farmer begins a new component.

Challenges and Benefits of Diversification

The survey findings revealed that farmers faced several practical constraints in adopting diversified agriculture. The major challenges were inadequate financial resources and limited availability of essential farm inputs and other resources required to establish additional enterprises. Farmers also reported difficulties associated with small landholdings and the management of multiple farm activities. Crop failure and pest-related risks further discouraged diversification among some households. Limited exposure to practical training and technical guidance was another important concern observed during the survey. An unsuitable enterprise can increase debt, labour burden, water demand or marketing losses, so diversification should be promoted as a carefully planned pathway rather than as automatic protection from farm risk. In other hand, diversification spreads production and market exposure across enterprises with different biological cycles and sale periods. It creates more regular opportunities for cash flow, use family labour across seasons and improve the value obtained from residues and organic resources. When pulses, vegetables, fruits, milk, eggs or fish are included, the farm can also contribute a wider range of foods for household use. These benefits are conditional.

Conclusion

Diversified agriculture offers a practical framework for connecting farm livelihood, resource use, food availability and resilience in rural Chhattisgarh. The village-level programme showed that promotion is most meaningful when general awareness is translated into farm-specific decisions, demonstrations and institutional linkages. Diversification should not be promoted as one complete model for every household. Its value lies in selecting compatible components that fit land, water, labour, capital, skills and markets and then integrating them gradually. Low-cost entry options, hands-on training, resource assessment, technical follow-up and coordinated access to finance, veterinary services, inputs and markets can make diversification more feasible.