



## Agricultural Extension Strategies for Doubling Farmers' Income

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Agriculture remains the backbone of rural livelihoods in India and many other developing countries. However, small and marginal farmers often struggle with low productivity, high costs, market fluctuations, and climate risks. Recognizing these challenges, the Government of India set a target of doubling farmers' income (DFI) by 2022, which continues as a guiding vision for agricultural transformation. While productivity growth is important, income growth requires a holistic approach that includes diversification, value addition, efficient resource use, and market integration. Agricultural extension services play a pivotal role in this process by bridging the gap between research innovations and farmers' practices, enabling them to make informed, profitable decisions.

### The Role of Extension in Income Enhancement

Traditionally, extension focused mainly on increasing crop yields through technology transfer. Today, the mandate is broader — extension must address **income, profitability, and sustainability**. Extension systems must evolve from a *technology-centric* approach to a *farmer-centric, market-oriented, and knowledge-intensive* approach.

### Key Extension Strategies for Doubling Farmers' Income

#### 1. Technology Adoption and Climate-Smart Practices

- **Improved Seeds and Varieties:** Dissemination of high-yielding, stress-tolerant, and short-duration crop varieties.
- **Climate-Smart Agriculture (CSA):** Promoting water-use efficiency (drip irrigation, laser leveling), integrated nutrient management, and climate-resilient crops.
- **Integrated Pest and Disease Management (IPM):** Reducing losses and input costs.
- **Digital Tools:** Use of mobile apps, AI-based advisories, and remote sensing for precision farming.

#### 2. Crop Diversification and Intensification

- Encouraging farmers to move from low-value cereals to **high-value crops** such as fruits, vegetables, spices, and medicinal plants.
- **Integrated Farming Systems (IFS):** Combining crops, livestock, fisheries, poultry, beekeeping, and agroforestry to generate multiple income streams.
- **Protected Cultivation:** Extension support for polyhouses, shade nets, and hydroponics.

#### 3. Value Addition and Post-Harvest Management

- Training in **grading, packaging, branding, and processing** to increase value.
- Establishing small-scale agro-processing units through FPOs and SHGs.
- Reducing post-harvest losses via improved storage and cold-chain infrastructure.

#### 4. Strengthening Farmer Producer Organizations (FPOs)

- Extension can facilitate collective action through FPOs for input procurement, processing, and marketing.
- FPOs as **extension hubs** provide training, custom hiring services, and digital advisory.

- Link FPOs with e-NAM, e-commerce platforms, and contract farming.

### 5. Market-Led Extension

- Shifting extension from “production only” to **production + marketing**.
- Training farmers in price forecasting, demand analysis, and quality standards.
- Establishing **direct marketing channels** (farmer markets, e-NAM, FPC outlets).

### 6. Extension for Risk Management

- Awareness about **crop insurance schemes** like PMFBY.
- Promoting **climate advisory services** (weather-based agro-advisories, early warning systems).
- Financial literacy programs for savings, credit, and insurance.

### 7. Capacity Building and Skill Development

- Organizing **Farmer Field Schools (FFS)**, demonstrations, and exposure visits.
- Building entrepreneurial and managerial skills among youth and women.
- Linking with **Agri-startups** and skill-development missions.

### 8. ICT and Digital Extension

- Mobile apps, SMS-based advisories, WhatsApp groups, and online training modules.
- **Kisan Call Centres (KCCs)** for real-time problem-solving.
- Digital platforms for record-keeping, market prices, and input access.

### 9. Gender-Sensitive Extension

- Special programs for women farmers, recognizing their role in dairy, poultry, and kitchen gardening.
- Promoting women-led SHGs and enterprises.

### 10. Public–Private–Partnership (PPP) in Extension

- Collaboration with agri-business companies, NGOs, and ICT providers.
- Contract farming and buy-back arrangements to ensure assured markets.

### Emerging Models of Extension for Income Enhancement

- **Pluralistic Extension Systems:** Combining government, private, NGO, and digital platforms.
- **Farm Schools on Farmers’ Fields:** Peer-to-peer learning.
- **Agri-Entrepreneurs as Extension Agents:** Local youth providing paid extension services.
- **One-Stop Resource Centres:** Custom hiring centres, soil testing labs, and market kiosks managed by FPOs.

### Challenges in Implementing Extension Strategies

- **Fragmented extension services** and lack of coordination among agencies.
- **Low extension–farmer ratio**, limiting reach.
- **Limited use of ICT** due to digital divide.
- **Socio-economic barriers** such as illiteracy, gender inequality, and risk aversion.
- **Weak market infrastructure** restricting profitability even with higher production.

### Policy and Institutional Support Needed

1. Increase investment in extension infrastructure and ICT tools.
2. Recruit and train more extension personnel, including women and agri-entrepreneurs.
3. Provide performance-based incentives for extension agencies linked to income growth.
4. Strengthen FPOs and SHGs as **grassroots extension partners**.
5. Promote integrated policies linking **production, processing, and marketing**.

### Conclusion

Doubling farmers’ income is a multidimensional challenge that requires not just higher yields but **higher value, lower costs, reduced risks, and stronger markets**. Agricultural extension holds the key to this transformation by equipping farmers with knowledge, skills, and institutional support.

Effective extension strategies — focused on technology, diversification, value addition, collective action, and market integration — can make farming **more profitable, sustainable, and resilient**. The future of extension lies in being **farmer-centric, ICT-enabled, market-led, and inclusive**. By adopting such approaches, the vision of doubling farmers' income can move from aspiration to reality.

## References

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