

**REVERSE EXTENSION: NEED FOR A RELOOK ON THE PRESENT EXTENSION SERVICE**



*Extension needs new theories, frameworks and a shift in its current approach if it has to remain relevant. Reverse extension offers one way of reinventing its future, argues Dr. R. M. Prasad.*

**CONTEXT**

Reflections from practice is an important type of learning which helps everyone to draw lessons and use these for continuous improvement in his/her ways of working. The benefits of such reflections are:

- improved critical thinking
- empowerment
- great self-awareness
- personal and professional growth.

For a profession, this kind of learning from practice helps us to discover new and better methods and approaches to improve the professional conduct of its members. It involves a process of relating, reflecting and mainstreaming good practices in the field.

**REVERSE EXTENSION**

Perhaps many of us may be aware about the concept of Reverse engineering, which is defined as the process of extracting knowledge or design information from anything man-made and reproducing it based on the extracted information. It is the process of dissecting an object to see how it works in order to replicate or enhance the use of the object. In similar lines, there is a need to relook at the concept of extension education being preached and practiced today.



## Reverse Extension-Dimensions

Reverse extension has four dimensions:

1. Categorical
2. Socio-organisational
3. Managerial
4. Situational.

### Categorical dimension

This refers to the concept, practice and usefulness of extension education perceived by the society at large. In this context, the need for Reverse Extension becomes obvious from the following observations:

- Extension education as currently conceptualized is inadequate, addresses all problems as technical and rational. Must broaden its mission and create a new vision (Lauzon, 1977)
- It is time to abandon the term Extension because of what it has come to mean in practice and the network of faulty assumptions at its core (Ison and Russell, 2000)
- Extension must broaden its programme portfolio to better engage the society it serves. 'Engagement' means staying attuned to the issues faced by people (McDowell, 2001)
- Extension professionals have to expand their repertoire of community interaction models and engage citizens as agri-food citizens and leaders in order to move towards sustainable development (Colasanti *et al*, 2009)

Though sporadic efforts are made to revive the field of extension education, it still remains alienated from various stakeholders who support and sustain development process. There are even instances where the need of extension service is doubted by the end users.

### Socio-organizational dimension

This is with reference to the organizational structure of extension services. Though pluralism is the norm, extension service is dominated by the public system, while private extension service is gradually gathering momentum. The support for public extension and accountability is declining and the efficiency of services by public extension is often questioned. The institution characteristics (rules, norms, practices) of public extension (Box 1) need to be reviewed.

#### **Box 1: Institutional characteristics of public extension in India**

The public extension system in our country is characterized by the following:

- Rigid hierarchies, patterns of control with highly centralized modes of planning
  - A tradition of assessing performance in terms of technology adoption
  - A History of rewarding only success and Reluctance to report and analyse reasons of failure
  - A tradition of working independently and a mistrust of other agencies
  - A tradition of upward accountability for resource use rather than output achievement and client satisfaction
- Sulaiman and Hall (2004)

To overcome some of the inherent limitations, measures like renaming of ICAR Zonal Project Directorates as ATARIs (Agricultural Technology Application Research Institutes) and "farmer first" are introduced by ICAR (What changes are envisaged through these nomenclatures still remain ambiguous!) Similarly, concepts like ATMA plus, agro service centres, etc are being introduced. Are

these organizational structures really able to tap the full potential of the principles and philosophy of extension education in the changing scenario?

### Managerial dimension

The inefficiency of extension system in India is often attributed to the poor governance of extension service. There are many challenges facing extension:

- *Demographic challenges* -- Average age of the farmers and farm labourers in the country is 50 plus. Promoting and retaining rural youth in farming is a great challenge.
- *Technological challenges* -- How to maximize factor productivity and minimize cost of cultivation is a major challenge.
- *Management challenges* -- Various options in minimizing risks in farming are limited, lack of convergence efforts by different agencies is evident.
- *Professional challenges* -- Extension personnel lack professional competency and related capacity to meet emerging needs and expected responsibilities.
- *Organizational challenges* -- Unchecked growth of non-governmental extension system prevails, need for public extension to be made more vibrant and competent is felt.
- *Economic and ecological challenges* -- Sustainability of the farming system and livelihood security of the farmers are at risk.

Extension programmes need to shift from a delivery model that prescribes technological practices to building capacity among farmers. The aim is to empower farmers so that they can identify and take advantage of available technological and economic opportunities. To ensure good governance in the delivery of extension services, administrative, structural and legal reforms must be carried out (Prasad, 2014).

### Situational dimension

In the changing scenario of development for sustainability, extension education essentially involves the following:

- judicious and improved management of natural resources
- enhanced climate resilience
- development of value chains
- reskilling and de-risking.

Extension service should address the dual challenge of supporting market competitiveness for commercial agriculture, and also poverty in rural areas (productivity as well as vulnerability). The agenda for extension needs shift from an exclusive focus on agricultural production to a broad range of services related to marketing, environmental concerns, poverty reduction, and off-farm activities (production, marketing, livelihood support).

Farmers need information that can be utilized instantly for making rational decisions in relation to production and post-production activities. Extension organizations should emerge as knowledge centres and nodal agencies for information communication (production & post production). In this context, besides technical knowledge, proficiency in management and soft skills are also needed.

## FOUR THEMES TO LEARN FROM

Extension could learn mainly from the following four areas:

1. Conservation agriculture
2. Climate resilience
3. Value chain development
4. Innovation and skill development.

**Conservation agriculture**- Conservation Agriculture (CA) aims to achieve sustainable and profitable farming through a set of natural resource management practices. It minimizes disruption of structure and composition of natural resources and ensures natural biodiversity. Agroecosystem analysis, which is a thorough analysis of an agricultural environment, considers various aspects from Ecology, Sociology, Economics and Political science. Whenever a farmer is involved in farming, he evaluates his farming situation to identify the problems and search solutions so that he can make the farming system function in a sustained manner. In this way, the farmer is performing an agroecosystem analysis.



Environmentalists view agriculture as locked into an economic and technological system that encourages intensive practices and environmental harms. The issue is one of contrasting perceptions, which are reflected in the current policy debate on the impact of agriculture on the environment. Learnings from the practice of agroecology applied in the field can help extensionists to explain their position.

Agroecology is the study of ecological processes that operate in agricultural production system. Extensionists have to learn from the principles of agroecosystem analysis as in the case of Farmer Field Schools. Extensionists have to ensure that eco-technologies are promoted which can stabilise and restore the carrying capacity in fields. Good Agriculture Practices (GAP) must be developed to ensure that the food is produced by caring about health and environment.

**Climate resilience**- Resilience is about creating/enhancing three different capacities:

- Capacity to respond to a disturbance or event to avoid or reduce damage to the existing system (Ecological resilience- e.g., Promoting organic farming)
- Capacity to recover from damaging events (Social resilience – e.g., Ensuring food safety)
- Capacity to transform or change the existing system to one that is more resilient to disturbance (Economic resilience- e.g., Promoting Integrated farming)

Resilience mechanisms to be promoted by extension system must include the following:

- Adaptation by use of bio-resources: Refers to adjustments in ecological, social or economic systems in response to harmful impacts
- Mitigation by promoting biodiversity: Action of reducing the severity, seriousness or loss by lessening the impact of disasters
- Coping by food safety: Refers to the specific efforts, both behavioural and psychological that people employ to reduce or minimize stressful events.



Learnings from technology demonstrations under National Innovations in Climate Resilient Agriculture (NICRA) help to enhance resilience of agriculture to climate change and climate vulnerability. The interventions related to technology demonstrations cover four modules, viz., natural resources, crop production, livestock and fisheries and institutional interventions.

### Value chain development

Value chains play an important role in transforming agricultural commodities from raw material to end products demanded by the consumers. The value addition in different phases of production can be mapped into a value chain map for easy understanding. The map depicts inter-linkages between successive stages in the value chain. Farmers, traders, wholesalers, retailers, big retail chains and consumers are major actors in the value chain.

With the enhanced efficiency of value chains, farmers benefit from better prices, higher and quality yield and assured markets, services and input supplies. Value chain analysis should look into cost-cutting innovations along the value chain to benefit price conscious poor consumers, besides focusing on value-added products.

Learnings from the functioning of Farmer Producer Organisations (FPOs) reveal that farmers can increase their share in the consumer price by organising themselves as producer organisations. By resolving the issues of trader exploitation, exploring new markets, accessing timely credit and quality inputs and value chain development, farmers can reap benefits through commitment and collective action.



### Innovation and Skill development

Agricultural innovation typically arises through dynamic interaction among the multitude of actors involved in cultivation, processing, packaging, distribution, and consumption of the agricultural

products. These actors represent quite different perspectives and skills, such as precision farming, safety standards, intellectual property, resource economics, logistics, land rights, etc.

Farmers are dependent on human resources, which implies that where technological, managerial and other organisational development exists, need for skills development is imperative. Skills development should be seen as an investment. Appropriate skill trainings in innovative practices and solutions have to be organised for farmer empowerment.

The need for skills development is widely recognised. The importance thereof is clear in terms of the growth and development of individuals (micro level), organisations (meso level) as well as the society as a whole (macro level).

Learnings from STRY (Skill Training of Rural Youth) under Sub mission on Agricultural Extension of NMAET and ARYA (Attracting Rural Youth in Agriculture) can provide valuable inputs for extensionists in the area of skills development.

### **REVERSE EXTENSION NEEDS NEW THEORIES/Framework TO MOVE FORWARD**

Reverse extension cannot rely on the conventional theories and concepts of extension education. It needs new theories and framework and a shift in approach.

- Beyond diffusion of innovations: New look on innovations; use of multiple sources of knowledge; extension as a co-learning process
- Beyond linear ToT (R-E-F-inkages): Credit, Marketing, Product development linkages needed
- Beyond technological interventions: institutional innovations and value chains
- Beyond Research and Extension System: Support and service system –also policy and institutional changes
- Beyond existing institutions and practices: Farmer companies, RPOs, SPVs, Agribusiness incubators
- Beyond allocation based targets and achievements: Outcome based targets and achievements
- Beyond networks: Convergence and partnerships at several levels

Finally, it is to be clearly understood that reverse extension doesn't mean going back to the old paradigm of learning from farmers and seeking feedback from users on the performance of a new technology. Instead, it argues that practitioners have found new and dynamic ways of dealing with their practical challenges and exploring new opportunities, while the extension concepts and teaching have remained rather static. We need to catch up, learn, reflect and use these learnings to reinvent the profession of extension.

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