

MANAGE Agricultural Extension "Evening4Learning (E4L)" Webinar Series

Topic: "Research Priorities in Extension"

Schedule:
20-11-2022, 20:30-21:00 PM

MANAGE - Center for Agricultural Extension Innovations, Reforms and Agripreneurship (MANAGE- CAEIRA)
National Institute of Agricultural Extension Management (MANAGE)
Rajendranagar, Hyderabad- 500 030, INDIA



About the Program

The MANAGE Agricultural Extension "Evening4Learning" Webinar Series is aimed at enhancing knowledge and professional engagement in the field of agricultural extension. The twelve-day series is structured with each day focusing on a distinct topic under a common theme, allowing participants to gain comprehensive insights into key areas of extension. The program is intended for a diverse audience, including postgraduate and doctoral students, agricultural faculty, and industry professionals. It covers broad themes ranging from entrepreneurship and sustainability to emerging technologies in agriculture.





Speaker

Dr. P. Sethuraman Sivakumar

Principal Scientist

ICAR-CTCRI

pssivakumar@ctcriabi.org.in

P. Sethuraman Sivakumar

About the Speaker

Dr. P. Sethuraman Sivakumar is a Principal Scientist at ICAR–CTCRI, working in the Division of Innovations, Technology Management and Utilization. His areas of expertise include technology commercialisation, business incubation, agripreneurship development, nutrition-sensitive extension, and market linkage. He has led several research and development initiatives related to tuber crops, seed systems, value addition, consumer behaviour, and scaling up of biofortified crops.

Introduction

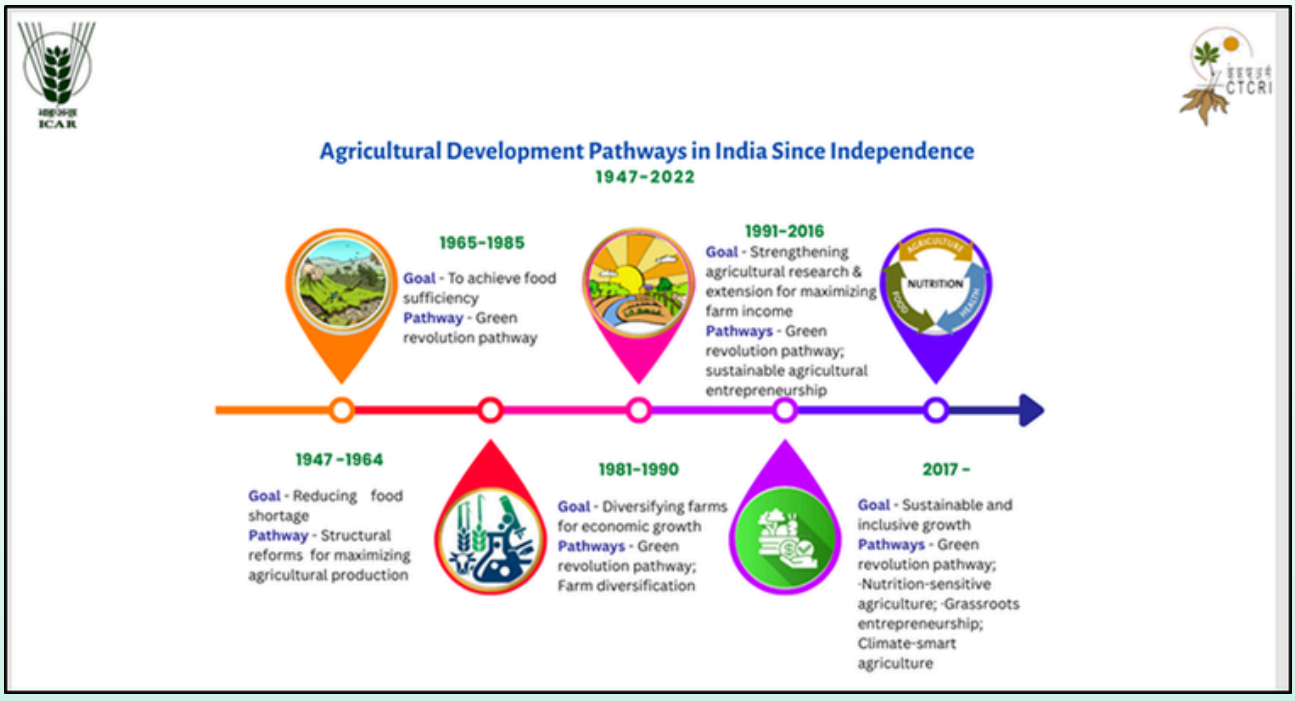
Agriculture remains a major source of employment and livelihood in India; however, the sector continues to face several structural and emerging challenges. Despite significant progress in agricultural production, concerns related to malnutrition, climate variability, fluctuating market prices, declining farm incomes and farmers' vulnerability persist. Changing food consumption patterns and the growing emphasis on nutrition, health, quality and value addition have further broadened the scope of agricultural development. In this context, agricultural transformation requires a shift beyond production-oriented approaches towards sustainable, inclusive and income-enhancing development strategies.

Indian agriculture faces several challenges and has evolving development priorities. Although the sector employs a substantial proportion of the workforce, its contribution to national value added remains comparatively low. There is a need to address persistent malnutrition, changing dietary preferences, climate-related production risks and constraints affecting farm profitability. The growing participation of private enterprises and start-ups was also recognized as an important development in the agricultural sector.

These emerging challenges underscore the need to broaden agricultural development beyond increasing production to include nutrition-sensitive approaches, quality improvement, value addition, entrepreneurship, climate resilience and enhanced farmers' incomes. Accordingly, agricultural research, extension and institutional support systems must respond to the changing needs of farmers and the wider agricultural economy.

Agricultural Development Pathways

The concept of **agricultural development pathways** refers to the approaches through which governments pursue development objectives by integrating policies, programmes, research, extension and institutional interventions. India's agricultural development priorities have evolved in response to changing national needs and emerging challenges.



Following independence, the primary focus was on overcoming food shortages and achieving food self-sufficiency. This was followed by the Green Revolution, which emphasized increasing agricultural productivity and foodgrain production. Subsequently, agricultural development priorities expanded towards farm diversification, economic growth, strengthening agricultural research and extension systems, and improving farmers' incomes. From 2017 onwards, greater emphasis has been placed on sustainable and inclusive growth, with multiple development pathways operating simultaneously.

The major agricultural development pathways include **the Green Revolution pathway, nutrition-sensitive agriculture pathway, grassroots entrepreneurship pathway, climate-smart agriculture pathway, and sustainable entrepreneurship and value-chain pathway**. These pathways reflect the need to integrate productivity enhancement with nutritional security, local enterprise development, climate resilience, sustainability and improved market access.

Agricultural extension professionals and researchers must understand these pathways to align their research priorities, extension strategies and field-level interventions with broader agricultural development objectives. Such alignment can help ensure that agricultural development contributes not only to increased production but also to improved farm incomes, better nutrition, sustainable resource management and inclusive rural development.

Changing focus of Extension and Advisory Services

Climate-Smart Agricultural Pathway

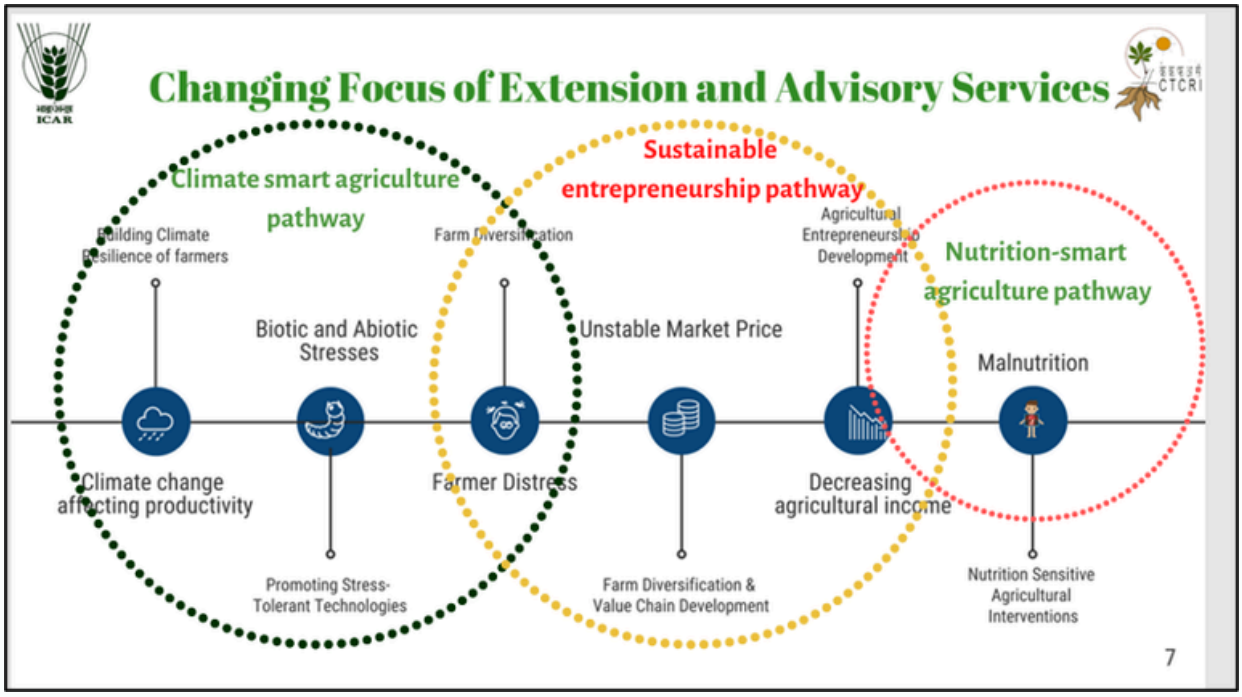
The climate-smart agricultural pathway has emerged in response to the adverse effects of climate change on agricultural production. The declining productivity, increasing biotic and abiotic stresses and decreasing per-capita land availability require farmers to adopt climate-resilient approaches.

Climate-smart interventions may include stress-tolerant varieties, integrated pest management, water-stress management and improved management practices. However, climate resilience cannot be achieved merely through the adoption of a single technology. It requires changes in agricultural practices, awareness, policy support, development programmes, research and extension working together towards a common objective.

Sustainable Entrepreneurship and Value-Chain Pathway

Sustainable entrepreneurship is an important pathway for improving farm incomes. Unstable market prices and declining returns from crop production highlight the need to diversify rural livelihoods and promote value addition.

Farmers can enhance the value of their produce through farm-level processing, collective action via self-help groups and Farmer Producer Organisations (FPOs), and linkages with agricultural start-ups and other support institutions. Programmes promoting market access, collective enterprises and value-chain development are examples of interventions under this pathway.



Nutrition-Sensitive Agriculture

The nutrition-sensitive agricultural pathway addresses the persistent challenge of malnutrition. Interventions such as biofortified crop varieties and nutrition gardens can help address nutritional deficiencies and wider public-health concerns.

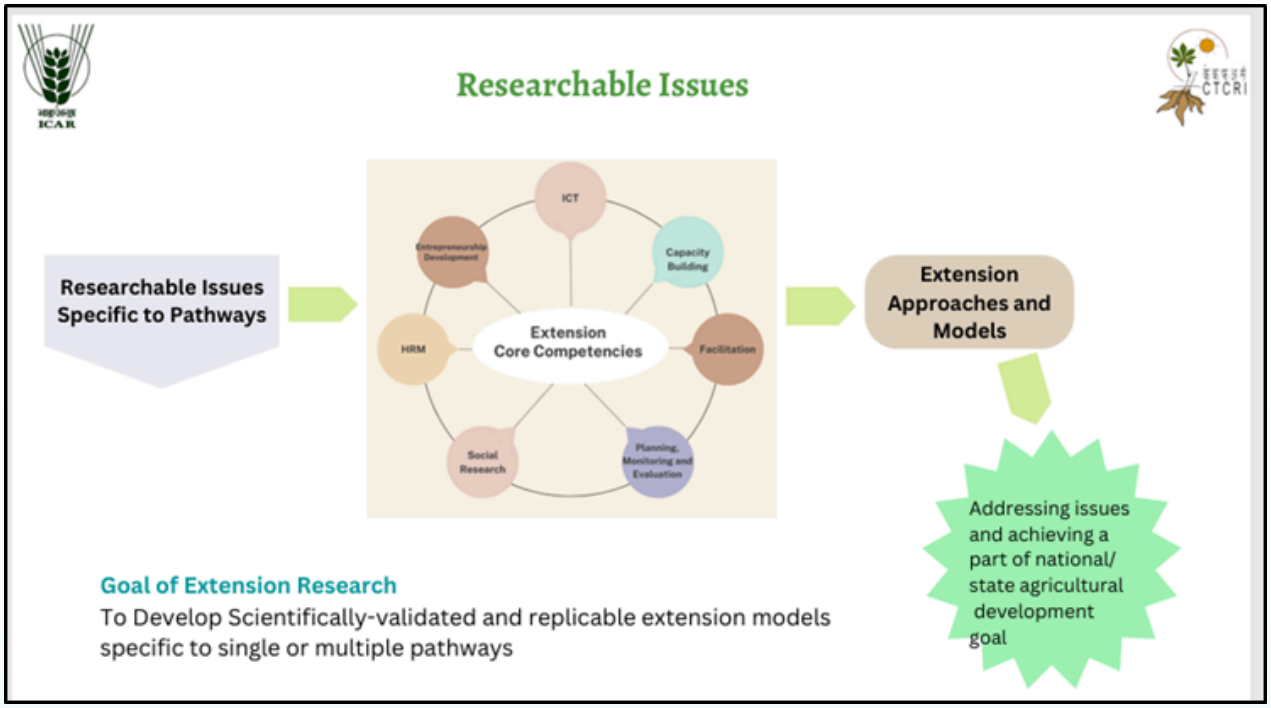
Unlike conventional productivity-oriented interventions, nutrition-sensitive approaches extend beyond improving farm-level outcomes to include broader nutritional and public-health benefits. Therefore, identifying priority locations and target populations and ensuring the effective scaling up of interventions are important components of this pathway.

Agricultural Development Programme



Aligning Extension Research with Government Priorities

Extension research should be aligned with government development priorities and the agricultural development pathways adopted to achieve national objectives, rather than being undertaken in isolation. Extension scientists and professionals need to understand prevailing policy priorities and identify how their research, programmes and field-level interventions can contribute to these objectives. Such alignment enhances the relevance and practical utility of extension research, strengthens its contribution to policy implementation, and facilitates the adoption of research findings in agricultural development programmes.



Approaches for Identification and Prioritisation of Researchable Issues

Research priorities should emerge from farmers' needs, field-level evidence and broader agricultural development objectives. The approach encompasses four major components: prioritisation, nature of intervention, monitoring and evaluation, and impact assessment.

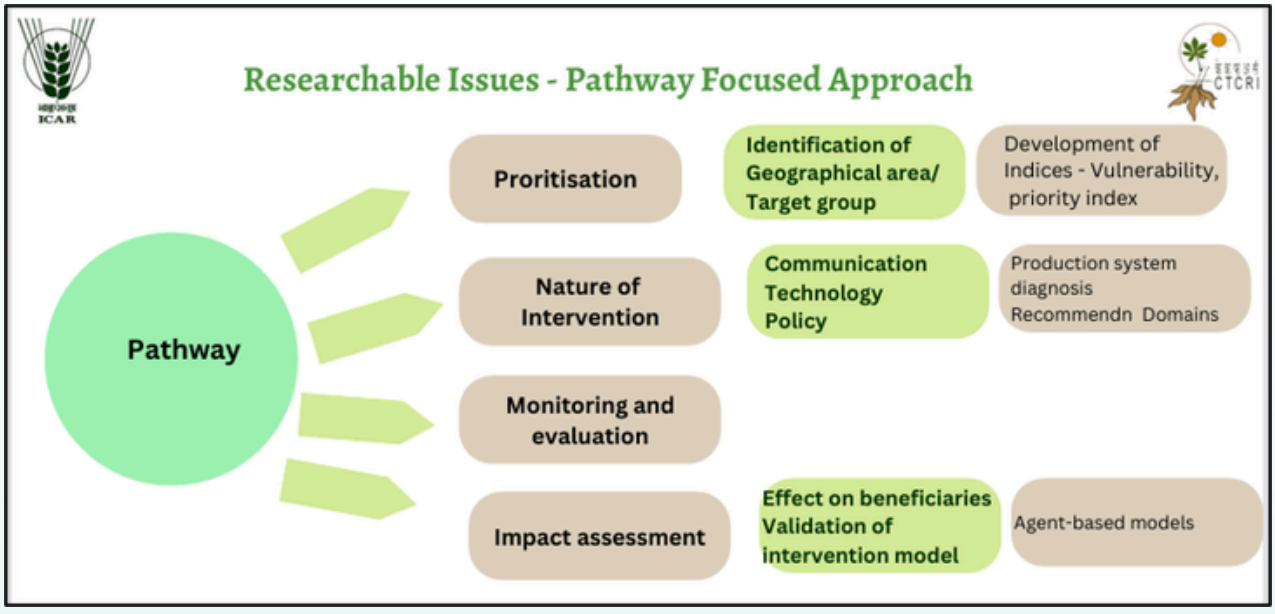
Prioritisation of Researchable Issues: The research prioritisation process may involve participatory rural appraisal, preparation of village and technology maps, seasonal calendars, consequence diagrams, Venn diagrams and matrix ranking. These methods help identify farmers' perceived problems, available resources and preferred solutions. Extension professionals can then screen the identified issues, while scientists assess their technical feasibility and resource requirements. The prioritised research areas can subsequently be incorporated into institutional research planning.

Nature of Intervention: Based on the prioritised issues, appropriate interventions need to be identified, particularly in the areas of communication, technology and policy. Production system diagnosis and the identification of recommended domains help determine suitable interventions for specific geographical areas and target groups.

Monitoring and Evaluation: Monitoring and evaluation are essential for assessing the implementation and performance of interventions. They help determine whether planned activities are progressing as intended and whether the interventions are addressing the identified problems.

Impact Assessment: Impact assessment focuses on evaluating the effects of interventions on beneficiaries and validating the intervention models. Approaches such as agent-based models can support the analysis of potential outcomes and interactions among stakeholders under different conditions.

Extension scientists play a critical role in bridging farmers' needs and formal research planning. By integrating participatory methods, technical assessment, resource considerations and systematic evaluation, extension professionals can ensure that research priorities are context-specific, scientifically feasible and aligned with broader agricultural development pathways.



Importance of Research Prioritisation

Research prioritisation is essential for improving the effectiveness of agricultural investments. Substantial public resources are invested in agricultural development; therefore, these investments should address relevant problems and generate meaningful outcomes.

Evidence-based research prioritisation helps identify critical issues, target appropriate geographical areas and beneficiary groups, select suitable interventions and improve the returns on public investment. Extension research should be guided by clearly defined development objectives and contribute to measurable agricultural and social outcomes.

Key Highlights

- **Evolving Agricultural Development Pathways:** Agricultural development has evolved from food self-sufficiency and productivity enhancement towards sustainable and inclusive growth, integrating nutrition security, climate resilience, entrepreneurship and value-chain development.
- **Diversification Beyond Production:** Improving farmers' incomes requires a shift beyond production-oriented approaches towards value addition, collective enterprises, FPOs, start-ups and stronger market linkages.
- **Climate-Smart and Nutrition-Sensitive Agriculture:** Climate-resilient technologies, improved resource management, biofortified varieties and nutrition gardens can contribute to sustainable agricultural production, nutritional security and improved rural livelihoods.
- **Alignment of Extension Research with Development Priorities:** Extension research should be aligned with government priorities and farmers' needs through participatory approaches, context-specific interventions, and systematic monitoring, evaluation and impact assessment.
- **Evidence-Based Research Prioritisation:** Participatory tools, technical feasibility assessments and impact evaluation help identify priority researchable issues, optimise public investments and ensure measurable agricultural and social outcomes.

YouTube Link:
https://youtu.be/zomYNqdFMB8?t=4388

E4L Report Prepared by:
Dr. Vavilala Priyanka
MANAGE Fellow