International Journal of Veterinary Sciences and Animal Husbandry

ISSN: 2456-2912
VET 2023; SP-8(3): 01-06

www.veterinarypaper.com
Received: 03-03-2023
Accepted: 05-04-2023

Deepjyoti Roy
Ph.D. Scholar, Department of Veterinary Extension, FVAS, RGSC-BHU, Mirzapur, Uttar Pradesh, India

AK Chaturvedani
Assistant Professor, Department of Veterinary Extension, FVAS, RGSC-BHU, Mirzapur, Uttar Pradesh, India

Corresponding Author:
AK Chaturvedani
Assistant Professor, Department of Veterinary Extension, FVAS, RGSC-BHU, Mirzapur, Uttar Pradesh, India

A review on pluralistic extension systems through convergence

Deepjyoti Roy and AK Chaturvedani

DOI: https://doi.org/10.22271/veterinary.2023.v8.i3Sa.573

Abstract
The public sector agencies in India have been instrumental in playing key role in facilitating services to the farming community through agricultural extension systems. Yet, factors such as an ever-increasing population, a lack of labour, an insufficient budget for extension activities, administrative rigidity, and outdated policies have caused the agricultural extension system to stagnate. Over 59.00 per cent of farm households did not receive any assistance from government or non-governmental extension organizations. Limited workforce and financial backing, the traditionally bureaucratic character of extension staff members, and the tremendous administrative responsibility put on field-level workers have resulted in supply-driven rather than demand-driven public extension services. Prior studies showed that the extension worker-to-farmer ratio in India is 1:5000, which is far greater than the ratios in Ethiopia (1:476) and China (1:625). For an inclusive structure and pluralistic convergence, legislators need to establish a stakeholder coordination mechanism and framework that defines what sort of good or service needs to be provided and to whom and at what degree.

Keywords: Manpower, Financial resources, Policymakers, Linkage

Introduction
With the current surge in catastrophic events and unpredictability, farming in India has become a precarious occupation rather than a feasible engagement. Given that agriculture employs 43 per cent of farmers and feeds 1.3 billion people, securing food during extreme weather occurrences is critical [1]. The wave of extension service was initiated through the Community Development (CD) and National Extension Service (NES) programmes [2]. Around 732 KVKs are working in a parallel manner in all regions of the country to validate and acclimatize technologies to local circumstances for technology-inclusive farming. The primary responsibilities of agricultural extension at the district level include technology cum product assessment, refinement, and demonstration via a network of Krishi Vigyan Kendras (KVKs), line departments, and the Agricultural Technology Management Agency (ATMA). Furthermore, 44 Agricultural Technology Information Centres (ATIC) have been established within Indian Council of Agricultural Research (ICAR) institutes and State Agricultural Universities (SAUs) to assist the extension activities [3].
ATMA was launched in 1998 by the Government of India as an element of the National Agricultural Technology Project's (NATP) Innovation in Technology Dissemination (ITD) component. It was done in partnership with the World Bank and was initially evaluated in 28 districts before being rolled out throughout the country. ATMA is a completely interconnected and organized entity that brings together many agencies involved in extension activities under a single roof. It is also an effort to link research, extension, farmers, non-governmental organizations, and the commercial sector. Despite professing to be a one-of-a-kind extension model, the Agency faced obstacles such as a lack of dedicated personnel, operational independence, and psychological hurdles at all levels, which hindered it from accomplishing its objectives [5]. The Doubling Farmers Income (DFI) Committee observed the Extension Service System (ESS) as the first-mile endeavour aimed at strengthening farmer ability to maintain income-based agricultural practices in its 11th report. Given the necessity of extension, it needs to be revitalized [6].

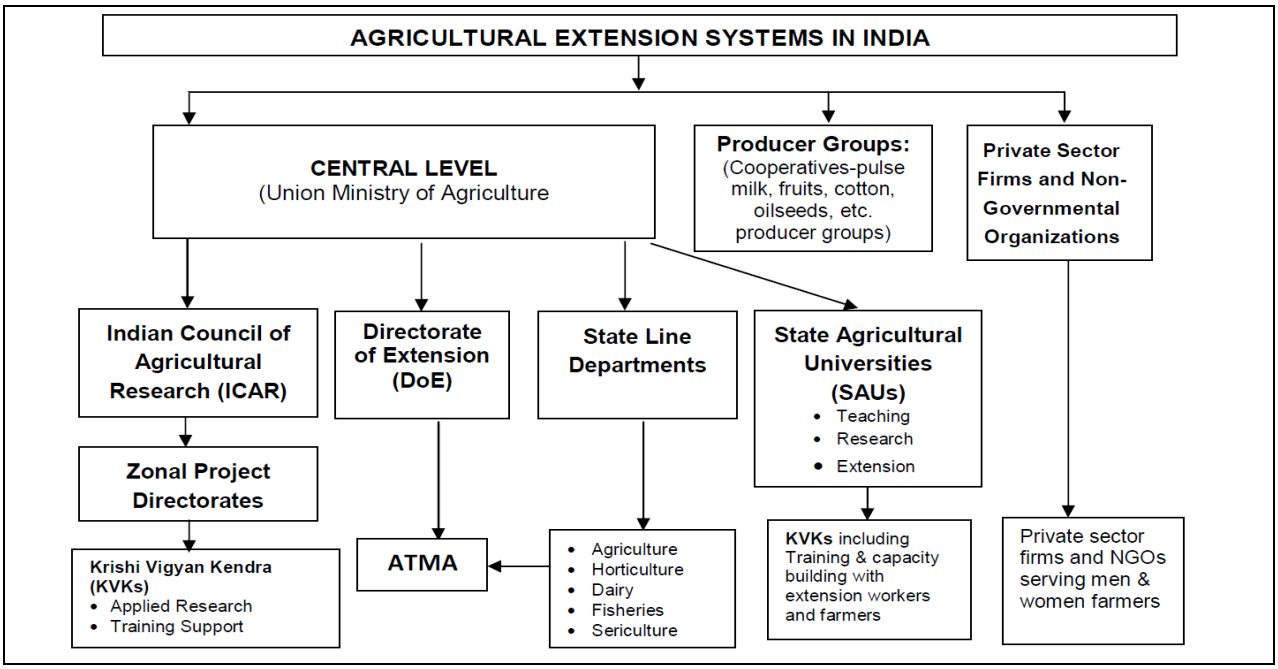

Fig 1: Agricultural extension system in India [4]

Public Extension

The services of agricultural extension in the country have largely been publicly funded and are provided through the Department of Agriculture, Cooperation, and Farmers' Welfare (DAC&FW), an apex extension service organization with supporting hubs (state departments) at the states and union territories. In spite of having minimal private-sector resources and workers, DAC&FW retains control of the country's extension system [6].

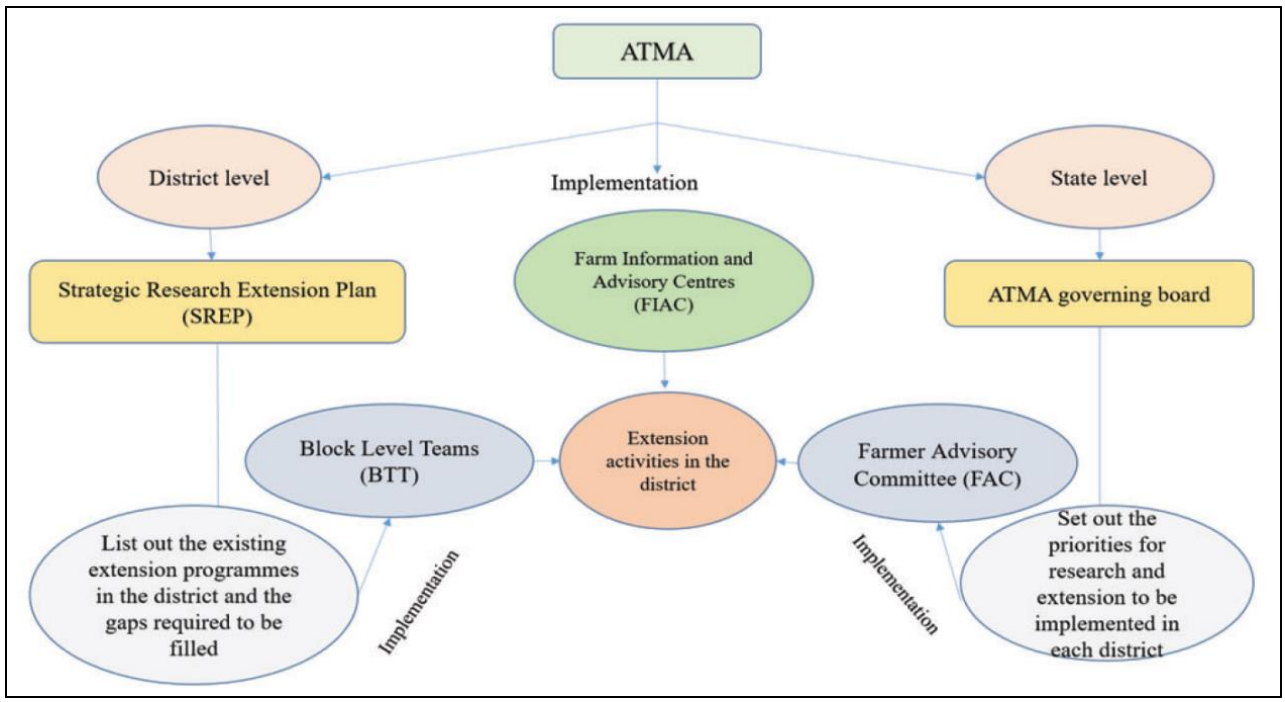

Fig 2: Integrated approach of ATMA [6]

The several key constraints in the agricultural extension system including the restricted scope of agricultural extension systems, the overlapping nature of government programmes with extension operations, the dearth of farmer participation in extension programme planning, supply-driven extension rather than market-driven extension, deficient research-extension links, insignificant public-private sector linkages, and insufficient operating resources and financial sustainability [7]. Within the Indian extension system, information flow is linear, with content concentrating on technology transfer to improve agricultural productivity. A deeper notion of agricultural extension that transcends boosting crop output has yet to be realized. Farmers view the quality of information provided by public extension personnel to be a major concern since information flow is supply-driven rather than need-based or area-specific [8, 9]. In addition, there are not enough assets for operational expenditures, training, and capacity development, limiting the extension staff's operations and continual improvement [10]. There are around 90,000 extension agents working as against the total number

of farmers which is approximately 130 million. Several state and district line departments had to be reprimanded for operating in isolation, with little cooperation and interactions. The research extension association has been criticized for failing to incorporate and utilize farmer and extension staff feedback. Farmers and extension workers are passive participants, while scientists have minimal field experience [11]. A number of elements of the public-sector extension system are impacted by programme duplication with low levels of convergence. Although ATMA is marketed as an avenue for multiple organizations to work together, it is facing substantial drawbacks for effective execution and integration, due to staffing and money constraints [12].

Private Extension

The extension worker-to-farmer ratio in India was reportedly 1:1000 [13]. It has grown to 2879 farmers per extension worker [14]. Consequently, private sector engagement in agricultural extension has become crucial in promoting easy access and significance in the growth of agriculture [15]. This would help the country's extension service delivery system reach more farmers while enhancing effectiveness in decision-making processes, conserving resources, allotment and structuring, as well as prompt farm operation and commercialization. Currently, the private sector contributes for more than 80 per cent of overall agricultural investment [16].

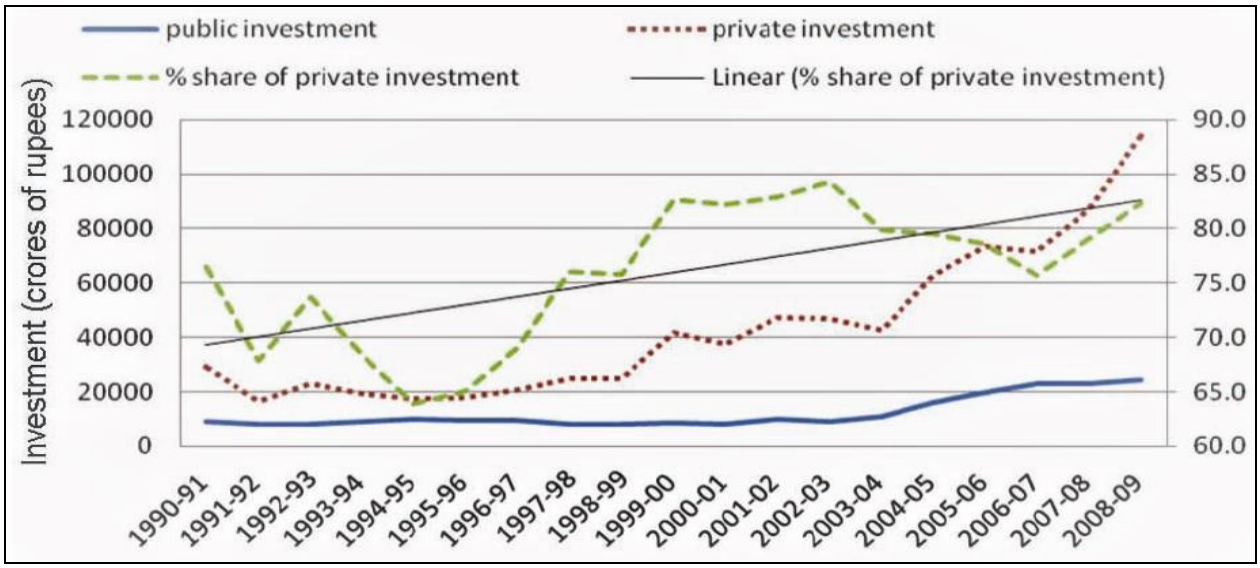

Fig 3: Investment in Agriculture and allied sectors in India [16]

Private extension is a broad category of service providers rather than a single business. The first category is wholly private, and they promote technology, inputs, and services using their own income. This group includes the majority of private profit-seeking players. The second kind comprises of organizations that receive government and other donor funds to undertake extension programmes and are mainly "not-for-profit." The third category is membership organizations, which generate funds from members through membership fees or service fees in exchange for delivering services [17]. Both public and private extension systems have been found to be inventing techniques for the transmission of technology and new advancements to farmers in order to equip them to deal with the obstacles posed by market liberalization and globalization [18]. To boost commercial extension approach efforts, a public sector extension strategy must be developed so that business organizations are prepared to deliver extension services that are partially determined by government activities [19].

Requirement of Private Extension System

Private organizations, while not usually technically recognized as extension services, provide individuals with advice and other forms of help. Examples include input agencies, producer cooperatives, non-governmental organizations (NGOs), agriculture-related business houses, progressive farmers, private advisory and consulting firms, financial organizations, and media and internet services. Though the government, particularly through state-line departments, continues to promote development through the execution of various programmes, many people rely on private organizations to satisfy their needs for information and other development assistance [17].

Privatization is projected to increase extension efficiency by reorienting public sector extension with specific and well-focused functions, increasing the number of extension providers (institutional pluralism), and actively encouraging the public sector to launch, run, and develop. More private engagement will result in the availability of specialized services that were previously unavailable through the public system. User contributions to extension result in enhanced financial sustainability, and client support and control result in client orientation.

Challenges of Private Extension System

Advances in information and communication technology (ICT), an extensive public research system, altering cropping patterns, contract agriculture, the problems of the public system in reaching a large clientele, and so on are all good conditions for efficient commercial extension services. However, impediments to the operation of private extension in India originate from the high cost of services to marginal and small-scale farmers in large subsistence agricultural regions and resource misuse. To address these issues, a strength, weakness, opportunity and threat (SWOT) analysis for identifying implementation gaps and the effective use of private extension services are required.

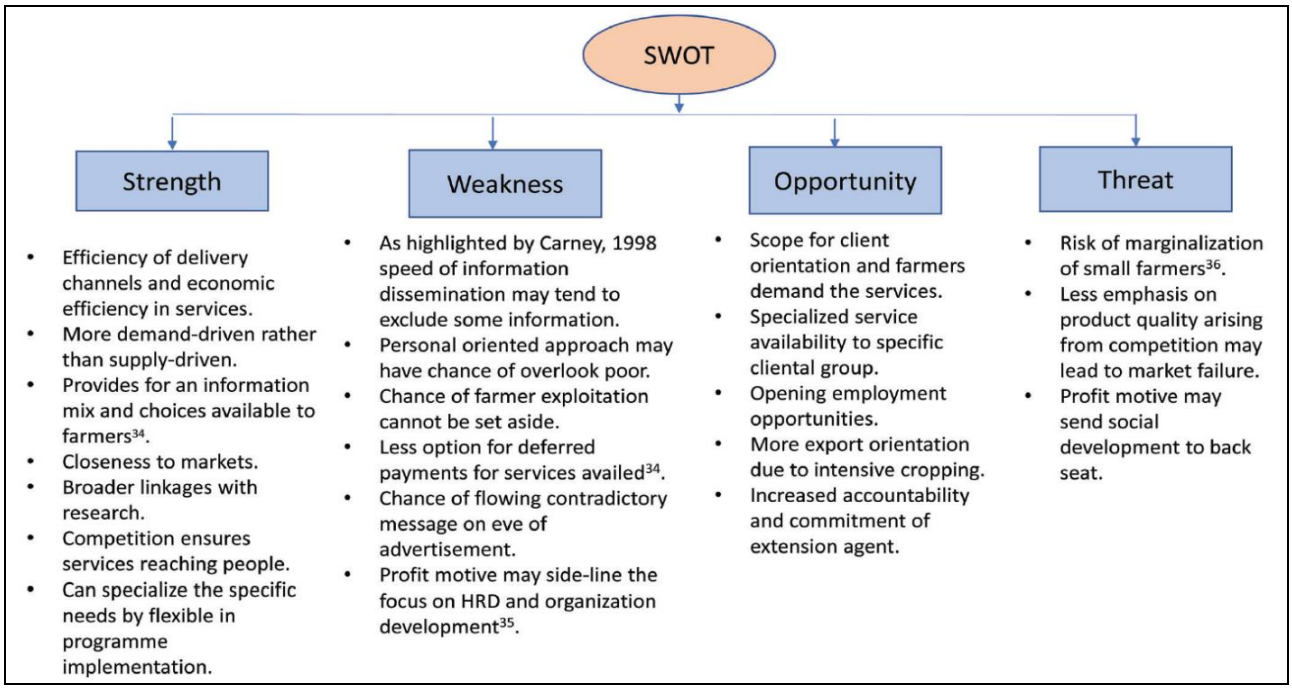

Fig 4: SWOT analysis of private extension system [13]

Based on a survey of experiences with extension privatization in several countries, Sulaiman and Gadewar (1994) [20] enlisted unreliable message flow, negative influence on long-term sustainability, reduced educational role, less contact between farmers and extension personnel, expensive technology and worsening of regional disparities as the main drawbacks of privatization of extension [20].

Need of convergence for pluralistic extension

Public organizations excel in backward connection, commercial organizations excel at forward linkage and non-governmental organizations excel at social engineering and mobilization. Every company has a competitive edge over the others. A single development agency may have resource constraints. That is why convergence is required: a defined strategy for planned multi-stakeholder participation with mandated activities based on their expertise, to supplement and complement efforts, and to promote effective community partnership involvement. Policies and programmes that promote extension services, ranging from grassroots extension to ICT-enabled extension, are continually altered as needed. However, there are concerns about the coverage, accessibility, and quality of information offered to marginalized and impoverished farmers. A close examination revealed that organisational performance issues, such as staff numbers, poor partnerships, and a continuing centralized unidirectional focus on extension [21], continue to limit the public agricultural extension system's efficacy and efficiency. There is a growing need for collaboration and knowledge exchange in order to meet the information needs of India's marginalized and smallholder farmers [22]. Convergence of efforts and programmes assisting extension endeavors is thus essential at the present time. This will allow current systems to address long-standing agricultural suffering in a more plausible, comprehensive, and equitable manner.

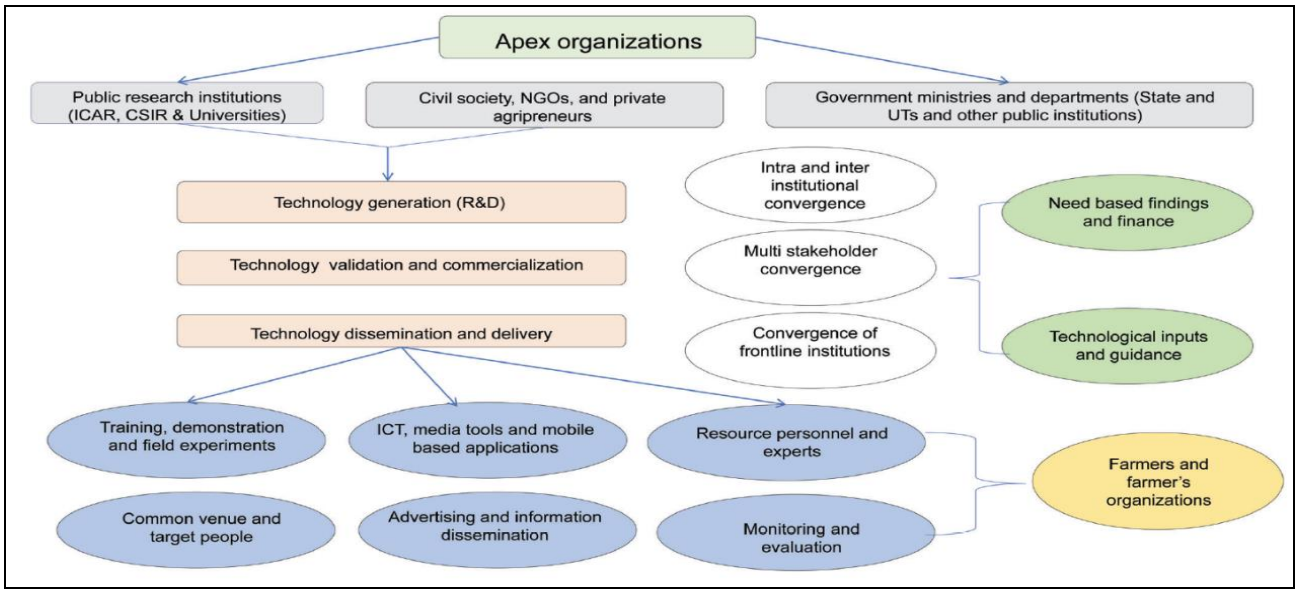

Fig 5: A multilevel convergence model [6]

Given that agriculture employs a sizable population, understanding the future development trend is crucial to ensuring the availability of food and subsistence. As per Gautam *et al*., (2013) climate change is the greatest danger to agricultural productivity in this century [23], and it is vital to include this component when predicting future trends. In terms of population, India was predicted to surpass China by 2027, and demography is expected to peak by 2040 [24] but crossed the milestone by 2023. Enhancements in productivity are the only way to achieve India's goals of ensuring adequate nourishment, a hunger-free society and an ecologically stable food system. As a result, rethinking agricultural extension policies is an urgent requirement for pragmatic and sustainable farming and food systems.

The private extension service will enter the first phase of convergence when it becomes a viable economic opportunity for private businesses and investors. They have to partner with significant organizations and a wide set of collaborators in order to support and complement each other's initiatives. Second, expand the engagement of institutions participating in frontline extension initiatives with major public institutions to bridge the information and technology adoption gap. Third, state institutions must highlight the importance of enabling connections between farmers and other groups, as well as encouraging private actors to participate in extension efforts [25]. Fourth, India is fortunate to have a diverse range of pluralistic extension organizations, including public, commercial, cooperatives, non-governmental organizations (NGOs), and so on. The efforts of such players are being duplicated without any coordination. PPP mode should be examined to reduce idleness, and duplication while improving resource utilization. Public organizations excel in backward connection, commercial organizations excel at forward linkage and non-governmental organizations excel at social engineering and mobilization [14]. Each organization's comparative advantage can be explored for the growth of extension services to previously untapped regions and parts of society. Finally, for effective demonstration and field days with farmers, frontline governmental extension organizations such as ATMA, KVK, and others should be linked to devoted private actors. The goal is to capitalize on these organizations' connections and to develop trust in them through cooperation. [26].

Conclusion

To keep up with the speed of competition, information providers must provide service based on client demands, which will pave the way for the establishment of an effective, timely, and efficient extension system. A single model will not work in such a large nation. Improved models for successful resource management must be tailored to varied locations and fields through constant requirements assessment. ICT technologies and mobile-based extensions should be promoted to improve contact with farmers. Policymakers must design an all-encompassing convergence system and create guidelines for a pluralistic system and region of convergence.

References

1. GOI. Agricultural census 2015-16. Department of Agriculture, Cooperation & Farmers Welfare Ministry of Agriculture & Farmers Welfare; c2020. URL: https://agcensus.nic.in/document/agcen1516/ac_1516_report_final-220221.pdf
2. Sulaiman RV. Agricultural extension: involvement of private sector. National Bank for Agriculture and Rural Development, Department of Economic Analysis and Research; c2003, Occasional Paper -29.
3. Singh K, Meena MS, Swanson B. Extension in India by Public Sector Institutions: An Overview; c2013, SSRN Electronic Journal. 10.2139/ssrn.2315457.
4. Meena M, Singh KM, Swanson B. Indian Agricultural Extension Systems and Lessons Learnt: A Review. J Agri Search. 2015;2(4):281-285.
5. Sulaiman RV, Hall A. The fallacy of universal solutions in extension: Is ATMA the new T&V. LINK News Bulletin; c2008. p. 1-4.
6. Padaria RN, Ranjith PC, Tanwar R, Shasani S. State of Agricultural Extension reforms in India and the need for convergence. Curr. Sci. 2022;123(3):264-270.
7. Swanson BE, Mathur PN. Review of the Agricultural Extension System in India. The World Bank, July 2003.
8. Raabe K. Reforming the agricultural extension system in India: What do we know about what works where and why?. 2008, IFPRI Discussion Paper, 00775.
9. NSSO. Situation assessment survey of farmers: Access to modern technology for farming, 59th round (January-December 2003). Report No. 499(59/33/2). New Delhi: Ministry of Statistics and Programme Implementation; c2005.
10. Swanson BE. Extension Strategies for Poverty Alleviation: Lessons from China and India. J Agric. Educ. Ext. 2006;12(4):285-299.
11. Reddy MN, Swanson B. Strategy for up-scaling the ATMA model in India, In Proceedings of the Association for International Agricultural and Extension Education, AIAEE 22nd Annual Conference, Clearwater Beach, Florida, USA, Ed: J.R. Vreyens, USA. 2006 May;14-19:561-569.
12. Working Group on Agricultural Extension. Recommendations of the working group on agricultural extension for the formulation of the eleventh five-year plan. New Delhi: Planning Commission; c2007. p. 12.
13. Shekara PC. Private extension in India: myths, realities, apprehensions and approaches. National Institute of Agricultural Extension Management, Rajendranagar, Hyderabad, A.P., India; c2001, p. 1-17.
14. Mukherjee A, Maity A. Public–private partnership for Convergence of extension services in Indian agriculture. Curr. Sci. 2015;109(9):1557-1563.
15. Sharma VP. Cyber extension: The extension approach for the new millennium. Manage Cyberary. 2002;18:8. Retrieved from http://www.manage.gov.in/managelib/faculty/VPSharma.htm
16. Umali-Deininger D. Public and private agricultural extension: Partners or rivals? World Bank Res. Obs. 1997;12(2):203-224.
17. IGNOU. Public Private Partnership and Local - Self Governance (Unit-2), Block-2: Local Governance and Local Organizations; c2017. IGNOU. URL: https://egyankosh.ac.in/handle/123456789/10188
18. Adhiguru P, Birthal PS, Kumar BG. Strengthening pluralistic agricultural information delivery systems in India. Agric. Econ. Res. Rev. 2009;22(1):71-80. https://ideas.repec.org/a/ags/aerrae/57382.html
19. Carney D. Changing public and private roles in agricultural service provision. Overseas Development Institute. Natural Resource Group, London; c1998.

20. Sulaiman VR, Gadewar AU. Privatisation of extension services-implications in the Indian context, J Rural Reconstruct. 1994;27(2):4l-48.
21. Babu SC, Joshi PK, Glendenning CJ, Asenso-Okyere K, Sulaiman VR. The State of Agricultural Extension Reforms in India: Strategic Priorities and Policy Options. Agric. Econ. Res. Rev. 2013;26(2):159-172.
22. Glendenning CJ, Babu S, Asenso-Okyere K. Review of agricultural extension in India: Are farmers information needs being met, IFPRI Discussion Paper 01048:55; c2010.
23. Gautam HR, Bhardwaj ML, Kumar R. Climate change and its impact on plant diseases. Curr. Sci. 2013;105(12):1685-1691.
24. GOI. Economic Survey 2018-19. Ministry of Finance, Department of Economic Affairs New Delhi; c2019. URL: https://www.indiabudget.gov.in/budget2019-20/economicsurvey/doc/echapter.pdf
25. Sulaiman VR, Hall A, Suresh N. Effectiveness of private sector extension in India and lessons for the new extension policy agenda. Agricultural Research & Extension Network, Network Paper No. 141; c2005.
26. ICAR. Convergence model in Madhya Pradesh reviewed. Bhopal Zonal Project Directorate, Zone VII, Jabalpur; c2013 Dec 28; http://www.icar.org.in/en/node/7168
27. Davis K, Swanson B, Amudavi D, Mekonnen DA, Flohrs A, Riese J, *et al*. In-depth assessment of the public agricultural extension system of Ethiopia and recommendations for improvement, Discussion Paper 01041, IFPRI, Washington DC; c2010.
28. Ragasa C, Ulimwengu J, Randriamamonjy J, Badibanga T. Assessment of the capacity, incentives, and performance of agricultural extension agents in Western Democratic Republic of Congo. Discussion Paper 01283. IFPRI, Washington DC; c2013.