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Current Issues of Agricultural Extension in India

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ABSTRACT

Agricultural Extension (also known as agricultural advisory services) plays a crucial role in boosting agricultural productivity, increasing food security, improving rural livelihoods, and promoting agriculture as an engine of economic growth. Extension in today's Indian context, includes all those agencies in the public, private, NGO and community-based initiatives that provide a range of agricultural advisory services and facilitate technology application, transfer, and management. However, the current state of agricultural extension services in India faces multifaceted challenges that impede its effectiveness. Though there are several extensions approaches for the development of farmers, rural livelihood agricultural extension faces various problems like diminished land productivity to water scarcity impacting crop yields, biodiversity loss, and challenges posed by population growth. The primary concerns are the shrinking per capita land availability for farming. Over adoption of farming techniques bring problems to the soil and water health, biodiversity. Despite its abundant network for agricultural extension reaching from the Ministry of Agriculture at the central level to KVKs at the local level.The absence of effective partnerships means a missed opportunity to leverage the strengths of both sectors for the benefit of farmers. Due to shortage of extension personnel, currently working personnels must cover a vast area in respect of extension services, technology dissemination, training programmes. The inaccessibility of proper information for farmers in agriculture extension services remains a pervasive challenge hindering the sector's progress and the well-being of farming communities. The current issues in agriculture extension in India underscore the urgent need for comprehensive reforms to ensure the sustainability and prosperity of the country's agricultural sector.By fostering partnerships, enhancing accessibility to information, and addressing resource constraints, the country can pave the way for a more inclusive, technologically advanced, and sustainable agricultural landscape. After agricultural landscape several steps like technology adoption, infrastructure development, education and training, government policies and support will lead the holistic development of agriculture and allied sectors.

Key words: Extension, Agriculture, Issues, Problems, Present scenario

INTRODUCTION

Agricultural research, education and extension are said to be the most critical for promoting farm productivity and enhance income amongst various types of government spending for agriculture. Agriculture extension system bridges the gap between research labs to a farmer's field. However, the reach of the public extension is limited in the country and in addition it is burdened with non-extension responsibilities such as the distribution of subsidies and inputs, with little time left to attend to core extension activities like advising farmers to enhance adoption of new practices and techniques (Reddy 2018). There is a strong relationship between agricultural growth and reduction in poverty and malnutrition and creating equitable society as compared to growth in any other sector. In the context of the Indian government's push to double farm income by 2022, the thrust placed on smallholder farmer is fair and visionary. Agriculture growth depends on various factors such as rainfall, creating irrigation infrastructure, agriculture research and development and prices stabilization, etc. Besides these, the other critical factor is agriculture extension as it translates innovations in the labs to lands of farmers. The right information at the right time and place through proper channels is crucial for the

farming community to take informed decisions. With changing in government policies, demand and supply characteristics of technology, and marketing reforms, agriculture extension system is facing more opportunities together with challenges.

Agricultural extension approaches in India:

For a long time since independence, extension services were being provided mainly by the public sector. At present also the public sector is major extension service providers through a two-tier system. At the central level, Indian Council of Agriculture Research (ICAR) is the nodal institute for agriculture research and extension; while at the state level, the State Agricultural Universities (SAU) via the Krishi Vigyan Kendra (KVKs) and Agriculture Technology Management Agency (ATMA) at the district level facilitate agriculture extension. However, the public extension is highly skewed towards crop husbandry ignoring allied sectors. Besides the existing public extension service system, there are several private players, civil-society organizations including farmer-based organizations and NGOs that play a major role in providing extension services (Birner and Anderson 2007).

Reforms in Agricultural Extension in India: Post independence era

India has witnessed and experienced many changes in extension approaches before and after independence for the development of agrarian society. Before independence, only some sporadic attempts by individuals, political and social leaders and philanthropists were made in different parts of the country, the most remarkable ones being Shriniketan Project (1921) by Rabindranath Tagore, Marthandam Project (1921) by Dr. Spencer Hatch, and Firka Development scheme in Madras state (1946). These projects were locale specific and aimed at holistic rural development but gradually disappeared with time due to lack of government support and mass involvement. The first more or less structured effort towards holistic rural development was the community development programme (1952) followed by the National Extension Service (1953). In the sixties, agriculture production situation was very critical and there was a felt need for intensification of agriculture with the use of high yielding varieties. Majority of the population being dependent solely upon agriculture for earning their livelihood agricultural development was the main indicator of rural as well as economic development of the country. Several programmes, namely Integrated Agriculture Development Programme (IADP), Intensive Agriculture Area Programme (IAAP), National Demonstration (ND) and High Yielding Variety Programme (HYVP) were launched. The approach although produced immediate results, did not succeed in long run due to its failure to uplift the small and marginal farmers and in terms of uniformly reaching every pocket of the country. A programme, namely Integrated Rural Development Programme (IRDP) launched during the early 80s was a broadened approach towards rural development. As far as agricultural extension in specific is concerned, the Training and Visit (T&V) system launched during the seventies was a breakthrough approach which laid major emphasis on trained field extension agents in technology transfer. The importance of disseminating the research-based recommendations was in real sense for the first time realized through this approach. Using trained field staff for technology transfer was subsequently executed through the Krishi Vigyan Kendra (KVKs) project in a more systematic manner. The new approach was found to have immense potential not only in mere transfer but internalization of technologies as it encouraged education and peoples' participation.

Extension and advisory services in India: present scenario

Extension in today's Indian context, includes all those agencies in the public, private, NGO and community-based initiatives that provide a range of agricultural advisory services and facilitate technology application, transfer, and management. While public sector line departments, mainly the Department of Agriculture was the main agricultural extension agency in the 60's and 70s, the last two decades have witnessed the increasing

involvement of private sector, NGOs, community-based organisations, and media. With the external support drying up with the end of the T&V (Training and Visit) system of extension in the early 1990s, states have been left to fund their extension machinery and this has led to considerable weakening of public sector extension. For the farmers who accessed information, progressive farmers and the input dealers were the main source of information. Broadcast media was also used a great deal to obtain information, which included radio, television, and newspapers.

Agriculture Extension in India: Current Issues

1. Limited land and water availability:

With a rapidly growing population and increasing urbanization, the pressure on available land for agriculture has intensified. The need to feed a large and growing population places immense stress on the limited arable land, leading to overexploitation and degradation of soil resources. As urban areas expand and infrastructure projects take precedence, agricultural land is often diverted for non-agricultural purposes. This urban sprawl not only reduces the total land available for cultivation but also fragments existing agricultural landscapes, making it challenging for farmers to practice large-scale, efficient farming methods. Many farmers still rely on rain-fed agriculture or use inefficient irrigation techniques, leading to wastage of water and reduced efficiency in water use. The urgent need for modernization and sustainable water management practices becomes evident in the face of these challenges.

2. Degradation of natural resources:

The intricate relationship between natural resources and agriculture necessitates a holistic understanding of the challenges faced, encompassing soil health, water availability, biodiversity, and the overall ecosystem.

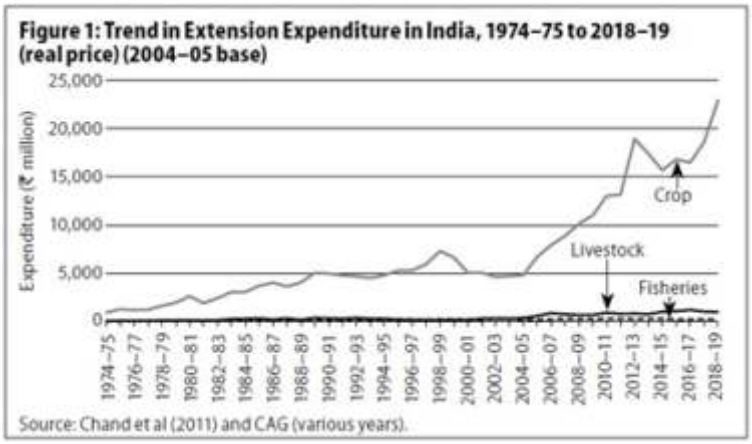
One of the foremost concerns in the realm of agricultural extension is soil degradation. The overuse of chemical fertilizers and pesticides, coupled with improper farming practices, has led to the erosion of topsoil and a decline in soil fertility. This degradation not only diminishes the productivity of the land but also has long-term implications for the sustainability of agriculture. The indiscriminate use of agrochemicals poses a dual threat to both the environment and human health. Pesticide residues in crops and soil contamination not only degrade the quality of agricultural produce but also pose serious health risks to farmers and consumers.

3. Low level outreach by public extension services:

A key issue regarding the effectiveness of the Indian RAS system is its outreach to farmers. Despite its abundant network for agricultural extension reaching from the Ministry of Agriculture at the central level to KVKs at the local level, the public extension system in India caters to only 6% of the more than 119 million of Indian farmers (Ghimire,2014). Due to the low coverage and often low quality of services, the productive potential of small farmers could yet considerably be multiplied with the right technologies, services, mentoring and access to markets.

4. Insufficient fund:

Agricultural Extension is funded majorly by state and central governments Together. An analysis revealed that over the years, the expenditure on agricultural extension has increased, but with high Degree of variability (Figure 1). This expenditure suffered a dip during the later half of the 1990s. The initiation of the ATMA and NMAET Helped to reverse the trend subsequently. When expenditure in extension activities was analysed in a Disaggregate manner, it was revealed that real extension Expenditure over the years has not increased much in absolute Terms.



The extension expenditure as a share of GDPA stood at 0.18% in 2011–13(average), showing wide variation across states (Pal 2017).This is in concordance with priorities for agricultural sector, in the form of newer schemes and programmes in state and central governments.

1. Increasing population:

With a growing population, there is a higher demand for food production, placing additional pressure on farmers to enhance productivity. This necessitates more extensive and effective agriculture extension services to disseminate modern farming techniques, technological advancements, and best practices. However, the surge in population also means a larger number of farmers seeking assistance, straining the existing extension infrastructure. Furthermore, the expanding population results in the fragmentation of agricultural land, making it challenging for farmers to adopt large-scale, modern farming methods.

2. Lack of Public- Private partnership:

Most of the private companies focuses on resourceful farmers. Most of the small and marginal farmers cannot avail the private extension services due to lack of capital, low risk bearing capability. Public extension organizations are mostly unavailable to remote village areas. While the government traditionally manages extension services, the private sector possesses valuable resources, expertise, and innovation. The absence of effective partnerships means a missed opportunity to leverage the strengths of both sectors for the benefit of farmers.

3. Huge workload of official work along with field work:

The public extension system was seen as outdated, top-down, paternalistic, inflexible, subject to bureaucratic inefficiencies, then unable to deal with the dynamic demands of latest agriculture (Rivera et al., 2000). Due to shortage of extension personnel, currently working personnels must cover a vast area in respect of extension services, technology dissemination, training programmes. They are unable to reach to the remote areas of villages due to shortage of time and manpower. Sometimes the technology cannot reach to the target audience in proper time for the delay of the information dissemination.

4. Changes in demand and consumption:

Per capita cereal consumption for food declined somewhat over the past three decades, while the consumption of fruits, vegetables, meat, fish, eggs, and dairy products increased . The demand for livestock products has been increasing rapidly during the last two decades. The increased demand must be primarily met through increase in productivity gained through increased application of knowledge by the farmers. Though it is required to fulfil the huge demand of growing population, most of the farmers are still practising traditional farming techniques. There is a technology gap between farmers and extension personnels.

5. Inaccessibility of proper information:

Many farmers, especially those in remote or marginalized areas, face difficulties in accessing timely and relevant information. Traditional extension methods, such as in-person training sessions and field visits, often fall short in terms of scalability and coverage. Unfortunately, the digital divide persists, with many farmers lacking access to the internet and other modern communication tools. A significant portion of the farming community comprises small and marginalized farmers who may have limited literacy and numeracy skills. This poses a barrier to the effective communication of agricultural practices, innovations, and government schemes. Many farmers may not be fully informed about the existence of government schemes, subsidies, and extension programs. This lack of awareness prevents them from actively seeking out valuable information that could enhance their agricultural practices and improve overall productivity.

CONCLUSION

The current issues in agriculture extension in India underscore the urgent need for comprehensive reforms to ensure the sustainability and prosperity of the country's agricultural sector. Challenges such as the lack of public-private partnerships, inaccessibility of proper information, and resource constraints within the public sector have collectively impeded the effectiveness of extension services, hindering the potential for inclusive growth and technological adoption in agriculture. One crucial aspect that demands attention is the fostering of robust public-private partnerships (PPPs). Addressing the inaccessibility of proper information is pivotal for the success of agriculture extension efforts. Adequate funding, manpower, and infrastructure are essential to strengthen the outreach and impact of agriculture extension services. These obstacles hinder the efficacy of extension services, impeding inclusive growth and technological adoption in the sector. The absence of clear government policies exacerbates these issues, leaving information inaccessible due to inadequate infrastructure and digital divides. By fostering partnerships, enhancing accessibility to information, and addressing resource constraints, the country can pave the way for a more inclusive, technologically advanced, and sustainable agricultural landscape.

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