



MY MEETING NOTES

Training on
Agricultural Innovation Systems (AIS)
29-31 October, 2013, Barsana Hotel and Resort, Darjeeling, West Bengal, India



In the rapidly changing agricultural innovation scenario, application of the innovation systems framework offer new hopes. This was clearly revealed in the recent training on Agricultural Innovation System (AIS) organized jointly by the Australian Council for International Agricultural Research (ACIAR) and the Centre for Research on Innovation and Science Policy (CRISP). Dr. Kausik Pradhan, Assistant Professor and Former Head, Department of Agricultural Extension, Uttar Banga Krishi Viswavidyalaya reflects on his participation in this training here

CONTEXT

This training was aimed at achieving a shared understanding about application of agricultural innovation systems (AIS) framework for improving the capacity of agricultural research and extension. The training was divided into five interactive and knowledge sharing sessions namely benchmarking the understanding about innovation, introduction to AIS, diagnosis of AIS, applying diagnosis and operationalising AIS in organisation/project settings. Along with theoretical insights (Box 1), opportunities were created to work on case studies and to apply the tools of AIS in real life situations. 23 trainees representing organisations from West Bengal (Uttar Banga Krishi Viswavidyalaya; Department of Agriculture, CDHI, ANWESHA), Bangladesh (CIMMYT-Bangladesh, Bangladesh Agricultural Research Institute, Rangpur-Dinajpur Rural Services) Nepal (IWMI), Australia (Curtin University, CSIRO, ACIAR) participated in this training. Dr. Rasheed Sulaiman V, Director, Centre for Research on Innovation and Science Policy (CRISP) was the Key Facilitator and Mr T S. Vamsidhar Reddy, Senior Research Fellow, CRISP was the Associate Facilitator of this programme.



Box 1: Agricultural Innovation System (AIS)

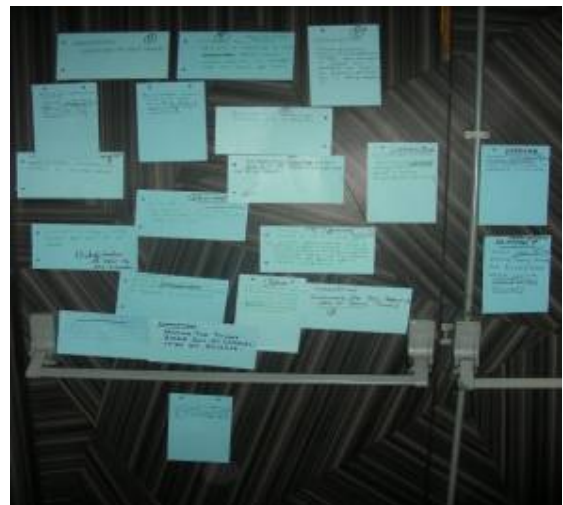
Innovation is the prime mover of agricultural development and it is a major source of enhanced productivity, competitiveness, and economic growth throughout advanced and emerging economies. It plays an important role in creating jobs, generating income, alleviating poverty, and driving social development. An innovation system is defined as a “network of organisations, enterprises and individuals focused on bringing new products, processes and new forms of organization into social and economic use, together with the institutions and policies that affect their behavior and performance”. Its main characteristics are interaction and knowledge flows among the wide range of actors involved in generation, adaptation and use of knowledge. While research, extension and farmers are important actors in the AIS, it considers other actors in the various other domains such as demand, enterprise and policy and support system that are critical for putting new knowledge into use

LEARNING

1. Understanding of term ‘innovation’ :

The meaning of innovation has considerably evolved during the past three decades. During 1960’s and 1970’s, innovation was considered as a new technology developed by the scientists and transferred by the extension agencies to the ultimate users and the role of extension was to communicate innovation. During 1980’s and 90’s innovation was understood as an outcome of interaction among stakeholders in the Agricultural Knowledge Information System (AKIS). The role of extension was to facilitate innovation. Currently innovation is viewed as an inclusive process of generating, accessing and putting knowledge into use to result in a social and economic change. The role of extension in AIS is to catalyse innovation and to play a connecting role. In other words, innovation is the process by which individuals or organizations master and implement the design and production of goods and services that are new to them, irrespective of whether they are new to their competitors, their country, or the world. So, mere transferring of knowledge or invention is not enough for innovation. Innovation is not a research driven process simply relying on technology transfer. However, research has a useful role in promoting innovation.

An innovative methodology was used in this training to better conceptualize the term innovation. A card exercise was conducted to clearly understand the views of the participants regarding the term innovation and this was followed by grouping the cards and having a discussion around this topic to discuss how the term has evolved and what is its current understanding.

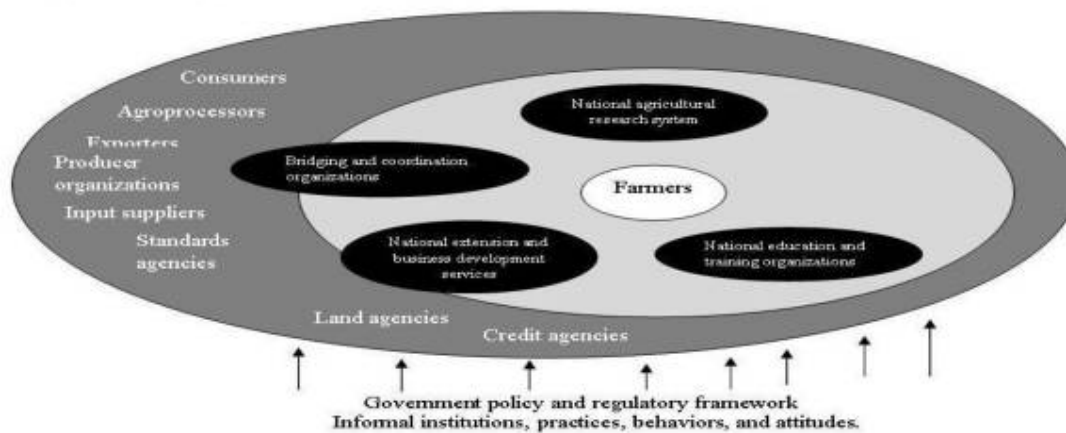


2. Introduction to Agricultural Innovation System (AIS):

Agriculture faces several new challenges. These include: lack of sustainability of resource use, global warming and climate change, poor market access and unstable market prices, increased corporate control on inputs and retailing foods, new standards and regulations, increase in number of small farms. Solving many of these challenges need group action and interaction among the wide range of actors beyond research, extension and farmers. The innovation system framework recognises innovation as a process of generating, accessing and putting knowledge into use emphasising the interaction and knowledge flows among different actors and how institutions, policies and the enabling environment influence knowledge production and application. Learning is an important element of AIS as learning is the means to evolve new arrangements specific to local context. Consequently, innovation system offers a potentially useful framework for analysis of existing situation and identifying the appropriate interventions.

AIS (Figure 1) comprises of demand domain, enterprise domain, intermediary domain, research domain and support structure. It could be used as a tool for analysis and as a framework for intervention. The capacity of AIS is determined by the four elements namely actors, interaction and knowledge flows, institution (habits and practices), policies and enabling environment.

Figure 1 An Agricultural Innovation System



Source: The World bank (2012) Agricultural Innovation Systems An Investment Source Book (Modified from Rivera et. al.n.d.)

To understand the conceptual framework of AIS in a better way, the participants were divided into 4 groups and to work on two problem cases, namely Value addition in Pineapple in the tribal district of Orissa' and 'Addressing fodder scarcity at Pondicherry'. The participants worked on these two problems/challenges using the principles they learnt on AIS in the session and came out with proposals on addressing these challenges. Each group presented their plans and this was discussed and commented. This was followed by a presentation on how these problems/challenges were addressed by two organisations in Orissa and Pondicherry.

3. Diagnosis of AIS and applying in real life situation:

Diagnosis is an important step in applying AIS. Diagnosis has four pillars: Actors and their roles; linkages among actors; habits and practices and the enabling environment. The first pillar envisages identifying the diverse agencies that have a potential stake in the issue under consideration and analysing their current and potential roles. The second pillar tries to understand the nature and quality of their interactions/linkages. The third pillar about habits and practices focus on identifying the underlying rules, norms, practices or behaviour that explains the current linkage status. The last



pillar is on understanding the policies which support the collaboration and the effective support structures prevailing within the system. The approach of administering this tools starts with defining the thematic and geographic scope of diagnosis and then engaging in data collection, triangulation and analysis. Lastly it ends with confirming this diagnostic analysis with key informants. Experiences of using this tool in varied contexts was shared in this session and some of the practical issues in using this tool (the need for flexibility, importance of a local facilitator etc) was also discussed.

The participants were divided into two groups and each group visited two sites on the second day to undertake a quick diagnosis around two on-going interventions happening in these sites (promotion of zero tillage and improving access to water by using modified pumpsets). The groups tried to understand the actors associated with the intervention, their roles, linkages among the actors, habits and practices and the enabling environment. The groups worked on these cases and presented their findings from the quick diagnosis next day. Field work to apply the diagnosis, presentation of the results and the discussions around the results all helped in reinforcing the learning acquired in these sessions.

4. Operationalising AIS:

Two concepts were discussed in this session:

- a. Innovation Management:** The major argument made in this session is the need for moving our approach from research/extension management to innovation management if we have to enable innovation. This was explained based on three cases from the Research Into Use (RIU) project in South Asia, namely participatory crop improvement in Nepal, strengthening value chain in vegetable and scaling up integrated flood plain management. The presentation highlighted the importance of undertaking several functions such as facilitation, coaching, networking, organisational development, adaptive research, policy engagement etc simultaneously if we have to achieve large scale application of new knowledge. It also highlighted the limitations of the transfer of technology approach that is commonly used in these types of settings
- b. Innovation platform/network/cluster/cloud:** Innovation platforms, Innovation networks and Innovation Clusters are basically mechanisms employed to bring together diverse actors that are critical for innovation for sharing perspectives and knowledge and promoting joint action. These platforms could be formed at various levels, national to local. Experiences from using innovation platforms in different project settings were shared in the presentation.



FINAL IMPRESSIONS

- ✓ The trainees gained confidence to try out some of the approaches and tools of AIS due to the skill endowed knowledge provided by the erudite, knowledgeable, affectionate and professional resource faculty of CRISP. The trainees had enough time and space within the programme to share their knowledge and experiences with the facilitators and co-participants in an interactive manner. A fusion of training methodologies such as card exercise, group discussions, case analysis, interactive lectures, practical exercises and field visits empowered the trainees these concepts and applying these through cases and practical field work.



- ✓ In this rapidly changing global scenario, application of the Agricultural Innovation System (AIS) framework will help in empowering the rural communities and making them more competitive and productive. Increasingly several organisations and programme have started applying AIS in their work. It recognises the role and contribution of different actors beyond research and farmers in achieving innovation and the importance of institutional and policy change. As AIS focus on knowledge generation till its application, it is a very useful tool for extension to address increasingly complex challenges and help it in achieving innovation and impact at a wider scale.

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