ENGAGING YOUTH, FARM WOMEN AND PRODUCER ORGANISATIONS IN EXTENSION



YOUTH: POTENTIAL TARGET FOR AGRICULTURAL EXTENSION

Agricultural extension services should tap the energy and creativity of rural youth to transform agricultural sector, argues Mahesh Chander.

India is losing more than 2,000 farmers every single day and that since 1991, the overall number of farmers has dropped by 15 million (Sainath, 2013). This has several implications for the future of Indian agriculture and India's food security. Young farmers can play an important role in ensuring food security if they are encouraged to involve in farming and the challenges they face are addressed. Over the past few years, rural youth have been shying away from agriculture and globally there is an increasing interest in finding ways of engaging youth in agriculture (IFAD, 2012; Paisley, 2013).

Box 1: Why Youth in Agriculture?

Young people are three times more likely to be unemployed than adults and more than 75 million youth worldwide are looking for work, according to the UN International Labour Organization (ILO). Due to their limited access to assets (in particular land), markets, finance and education and skills training, youth are often unemployed or work informally – often in unpaid, very low-skilled, insecure and sometimes hazardous jobs (IFAD, 2012). Most of the educated youth find agriculture as an unattractive preposition; especially the way it is practiced traditionally by their parents. The society largely looks down upon farming, as also families of prospective brides do not prefer farming youth.

When specific youth policies do exist in developing countries, they often do not cater for poor rural youth but tend to be biased towards non-poor males living in urban areas. Consequently, there is growing disenchantment among rural youth towards agriculture vocation and they find it much lucrative to migrate to cities to do even menial jobs. Large-scale migration of rural youth from farming to urban areas has caused concern among the agricultural policy makers, since, such a trend, if not checked, is likely to affect agricultural activities in the future. Thus, checking migration and retaining youth in agricultural sector is currently a big challenge.

Generally youth are willing to adopt new ideas and technologies and therefore agricultural extension services should target youth to transform agriculture. The youth could be the ideal catalyst to change the poor image of persons involved in agriculture, especially in the rural communities given their greater possibility to adapt new ideas, concept and technology which are all important to changing the way agriculture is practiced and perceived. Agricultural extension services can effectively address these issues by encouraging and supporting youth participation in agriculture. Improving their capacities and increasing their involvement will also help in changing the

negative perception about farmers as "uneducated and unskilled, physical labourers engaged in a glamourless vocation with extremely low economic returns".

The population in the age-group of 15-34 in India increased from 353 million in 2001 to 430 million in 2011. More than half of India's population is under the age of 25, with 65 percent of the population under 35. The rural population is about 70%, and the indications are that the migration of rural youth to cities is around 45% in the country, which is quite alarming. The youth from low income families are disadvantaged due to poor telecommunication connectivity, poor

quality of educational standards coupled with a high dropout rate beyond primary school stage is a major challenge. Such youth have very limited information about or access to various options in relevant skill training and are often also unable to pay the admission fees for such training.

The Government of India has formulated its youth policy (NYP-2012 draft) to respond effectively to the changing conditions of the young people in the 21st century. This national policy aims to put young people at the center of country's growth and development by recognizing the problems of rural youth to be addressed through suitable interventions.

Box 2: Youth Defined

Youth is often understood to be the period of transition from childhood to adulthood, encompassing processes of sexual maturation and growing social and economic autonomy from parents and carers (Bennell, 2007). There is no universally accepted definition of youth, since the age ranges anywhere from 8 to 40 yrs. On the occasion of the International Youth Year in 1985, the United Nations General Assembly for the first time defined youth as people between the ages of 15 and 24 for its work on youth (with under 15s being classed as 'children'). For global programming purposes, FAO defines the priority age range for rural youth development from 10 to 25. The World Development Report (2007) expanded the range to include all people between 12 and 24 years.

The Government of India (GOI) officially defines youth as persons between the ages of 13 and 35 years and it also varies depending on the programme. For instance, the National Youth Policy of India considers age group 10 to 34 yrs as youth. The United Nations (UN) and the International Labour Organisation (ILO), however, defined the youth as persons between 15 and 24 years of age for cross country comparison and analysis.

Youth and Extension

Adult Vs Youth: When India became independent in 1947, about 83% of the Indian population was living in rural areas and most of the Indians were illiterate (over 88%). Adult education was the main focus for extension at that time and the agricultural extension programmes, obviously were mostly designed considering this mass scale rural illiteracy, focusing on interventions aimed at improving the functional literacy among rural adults. However, over the years, the literacy rates have gone up and in 2011, it stands at 74.04%. The rural youth are now more literate, aware, educated and many are looking for new livelihood options including migrating to urban areas. Here lies the importance of developing extension programmes for youth, who are the future farmers.

Head of family Vs Youth: Most of the agricultural extension programmes which we implemented since independence in India traditionally targeted the head of families for training and technology transfer. In extension studies too, we consider the head of family, mostly male as the respondent, though in every diffusion-adoption study we found the early adopters to be younger. Youth are more techno-savvy and they could access information & knowledge promoted through

the new ICTs which uses computer, internet and mobiles. Young farmers often have greater capacity for innovation, imagination, initiative and entrepreneurship than older adults and these characteristics should be effectively harnessed by extension services to provide better livelihood opportunities for youth in agriculture.

The investment on youth in agriculture is still minimal, as there are only a few youth focused programs and thus, few clear examples of impact. Nevertheless, the ICAR and departments of Agriculture in many states are recognizing the farmers including the young and innovative ones for the innovative and diversified farming ventures taken up by them. Many young farmers are



taking up high risk high returns agri-ventures like protected agriculture, precision farming, organic agriculture, floriculture, medicinal and aromatic plants cultivation etc, which are mostly avoided by the aging farmers. These new agri-ventures need to be actively supported by the government agencies and financial institutions with skill training, financing and marketing support.

Some of the initiatives presented below have tried to enhance capacities of rural youth and some new initiatives have also been planned.

On-Going Initiatives

Krishi Vigyan Kendra (KVKs): Imparting need based vocational training to farmers, farm women & rural youth to change their knowledge, skill & attitude as a result uplift the standard of living, is the main mandate of the KVKs. KVKs numbering over 631, exist practically in every district of India. A total of 4.86 lakh extension programmes/activities were organized by the KVKs during 2012-13, which attracted the participation of 170.16 lakh farmers and 2.61 lakh extension personnel. These KVKs organized 65,314 training programmes under capacity building with the participation of 18.8 lakh farmers/farm-women, rural youth and extension personnel during 2012-13.

Besides this, 8,486 skill-oriented training courses (both on-campus and off-campus) were organized exclusively for 1.91 rural youth, of which 69,163 (36.17%) were young women. These trainings were organized on various vocations viz. crop production and management, post-harvest technology and value-addition, nursery management, livestock, fisheries, income generation activities, capacity building and group dynamics etc. These KVKs also conducted 5,730 capacity building programmes for 1.42 lakh extension personnel, which included 34,563 (24.35%) women extension personnel (ICAR, 2012-13). KVKs need more resources to organize more number of similar trainings.

Nehru Yuva Kendra Sangathan (NYKS):

Established in 1987-88 as an autonomous organization under the Ministry of Youth Affairs and Sports, it has been channelizing the power of youth (13-35 yrs) on the principles of voluntarism, self-help and community participation. Over the years, NYKS has established a network of youth clubs in villages, where Nehru Yuva Kendras (501 at the moment) have been set up, harnessing youth power for development by forming Youth Clubs, which are village level voluntary action groups of youth at the grassroots level to involve them in nation building activities,

working for community development and youth empowerment. However, only a few NYKS are involved in agricultural development. Much more could be achieved if NYKS could focus on skilling rural youth in agricultural activities.

NABARD Farmers' Clubs: NABARD's policy support for Farmers' Club Programme emphasizes on linking technologies with farmers' club members, while facilitating market access through capacity building of members of Farmers' Clubs including leadership training; linkage with technology/markets; Self Help Groups (SHGs)/ Joint Liability Groups (JLGs) formation and forming Federations of Farmers' Clubs/Producers' Groups/ Companies. Under this programme, the NABARD has so far (March 2013) assisted formation of 1.27 lakh farmers' clubs across the country. These clubs are organized by rural branches of banks with the support and financial assistance of NABARD for the mutual benefit of the banks concerned and the village farming community/rural people.

The broad objective of setting up Farmers' Clubs is to achieve prosperity for the farmers with overall agricultural development in its area of operation by facilitating credit counseling, technology counseling and market counseling. The NABARD provide a financial assistance of Rs. 10,000 to each club per annum for three years. The club members are expected to utilize this amount to meet routine expenses for formation, maintenance, and organising awareness meets. Most of these farmers' clubs have a good representation of rural youth.

New Initiatives

ARYA (Attracting and Retaining Youth in Agriculture): The Indian Council of Agricultural Research (ICAR) has constituted a seven-member expert committee, to suggest ways of attracting youth to agriculture. The committee is working on issues such as providing training to farm youth on innovative and sustainable agricultural practices to help make agriculture a profitable venture. This would involve a series of activities, including exploring opportunities in secondary agricultural operations such as value addition of crops and hiring, and servicing of mechanized farm implements. This is going to be an important strategy of the ICAR focused on rural youth mobilization for agricultural transformation during 12th plan (ICAR Reporter (October-December-2012).

National Rural Livelihood Mission (NRLM):

NRLM aims at creation of opportunities for both wage employment and skill development for the rural youth, who lack skills in many areas of

agricultural production and processing. National Skill Development Mission and the National Skill Qualification Framework are, thus, aggressively pushing the agenda of skill development to build the capacity of rural youth so that they are meaningfully employed in rural areas itself. Thus, need based experiential skill learning supported by public sector banks/organizations in rural areas is the key to strengthen the Rural Self Employment Training Institutes (RSETIs) being set up in all districts under NRLM to assist such youth (Likhi, 2013). NRLM requires suitable decentralized convergence of skill development programs run by multiple central ministries including the National Skill Development Corporation (NSDC).

Agricultural Skill Council of India (ASCI):

Considering the need for skilling the work force in agricultural sector, the Agricultural Skills Council of India (ASCI) has been recently proposed by National Skill Development Corporation (NSDC), which could be one ideal institution to train rural youth. The ASCI proposes to train, certify and accredit 56.5 million workforce comprising of farmers, wage workers, entrepreneurs and extension workers, over 10 years through its training partners.

ASEAN-India Farmers Exchange: The Ministers of the ASEAN (The Association of South East Nations) concerned over the small number of young farmers' involvement in the agriculture sector, agreed on the importance of promoting innovation and entrepreneurship among young

farmers to achieve more sustainable agriculture development in the region. This initiative is expected to create greater awareness among the young and innovative farmers on the promising career in the agriculture sector. The 1st Exchange Visit was conducted in Malaysia in conjunction with the 2012 ASEAN Farmers' Week and the Malaysian Agriculture, Horticulture and Agrotourism (MAHA) International in November 2012, followed by the 2nd Exchange Visit conducted in India during December 19-30, 2012, wherein, farmers' delegation from nine ASEAN member states participated.

Mobilizing Young Farmers

Attracting and retaining youth in agriculture is critical for Indian Agriculture. Most of the new innovations (both technical and institutional) require a skilled agricultural work force. For instance, promotion of high value agriculture, precision farming, organic cultivation, Hi-Tech horticulture, micro-propagation, Integrated Pest Disease & Nutrients Management, Post-Harvest Management, development of backward and forward linkages etc. require well trained young farmers with enthusiasm and passion for farming and ability to take risks. The rural youth could be the ideal target for skill training in these new areas of agricultural growth and to do this effectively there is a need to mobilize young farmers. Organised groups of young farmers will be useful for introducing new production technologies and organizing effective input and output markets.

Box 3: Young Farmers' Associations

The enthusiasm of youth for new technologies facilitated the initiation of rural youth programmes in USA, leading to the birth of the 4-H clubs in 1914. These clubs well recognized as an innovative way to introduce new agriculture technologies to rural communities, now have become important partners of the Cooperative 8Extension Service in USA especially on promotion of youth involvement in agriculture. Similarly, in European Union and in other developed countries, the young Farmers Associations are active since long, For instance, the National Federation of Young Farmers' Clubs (NFYFC) is one of the largest rural youth organisations in the UK, There are 662 Young Farmers' Clubs in England and Wales.

In India, the recently initiated "The Young Farmers Association (YFA), Punjab" is involved in promoting and modernizing agriculture. The YFA, has started a programme called the Future Farmers Foundation (FFF) to encourage the youth to take up farming as a viable and lucrative occupation to increase farm income, while maintaining sustainability in agriculture.

Way Forward

The following measures may help boost involvement of rural youth in farming:

 Farm Youth Policy: Formulating a comprehensive policy on farm youth including suitable institutional arrangements for its implementation as recommended by the 12th plan Working Group on Agricultural Extension. If acted upon, it would take care of many of the concerns and challenges rural youth face in taking up farming.

Extension Programme for Youth: An
exclusive nationwide extension programme
may be launched to address the issues
concerning rural youth to mobilize them
towards their greater participation in
agricultural production activities. The proposed
"Farmer First" programme of the ICAR to be
implemented in 12th plan should focus on

young farmers to draw maximum benefit from the programme.

- Beyond technical skills: The rural youth may be encouraged, trained and supported for undertaking innovative farming and associated ventures like agri-tourism to supplement income. Sufficient resources should be invested to improve not only technical skill training, and entrepreneurship development but also a range of other skills and competencies, particularly those 'soft' skills such as communication, leadership and business skills. This can be achieved effectively, if youth are mobilized through youth clubs, financially supported under extension reforms.
- Farm Youth Clubs: Farm youth may be mobilized as Farm Youth Clubs (FYCs) so that it serves as a platform for rural youth to discuss issues related to farming, farm enterprises and

- skill development. Inter-country and interstate youth exchanges may also be organized by these FYCs to share experiences on best practices and learning. ICAR/SAUs, state Departments of Agriculture and the Gram Panchayats may take a lead in this.
- young farmers/agripreneurs including those youth who have successfully launched agriventures/agri-entrepreneurship in different parts of the country may be highlighted through radio, TV and newspapers to motivate other young farmers. The community radio too can play vital role in encouraging and making young farmers aware about the possibilities in agricultural sector. Extension staff should effectively use the mass media and also the social media to encourage and support rural youth to play meaningful roles in agricultural transformation.

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ENHANCING THE CAPACITIES OF FARM WOMEN

Women do play an important role in crops such as wheat and they really value information if it is provided to them. Surabhi Mittal and Vinod Hariharan explore the gender roles and decision making in wheat farming in India, based on empirical data in this blog.

In India as per the agricultural census, one third of the agricultural cultivators, both farmers and laborers are women. Their participation in agriculture is rapidly increasing because of multiple factors but the prime reason is out-migration (temporary or permanent) of male members of the family in search of alternative avenues for income, thus leaving the women of the household to be fully involved in agriculture.

In the case of wheat cultivation, it is generally perceived that all the operations in wheat production are carried out by men and the women have only a secondary role in it. A wheat survey conducted by CIMMYT in 2014 covering 1022 households in three states of India; Haryana (335), Bihar (357) and Madhya Pradesh (330) however revealed several new insights on their roles in different operations.

To understand women's participation in various activities, we calculated the average number of days women spend on a particular operation in wheat production and also compared it with men's contribution for the same in the household. We found that, women's share of contribution of labour to wheat production is lowest in Haryana and highest in Bihar. In Bihar and Madhya Pradesh, women are mainly engaged in seeding and fertilizer application while in Haryana and Bihar it is weeding and irrigation. Harvesting is an important activity in all the three states where women are actively involved. Overall table below presents the average time spent in wheat production, disaggregated by gender.

Women's Role in Decision Making

Though women spend a substantial amount of time in agriculture, what is her role in decision making? The literature review revealed that women are not playing an important role in decision making, though she is an active participant in farming. This is attributed to her lack of education and low decision making power within the household. (Mehar, 2014). Studies argue that men remain the key decision makers in crop production and marketing. In the survey we also found that, almost all the decisions related to the use of technology and marketing of produce were primarily taken by men. However, decisions on storage and consumption were found to be mostly taken either by men alone or jointly with women in the household.

In Haryana, a large proportion of households responded that most of the decisions are taken by men. In Bihar and Madhya Pradesh there are evidences of joint decision making but trends vary among different agricultural activities. However,

percent of households that reported women only taking the decisions was negligible. The households that reported such instance were usually women headed households where men have either migrated or where men are too young to take decisions.

Lack of information?

Why women are not taking decisions though they play several roles in farming? Is it the social cultural barriers or inability to make decisions? When we discuss these issues in detail with the farmers in villages (which are mostly men) their usual

response is that women did exactly what men told them to do as women don't get information about agricultural technologies. Because of this reason, they "lack technical know-how" on farming.

Women in farming households, also feels the same. So if we are keen to improve their decision making skills on farming issues, they should also have equal access to information. Studies show that women are usually left out by information providers due to institutionalized socio-cultural barriers, low literacy levels, low involvement in decision making and their hectic daily schedules.

Table 1: Average Time spent (days per acre) by men and women in wheat production

		Haryana (335)	Bihar (357)	Madhya Pradesh (330)
Men	Hired Labour	4.37	10.24	3.14
	Family Labour	6.67	22.44	4.52
	Total	11.04	32.68	7.67
Women	Hired Labour	0.67	14.37	3.92
	Family Labour	7.26	25.92	4.33
	Total	7.93	40.29	8.25

Note: Figures given in the parenthesis are the number of households in each State. Source: Authors calculation from CIMMYT wheat value chain survey, 2014.

M(obile) Solution in Bihar and Haryana

CIMMYT-CCAFS programme initiated the project "M(obile) solution" in Bihar and Haryana (Box 1) to specifically address this issue of information asymmetry. The project has taken special efforts to ensure that it is inclusive - where not only women from women headed households but also women from male headed households were included in information transfer as voice message on climate smart technologies/ practices, weather agro advisories etc.

Initial analysis of the data collected from the pilot study of the project carried out in Bihar and

Haryana has thrown up interesting results. Nearly 1,100 farmers received about 325 messages over a period of 9 months between 2013 and 2014. Feedback was randomly sought from 510 farmers, nearly 16 percent of whom were women. These feedbacks were collected through systematic paper survey that helped to identify the type of information that farmers were using and action taken on then along with quantification of the impact if visible. The feedback also included information about what information farmer do not find useful or is inconsistent. This helped to develop the priority plan and customization according to villages and districts.



Box 1: M(obile) Solution

The project is working with local partners like Kisan Sanchar limited, IKSL, Farmers cooperatives of some of these villages and also the state agricultural department, KVKs and national research institutes and universities to provide climate information and agro advisories to farmers. As part of promoting climate-smart approach to farming, the couple are subscribed to M(obile) Solution.

It offers an alternative model of information dissemination that incorporates farmers' feedback by creating an information loop that not only pushes information, as traditional climate information services do, but also pulls back information from farmers. Farmers are delivered information in form of voice messages on their mobile phones on weather, climate smart technologies and practices, seed, nutrient management, livestock management, pest management etc.

Farmers have access to helpline numbers to contact back for detailed or follow-up questions. These queries are also used as feedback to develop the agro-advisory messages. The field staff of the project and partner organizations also interacts with the farmers from time to time to understand the usability of advisories, action taken and impact. Farmer to farmer messages are also transmitted, if benefits or threats faced by some farmers need to be passed on to other farmers in that geographical area. All these efforts helped to create a feedback loop for more timely, usable and actionable agro advisories.

The most interesting observations from the study are as follows:

Need for Information: During the initial survey on information needs, women farmers responded that they are interested in messages linked with pest management and weather information only. But when they started receiving these information on their mobile phones, they showed increasing interest to receive information on related technologies and practices and also information on livestock management This means the demand for information keeps evolving and one has to continuously assess demand to provide the needed information.

Use of information: Within the project team, there were apprehensions initially that that women might not value this information as they are not the decision makers. But actually what we observed was that women do value these information. This is clearly revealed from the equitable listening rate to the messages that women farmers have in two contrasting states. In the study we had around 13.75% women farmers of which almost 70 percent were listening to the messages that they received on their mobile phones as voice messages. Their listening rate was on average 44 seconds per message almost equivalent to their male counterparts. They were listening to almost 88.9 percent of all the messages delivered which made them informed and aware about climate smart practices, weather information, seed information and pest management.

Gains from information: Many women farmers, particularly in the study villages in Karnal (Haryana) though not directly engaged in farming were spending the same amount of time as male farmers in listening to the full voice message.

This is a good indicator of their interest in the information provided, although it is yet to be seen, if this translates into greater participation and decision-making in agriculture. The feedback received from female farmers clearly revealed that they appreciated the awareness they got on climate-smart agriculture practices and issues related to climate change. Several of them noted that they often shared the information with other women who were not part of the project.

Overall benefits: With the dissemination of information, it is observed that farmers have become more aware about these technologies and have started recognizing the value of information on weather delivered to them. They shared anecdotal evidences as to how precise and timely weather based agro-advisories have helped them to take informed decision about use of inputs during the sowing season based on which they have saved the irrigation and the cost on pesticides and weedicides. Women farmers have become more aware about climate smart technologies and they feel empowered with access to information. Moreover, where ever possible they were taking action as well.

Lessons for Extension

- It is imperative that extension services should target the entire family and not just male farmers.
- To reach women, it is important to understand how information services can overcome existing barriers, keeping in mind the existing social and cultural context
- Voice messages in local language through mobile phones offers new opportunities to reach women farmers and women in male

headed farming households

• Provision of information on all aspects related to agriculture (not merely on operations

which they are currently involved with) can potentially increase womens' ability to do farming better and also enhances their decision making capacities.

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LEVERAGING EXTENSION SERVICES FOR ACHIEVING GENDER- AND NUTRITION-SENSITIVE AGRICULTURE

Enhancing women's skill and knowledge through a targeted extension system is a prerequisite for achieving the goal of genderand nutrition-sensitive agriculture. However, efforts in this direction are few. Surabhi Mittal explores these issues in this blog.

Empowering and educating women has positive implications for children's health and nutritional status, which in turn influences the demographic dividend, and that is what India aims to harness in the medium to long run. Many experts consider women to be at the nexus of agriculture, health and nutrition, and thus gender and nutrition are increasingly being viewed as priority areas for research and extension.

Women often hold dual roles as consumers and food managers at home, influencing intrahousehold management of both food and nutrition security (Box 1), as recognized by India's National Food Security Act (NFSA). They also play a substantial role as producers, and contribute a significant share to farm labor all over the world. It is important to find ways to mainstream gender in nutrition into the field of agriculture, so as to create gender and nutrition linkages in the food systems.

Thus, in this blog we present a discussion around how women's involvement in decision-making and time-use in agriculture influences the nutritional status of the household. We also discuss how extension can play an important role in women's empowerment and behavior change for improved nutritional outcomes.

For improved Nutritional outcomes

Even if women are playing an active role in agriculture, it is often found that their involvement in the decision-making process on various agricultural activities is very limited. It is often cited that a lack of access to information sources, new technology, credit facilities and proper training limits the decision-making capacity of women (Mittal 2016¹). These factors also have an impact on aspects related to food and nutritional security.

Women's role is also important in meeting the cultural needs of food consumption and preparation within the household. Empirical evidence shows that household consumption patterns, and mainly that of women in the household, change during times of crisis and uncertainty. Women tend to prioritize the food intake of the elderly and children before themselves during food shortages caused by factors like variations in household income and seasonal availability of food products. Therefore, it is important to improve the affordability of nutritious foods by ensuring their year-round availability, and by limiting the impacts that price

shocks can have on household incomes.

Increasing the quantity of food available at the household level does not always guarantee improvement in nutritional status, since the latter depends as much on the diversity and quality of food as on its availability for consumption and the intra-household distribution of that food. For this reason, enhancing women's understanding of nutrition and why it is important to have

a nutritious and diversified diet, as well as encouraging behavioral change towards self-consumption are critical to achieving positive nutritional outcomes. Reaching out to women, however, warrants a differentiated communication strategy on nutrition for different age cohorts (such as for school going girls, adolescent girls, young women attending colleges and universities, young women in the reproductive age cohort, and other older women).

Box 1: Pathways of effect on nutrition

Studies have shown a growing trend of feminization in Indian agriculture (Satyavathi et al. 2010²; Rao 2006³, Headey etal. 2011⁴). With increased feminization of agriculture, it is often seen that consumption habits change as time available for the household reduces and traditional ways of cooking and eating habits adapt to the woman's formal work lifestyle. The changing role of women in agriculture, and how they make decisions about their time and expenditure choices have direct implications on agricultural sub-systems – ranging from production to anthropometric outcomes. Income, education and food expenditure are some of the direct routes through which health outcomes can be improved.

Moreover, it is important to recognize that the combined provision of children's health services, nutrition education for mothers, and women's empowerment interventions has been shown to lead to heightened impact on child stunting. Everyday logistics, such as childcare services for working mothers can also have real implications on gender and nutrition outcomes, and therefore warrant special consideration (Gillepsie and Mason 1991⁵). We need to have structural policies that support working women, such as having proper daycare facilities at work locations; breaking down gendered roles in the household and at work, is important for better child nutritional status in the case of women who work outside the home.

The amount of time that women devote to labor-intensive agricultural activities and work outside the home can have implications for their own nutritional status as well as the nutritional status of their children and family members (Smith and Haddad 2015⁶). Household chores, farm and non-farm activities constitute approximately half of women's total time use. The more time women spend in agricultural work and domestic activities, the less hours they have available to spend on personal and family care (Padmaja et al.⁷). It is in this context that enhancing women's access to low-cost mechanized equipment and tools is essential for reducing their drudgery and overall time spent in the field.

Increased labor market participation by women also manifest income effects that have a positive implication on nutritional security. Higher incomes help in improving the household food security status, but better awareness and education can bring about nutritional security, because women can then buy cautiously as well as choose a diverse food basket for family consumption.

Leveraging Extension Services in Empowering Women and Enhancing Nutrition

Access to income and equal employment opportunities for women enhance the household's access to food and nutrition. A fundamental step forward in that direction involves removing

the constraints faced by women with regard to their access to information, dissemination, and extension facilities. Information asymmetries tend to limit the ability of women farmers to harness the potential of agriculture, as they often do not have access to the appropriate technological know-how and inputs, as well as information on weather patterns and best agronomic practices.

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⁵Gillespie S and Mason J. 1991. Nutrition relevant actions: some experiences from the eighties and lessons for the nineties ACC/SCN State-of-the-Art Series. Nutrition Policy Discussion Paper no. 10. Geneva: United Nations.

⁶Smith LC and Haddad L. 2015. Reducing child under nutrition: Past drivers and priorities for the post-MDG era. World Development 68:180-204.

⁷https://www.researchgate.net/profile/Padmaja_Ravula/publication/305657476_Gendered_time-use_patterns_and_effects_on_nutritional_status_of_women_and_children_in_the_semi-_arid_tropics_micro-level_evidence_from_selected_villages_of_India/links/57987aa308aed51475e83d60.pdf

In this context, the roles of extension services become significant. Extension agents often fail to reach out to women farmers due to structural impediments such as staffing and funding shortages that make it difficult to reach resource-poor, remote farms (as women's barriers to credit and land titles usually leave them with marginal lands). Existing cultural and social barriers also discourage women farmers from interacting with male extension workers. Enhancing women's skills and knowledge through extension systems is a prerequisite for increasing their decision-making capacity and income, which lead to better nutritional outcomes.

Within agriculture extension services, agrinutrition-related education and communication have a very critical and important role to play if we want food security to translate into nutritional security and gender empowerment. Extension has a facilitating role in multi-sectoral convergence for leveraging agriculture with regard to nutritional security and gender empowerment. Information and Communication Technology (ICT), together with traditional media, offer a platform for promoting extension for agri-nutrition. Although extension services in India have started integrating modern ICT tools to disseminate information, yet gender bias exists due to poor access of women to these resources.

Nutrition-sensitive information is still not a mandate for the extension system of India. It is necessary to deviate from just the conventional information about staple crops and agronomic practices and include information that incorporates a diversified production system. For example, to enhance household nutrition, it is important to promote labor-saving technologies and a variety of allied activities, such as kitchen gardening, wadi (orchard), livestock, poultry, and fisheries. This can help in creating gender-driven diversification of production activities.

Studies, 8.9 suggest that there is need to update the curriculum of extension agents so as to integrate such information into their training. The current curriculums taught to extension agents in the state agricultural universities do not integrate the agriculture and nutrition linkages.

Nutrition-related extension is done through the Ministry of Women and Development and they focus largely on women's health aspects. The agricultural extension system needs to be linked more closely with the health extension services so as to create extension material that is relevant for nutritional improvement in the agricultural sector.

Self-Help Groups (SHGs) have been a successful platform for initiating behavioral change – by educating and empowering women to increase their incomes and economic opportunities. These groups emerge as potential change agents for creating an enabling environment that can enhance women farmers' access to technology and related inputs. SHGs can be leveraged and institutionalized to enhance capacity and employment opportunities in agriculture; examples of such are 'Kudumbashree' in Kerala, and 'Jeevika' in Bihar. Extension can play an important role in developing entrepreneurship among women. There is a need for transforming and graduating from micro-credit to microentrepreneurship, taking advantages of the SHG network and using it as platforms for extension education.

Way Forward

There is an obvious and glaring disconnect between agriculture and nutritional security. Bridging the gaps between agriculture, nutrition, and gender empowerment will make a major contribution towards achieving the goal of freedom from malnutrition. Women play an important role in ensuring both food security and nutritional security in the family as they are producers of food and also because they play an important role in food management. Empowering them to make informed decisions and recognizing their role in this process can help solve some of the challenges related to nutritional security. There is a need to invest in the development and distribution of time-saving farm technologies to reduce women's drudgery as this will help to improve labor productivity and limit women's time in the field. This will help improve her and her family's nutrition by allowing them to spend more time on activities like child care and food preparation.

There is need to ensure that extension services and extension tools and materials are gender and nutrition inclusive. Enhancing women's skill and knowledge through a targeted extension system is a prerequisite for achieving the goal of improved decision making in the context of

^{*}https://openknowledge.worldbank.org/bitstream/handle/10986/23767/Improved0nutri0l0lessons0from0India.pdf?sequence=1&isAllowed=y

⁹Kachelriess-Matthess S, Matthess A, Stancher A, Asare B and Afoakwa EO. 2016. Promoting nutrition-sensitive Extension Advisory Services. Note 25. GFRAS Good Practice Notes for Extension and Advisory Services. Lausanne, Switzerland: GFRAS. http://www.g-fras.org/en/knowledge/gfras-publications/category/tag.html?tagid=67

increased feminization of agriculture. Farmer-to-Farmer extension programs can be more focused

on engaging women lead farmers, who can then

reach out to other women farmers.



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PRODUCER ORGANISATIONS AND EXTENSION: PERFORMANCE AND SUSTAINABILITY

Producer Organisations often need continuous hand holding support to emerge as viable and effective organizations and quite often this kind of support is not available, argues Utpal Barman.

Producer organisations (POs) are widely heralded as leading contributors to poverty reduction and achievement of food security (FAO, 2010). POs can successfully strengthen the economic position of their members by providing agricultural inputs, credit, processing and marketing services (Narayanan and Gulati, 2002), In India, the Central Government has identified farmer producer organisation as the most appropriate institutional form around which to mobilize farmers and build their capacity to collectively leverage their production and marketing strength (GoI, 2013). While several POs are doing well, a large number of POs struggle to continue their activities after the first few years of its formation.

Context

The economy of Assam state, India is predominantly based on agriculture. Its agriculture is characterised by large number of marginal and small farmers, fragmented land holdings, low level of adoption of technologies, low productivity, dependency on monsoon rainfall, etc. These hinder improvement of agriculture. To address these issues, the Government of Assam decided to mobilize farmers in the form of Field Management Committee (*Pathar Parichalana Samitee* in Assamese).

Box 1: FMCs

Field Management Committee (FMC) is a producer organization meant for effective management of agriculture in a specific crop field. It is formed in a contiguous field where large numbers of farmers of a village or of a locality have their land or cultivation. A farmer can be member of more than one FMC, but he/ she will be eligible to be a member of only one executive body. It came into operation by a resolution on settlement of agricultural land and reorganisation by the Government of Assam in 1951. FMC is a non-government organisation (NGO) registered by the District Agricultural Officer, Department of Agriculture, Assam. The Agricultural Development Officer (ADO) and Village Level Extension Worker (VLEW) of the concerned area are the technical advisers of the FMC.

Considering its numbers, membership and nature of activities, the FMC is a giant and unique organisation in the country. It earned the recognition as a village intermediary and a project delivery instrument. Actually, the FMC is a bold step in reaching out to the farmers (target groups). By 2011, the Department of Agriculture, Government of Assam has organized about 1.8 million farmers in 25,938 FMCs (Govt. of Assam, 2012).

Box 2: Objectives of FMC

The basic objective of the FMC is to organise farmers of a contiguous field to bring about development of agriculture and allied activities through collective planning and implementation of programmes. Its specific objectives include:

- Preservations of seeds and seedlings for emergency situation and to take up suitable cropping programmes in areas affected by flood and other natural calamities.
- To develop field by taking up soil conservation & land development wherever necessary and to adopt irrigation and water management measures for higher production.
- To take up crop cultivation, plant protection and post harvest measures collectively by the members of the FMC and popularise use of improved agricultural inputs, organise seed production programme.
- Continuous programme in the field by adopting crop rotation system to raise 2 to 3 crops a year.
- Arrange to protect crop from stray cattle to venture in fodder cultivation.
- To open sales counter for agricultural inputs and to have a common stock of agricultural machineries and implements for use.
- To arrange to get the farmers and farm women trained on modern methods of agriculture through both institutional and peripatetic training.
- To train educated unemployed youth on operation and maintenance of agricultural machineries etc.
- To provide suitable warehouse facilities for the produce.
- To maintain liaison with the Department of Agriculture, Agricultural Universities, Research Stations and other Department.
- To keep basic information/statistics of the FMC and to review its progress.
- To enthuse the members to take up other agricultural activities like animal husbandry including poultry, piggery, duckery, fisheries, beekeeping, social forestry, sericulture, weaving etc.

The World Bank aided project ARIASP (Assam Rural Infrastructure and Agricultural Services Project) recognized and used the FMC platform to implement several projects. The financial institution like National Bank for Agricultural and Rural Development (NABARD) and North Eastern Development.

Finance Institution (NEDFi) have treated it as the vehicle for grass root level project implementation. Council for Advancement of Peoples' Action and Rural Technology (CAPART), Indian Tea Board, Regional Rural Bank and others have also effectively collaborated with the FMC in various schemes (Barah, 2006).

Performance

Through FMC, farmers have benefitted by way of access to new and improved machinery (power tillers and other implements for farm mechanization), collective labour sharing and development of marketing facility for agricultural produce. There has been increase in cropping intensity and productivity in different areas and many farmers adopted modern technologies and diversified their farming activities.

However, the history of FMCs indicates that sustainability is an issue from very beginning. During the period 1951-63, over 10,000 FMCs were formed. These FMCs functioned up to the expectations only for a short period. FMCs were

reorganised during the 1970s for the benefit of farmers. However, this time also FMCs did not perform well after the initial years.

In 2001-02, a capacity building programme for FMCs was under taken by ARIASP and the Department of Agriculture, Assam with the help of National Institute of Agricultural Extension Management (MANAGE), Hyderabad and Extension Education Institute (EEI), AAU, Jorhat. The project covered different aspects of organisational development and trained the FMC members. Significant improvements were recorded on the status of FMC in terms of 17 parameters in the initial years, but again with time the performance diminished. The parameters were leadership, group action, organizational aspects, records and accounts, repair and maintenance of implements, arranging shallow tube wells and other Government Subsidies, capital formation, communication between executive committee and general members, adoption of modern technology, service to members by executive committee, solving stray cattle problem, social welfare actions, SHG formation, registration of FMC, establishment of office, community marketing etc (Neog, 2004).

However, by 2012, almost 95 per cent FMCs were defunct. Therefore, it is important to analyze the reasons for their lack of sustainability. Though FMCs are old and big, there are only very few studies that have explored this topic. Based on reviews of official documents and research studies:

interactions with extension personnel, members and non-members of FMCs and through my own observations, I have arrived at the following conclusions.

Reason of Poor Sustainability of FMC

From field based to village based

Though FMC is a field-based producer organisation, in practice it has evolved as a villagebased organisation of a particular group meant for agricultural development. In reality all cultivators of the selected field are not the members of the FMC. For instance, some of the cultivators are staying in different villages. Though they are eligible to become members of FMC (in the village they are cultivating) the members of that village who were in majority didn't allow them to become members. Therefore the land remains fragmented and the FMC didn't receive cooperation from these potential members. In such situations, the FMC could not take collective decision on proper use of the field. As a result aspects related to farm mechanisation, intensification, irrigation, land development, soil conservation, collective purchase of inputs, storage of farm produce etc., remained untouched. Only few FMCs took collective action for preservation of seeds and/or seedlings to take up suitable cropping programmes in area affected by flood and other natural calamities. Because of these factors, most of the small and marginal farmers having fragmented land lost faith in the FMC and slowly withdrew from the FMCs.

Demarcating the field

Though the field of FMC should be properly earmarked (not necessarily a fenced one), in practice the FMCs did not demarcate the field from fields of other farmers. People could not recognise the field as a field of a particular FMC. Most of the areas of Assam are still under mono cropping and winter paddy is the main crop. Therefore, after harvesting of winter crop generally farmers practiced open grazing system as there is a shortage of fodder for livestock. Under such conditions, the interested farmers cannot raise second crop. The cost of fencing is also a problem. Therefore, the cropping intensity is also low. However, the farmers can solve this type of problem by cultivating the second crop collectively. Even they can bear the cost of fencing and alternatively cultivate fodder crops. Inability to demarcate the area of operation of the FMC has been another reason for poor sustainability of the FMCs.

Member contribution

The members of the FMC are expected to deposit a monthly contribution as fixed by the FMC.

However, in most cases the members did not deposit the contribution regularly. Nevertheless, whenever there is some subsidy-oriented schemes, the members quickly deposited the required amount to get the subsidised inputs. In all other times, they remained inactive as members of the FMC.

In such situations, the active members also could not do much through the FMC. Hardly any FMC in practice gave due importance to farm women though they are also equally involved in agricultural activities. Likewise little or no effort was given to organise training for farmers, farmwomen or unemployed rural youth.

Distribution of Inputs without Support and Services

Most of the FMC received agricultural machineries, tractor, power tillers, pump set etc. from the Department of Agriculture. However, in the villages mechanics to repair these machines were often not available. Though FMC members were interested to contribute to procure subsidised machineries, they were not interested to contribute for its maintenance. Moreover, the FMCs in most cases did not formulate any mechanism to fund these initiatives. In some other cases, some interested farmers maintained some machineries at their own cost and they kept it with them for use. Finally due to inactiveness of the members and/or executive body of the FMC, most of these machineries are not traceable now.

Governance of FMC

Though the executive body of FMC should be formed at regular intervals, the FMCs in most cases is managed by the same group of people. The executive body meeting of FMCs were also not held regularly. Members in general are not concerned as very few attend these meetings. In practice, FMC president/secretary generally convened a meeting when some government schemes are offered to them. In the meeting, they discussed mainly that issue only. The members generally did not review the progress of implementation of the decisions taken by the FMC. From the very beginning, most of the FMCs heavily depended on the staff of the Department of Agriculture, who could not help them or solve their problem.

Forming Groups without Mobilization

FMC emphasises the role of farmers and their active participation in programme planning and resource allocation. It assumes that farmers will be able to understand their situation and to act on it. However, success of this group approach depends on sufficient mobilisation at the grassroots level.

However, most of the groups were formed by extension staff (Agricultural Development Officer/ Village Level Extension Workers) without investing sufficient time and effort in mobilising the farmers. As a result, farmers did not realise the importance of FMC and they did not involve actively in FMC activities.

In practice, the FMCs faced several challenges related to leadership, group dynamics, organisational development, conflict management, planning, decision-making, accounting, record keeping, resource management etc. However, there was little or no regular programme on capacity building of FMC members on these aspects. The extension personnel were also not well equipped on such topics to help the FMC members. They mainly acted, as technical advisers on agriculture. These types of unresolved issues finally affected the sustainability of FMCs.

Lack of Capacities within Extension

Extension personnel should act as facilitators of FMC and not as technical experts. As a facilitator, extension personnel should ensure that the FMC work as a constructive, collaborative, creative and cohesive unit. As facilitator, they should have been more concerned with helping farmers to gain confidence, to organise them and to get them involved in agricultural development initiatives. To perform these roles, the extension personnel should act as an enabler, supporter, team builder, problem solver, conflict manager, motivator, counsellor etc. These roles are completely different from the role of an expert. However, no effort was made to develop their skills among extension staff and therefore, they couldn't perform these roles effectively.

Lack of Clarity on Registration and Access to Funds

As per rule, the FMC, though an NGO, is a producer organisation formed under Department of Agriculture, Government of Assam. District

Agriculture Office registers the FMCs. After the registration, the FMC become illegible to get various services of the Department of Agriculture and other government organisations. It also acted as an extension wing of the Department of Agriculture. However, in the mean time a state level NGO named as Sodou Asom Pathar Parichalana Samity (SAPPS) was formed in 1993. It also has similar types of objectives to form FMC just like the Department of Agriculture. However, they are not working in collaboration with the Department of Agriculture and there are no fixed sources of funding for running their activities. It has its own rules and regulations. Initially, the SAPPS showed some progress. To get the benefits from SAPPS, a FMC must register with it. However, these registrations have no value to the Department of Agriculture because they provide services to those FMCs, which are registered by the District Agriculture Office. The parallel activity created confusion among farmers and they registered their organization with both agencies and this dual registration created problems. Currently SAPPS lack sufficient funds to support FMCs formed all over the state. The Department of Agriculture consider the FMCs formed by them only as an extension wing of the Department of Agriculture have difficulty in recognizing FMCs formed by others and this has created confusion among farmers resulting in weakening of the FMCs.

Way Forward

The Government of Assam has started reorganization of FMCs once again. Hopefully they will analyze the reasons for the poor performance of FMCs so far. Capacity building of extension personnel to play the role of facilitator should be of high priority. Extension personnel should follow proper steps to form FMC. They should analyse the past record of earlier FMCs as many of those ex-members will come to form FMCs again. The Agricultural Department should not give target



to extension personnel to form FMCs. Proper mechanism should be established to monitor the performance of FMCs on regular basis. Emphasis should be given for convergence of FMCs at different levels. If needed an in-depth analysis of services provided by SAPPS and the Department

of Agriculture to FMCs should be undertaken. For sustainability of group efforts, there should be proper planning of FMC activities. The extension personnel should involve the members to prepare their activity calendar. This will help the members to stick to the activities of FMCs.

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PRODUCER ORGANIZATIONS (POs) AND EXTENSION: THE ROAD AHEAD

Farmers are organizing their own support systems including extension delivery through forming their own organizations to access information, advice and support on production and marketing. It is time to recognize the contributions of producer organizations and enhance their capacities to provide a much wider range of services to producers, argues, Mahesh Chander.

Producer Organizations (POs) are successfully strengthening the economic position of their members by providing agricultural inputs, credit, processing and marketing services (Narayanan and Gulati, 2002). Organizing farmers into specific producer groups also improves the effectiveness and efficiency of agricultural extension systems in supplying relevant commodity or product-specific information and training directly to farmer groups who are producing particular crops or products (Swanson, 2008).Globally, POs are also increasingly recognized as an important actor in the Agricultural Innovation System (Heemskerk & Wennink, 2005; Shapland & Kampen, 2006; Rondot and Collion, 2005; FAO, 2010).

Producer Organisations in India

In India too, organizing producers, especially the small and marginal farmers is considered as one of the most effective pathways to address some of the most important challenges in agriculture. For instance, during the 12th Plan period (2012-2017), the Small Farmers' Agribusiness Consortium (SFAC) aims to further promote POs (GOI, 2013). The Government hopes that this will foster technology penetration, improve productivity, enable improved access to inputs and services and increase farmer incomes.

Similarly, the Ministry of Agriculture has identified farmer POs registered under the special provisions of the Companies Act, 1956 as the most appropriate institutional form around which to mobilize farmers and build their capacity to collectively enhance their production and marketing strengths. It also involves linking POs directly to market opportunities to enable integration in the agriculture value chain and create direct producer consumer supply chains. These developments have important implications for extension.

Basically POs cater to the producers' interests and their varied needs and organize activities that help strengthening the capacities of their members to deal with production and marketing challenges. POs could be a farmer associations around a commodity (eg: Maharashtra State Grapes Grower Association) or around an activity like water management (eg: *Pani Panchayats*); a producer co-operatives (eg: milk cooperatives promoted by the National Dairy Development Board); or a producer company (eg: Vanilla India Producer Company Limited (VANILCO). The major types of producer organizations active in India are discussed hereunder:

The Grower Associations

Many commodity oriented (fruits, vegetables, sugarcane, banana, etc.,) grower societies are

functional in India, which help farmer members in getting the latest information and technology. For instance, the Maharashtra State Grapes Grower Association maintain regular contacts with research centres working on grapes to access information and technologies related to grape farming and organizes educational programmes for its member farmers. They also support

grape growers in developing integrated plant protection schedule against pest and diseases and implementing measures to reduce pesticide residues to facilitate exports. The Association organizes a number of seminars and conventions to educate growers and engage in policy advocacy on behalf of growers and also for strengthening the grape sector.

Box 1: Producer Organisations

Farmers' and rural producers' organizations refer to independent, non-governmental, membership-based rural organizations of part or fulltime self-employed smallholders and family farmers, pastoralists, artisanal fishers, landless people, women, small entrepreneurs and indigenous people. They are based on principles of non-discrimination, provide a range of services for their members, including market opportunities and empower all their members, women, men and youth. The POs are grounded on the principle of collective action among potential beneficiaries. Collective action occurs when individuals voluntarily cooperate as a group and coordinate their behavior in solving a common problem. These can assume a variety of forms, from small, grassroots associations to unions, federations and chambers of agriculture. They range from formal groups covered by national legislation, such as cooperatives and national farmers unions, to looser self-help groupings and associations (FAO, 2007).

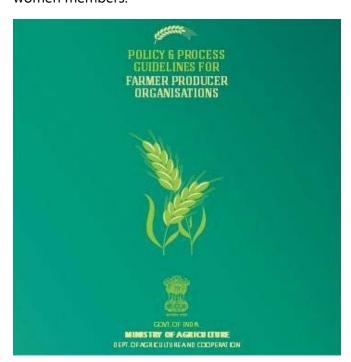
The User Associations

User groups are common in the area of participatory irrigation management, watershed management and community forest management. For instance, in Odisha, the Orissa Farmers Management Irrigation Act provides for the establishment of farmers organizations in all the irrigation systems, for their operation and maintenance. The Act enables farmers' participation, not only at a lower level but also in a restricted manner at the main system level. The farmers' collective action is enabled through the formation of *Pani Panchayats* whose office bearers are elected through a democratic process. The Act also provides for the autonomous management of the irrigation system by producer organizations in their respective areas for both the maintenance of the system and for the distribution of water. In some state, the *Pani Panchayats* could orient farmers to adopt the best water management practices; understand the collective management systems in crop planning, water distribution and conflict resolution and develop an action plan for strengthening learning.

The Farmer Cooperatives

The cooperatives especially in the dairy sector have organized an effective extension delivery system in India. Extension activities are undertaken at the level of the Dairy Cooperative Societies and the milk unions to create awareness about improved animal husbandry practices. For instance, the Anand Milk Cooperative Union (AMUL) in Gujarat organizes field demonstrations and extension camps to promote better feeding practices, fodder development and clean milk production practices

among milk producers. Dairy cooperatives exist in many states and are owned by about 15 million farmer members, out of which over 4 million are women members.



The Farmer Interest Groups (FIGs)

A Farmer Interest Group (FIG) is a self managed, independent group of farmers with a shared goal and interest. Commodity oriented Farmer Interest Groups (FIGs) are promoted by the Agriculture Technology Management Agency (ATMA) at block/village level to make the technology generation/dissemination farmer-driven and farmer-accountable. These Village level FIGs are ultimately federated at block/district level and they are represented in Farmer Advisory Committee and ATMA General Body (GB).

The Farmers' Clubs

The NABARD has assisted formation of 54,805farmers' clubs across the country. These clubs are organised by rural branches of banks with the support and financial assistance of NABARD for the mutual benefit of the banks concerned and the village farming community/ rural people. The broad objective of setting up Farmers' Clubs is to achieve prosperity for the farmers with overall agricultural development in its area of operation by facilitating credit counseling, technology counseling and market counseling. The NABARD provide a financial assistance of Rs.10,000 to each club per annum for three years. The club members were expected to utilise this amount to meet routine expenses for formation, maintenance, and organising awareness meets.

The Producer Companies

Producer company means a body of corporates having objects or activities specified in section 581B of companies Act, 1956 and registered as producer company under this Act [S.581A(1)]. The concept of Producer Companies was introduced in India in the year 2002, and about 500 Producer Companies are registered till date. To support POs in forming Producer Companies, the NABARD (National Bank for Agricultural and Rural Development) has also established Producers' Organization Development Fund (PODF). This fund is used for promoting organizational and skill building exercises, organizing meetings of the experts, organizing for tie-ups with the various agricultural universities, etc. Indian Organic Farmers Producer Company Limited, Vanilla India Producer Company Limited, Rangsutra Craft Duniya Producer Company Limited, Masuta Producer Company Limited, and ESAF Swasraya Producer Company Limited are some of the successful producer companies established so far in India.

The POs discussed here are only a few illustrative ones which have role in extension services delivery to farming communities. All POs, however, may not be equally effective or focused on extension delivery. Other than the POs discussed above, there are other farmer organizations that lobby for government support like input subsidies, price support and other favourbale policies in support of farmers. For instance, *Shetakari Sanghatana* (a non political union of Farmers) works towards freedom of access to markets and technology. Similarly, the *Bharatiya Kisan Union* negotiates for fair deals to farmers on land acquisitions and reduction in toll tax. Such organizations have deep influence on the

farmers' they represent and can potentially play an important role in technology promotion and market development.

Way Forward

- Experience shows that POs represent
 the interest of their members and have
 the potential to articulate their need for
 agricultural services. Extension organizations
 should therefore collaborate with them in their
 activities. Partnering with POs would improve
 knowledge promotion, adaptation and its
 eventual use. It also helps extension to assess
 better the priorities of farmers. Many POs
 need support to develop their capacities to
 serve farmers better especially in promoting
 adoption of new technologies, stimulate
 learning and develop entrepreneurial skills.
- Extension should also help in promoting producer organizations. POs need to be built on a strong foundation of producer initiative and ownership and they need long term efforts and provision of hand holding support. The public extension system traditionally has very limited skills in this area and therefore it should partner with others (mainly NGOs who are often skilled in social mobilization and market development) in supporting their development and improving their links to markets.
- Extension should develop its own capacities related to development of producer organizations and these include capacities related to organising, sustaining and federating POs to take up new extension and advisory service tasks in agriculture and linking them to new source of knowledge and services); facilitation (facilitating discussions, enabling consensus building and joint action, accompanying multi-stakeholder processes); ,mediating in conflicts (by improving dialogue and helping to reach agreement); negotiating (helping to reach a satisfactory compromise or agreement between individuals or groups and developing negotiating capacity among other stakeholders); brokering (creating many-tomany relationships among the wide range of actors) etc.

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