Extension’s Role in Organizing Producer Groups: a Case Study from Orissa, India

Sanat Mishra
Livelihoods Expert
Orissa Community Tank Management Project (OCTMP)
Water Resources Department, Rajeev Bhawan
Bhubaneswar-751001, Orissa, India
E mail: mishrasanat@yahoo.com

Burton E. Swanson
Professor Emeritus of Rural Development
University of Illinois at Urbana-Champaign
1301 West Gregory Drive, Urbana, IL 61801
Telephone: 217-244-6978
Fax: 217-244-1873
E mail: swansonb@illinois.edu

Abstract
This paper outlines the procedures and outcomes of a new extension model in India that sought to organize producer and self-help groups within four districts in the State of Orissa. This new program activity was carried out as part of an overall decentralized, farmer-led, market-driven extension model that was pilot-tested as part of the Innovations in Technology Dissemination (ITD) component of National Agriculture Technology Project (NATP) funded by the World Bank during 1998-2005. First, this new extension model sought to integrate research and extension activities in each participating district through a new Agriculture Technology Management Agency (ATMA). Second, each ATMA worked to integrate the efforts of the district extension system, local non-governmental organizations (NGOs) and farm leaders to collaborate together in forming different types of Farmer Interest Groups (FIGs) and women’s Self Help Groups (SHGs) across each district. The primary goal was to enable these farmer groups to pursue appropriate high-value crop, livestock or other enterprises that would increase farm household income. The procedures used to organize these groups are outlined in this paper. Once organized, these FIGs and SHGs became involved in the extension program planning process through the ATMA Governing Boards at the district level and Farmer Advisory Committees established at the block or subdistrict level. The purpose was to identify key problems and priorities among these different farmer groups. As a result of this new extension strategy, nearly 1,400 producer groups were organized in five years across these four project districts.

Key words: Farmer organizations, bottom-up extension, rural livelihoods
Introduction

This paper will document how a more decentralized, farmer-led, market-driven agricultural extension system in India helped increase the technical, economic and social skills of rural farm households in four districts of the State of Orissa in eastern India. Orissa is the second poorest state in India, with over 45% of its 37 million people living in poverty (i.e. < $1/day). Hunger continues to be a very serious problem in Orissa, with child malnutrition averaging more than 25% and with over 50% of all children being underweight. Orissa is a very rural state with about 85% of the population still living in rural areas and only about 25% of rural households have access to electricity.

The extension model used to organize producer group in four districts (Khurda, Koraput, Ganjam and Sambalpur) in the State of Orissa was introduced and pilot tested through the Innovations in Technology Dissemination (ITD) component of the World Bank financed National Agricultural Technology Project (NATP). First, an Agricultural Technology Management Agency (ATMA) was established as an autonomous registered society in each district to serve as the focal institution for integrating and coordinating agricultural research and extension activities across the Krishi Vigyan Kendra (KVKs or Farm Science Centers) and line departments (agriculture, horticulture, livestock, fisheries, and so forth) within each district. This ATMA model has been described in more detail elsewhere (e.g. Singh et al 2006, and Swanson, et al 2008) and will not be repeated here.

One key operational innovation used by each ATMA was the organization and use of “farmer interest and self-help groups” to both organize and target extension programs around the specific needs and economic opportunities of the different categories of farm households. This paper outlines the pivotal role played by the ATMAs in integrating the work of the KVKs, the extension staff, as well as the local NGOs in first organizing these different producer groups and then in helping these groups pursue promising new agro-enterprises to improve rural livelihoods.

Prior to the process of institutionalizing ATMAs at district level, the agriculture extension system in India primarily focused on technology transfer for the major staple food crops (i.e. cereals) to increase the productivity (yields) of these crops. Other issues relating to the intensification and/or diversification of the farming systems to increase farm household income (i.e. market-driven extension) were not considered their responsibility. The rationale for introducing the ATMA model was to 1) organize different categories of farmers into groups, 2) determine their interests and emerging market opportunities for different high-value crops, livestock or other products, and then 3) to integrate the knowledge and skills of the different line departments (agriculture, horticulture, animal husbandry, etc.) and research, to enable these groups in pursuing promising new enterprises that would increase farm household income, especially among the rural poor.

The complexity of this process was not simple, given the low literacy rates among small-scale farm households, especially rural women (< 25%), as well as the dominant role of “traders” in controlling local agricultural markets. Therefore, the problem being addressed was whether agricultural extension workers could successfully organize small-scale farmers into groups, help them start up new production systems or enterprises and, thereby, increase their farm income.

Purpose and Objectives

The objective of this paper is to explain how the agricultural extension system in Orissa successfully organized different types of farmer organizations (both men and women) to teach the necessary technical, economic and social skills needed to enable these poor farm households
to increase farm income, reduce malnutrition, and increase their access to education. Hence, three interdependent objectives have been identified to outline the role played by agricultural extension workers in organizing and then supporting producer groups under the ATMA model in the State of Orissa. These objectives follow:

- The methods used to formulate and/or strengthen Farmer Interest Groups (FIGs) and Self-Help Groups (SHGs; mainly women’s groups).
- The procedures used to institutionalize the participation of FIG and SHG leaders into the program planning and priority setting for this newly decentralized, farmer-led extension system;
- The extension activities undertaken to strengthen the social, technical and management skills of FIG and SHG members, so they could pursue these new income generating activities.

**Framework and Methods**

Starting in 1998, the first Agricultural Technology Management Agency (ATMA) was registered in Khurda district, followed by the introduction of ATMAs into three other districts. All four ATMAs continued to operate until June 2005, after which donor funding ended. The formal registration dates for each ATMA follows:

<table>
<thead>
<tr>
<th>No.</th>
<th>Name of ATMAs</th>
<th>Month of Registration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ATMA, Khurda</td>
<td>November 1998</td>
</tr>
<tr>
<td>2</td>
<td>ATMA, Koraput</td>
<td>August 1999</td>
</tr>
<tr>
<td>3</td>
<td>ATMA, Ganjam</td>
<td>September 2000</td>
</tr>
<tr>
<td>4</td>
<td>ATMA, Sambalpur</td>
<td>October 1999</td>
</tr>
</tbody>
</table>

Institutionally, ATMAs were established as registered societies but they were staffed by a senior extension official from the Department of Agriculture (either as the ATMA Director or Deputy Director) and from a State Agricultural University (also, as either the ATMA Director or Deputy Director). The purpose was to combine the flexibility of a Nongovernment Organization (NGO), since ATMAs were officially a registered society with the credibility of government agencies. The organizational framework illustrating how the different research units and line departments were integrated at the district and subdistrict levels is presented in Figure 1.

This new bottom-up management structure is outlined in Figure 2, which formally institutionalized farmer participation in the decision-making process within the ATMA Governing Board (GB) at district level and through Farmer Advisory Committee (FAC) at block level. Initially these FAC members were selected by the block extension staff; however, after the FIGs and SHGs were organized at village level, these emerging leaders began representing these commodity groups and other enterprises at both the block and district levels. This new management structure began the process of empowering otherwise small and marginal farmers, including rural women, ethnic minorities and tribal groups (i.e. a minimum 30% representation).
Note. ZRS = Zonal Research Station; KVK = Krishi Vigyan Kendra (Farm Science Center); DOA= Dept. of Agriculture; DOH = Horticulture; DAH = Animal Husbandry; DOF = Fisheries

These FIGs and SHGs were voluntary, self-governing, unregistered societies of farmers and/or farmwomen, formed at the village level for the purpose of economic cooperation to improve and sustain their resource base (social, economic and natural) (Desai, et al 2005). Each group consisted of 15-20 members, mostly from same village with both harmonious (likeminded/social parity) and homogeneous (economic parity) backgrounds (also see: Shepherd, 2007 and Meinzen-Dick et al, 2004).

The role played by the public extension system in organizing these groups is outlined in the following sections, as they sought to address the needs and priorities of these producer groups, as well as the capacity building activities needed so they could effectively develop and implement these producer group activities.
**Methods and Stages of Group Formation:**

The extension system in Orissa began pilot-testing this new decentralized, participatory, market-driven extension strategy in four districts to determine if small-scale farm households, including farm women, could diversify into different types of high-value crops and products and, thereby, increase farm income. Since local traders generally controlled the markets for most high-value crops/products they were, in effect, capturing most of the profit from these products. Therefore, it was determined that farmers must organize into different types of producer groups to improve their access to urban markets and to eliminate the need for local traders. Also, as the local extension staff focused on these different producer groups, who were interested in producing specific products, then this approach became more effective and efficient in increasing the technical, management and marketing skills of these participating farmers. In the process, members of these different producer groups also learned new social, organizational, leadership and financial management skills.

![Diagram of the Decentralized ATMA Management Structure](image)

**Figure 2. The Decentralized ATMA Management Structure**

The procedures carried out by the local extension staff, working in collaboration with NGOs, in developing these FIGs and SHGs is outlined in Table 1. This framework shows the steps, timeframe, how these activities were implemented and the performance indicators that

---

**Table 1. Framework for Developing FIGs and SHGs**

<table>
<thead>
<tr>
<th>District</th>
<th>Block</th>
<th>Village</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Singh, Swanson and Singh, 2006; Swanson, Singh and Reddy, 2008
were used to measure progress in organizing each group. Initially, this strategy was first implemented by local (NGOs) who helped organize interested farmers and farm women into different types of FIGs or SHGs. Once organized, then the local extension staff began working with these different FIGs or SHGs to determine the most suitable high-value crops or products that could be produced locally, given local agro-ecological conditions (e.g. irrigated or rainfed), proximity to markets, transportation (most rural roads are unpaved and are impassable during monsoons) and gender (men and women traditionally produce different products).

Table 1
*Steps in Forming Groups, including Time, Role and Performance Indicators*

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Steps in Forming FIG/SHGs</th>
<th>Time Frame</th>
<th>Role of Extension</th>
<th>Performance Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Start Up</td>
<td>2 months</td>
<td>Conduct awareness campaigns; village meetings; identify leaders; and mobilize farmer groups</td>
<td>Leader usually takes the initiatives; prospective members meet with each other.</td>
</tr>
<tr>
<td>2</td>
<td>Firming Up</td>
<td>2-3 months</td>
<td>Exposure visits; interaction within groups; decide on commonality of group interests; develop future course of action; provide information in assessing different agro-enterprises.</td>
<td>Members contribute a monthly fee; group norms finalized; decide upon agro-enterprise(s) to be undertaken; plan extension programs; determine the availability of micro-credit</td>
</tr>
<tr>
<td>3</td>
<td>Setting Up</td>
<td>2 months</td>
<td>Conduct training programs to help groups develop an agro-enterprise management plan</td>
<td>Adequacy of knowledge and skills to undertake group activities; selection of work site, develop production plan, resource mobilisation, determine input needs and a marketing plan.</td>
</tr>
<tr>
<td>4</td>
<td>Acting Upon</td>
<td>6 months</td>
<td>Provision of demonstration support; linkages with banks and other developmental programs; handholding during implementation; and conflict resolution</td>
<td>Implementation of Agro-enterprise management plan; refinement of the plan during implementation; and resolve operational bottlenecks.</td>
</tr>
<tr>
<td>5</td>
<td>Spreading Up</td>
<td>1 year after start up</td>
<td>Revisit the agro-enterprise management plan and suggest changes; extension provides support for one more season</td>
<td>Strengthening of existing agro-enterprise and/or to attempt new enterprises and/or to pursue a new implementation strategy</td>
</tr>
<tr>
<td>6</td>
<td>Stabilize</td>
<td>2 years after start up</td>
<td>Provide only techno-managerial guidance during BTT-FAC meetings and through routine field visits.</td>
<td>Agro-enterprise(s) emerge as sustainable producer groups at village level and associations at the block/district level</td>
</tr>
</tbody>
</table>
After the initial FIGs and SHGs were organized and were working with the local extension staff, then many of these emerging farm leaders began networking with other farm households, especially in other communities, to increase the total number of FIGs and SHGs being organized. As a result, these expanding producer groups began working together to form new producer associations (PAs) at the sub-district level, so they could further expand their access to markets into larger towns and cities; thereby, securing higher prices and further increasing farm income.

Experiences in the four ATMA districts demonstrated that resource poor farmers can pool their labor and other resources to pursue common objectives. These groups were formed around a commonality of interest as they undertook specific agro-enterprises; thereby, increasing access to inputs, technologies, credit and markets. Initially, prospective group members would meet formally on a scheduled day (mostly on a fortnightly or monthly basis) and they would contribute a nominal sum towards group membership activities. With support and encouragement from Block Technology Team (BTT) and Farmers’ Advisory Committee (FAC), these groups would soon begin developing their own procedures to gain access to needed technical and management skills, as well as in gaining access to inputs, credit and marketing services for a particular commodity. The BTTs would begin by introducing a suitable or manageable technological package that reflected several key factors, such as the size of farms, soil and water conditions, level of income and access to markets. Effective backward and forward linkages were worked out before initiating these activities. Also, the groups were strongly encouraged to liaise with banks, cooperatives and other agencies to increase their access to micro-credit, inputs, subsidies and so forth. The GB of each ATMA took the lead in helping establish these linkages.

Operational Procedures Used to Identify and Address Farmer Problems and Priorities

Prior to the institutionalization of ATMAs at the district level, the agriculture extension system primarily focused on technology transfer to increase the productivity and overall production of staple food crops in achieving national food security. Issues relating to increasing farm income through the production and marketing of high value horticultural crops (e.g. fruits, vegetables, herbs, aromatic and medicinal crops), livestock, freshwater fish and other food products were not considered part of their extension duties. However, a major objective of the NATP project was to increase farm income and improve rural livelihoods, especially among small-scale and women farmers. Therefore, establishment of the ATMAs at district level, using a bottom-up planning process and integrating both research and the line departments was designed to help refocus extension activities on those program areas of direct interest to small-scale and women farmers at both the block and district levels.

The first step in shifting the focus of the extension system toward increasing farm incomes and improving rural livelihoods involved having senior research and extension personnel at the district level carry out a Participatory Rural Appraisal (PRA) in each district. Once the PRA was completed, then these research-extension teams prepared a preliminary Strategic Research & Extension Plan (SREP). These SREPs were prepared at the beginning of the project and were based on a) different agro-ecological conditions within each district, b) possible market opportunities for different high value crop and livestock products, c) the identification of innovative farmers who were already successfully producing and marketing different high-value products, and d) an assessment of the different types of crops or other
enterprises that were of direct interest to different categories of farmers, including rural women. The goal was to prepare a preliminary plan or blueprint that would outline how the district level agricultural research and extension system would work together in serving the needs of small-scale and women farmers during the next 3-5 years. During the 3rd year of project implementation, this SREP was revised and fine-tuned to reflect what had been learned during the first two years of operations.

Similarly, at block or sub-division level, prior to each season (i.e. Kahrif, which runs from April to September and Rabi which runs from October to March) Block Action Plans were prepared for each block and then these BAPs were collated at the district level in developing a comprehensive Annual Action Plan for the district. These BAPs were reviewed and approved by the FAC members, representing the different FIGs and SHGs at the block level and then submitted to ATMA GB for review, approval and funding.

This process led to emergence of overarching issues affecting small and marginal farmers, including rural women, which were prevalent in each of the four districts. For example, the lack of bargaining capacity among small-scale and women farmers; lack of market accessibility, especially with small levels of production; lack of access to new technologies for specific high-value crops/products; and their lack of capacity to intensify and/or diversify their farming systems, and so forth. Therefore, the BAPs became fundamental documents that outlined the problems and priorities that the different FIGs wished to pursue and this process defined the agenda to be carried out by this more integrated agricultural extension system.

**How Farmer Group Leaders were Engaged in Setting Extension Priorities**

There were 7 or more farmer representatives on each ATMA Governing Board (GB), including at least 30% (i.e. 2-3 representatives) from the major scheduled castes, tribal groups and rural women from within each district. Initially, these farmer representatives were selected by officials from the agriculture and other line departments. These farmer representatives were selected to institutionalize farmer participation in setting extension priorities, including how program resources should be allocated across the different crop and livestock systems. The ATMA GB provided a platform for all stakeholders within the farming community to participate and to share the ownership over this decision-making process. Similarly at block level, there were generally 8-12 farmer members included on each block-level FAC, who represented the major producer groups in that particular block. During the first year, some committee members dropped out due to lack of motivation, lack of personal benefit, not being representative of their farming community and/or not being real farm leaders.

Subsequently, a decision was taken by each ATMA GB to drop inactive or uninterested members of these GBs and FACs. For example, if a member failed to attend three consecutive meetings in a row or expressed their lack of interest to continue, then a notice sent to them terminating their membership from these decision-making bodies. Hence, during the second half of the project, procedures were established to nominate the presidents from these FACs to the ATMA GB on a rotation basis. Similarly, the leaders of village-level producer groups were nominated to serve on these FACs on a rotating basis. Thus a democratic method of replacing inactive members of these GBs and FACs was established, whereby an active FIG leader had a fair chance to being nominated to serve on a FAC and, subsequently, on the ATMA GB. This facilitated the development of strong farmer organizations with genuine members; and it helped reduce political-administrative intrusion into this bottom-up extension management system.
Capacity Building Support to Farmer Groups

The provision of effective capacity-building activities to support the development of FIGs and SHGs was a primary factor in bringing about the sustainability of these producer groups. Substantial resources were spent, in terms of manpower, time and funding, to build the capacities of these FIGs during the first year of their development. These different extension activities included awareness campaigns, exposure visits to innovative farmers, training courses, farmer-scientist interactions, as well as field demonstrations that were carried out by the block extension staff. With support from the ATMA, these FIGs graduated from one level to another, maturing over time as the member gained experience and confidence. Both technological knowledge and managerial skills were key extension inputs. Along with need-based technical backstopping and managerial training courses, like team building, leadership development, conflict resolution, record keeping, as well as post-harvest handling and/or marketing skills were given to different FIGs, depending on the product being produced. Within each FIG/SHG, group leaders were identified and provided with the necessary capacity building skills. They, in turn, guided their respective groups in taking up key activities. This approach strengthened the farmer-to-farmer linkage and helped multiply the outreach programs of the extension staff. A summary of the number of management training courses that were provided the ATMAs in each district are presented in Table 2.

In addition to these extension interventions, at the state level 127 additional training courses and 22 workshops were organized to support capacity building activities for FIGs and SHGs in other districts. It should be noted that many of the innovations that were shared with FIG leaders during exposure visits in innovative farmers both within and in other states were subsequently replicated in these project districts. This process helped build the conviction among the participating farmers in this new, bottom-up, participatory, market driven extension system.

Table 2
ATMA wise Management Trainings for FIGs

<table>
<thead>
<tr>
<th>No.</th>
<th>Name of ATMA</th>
<th>Number of Management Training Sessions</th>
<th>Total No. of Training Days</th>
<th>Total No. of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ATMA, Khurda</td>
<td>46</td>
<td>157</td>
<td>938</td>
</tr>
<tr>
<td>2</td>
<td>ATMA, Koraput</td>
<td>28</td>
<td>113</td>
<td>490</td>
</tr>
<tr>
<td>3</td>
<td>ATMA, Ganjam</td>
<td>30</td>
<td>112</td>
<td>599</td>
</tr>
<tr>
<td>4</td>
<td>ATMA, Sambalpur</td>
<td>25</td>
<td>109</td>
<td>392</td>
</tr>
</tbody>
</table>

Results

A critical factor in being able to diversify into a range of different crops, livestock and other enterprises, in different parts of each district, is the transition of women’s SHGs into FIGs or new producer groups as they focus on specific high-value commodities. The range of agro-enterprises taken up by both men and women farmers were: paddy seed production, oilseeds (sunflower & groundnut), mushroom cultivation, both broiler and backyard poultry production, dairy, goatery, honeybee rearing, floriculture, both in-season and off-season vegetable cultivation, freshwater fish farming and other enterprises, such as vermi-composting. As summarized in Table 3, during this 6 year project, nearly 1,400 producer groups were
successfully organized in these four districts, covering a wide range of high-value crops and products.

Table 3
Number of Farmer Interest Groups by District and Dominant Agro-Enterprises

<table>
<thead>
<tr>
<th>No.</th>
<th>ATMA districts</th>
<th>No. of Male FIGs</th>
<th>No. Female SHGs/FIGs</th>
<th>Predominant Producer Group Agro-Enterprises</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ATMA, Khurda</td>
<td>205</td>
<td>371</td>
<td>Paddy seed production, sunflower cultivation, mushrooms, floriculture, vegetables, broiler poultry, dairy and pisciculture (freshwater fish farming).</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Aromatic local paddy, off-season vegetables, vegetable seed production, backyard poultry, honey bees, mushroom, vermi-compost and ginger</td>
</tr>
<tr>
<td>2</td>
<td>ATMA, Koraput</td>
<td>106</td>
<td>46</td>
<td>Paddy seed production, mushroom cultivation, floriculture, vegetables, broiler poultry, goatery and pisciculture</td>
</tr>
<tr>
<td>3</td>
<td>ATMA, Ganjam</td>
<td>120</td>
<td>114</td>
<td>Paddy seed production, Boer goat rearing, yam cultivation, milk marketing, vegetables, mushroom cultivation, vermi-compost and broiler poultry</td>
</tr>
<tr>
<td>4</td>
<td>ATMA, Sambalpur</td>
<td>233</td>
<td>195</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SUB TOTAL 664 726</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>GRAND TOTAL 1390</td>
</tr>
</tbody>
</table>

Some of the major high-value crops and other products that were taken up by these small-scale and women farmers included dairy (taken up by 4% of local farmers), horticulture 27%, fisheries 6%, small ruminants 3%, poultry 3.5%, and beekeeping 1% of all farm households (IIM Lucknow, 2005). As a result of this diversification, these participating farm households increased their average farm income by an average of 6%/year, in comparison with only a 1% increase by farmers in non-project districts (Tyagi & Verma, 2004).

In addition, these farmer groups realised many intangible benefits, such as: risk minimization, community recognition, enhanced social-political status, improved accessibility to new technologies and markets, as well as enhanced bargaining capacity. One of the most significant statements made by one small-scale farmer during interaction with World Bank Mission to the Khurda ATMA on 3-5 May 2004 was the following: “this endeavour (group formation) has given value and recognition to the otherwise faceless farmers in the milieu”.

In addition, the delivery of targeted extension programs by the field staff at both the district and block level improved considerably. In addition, FIG/SHG leaders started acting as an “extended arm” of the agricultural extension system, as farmers in other villages were shown how to take on new agro-enterprises by themselves. This innovation in technology dissemination not only improved the quality of extension services being provided to the rural poor, but it also encouraged full accountability and transparency within the extension system.
Conclusions and Recommendations

The sense of full farmer engagement in this newly integrated extension system, plus the hundreds of new FIGs and SHGs that were established during this project, gave a clear indication of the benefit of restructuring the extension system. By moving toward a group approach, with farmers being trained and empowered to take on new agro-enterprises generated considerable pride in their achievements. Hence, role of agriculture extension in identifying, developing and promoting new agro-enterprises among these producer groups has been unequivocally confirmed.

It should be noted that agricultural extension systems in both developed (e.g. U.S., Netherlands, France, etc.) and developing countries (China, Ghana, India, Indonesia, etc.) have successfully increased the technical, economic, social and leadership skills and knowledge of farmers by helping them organize into producer and farmer groups. In the process, these farmers share technical and economic information about these different types of crop, livestock and other agro-enterprises. In addition, these farmer organizations become the building blocks of democratic institutions. Therefore, it is recommended that agricultural extension organizations worldwide give priority to helping small-scale and women farmers get organized into producer groups, both to reduce rural poverty and malnutrition, as well as to facilitate the development of democratic institutions.

References


