

INNOVATIONS IN AGRICULTURAL EXTENSION

A joint publication of Michigan State University (MSU) Extension, East Lansing, Michigan, U.S.A., and the National Institute of Agricultural Extension Management (MANAGE), Hyderabad, India



MICHIGAN STATE
UNIVERSITY

Extension



Innovations in Agricultural Extension

Michigan State University Extension, East Lansing, MI 48824

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Printed in the United States of America.

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CHAPTER 5

Revitalizing Agricultural Extension & Advisory Services in India

SPREAD NE INITIATIVE

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Introduction

Agricultural extension (broadly, the “delivery of information inputs to farmers”) has traditionally been the primary means of reducing the information asymmetries related to technology adoption in both developed and developing countries (Andersen & Feder, 2007). In many parts of the world, extension services are constrained by several factors such as distance, time, and costs involved for farmers accessing these services. As a result, conventional face-to-face extension services meet the needs of only a small proportion of farmers (Anderson & Feder, 2004; Graeub et al., 2016).

Research and extension played a major role in bringing about the green revolution in India. Extension services however, face important challenges in the areas of relevance, accountability, and sustainability in the post-green revolution era (Ferroni & Zhou, 2012). India’s changing economic scenarios and the need for appropriate agricultural technologies and agro-management practices to respond to food and nutritional security, poverty alleviation, diversifying market demands, exports opportunities, and environmental concerns are posing new challenges and threats to the technology disseminations and rural development systems (Sharma, 2002). Therefore, any future agricultural growth would accrue from improvements in productivity of diversified farming systems with regional specialization and sustainable management of natural resources, especially land and water.

In India, public extension began long before the green revolution, evolving with national priorities (Singh & Swanson, 2006). However, with the ever-increasing agriculture production demand, it is becoming increasingly evident that public extension by itself can no longer respond to the multifarious demands of farming systems. There is need for reappraisal of the capacity of agricultural extension to effectively address the

contemporary and future needs of the farming community. Public funding for sustaining the vast extension infrastructure in the country is also under considerable strain due to the need to extensively cover large areas. Meanwhile, in response to market demand, the existing public extension network is being complemented, supplemented, and replaced by private extension. As the nature and scope of agricultural extension undergoes fundamental changes, the outlook calls for a whole new pluralistic approach of institutions and agencies (Birner & Anderson, 2007; Christoplos & Kidd, 2000). Agriculture extension is no longer only a public sector phenomenon; it now involves a more complex range of actors providing a wide range of services. This has therefore allowed various actors and private agencies to provide extension and advisory services. The Society for Promotion of Rural Economy and Agricultural Development in North East (SPREAD NE) (or “the society”) is the quintessential example.

SPREAD NE Genesis

SPREAD NE has its roots in 2005 when Samir Bordoloi, an agricultural graduate, started a one-room plant health clinic in Jorhat, Assam, India, to give prescriptions to people about their plants. When no one showed up, Bordoloi began riding his bike, toting a backpack filled with organic input, to the remotest villages of Upper Assam. He gave out unsolicited advice about sustainable organic ways of farming. Slowly, as farmers saw the benefits of his methods, they started warming up and accepting his services. Within a year, the farmers would be waiting for Bordoloi’s bike. Later, Bordoloi ventured into rural schools. These village schools provide free standard education to rural low-income children who were enthusiastic learners keen to learning anything that they could relate to. Due to the success he had with one of the school visits, he ended up launching a vermicompost brand named after the school: Chitrlekha. From this little project, the children started learning. Very soon, their mothers wanted to learn. The students had become an agent of change. This inspired him to think of ways and means to further scale his work and expertise.

Since he was a graduate of Assam Agricultural University (AAU), Jorhat, Assam, he was offered a job as agricultural extension officer in the government of Arunachal Pradesh. However, with the urge to get more exposure to farming practices in different parts of the country, he chose to instead join Rallis India Limited (a Tata Enterprise) in their agrochemical division. He was assigned to Jorhat, which exposed him to hundreds of farmers in Upper Assam. With some qualitative training programs on self-development and time, he developed the self-confidence to start something on his own to serve farmers of his area. They were pushed to monocropping of tea using lots of chemicals and fertilizers, making their village life amidst a cocktail of chemicals. He began his first venture in 2003, SS Botanicals, an agri-clinic, agri-business center, and plant health clinic, established in Jorhat. The clinic aims to provide curative solutions to farmers about raising plants and judiciously utilizing the land. Trained under the National Institute of Agricultural Extension Management (MANAGE), Hyderabad, Telangana, with the Indian Society of Agribusiness Professionals, Guwahati, Assam, Bordoloi was supported by the State Bank of India and the Indian Bank to reach more and more farmers and steer them toward organic farming initiatives. He could reach more than 20,000 farmers through his clinic. He introduced the concept of the Krishok Bandhu (Farmers’ Brother) Help Card, making the

farmers members of the clinic and offering them profit-making and value-added services. SS Botanicals provided organic solutions, soil testing, agro-tourism ventures, publication of farmers' monthly magazines such as *Prakriti* (Nature) and *Seuj Chinta* (Green Thinking), and forward and backward linkage development. MANAGE, Hyderabad, provided him with hand-holding support and promoted his works in various platforms. With time, the demands for his services increased making him aware of the urgent need to develop innovative ideas to diversify his reach and approach.

SPREAD NE Initiatives

SPREAD NE aims to get local people of the northeastern (NE) states of India to eat local food from local resources and stresses promoting ethnic people, ethnic food, and ethnic economy for achieving sustainability. (We define *ethnic* as that pertaining to characteristics people who identify with each other share based on similarities in culture and food habits.) The society seeing the potential of the NE region has a mission to promote organic farming to make its farmers "independent self-sustaining entities." With an attempt to revolutionize farming in the NE, Bordoloi through SPREAD NE now teaches and trains budding farmers and small entrepreneurs to use innovative farming and food techniques. Apart from training, the society has developed the Farm Learning Centre (FLC) and various others programs to train, educate, expose, and instill among the children, youth, and farmers to be custodians of their natural resources. Some of the extension programs and initiatives of SPREAD NE particularly to empower the youth on ecological farming skills and entrepreneurships are explained in the following sections.

SPREAD NE FLC

FLC is a three-day camp in various centers in the NE: Sonapur, Jorhat, and Tinsukia in Assam; Dimapur and Jalukie in Nagaland; and Imphal in Manipur. These organic farm model camps created by the society consist of a fishery and food forest that provides youngsters a platform for hands-on training in organic farming. The camping sites are open-air natural classrooms with farm tents to teach youth to learn life at its best. The youth come from different parts of the NE states and train to be Green Commandos.

Figure 5-1. A session at the Farm Learning Centre in Sonapur.



The *biophilia connection* is an innate affinity or connection of humans toward the natural world. The concept behind the FLC is recapturing the biophilia connection in NE India by re-establishing that human relationship with nature by creating an edible food forest. SPREAD NE and its members

believe that children have to be prepared to think as extended ecological selves to have biosphere consciousness. This ability might well determine whether they will be able to create a new, sustainable relationship with the Earth in time to reverse the climate change trend and halt human extinction. The FLC aims to develop youngsters' innate connections so that they act as a part of a universal family that includes not only fellow human beings but all fellow creatures and nature as a whole. One major step to care for the environment and for a sound health of humanity is to conserve the local food wisdom to escape the invasion of unhealthy foods, which are products of industrial big sale farming. We must grow our own food based on the principle of "Indigenous People—Indigenous Food—Indigenous Economy."

"At the FLC, I learnt to manage organic waste, composting and ecological farming at the camps. Then I started taking this concept to our urban spaces where I tried to link it with rooftop gardening and urban waste management. Moreover, we also realized that we are eating unhealthy food."

—Ms. Ittisha Sarah, one of the participants of the FLC

Green Commando

A practical approach is needed to combat the adversities of climate change and that must be led by the young people. With this in mind, SPREAD NE intends to create a green tribe of human beings by the action of their trained Green Commandos, whose mission is to spread ecological food production practices and green living concepts to the communities.

Figure 5-2a. Green Commando training at the Farm Learning Centre.



Figure 5-2b. Hands-on Green Commando training on working with raised beds at the Farm Learning Centre.



Figure 5-2c. Hands-on Green Commando training at the Farm Learning Centre.



Green Commandos are trained agents in the FLC and social entrepreneurs who promote the Indigenous People—Indigenous Food—Indigenous Economy concept in their communities. A Green Commando must undertake the following training modules:

- Level 1 Green Commando training program for three days at the farm camping sites and various centers
- Level 2 Green Commando training program for five days at the farm camping sites
- Level 3 Green Commando training program for 10 days at multi-location farm sites
- Green Commandos refresher training program for three days

“The first time Ittisha Sarah, a 25-year-old resident of Guwahati used a koor (a heavy-duty spade), she did it effortlessly. She was with a group of 20, on a hilltop in Sonapur, about 15 km from Guwahati, digging and planting saplings in silence. Now when she looks back, she realizes that it was probably a sense of zeal instilled by just being in nature that made the process of wearing gum boots, using a koor, digging a pit, and planting saplings so effortless. Of course, it is hard work, but somehow when it is all done and dusted she did not feel it was. Since May 2018, Sarah has been a certified Green Commando—a new-age farmer, whose primary aim is to bring back to the plates of the population, healthy, wholesome, indigenous local food.

“Prerona Probor Gogoi, a 27-year-old technical officer at the National Food Security Mission in Dibrugarh, Assam, devotes his second and fourth Saturdays ‘to the community.’ He, too, is a Green Commando, and has adopted a local school where he teaches kids how to make vermicompost beds, rustle up bio-pesticides, and grow vegetable patches at home.”

—Samir Bordoloi

“I was always interested in sustainable farming but there was very little opportunity in urban spaces like Guwahati. When I was told about Spread NE, I immediately applied for their training programme to become a Green Commando. Our job as a Green Commando is to spread awareness about organic farming and bring as many farmers as we can under our wing. Not everyone knows the exact meaning of organic farming and it is up to us to teach them that.”

—Chandeep Gogoi, participant of the Green Commando program

“As part of my work as a Green Commando, I adopted the Malowpathar village. I started teaching how to make vermicompost to the farmers here and soon enough, the kids also joined us. My work is to support the locals and ensure that local food brings money to the villages. The village was adopted about two months ago and already, 27 families are benefitting from the initiative.”

—Kirtiman Borah, participant of the Green Commando program

Farmer’s Exposure-Cum-Training Program on Zero Budget Ecological Farming Practices

SPREAD NE conducts an exposure-cum-training program for farmers in the already established FLC. They are also given hands-on training on Zero Budget Ecological Farming Practices (ZBEFC) in the following modules:

- One-day exposure to the Zero Budget Edible Food Forest and hands-on training on soil management practices
- Three-day Farm Camping and Training Program on ZBEFC
- One-day Meet the Expert Program on ZBEFP
- Five-day Exposure-cum-Training Program on fish farming
- One-Day Homestead Garden Development Program for women
- One-day Solid Liquid Resource Management Program (Waste to Wealth)

Figure 5-3. Exposure-cum-training program on the Zero Budget Edible Food Forest.



Farm Extension Services

The society has experts from various domains of national and international repute who work extensively when called upon to provide advisory services in the following fields:

- Ecological and organic farming practices
- Fisheries

- Animal husbandry
- Social mobilization and group dynamics
- Agricultural finance
- Farm and village tourism
- Value addition and marketing
- Micro-irrigation
- Apiary

SPREAD NE has time and again on a continuous basis supported the various government extension mechanisms in agriculture as a private extension system by rendering the latest and practical solutions for the farmers through their consultancy services. They assist budding agripreneurs in drafting their Detailed Project Report providing hand-holding support.

Attracting Students to Agripreneurship Program

Green space and an edible food forest in the school campus support healthy child development. Children today have less opportunity to explore themselves in nature and understand practically the world around them. Through the Attracting Students to Agripreneurship Program, the students are drawn to eating healthy food by having the experience of growing it themselves. It builds nutritional stewards who learn to grow their own local food and also sows the seed of agripreneurship in the minds of the students.

Under this program, the following services are offered:

- Three-day farm camping and hands-on training on creating an edible food forest
- One-day exposure visit to the society's Edible Food Forest and interaction ecological farming expert
- Formation of school green tribe club and establishment of school edible food forest
- Meet the Expert: One-hour interactive session with National Awardee Zero Budget Ecological Farmer Samir Bordoloi
- Back to the Roots: One-day exposure trip to the society's model villages

Figure 5-4. Samir Bordoloi during one of his visits for establishing an edible school forest.



YATRA: Farm & Village Tourism

Yatra is a Hindi word meaning “a journey.” The society conducts group *yatra* for its trainees and visitors so they can adapt, learn from nature, and enjoy the roots from which they emerged. It’s a learning process where the trainees visit the society’s farms in the NE and one near Goa. The visit to the farm and villages allows them to interact with the society’s farmer friend, motivating them toward good food production, and also to learn from the farmers’ practical skills. The concept behind organizing *yatras* is to slow down the pace of life and find the inner self and our biophilic attraction. The society organizes three *yatras* in a year with 20 *yatris* (pilgrims or individuals).

Farm Connects

Market-led extension services are extended to the society farmers and gardeners by providing market linkages for the farmers’ product and by helping them in Fair Price Recovery. SPREAD NE motivates urban consumers to “adopt a farmer” for their food and utilities produced in their farms and villages thereby ensuring them an assured market.

Vision

The SPREAD NE aims to connect the indigenous farmers and the local consumers through local and natural food. To conserve the local food wisdom by making our farmers grow local food crops and rear animals through low cost ecological farming practices and to involve the Green Commandos (Social Agripreneurs) to connect people to small farmers through healthy food.

The food items at the Farm Connect at AAU, Khanapara, Assam, comes from the FLC at Sonapur; the model villages of Bandorgok, Kolongpur, and Dondoral; from the farmers of the Green Commandos working in the states of Meghalaya, Nagaland, Manipur, and Arunachal Pradesh; and all districts of Assam. After the Green Commandos complete their training, they adopt a community of small, marginal, and tribal farmers and train them on low-cost ecological farming practices under our flagship program “Amar Bari Amar Proichoy” (Our homestead gardens are our identity). Through the Green Commandos’ help, the farmers’ cost of cultivation is reduced by training them on Zero Budget Ecological Farming Practices. The Green Commandos ensure proper nutrition of the farm families, and then convert the surplus into marketable products by creating community enterprises of farmers. When finalizing the price of the farmers’ produce, 15% is added on the farmers’ price per kg for the sustenance of the Green Commandos and another 15% for the transport, packaging, logistics, and maintenance of the store, and 5% for the organization.

Figure 5a. Farm connect outlet at AAU, Khanapara, Assam.



Figure 5b. Farm connect outlet at AAU, Khanapara, Assam.



Figure 5c. Farm connect outlet at AAU, Khanapara, Assam.



Conclusion

“To start a change, one must change oneself first.” The SPREAD NE, through its various programs, strives to inculcate and educate millennial farmers who can in turn spread awareness and act as agents of change through their extension services in any form. Since the extension services required are changing rapidly, they should suit the current context, from production orientation and profit making to long-lasting benefits of sustainable farming.

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