



Strengthening Civil Society Participation in Natural Resource Management



Experiences of SAJJATA SANGH

A Network of NGOs in Gujarat



AGA KHAN FOUNDATION



Sajjata Sangh

A network of NGOs engaged in
participatory management of Natural Resources



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During 8 -12 August, 2011, SAJJATA SANGH and the Aga Khan Foundation (AKF) jointly organised a writeshop at Bopal, Ahmedabad in Gujarat involving potential case authors drawn from partner organisations of SAJJATA SANGH. This writeshop was facilitated by faculty members from The Livelihood School, an academic institution promoted by BASIX group. The workshop helped to identify six cases on various interventions initiated by SAJJATA SANGH, which have contributed to improving practices in natural resource management at the field level and influencing policy at the state and national level. These cases form the crux of this book.

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ABBREVIATIONS

AGBM	Annual General Body Meetings
AIC	agriculture Insurance Company
AKRSP(I)	Aga Khan Rural Support Programme (India)
AOA	Articles of Association
APMC	Agricultural Produce and Market Committees
AVIRAT	Amreli Vistar Rachnatmak Nang
BT Cotton	Bio Technology Cotton
CA	Chartered Accountant
CEO	Chief Executive Officer
CRISIL	Credit Rating Information Services of India Limited
CSPC	Coastal Salinity Prevention Cell
DEMAT	De-materialised
DSC	Development Support Centre
EFICORE	Evangelical Fellowship of India Commission on Relief
GDP	Gross Domestic Product
GIC	General Insurance Company
GIZ	The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)
GUJCOMASOL	The Gujarat State Marketing Cooperative Federation Limited
GW	Gujarat Wheat
ICAR	Indian Council for Agriculture Research
ICT	Information and Communication Technology
IMD	India Meteorological Department
INAFI	International Network of Alternative Financial Institutions
INR	Indian National Rupee
LOK	Lok Bharti
MCX	Multi Commodity Exchange
MOA	Memorandum of Association
NABARD	National Bank for Agriculture and Rural Development
NDDB	National Dairy Development Board
PAN	Permanent Account Number
PIA	Project Implementing Agency
SAVA	Saurashtra Voluntary Action
SCALE	Sustainable Community-based Approaches to Livelihoods Enhancement
SSKK	Shikshan and Samaj Kalyan Kendra
VAT	Value Added Tax
WBCIS	Weather Based Crop Insurance Scheme

FOREWORD

Agriculture is a vital sector of Gujarat's economy, both in terms of providing food security to the population as well as providing raw materials to a host of agro-based industries. Despite the limitations resulting from the unfriendly agro-climatic and topographical conditions, agriculture in the state has done well, especially over the past few years. The key drivers of agricultural growth have been technology development, agricultural extension and diffusion and increased access to water. While the public sector plays a strategic role in production and distribution of high yielding variety seeds like wheat, the private seed sector has taken a lead in developing and promoting the use of high yielding seeds.

Apart from making efforts to maximise the gains from the Sardar Sarovar Project, the state has implemented a host of proactive initiatives in the field of micro irrigation – check dams, farm ponds and *boribandhs* – with the active cooperation of NGOs and private players. Successful experiments in contract farming (in potato, for instance) and cooperative based agro-processing (such as the BAIF initiative) have adequately demonstrated the state's ability to develop appropriate and sustainable livelihood agricultural models. There has also been significant emphasis on the efficient management and development of water resources. As outcomes of these endeavours, Gujarat has shown remarkable progress in agriculture during the last decade, with the fastest agriculture growth (above 9.6 percent) amongst all Indian states since 2000. These developments have increased the role of the private sector and particularly the NGOs in agriculture extension and given rise to various partnerships amongst the Agriculture Department of the state, agriculture scientists in universities, NGOs and the farming community.

Sajjata Sangh is a network of 34 non-governmental organisations (NGOs) for capacity building of NGOs involved in natural resources management programmes. The main focus of its partner organisations, hence, is to work on the available natural resources like land and water with the participation of the local people with the ultimate view to arrest distress migration and improve the socio-economic status of rural population. It facilitates development of local institutions that support and sustain the natural resource management programmes. Sajjata Sangh is recognised as a credible network of NGOs working on participatory natural resource management both at the state and national level. Its receives a major source of financial support from the Sustainable Community-based Approaches to Livelihood Enhancement (SCALE) project funded by the European Union through the Aga Khan Foundation.

The process of bringing out this book has been both exciting and enriching and we eagerly look forward to feedback and comments from our readers.

Harnath Jagawat
President
SAJJATA SANGH

Rajesh Kapoor
Secretary
SAJJATA SANGH

PREFACE

The Participatory Watershed Development Programme of the Ministry of Rural Development initiated by the Government of India in 1995 was a major landmark in designing centrally-sponsored schemes. Instead of the usual top-down approach, this programme focused on a bottom-up approach through development of plans at the village level, intensive involvement of people in planning, implementation and management of the programme, formation of village institutions, capacity building of people and the provision of funds directly from the district to peoples' institutions known as Watershed Associations (WA). The guidelines also invited the participation of voluntary organisations to play the role of a catalyst in creating these institutions.

The Government of Gujarat responded positively to the guidelines and encouraged many NGOs to become Project Implementing Agencies (PIAs). From 1995-2000, nearly 70 percent of all watershed projects were implemented by NGOs, giving rise to a rich mosaic of experiences and expertise in natural resource management. After almost 2-3 years of implementation of the 5-year watershed programme, Development Support Centre (which functioned as a support organisation involved in capacity building of policy makers, staff of NGOs, agriculture scientists and the farming community), realised that the watershed programme alone would not suffice to improve the livelihoods of rural communities. The 5-year programme (which essentially focused on creating primary village institutions and implementing a series of physical interventions for soil and water conservation, afforestation, water harvesting and animal husbandry) need to be further enhanced if people were to reap the benefits of the investment in the watershed development programme. With increased access to water through watershed development activities, the need was voiced by the farmers and NGOs for increased access to improved variety of seeds and other agricultural inputs, modern agriculture practices and implements to enhance productivity and profitability of agriculture and allied activities.

Sajjata Sangh evolved from a concept to an organisation over a period of four years, spearheaded by late Founder Chairman, Shri Anilbhai of the Development Support Centre (DSC). The process of networking started parallel to the implementation of government-sponsored Watershed Development Programme, forming Sajjata Samiti - a committee for capacity building of NGOs in order to facilitate the process of mutual learning and support among participating NGOs. In 2000, Sajjata Sangh was registered under the Societies Registration Act, 1860 and the Bombay Public Trust Act, 1950. Leading NGOs including the Aga Khan Rural Support Programme [AKRSP(I)], Development Support Center (DSC), Sadguru Foundation, VIKAS, Vivekanand Research and Training Institute, (VRTI) and Bhartiya Agro Industries Foundation (BIAF) played a key role in promoting post watershed treatment activities that would lead to productivity enhancement of natural resources. An Executive Committee was formed under the Chairmanship of Anilbhai to realise this objective. With the passing away of Anilbhai, Shri Harnath Jagawat (CEO of Sadguru Foundation) became the President and Mr. Rajesh Kapoor of Cohesion Foundation, the Secretary. The Sajjata Sangh holds two meetings every year which are preceded by a regional level meeting with its partners in north Gujarat, central and eastern Gujarat and Saurashtra. Currently, Sajjata Sangh has 31 members that work in about 8,000 villages of the state. The membership to this network is by invitation only and NGOs which would

like to be members of the Sangh need a recommendation from an existing member and also pay an annual fee of Rs. 1,000.

The major objectives of Sajjata Sangh are:

1. Building NGO capacity to provide backward linkages such as better farming and integrated pest management practices, efficient water management systems, village institution development, technology providing and forward linkages such as post-harvest surplus management, value addition and marketing.
2. Creating space for NGOs in development programmes through participation in the formulation of the NGO National Policy for the Voluntary Sector in 2009 and encouraging NGOs to get accredited by agencies such as Credibility Alliance.
3. Conducting crop specific workshops/congregations where agricultural input suppliers, farmers, NGO representatives and representatives from the Agriculture Universities and the Agriculture Department interact with each other to facilitate information sharing and learning.
4. Developing and disseminating communication material such as crop specific CDs and crop calendars for NGOs as well as farmer-organisations to support the goal of conducting issue-based research.
5. Participating in policy making forums at the state and national levels

With support from the SCALE project funded by the European Union through the Aga Khan Foundation, *Sajjata Sangh* has come to be recognised as a credible network of NGOs working on participatory natural resource management at both the state and national level. It has done pioneering work in piloting and scaling up rainfall insurance in the state. The radio programme *Sajjata No Sangh Lave kheti Ma Rang*, which has completed five years, has about 500,000 listeners across the state. It has created awareness on improved agriculture practices, integrated pest management, integrated nutrient management etc. Representatives from partner organisations have also participated in “*shrota sammelans*” to plan and review contents and themes for the programme. The network has also provided critical inputs during policy making forums on accreditation of NGOs both at the state and national levels to ensure transparency and accountability in the working of NGOs.

This book is an important outcome of Sajjata Sangh’s goal to promote innovative and improve livelihood enhancement and natural resource management practices. It presents a collection of cases from Gujarat that are both informative and revealing, and offers the potential to rethink policies and shape them in a manner that enhances the livelihoods of farmers. Therefore, it is with a great deal of satisfaction that I present this important and timely work and hope that it will be of much use to practioners, researchers and academicians.

Natu Macwana

Former Executive Director
SAJJATA SANGH

CASE SYNTHESIS

Moving to the Next Orbit

Nabarun Sen Gupta

Sajjata Sangh is a network of Non Government Organisations engaged in the promotion of participatory natural resource management in Gujarat. It is especially playing a key role in policy advocacy and scaling up of good practices and innovative ideas being experimented by its partner agencies on a range of issues such as village institution building, agriculture technology extension and agribusiness management. All these initiatives fall in the domain of “watershed plus” approach, which includes post watershed treatment activities that lead to productivity enhancement and increase in the incomes of rural communities. Towards this, many field level experiments were conducted to assess suitability of crops that can be grown on treated lands and with lesser water resources. Some of these experiments have yielded positive outcomes. Sajjata Sangh provided the platform where possible ways for replication of these practices within the network was discussed. In such efforts, the partners required both direction and support, which was provided by the secretariat of the network. The network secretariat has been successful in playing a key role in generating new ideas and replicating these through the partners.

Sajjata Sangh’s main challenges emerged while taking these innovations to “the next higher orbit”- beyond its partners. Sajjata Sangh’s various roles in this domain, which includes negotiating with support agencies, establishing partnerships, pushing for large scale replication of learnings, and finally, setting the agenda for its role as a network agency, as narrated especially within the context of the cases included in this book, are discussed below.

Generating New Ideas: The common thread that runs through the various experiments in this book, is the generation of new models, particularly those that have unlocked the productivity potential in rain-fed areas. A number of these interventions were designed especially to suit local conditions.

The case *Making Information Reach on Time* discusses two innovative ICT initiatives - an Agriculture Radio Programme and *Avaaj Otao* (based on mobile phone technology) - aimed at improving farmers’ access to information on agricultural practices and empowering small and marginal farmers by addressing knowledge needs in an effective way.

The case *Seed of Hope* discusses the introduction of a new variety of wheat in Gujarat which requires less water and provided greater yields. This intervention was successful because it addressed the specific needs of farmers according to prevailing local conditions of less water availability. The case *Vayde Se Fayda* describes how for the first time in Gujarat, farmers engaged in the Multi Commodity Exchange (MCX), which protected them against market price fluctuations in cotton, thus helping them secure a higher income. The case *Bringing Back the Lost Smile* discusses the provision of weather insurance to cushion farmers against crop losses on account of weather-related conditions. As a result of this intervention, a number of farmers were able to recover investments where rainfall figures showed deviations from the normal trend. The story of *Avirat Agro Business Producer*

Company Limited depicts an intervention of organising farmers into a collective called “producers company” to undertake trading activities. Today, the company is a self-sufficient institution, where farmers can purchase to quality seeds at affordable rates and have access to education and new trends in agricultural practices.

Pushing for Large Scale Replication of Learning: The six cases presented in this book highlight the agenda of “lab to land”. If the livelihoods of farmers have to be augmented, it is argued, the scope requires a shift to the second orbit - of cost, price and risk management - without compromising that of the first orbit - increasing production through high yielding varieties and scientific agriculture.

The radio programme (*Making Information Reach on Time*), the intervention on the less water requiring wheat variety (*Seed of Hope*) and the initiatives of clubbing scientific practices with insurance programme (*Bringing Back the lost Smile*) demonstrates that moving to the next orbit will continue with the basic element of the erstwhile agenda of lab to land occurring alongside. This synergy has worked well as is obvious from the achievements and outcomes that the cases narrate.

Most of the cases included in this book highlight the importance of positive incentives and win-win models patronised by the state. The insurance programme, as discussed in the case *Bringing Back the Lost Smile*, required the state to subsidise the premium because farmers may find it difficult to pay the same amidst the rising cost of agriculture. Such subsidies are actually very small amounts compared to the millions that the state needs to pump in when tragedy strikes. The transfer of such a small payment of premium is a good argument that specifies the enabling role a state should play. The clubbing of extension and information to farmers on “good practices” made the intervention a win-win for both the business partners - farmers and insurance companies. The cotton initiative through the MCX platform, as discussed in the case *Vayde Se Phayda*, also provided an important learning. The platform was viewed as a price risk intervention and not as an intervention for profiteering. In both the cases described above, the investments in building the capacity of the farmers and removing the bottlenecks of understanding of product is important. This investment must come from the state or through external agencies interested in working with small and marginal farmers.

Negotiating with Key Agencies, Building Partnerships and Influencing Policy: Sajjata Sangh played a critical role in conducting negotiations with external agencies on behalf of NGOs and dialogued with key officials and research agencies on policy issues. Further, it also instrumental in networking with NGOs for forming pressure groups and devising collaborative projects and working with village groups for operationalising policy changes.

As discussed in the case *Bringing Back the Lost Smile*, Sajjata Sangh conducted a state-level workshop on weather insurance with the aim of initiating dialogue with the state government. The idea was to involve state government officials so that they were motivated to consider introducing the Weather Based Crop Insurance Scheme (WBCIS) as a state-sponsored programme. The Sangh also succeeded in convincing the Agricultural Insurance Company (AIC) to customise the products to suit farmers’ needs in the operational areas of its member organisations. Negotiating with the company to understand farmers’ needs,

tailoring policies to make the product suit these needs and negotiating with the said agency so that it accepted data from weather stations beyond the IMD, and so on, were important steps in the success of this initiative. Similarly, the Sangh also opened up communication channels with the state and also used the channel of influential people's representatives to make this experiments part of the state agenda.

In the case *Vayde Se Phayda*, which discusses the MCX intervention, AKRSP (I), the implementing support agency built the capacity of the Chotila Federation, provided the platform for organising meetings, conducted trainings and workshops and ensured timely implementation of the project. In addition, a number of field-based research studies have been published and shared with government departments, NGOs and academic institutions. Field learning is documented and disseminated through various publications and audio visual material. In the case, *Making Information Reach in Time*, the Sangh negotiated with the State University and the Directorate of Agriculture.

Had no single agency steered such negotiations on a constant basis while taking cues from the implementing partners, the interventions would not have been as successful.

Setting the Agenda - Role of a Networking Agency: Finally, the cases depict the role that a network agency ought to play. Gujarat, being a pioneer in initiatives around agriculture and with almost every sphere of actions and themes having one or the other network, the cases establish the functions that the network agency needs to play. It is important for the network agency to give direction to a well-thought out agenda and help experiment with new and novel thoughts. Models can best be established if they are experimented at multiple locations. The network agencies are spread far and wide (with members from all across the state) and in almost all corners of the state, and their experiments often make way for good inputs for any public policy debate. The case *Crediting through Accreditation* describes an initiative of far wider significance for the civil society sector - promoting transparency and managerial competence among NGOs through an accreditation programme. The accreditation process undergone by nine member organisations of Sajjata Sangh have led to them developing a greater understanding of good governance, transparency and accounting procedures.

Conclusion: To conclude, the case studies explored in this book demonstrate a range of interventions that empower farmers to engage effectively and equitably in sustainable agricultural-based livelihood practices. In my view, the learning from these cases holds strong potential to initiate discussion on public policies aimed at improving rural livelihoods. I recommend this to be a learning resource for development practitioners across the country.

CHAPTER 1

Crediting through Accreditation

Dhirubhai Vagadya

Introduction

In a welfare state, both the government and civil society shoulder the responsibility of addressing the problems of the poor, marginalised and disadvantaged communities. The Government of India provides for a legal framework that gives civil society the legal sanction to operate within the country. The India Trust Act and the Societies Registration Act are significant legislative provisions under which a majority of social development agencies within the country are registered. Once registered, these agencies raise their own resources towards the agenda of social and economic development. There are provisions under which these agencies can source funding from beyond the national borders. These foreign grants are regulated under another Act.

Greater involvement of voluntary organisations has helped the government in providing more efficient delivery of social services at substantially lower costs. NGOs can be innovative, rooted to the ground and participatory in their approach, which helps government agencies replicate best practices for greater impact. In addition, NGOs supplement government projects by acting as a conduit between development programmes and beneficiaries. The government recognises the fact that it is through NGOs that the “un-reached” are better reached. However, in recent years, personal rather than civic interests have taken a front seat in the NGO sector. Allegations of corruption, misuse of funds and lack of accountability are rampant, especially with the mushrooming of NGOs in the last decade or so. It is imperative that efforts are made to identify, acknowledge and support NGOs which have remained fair to the cause for which they were established – those with credible obligations to ensure program effectiveness and devote their resources to achieving their stated missions. The following case describes an initiative by Sajjata Sangh - a network of agencies working on agricultural development in Gujarat - to ensure that organisations that have been able to develop systems for transparency and good governance are recognised and supported in carrying out their mandate.

Context

Watershed development projects, initially undertaken by the Gujarat Land Development Corporation, were often critiqued for being non-participatory and of little benefit to the community. Many a time, the target-driven approach adopted by state-operated institutions helped them meet official targets, but not the goals for which they were designed. Government agencies implement programmes through the tender system under which work is awarded to the contracting agency with the lowest financial bid. However, this approach being mostly top down, has often neglected the needs of the community. In this context, Non Governmental Organisations (NGOs) were called upon to act and function as service providers.

NGOs have strong links with the community, extensive knowledge and expertise in participatory tools and techniques and are better placed for direct implementation than the government, for which a regulatory and monitoring role was deemed more suitable. In 1995, many of the rural development schemes of the Government of India were amalgamated into the watershed scheme. Around the same time, the pressure of international aid agencies, particularly the World Bank, to implement projects using participatory methods made it imperative for the government to seek the support of NGOs. The Ministry of Rural Development specified in its guidelines that Village Watershed Associations (VWAs) would be designated as the guiding force in planning, executing and managing local natural resources. It introduced the concept of Project Implementing Agency (PIA) that would work through a professional team and perform the role of a facilitating agency. The guidelines also recommended that the district administration play a supporting role monitoring role in the process. As PIAs, NGOs were entrusted with the responsibility of undertaking the tasks of awareness generation and community organisation and mobilisation to facilitate participatory planning and implementation. The change in the *modus operandi* prompted many of the earlier contracting agencies to float their own organisations to grab the share of resources. However, a majority of these agencies lacked good governance and were not transparent in their financial dealings. With so many NGOs in existence, there was a need to assess their credibility following certain parameters. From time to time, the state government attempted to weed out such agencies, but often pressure from powerful quarters prevented actions from being taken.

In 1999, the Rural Housing Department, Panchayat Raj Department and the Rural Development Department of Gujarat released a list of approved agencies to implement governmental schemes. This list had around 300 organisations. While the government had its own criteria of developing this list, it was a cause for concern that many of these agencies had dubious records. In many cases, the government resorted to the system of tendering whereby the contract was mostly given to agencies that quoted the lowest financials. Selection methods were vague and non standardised, which led to lack of accountability and transparency in implementation practices.

In April 2006, Sajjata Sangh organised a seminar to explore the issue of evolving a rating system for NGOs. It was attended by policy makers, representatives from donor agencies, NGO leaders and academicians. The deliberations paved the way for Sajjata Sangh to initiate the intervention.

Intervention

NGOs involved in development work are expected to play a range of roles to be effective, which include developing of community-based institutions for sustained growth. This required investments in quality human resources to manage the design and delivery of programmes. The April 2006 workshop revealed that there was an urgent need to examine the functioning of NGOs to support them in carrying out their mandate. Since NGOs have become the main service providers where the government is unable to fulfill its traditional roles, there is an urgent need to identify NGOs that possess the capacity and credibility to provide these services. The workshop, therefore, examined three critical questions:

1. What criteria should be used to rate NGOs?
2. Who would develop such criteria or parameters?
3. What methodology should be adopted to evolve these criteria?

The workshop also evolved certain desirable rating criteria (See Box 1 below) to help weed out the black sheep.

Box 1: Desirable Rating Criteria

- **Simplicity:** The rating procedure should be a simple and low-cost exercise.
- **Universal validity:** The rating procedure should be regionally, nationally and internationally valid and acceptable.
- **Independent:** Rating should be undertaken by a reasonably independent party.
- **Equitable:** Separate rating systems should be devised for larger and smaller organisations so that larger organisations are not overshadowed by their bigger counterparts.
- **Holistic:** The rating must reflect the core integrity of NGOs and not merely focus on adherence to financial discipline and standard accounting procedures.

The discussions also revealed that though agencies differ in many respects like vision, size, management structure and specialisation, they still can adapt themselves to certain standards of governance and accountability. However, this would depend to a great extent on many of the networks that have been created. For example, networks like Sajjata Sangh, PRAVAH, Jan Vikas etc. can help agencies to develop and attain the desired standards of governance and management. Regarding the sectoral specialisation of NGOs, the group realised that separate sector-specific sets of criteria, tailor-made for each sector, needed to be developed. Such criteria should have more to do with competence than governance.

The workshop came to the conclusion that there were certain non-negotiable aspects of credibility, such as those pertaining to transparency, financial management, accountability and management structures. However, assessing the ability of an organisation to deliver expected quality of services is often subjective and required the skills and experience of a specialised rating agency. It was also agreed that the funding for the accreditation process should be provided by an external donor agency (ideally not the government to avoid bureaucratic delays). Having agreed on a future line of action, Sajjata Sangh provided secretariat services and functioned as the convener of the group. As agreed during the discussions, the mandate of the group was to look solely at the basic governance issues of the NGOs. Once the rating requirements of basic governance were accomplished, the rating of specialised affairs of the NGOs could be taken up. The group also discussed the possibility of inviting other experts whose contribution could develop and support practical action. Armed with this mandate, Sajjata Sangh started building contacts with rating agencies for developing the indicators and parameters for undertaking ratings. Members of the group suggested that rating instrument that must be simple, low cost, credible and non-partial. The agency that would do the rating also needed to be accepted at the regional, national and international levels.

After several rounds of discussion, members agreed that collaborating with Credibility Alliance (CA) would be extremely fruitful for this endeavor. Credibility Alliance is well known for its involvement in accreditation across various sectors. With its goal of enhancing accountability and transparency through good governance practices within civil society, Credibility Alliance was accepted as a partner agency for the accreditation. Within the Sajjata Sangh network, the names of nine organisations were proposed to undergo the first round of the accreditation process. These nine agencies were:

Name of NGO	Operational Area	Headquarters
Shroff Foundation	Vadodara, Kutch	Kalali
Deepak Charitable Trust	Vadodara, Junagadh, Amreli	Vadodara
Sikshanane Samaj Kalyan Kendra (SSKK)	Amreli, Junagadh, Valsad	Amreli
SARTHI	Panchmahal, Godhara	Kodinar
MAHITI	Ahmedabad, Bhavnagar	Dholera
Gram Vikas Charitable Trust	Dwarka, Jamnagar	Dwarka
Vishwa Vatsalya Manav Seva	Amreli	Bagsara
Prakriti Foundation	Dahod, Panchmahal	Jhalod

While Sajjata Sangh provided all the necessary expenditures, partner agencies also deposited Rs. 5,000 as a token amount to demonstrate their interest in undergoing the accreditation process. When dialogue was initiated between Sajjata Sangh and Credibility Alliance, the latter agreed to provide a 25 percent concession to agencies coming through Sajjata Sangh. However, after receiving a grant from the Canadian High Commission, Credibility Alliance undertook this exercise free of cost for small and medium NGOs (organisations with annual receipts up to Rs 25 lakhs are termed as small and those with annual receipts above Rs 25 lakhs up to Rs 1 Crore are termed as medium). Expenses on training and interactions and workshops were paid for by Sajjata Sangh.

Credibility Alliance began to introduce the concept of minimum norms for accreditation of the nine organisations (See Annexure 1 for a description of CA norms). However, these minimum norms required discussions, both with the staff and the management team of these organisations. Clarity on the minimum standards gave way for correcting the existing systems and incorporating new systems. After extensive deliberation, the agencies began to work towards incorporating minimum standards, which thereafter formed part of their governance mechanisms.

In the initial stages, the organisations collected the necessary documents from Sajjata Sangh for the accreditation process. The process provided for an assessor from Credibility Alliance to visit the organisations. The assessor looked at relevant documents and also understood the nature of work undertaken by the organisation to examine their potential to conform to the norms of Credibility Alliance. All NGOs were found suitable to further the exercise.

The accreditation process was not an easy one. For instance, accountants working with small NGOs were used to doing accounts entry work towards the end of the week. The new norms required that they attend to this task almost on a daily basis, which increased their workload. Similarly, the need to instill a professional culture among staff previously used to a voluntary style made some staff members uncomfortable. It was important to minute meeting proceedings, which was something that staff members were unused to and this created difficulties. In addition, the organisations had to develop processes to document discussions that took place during the annual general body meetings and route important decisions of the organisation through Annual General Board Meetings (AGBMs). Evaluation of the staff rights and their efficiency was also an important standard practice that needed to be undertaken.

So far, the organisations, which enrolled to become part of the accreditation process, have adopted the minimum standards set by Credibility Alliance. They have also moved further and accepted the desirable norms as laid down by Credibility Alliance and changed their working pattern. For example, they publish progress reports and accounts are received regularly. Organisations have also started publishing their annual reports and are aware of the significance of being accountable and transparent. Sajjata Sangh, which initiated the accreditation process for nine organisations, has supported three organisations in being accredited. The remaining six will complete the process in the next year. The Sangh has constantly followed up with the organisations associated with Credibility Alliance and encourages other members to join the process.

Outcome

The process of undergoing an assessment by a third party has been a very important one for all the nine NGOs that paid the token fee to Sajjata Sangh and demonstrated their willingness to be accredited. The outcomes that the process had on the NGOs are:

Accreditation by the state as well: The government has prepared a list of 31 agencies for implementing rural development programmes in Gujarat. Eleven of these agencies such as AKRSP(I), DSC, Sadguru, Gramya Vikas Trust, Deepak Foundation, SSKK, VRTI, BAIF, UTTHAN, Shroff foundation, UNNATI are partners of Sajjata Sangh and all of them are among those who have showed their willingness to be accredited.

Organisational processes have undergone transformation: Organisations that have undergone the accreditation process have since then developed an understanding of good governance, transparency, financial transactions and accounting procedures. Now, they no longer face difficulties during a third party audit. This has saved time and human resources as well. Good governance has increased the efficiency of the staff and has improved management functions of the organisation.

One is assured about certain minimum standards: As per the minimum norms of Credibility Alliance, every organisation is bound to publish its annual report. The format of annual reports today includes information on the governance system, legal information, governing board, staff details, salary paid to staff and governing board and expenses made by staff and board members on travel within and outside the country. Earlier, very few

organisations documented their activities in their annual reports and usually developed reports according to the requirements of the funding agency. However, the development of standardised annual reports made the management more efficient and paved the way for gaining better credibility among people.

Staff and management are able to work together: Remuneration and working conditions of staff in the development sector were addressed in both minimum and desirable standards. The management realises the importance of measuring employee performances, while employees now understand the need to meet performance goals.

Victimisation by local bureaucracy can be addressed: The certification process has helped build credibility and confidence among NGOs to withstand occasional pressure tactics from corrupt local officials. In one instance, a member agency stood firmly against corrupt practices and refused to grease the palms of the local administration. As a result, it faced difficulties in getting sanctions of government schemes at the local level. However, armed with the Credibility Alliance certification, it is now listed as an NGO by the state department and hence can obtain schemes directly from the state without being victimised by the local administration. The certification has made this difference.

Learning

This initiative has yielded lessons that can be used by development practitioners in similar contexts. These are:

A slow and steady approach succeeds in the long run: The accreditation process was not a mandatory condition to be a member of the network. Only after the agency agreed, did Sajjata Sangh link it to the Credibility Alliance. This helped in keeping the network together. However, the Sangh also made special efforts to discuss the benefits of the accreditation process in network meetings and encouraged agencies subscribing to the Alliance's minimum standards to share experiences.

The initial process was slow since there were certain inhibitions: Many staff members initially viewed the proposed accreditation process as an intrusion into their private space. Some were also of the opinion that they already had good systems and hence the corrections that Credibility Alliance was seeking might not be useful. However, the initial inhibitions are now gone. Those who experienced the process and experienced its benefits are now strong advocates for it.

Conclusion

The accreditation process has been a challenging and time-taking exercise but has started to bear fruit. Organisations that have gone through the accreditation process have become better managed and governed, besides improving their visibility among their stakeholders. Their internal systems have changed for the better and they have been able to adopt a more professional approach towards their work and dealings. A strong beginning has been made and this initiative now needs to be consolidated to realise its full potential.

ANNEXURE 1: CREDIBILITY ALLIANCE (CA) NORMS

To get accredited by Credibility Alliance (CA), an organisation needs to comply with the CA norms. These norms have been developed through in-depth research of international standards for the voluntary sector. CA has two sets of norms :

- Minimum Norms
- Desirable Norms

For an accreditation certificate, an organisation must comply with the minimum norms. The organisation can also choose to comply with the desirable norms as the next step after basic accreditation.

MINIMUM NORMS

The Minimum Norms are basic standards of governance that all voluntary organisations should follow. It is mandatory for all members of the Alliance to comply with the Minimum Norms or give an undertaking that they would do so within a year. They include the following elements:

- Identity
- Vision, Aims / Objectives and Achievements
- Governance
- Operations
- Accountability and Transparency

IDENTITY

Principle: The organisation should exist and be registered

a. Existence

- The organisation has been functioning for a minimum of 1 year from the date of registration.
- The physical address given by the organisation is verifiable.

b. Legal Status

- The organisation is registered as a Trust/Society/Section 25 Company.
- Registration documents of the organisation are available on request.

VISION, AIMS/ OBJECTIVES AND ACHIEVEMENTS

Principle: The organisation is able to state what it is aiming to do and can also state achievements related to its aims.

- a. Vision/ Purpose/ Mandate/ Mission/ Objectives: A vision/ purpose/ mandate/ mission, which drives the organisation, is articulated beyond the registration documents.
- b. Impact/ Achievement/ Output/ Performance
The organisation is able to show performance through defined indicators against stated objectives.
- c. Aims and Objectives
The organisation has a defined set of aims and objectives.

GOVERNANCE

Principle: The organisation is committed to and practices good governance, especially because voluntary organisations draw upon public funds and private donations.

- a. The organisation has a Governing Board, by whatever name called.
- b. The organisation discloses name, age, gender, occupation and position of its Board members.
- c. Not more than half the Board members have remunerated roles.
- d. The Board has at least two meetings a year suitably spaced with quorum stipulated in its own Articles of Association.
- e. Minutes of the Board meetings are documented and circulated.
- f. The Board approves programmes, budgets, annual activity reports and audited financial statements.
- g. The Board ensures the organisation's compliance with applicable laws and statutory regulations.

OPERATIONS

Principle: The organisation conducts its programmes and operations efficiently and effectively in public interest.

- a. Programme
 - Activities are in line with the Vision, Aims and Objectives of the organisation.
- b. Management
 - The organisation periodically reviews progress of programmes. The organisation follows consultative decision-making processes.
 - The organisation complies with applicable laws and regulations of the country.
 - The accounts of the organisation are regularly maintained and those with an annual income above Rs. 50,000/- are audited by a chartered accountant.
- c. Human Resources
 - Roles and responsibilities are defined for Personnel (Staff and Volunteers).
 - All personnel are issued letters of contract/ appointment.
 - Appropriate Personnel Policy is in place.

ACCOUNTABILITY AND TRANSPARENCY

Principle: Organisation is accountable and transparent to the community served, the state, the public, the donors, the staff, the volunteers, and concerned others.

- a. Accountability
 - Signed audited statements are available: balance sheet, income and expenditure statement, receipts and payments account, schedules to these, notes on accounts and the statutory auditor's report.
 - Statement of accounts indicates whether constructed on a cash or accrual basis.
 - There are no serious adverse notes on any material point. There are no material transactions involving conflict of interest between a Board or staff member and the organisation.

b. Transparency

- The organisation's Annual Report is distributed and communicated to the community and others and is made available on request every year, within eight months of the end of the organisation's financial year.
- The Annual Report contains information on the Board members' names, position in the Board, remuneration or reimbursement, objectives and description of main activities of the organisation, a review of the progress and results achieved in the year and should contain brief financial details.

DESIRABLE NORMS

Desirable Norms are the next level of norms for good governance and public disclosure. These are practices that are at present not mandatory and some organisations may require time to adopt such practices. These "desirable norms" enhance the transparency and accountability of an organisation.

1. Governance

Composition of the Board

- At least two-thirds of Board members are unrelated by blood or marriage.
- A Board Rotation Policy exists and is practiced.

2. Accountability and Transparency

- Distribution of staff, according to salary levels and gender break-up, is disclosed in the Annual Report.

FRAMEWORK I (Illustrative)

Slab of Gross Monthly Salary (in Rs.) plus benefits paid to the staff	Male	Female	Total
< 2500			
< 7000			
< 15000			
< 30000			
< 50000			
> 50000			

FRAMEWORK II (Illustrative)

Slab of Gross Monthly Salary (in Rs.) plus benefits paid to the staff	Male	Female	Total
< 5000			
5001-10000			
10001-25000			
25001-50000			
> 50000			

FRAMEWORK III (Illustrative)

Name	Designation	Year of Joining	Years of Experience	Remuneration	Benefits	Remarks
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Annual Report discloses the total cost of international travel by all personnel (including volunteers) - segregating those incurred on organisation's expense and those that were sponsored, along with the names and designations of the persons who traveled and the purpose(s) of travel. In addition, organisations may also include details of air travel undertaken within the country. The format followed is:

Name	Designation	Destination	Purpose	Gross Expenses	Sponsored by
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CHAPTER 2

Making Information Reach on Time A Case of Information Revolution

Paresh Dave

Introduction

Agricultural growth in Gujarat is reportedly higher than most other states in the country¹. During the past two decades, intensive work in soil and water conservation and participatory irrigation management (PIM) has enhanced water security in many parts of the state. This has enabled farmers to adopt different cropping patterns with many farmers switching from food grains to cash crops like cotton, cumin, castor and groundnut. Changing cropping patterns and agricultural practices among well-to-do farmers has influenced small and marginal farmers in the rain-fed areas as well, who are now choosing to grow cash crops and high yielding varieties of crops. However, these farmers operate without sufficient understanding of the risks that accompany high income cash crops. They need scientific information on weather, new cropping techniques, government policies, markets and price updates and other factors that can impact farming. In addition, this information must be delivered in a timely manner for farmers to act accordingly.

This case describes an intervention of Sajjata Sangh in Gujarat, which initiated an innovative approach towards agriculture extension. The intervention depicted here is of enormous significance since it describes ways to enhance information sharing and communication with farmers, especially since agriculture extension system in the country has become quite ineffective despite the penetration of the mass media and mobile network in the countryside. The case provides significant learning for practitioners to replicate similar approaches in other states as well.

Context

The Vision 2020 document of the Government of India states that the country will need an extra 2.5 million tonnes of food grains per year to feed a growing population². The overall economic growth rate of India has been hovering at around 8.5 percent for almost a decade now. However, growth in the share of agriculture in the Gross Domestic Product (GDP) has only been around 5.4 percent³. There are many reasons for this stagnancy. Farmers encounter challenges such as high input costs, degrading land quality, lack of irrigation facilities, fluctuations in prices of agriculture produces etc. Most importantly, they lack adequate and timely information to be able to deal with such challenges, especially because agriculture extension mechanism in the country has been quite ineffective.

In a survey conducted by the International Food Policy Research Institute (IFPRI), only 6 percent of the respondents reported having ever interacted with an extension

officer⁴. Access to information, which will contribute to the success of small and marginal farmers, remains beyond their reach. Access to information is particularly pathetic for women farmers and single women farmers. A World Bank study conducted in 1998 mentions that only 10 percent of all the women farmers had some access to state run agriculture programmes⁵.

A majority of farmers source information from vendors, also known as the agro centres, which are private business establishments dealing in seeds, fertilisers, farm equipment and pesticides. The network of these agencies is so extensive that one may even find them in markets located in remote locations. They are part and parcel of any economic activity in the village. However, since their primary interest is increasing sales and profits, they do not act in the interest of the farmers or provide farmers with accurate information. Similarly, mainstream media also offers some information through newspapers, radio and television, but the content is often designed by government departments, many of which are unable to communicate contemporary knowledge to farmers.

In this context, tackling the challenges in agriculture extension in India today requires a new set of linkages to be developed between farmers, researchers, extension professionals and Non Governmental Organisations (NGOs), with each of these contributing in facilitating timely information, dissemination and motivation of farmers to adapt to innovative methods of farming. Recent advancements in Information and Communication Technology (ICT) in the country have created vast possibilities of interacting with farmers living in the remotest areas.

Community radio, a product of the ICT revolution, is an example of an extremely effective ICT instrument. It affords a unique advantage of receiving transmission through low-cost, battery-operated and portable receiving sets, while serving the cause of the community in the service area. Community members are involved in the production and broadcast of the programmes. Community radios encourage participation, offer members of the community the opportunity to initiate communication and participate in content design, and use technology appropriate to the economic capability of the people. Community radio is usually motivated by community well-being and hence not driven by commercial considerations. It promotes and improves the problem solving processes as experienced by the community and hence is apt for replication. The new guidelines and policy initiatives of the Government of India has led many agencies to initiate community radios. Some well-known initiatives include:

- Alternative for India Development (AID) project in Daltangunj, Jharkhand
- Kutch Mahila Vikas Sangathan (KMVS) project in Bhuj, Gujarat
- VOICES project in Budhikote, Karnataka
- Deccan Development Society (DDS) project in Pastapur, Andhra Pradesh
- M.S. Swaminathan Foundation's Virtual Academy and Community Radio Station, Tamil Nadu

Sajjata Sangh was contemplating a similar intervention across Gujarat to promote and popularise low-cost agricultural practices among farmers and provide the necessary guidance on methods that would reduce risks, reduce costs and increase yield. It understood

that to make correct use of the resources created for farmers, one would have to undertake extension on a large scale. It also realised that to make extension activity reach more people and yield results, the traditional method of T and V would not be appropriate. In 2006, discussions within the network members led to the initiation of a radio titled “*Sajjata No Sang, Lavekheti Ma Rang*”. In 2008, the programme added another component - a mobile based ICT initiative named AVAAJ OTALO. The case depicts this intervention.

Intervention

Most of the member NGOs of Sajjata Sangh are experienced in community-based and have developed knowledge on various technical matters related to NRM. When the members chose radio as the medium to disseminate information, it was mainly with the motive to reach out to the small and marginal farmers of the rain-fed areas. DSC, a member of Sajjata Sangh, undertook the responsibility of developing the radio programme.

Understanding the issue: In 2006 DSC undertook two studies in the working areas of the member organisations of Sajjata Sangh. One of these studies aimed to understand the radio listening habits of farmers and the other aimed to assess their information level on agricultural practices and also to ascertain encountered by farmers. A total of 50 farmers were interviewed on their listening habits and data on agricultural practices was gathered from another 50 villages. This data formed the basis of Sajjata Sangh’s strategic direction and development of the programme. The decisions made on the basis of the findings of the two studies were:

- The farmers should not be burdened with a lot of information at any given point of time.
- The information packages should be phased out in a manner such that the farmers can assimilate the learning and put it into practice.
- A three-year plan for the programme was developed. During the first year new information should be given to the farmers. During the second year, the farmers should be given education on the use of the information given and in the third year, farmers should be motivated to adapt to new methods in agriculture.
- Programmes should be developed according to the needs and interests of the farmers by conducting research at the field level.
- The chosen “docudrama” format of the episodes would not have just lectures and interviews of scientists but also showcase farmers’ experiences.
- A telephone helpline was envisaged as part of the strategy. After each episode, the helpline would be opened to provide expert advice to farmers.
- Taking into account the data of the farmers’ radio listening habits, the duration of the radio programme was set at 15 minutes.
- Agricultural information would cater to all the agro-climatic regions of Gujarat so that a larger number of farmers could be reached.

The radio programme production team received guidance from a programme advisory committee, which was set up in 2006 and consisted of four members drawn from the social development sector, development communication sector and agriculture. The team also hired a professional agency to manage the writing, editing and recording of the programme.

Preparing for the first launch: The team began to prepare the first dummy radio programme, and on completion, farmers were invited to provide feedback for it. Farmers expressed that there was too much content in the programme. It was very long and lacked farmer participation, which made it sound more like a commercial programme rather than a development programme. The team took the inputs in the right spirit and resolved to plug the gaps. The actual programme would now include only three messages in its broadcast. Farmer interviews and participatory experience sharing would be an integral part of the programme format. The first programme, launched on November 23rd, 2006, was a great success. As soon as the programme came to a close, the telephone help line started ringing. Farmers who had heard the programme asked a number of questions, and many wanted to register their responses to the quiz questions. Some even provided some suggestions on the content of the programme. In short, the launch was successful and gave the team the confidence to continue the initiative with greater enthusiasm. The team has not looked back since. Till date, this programme has relayed over 233 episodes without a break. A total of 253 episodes were produced and broadcasted. Almost all the programmes deal with issues of productivity enhancement, costs and risk reduction and improved sets of agricultural practices to enhance farmer's knowledge.

Making of an episode: Developing a 15-minute episode involves as many as 42 different activities including field research on the current practices and problems that farmers encounter, researching farmer experiences from previous years from the farmers and inviting experts to provide advice to farmers. The script is written, then edited and recorded for the programme. When farmers are invited to share their experiences, the recorded interview is shared with the relevant subject expert to verify if the experiences on practices are scientific or not. The radio team encourages the farmer listeners to provide feedback, which often forms the basis for improving the content and the design of the episodes. During the course of its 233 episodes, the intervention also underwent certain changes. It evolved to a large extent. The distinct phases of this evolution are:

Getting to know the listeners: The strategic plan document drawn out at the beginning set the direction of the programme. In accordance with this, the initial days focused on providing new information to farmers. This included information on new seed varieties (especially for wheat crop), different cropping methods and their advantages, content and composition of the soil, reading the soil report card, application of fertilisers and their impact on crops and correct irrigation practices for different crops. The radio programmes also discussed issues related to diseases on crops and prevention and control of these diseases.

After the broadcast of the first few episodes, listeners from Bhavnagar, Banaskantha and Surendranagar Districts were attracted to the programme. Many NGO members were actively and regularly discussing the information disseminated at the village level. This encouraged the farmers to hold collective listening sessions of the radio programme and thereafter "*shrota mandals*" or listeners' groups were formed. These groups had an added advantage. They collectively listened to the programme and called on the phone line to share their comments and experiences. To understand these listeners' groups better, a professional communications agency was hired to record member queries, which

were taken to the agricultural scientists. Their responses were broadcasted in the next episode. The quick redressal of issues made farmers dedicated patrons of the programme. They felt a meaningful association with the programme, which kept the listeners' groups active. The radio team organised its first face-to-face interaction between the radio team and the listeners' groups after the completion of 25 episodes. Farmers' suggestions and comments were recorded and thereafter relayed on the programme. Listening to their own participation on the radio became a frequent part of their routine.

The team made sure to address the suggestions and comments provided by the listeners. Based on one listener suggestions, additional information was relayed on crops like maize, paddy and vegetables. These crops are vital for livelihood security in the tribal areas and increased enthusiasm among tribal farmers. This pro-active stance provided a fillip to the number of queries that came through phone calls. It averaged around 110 calls after almost every episode, and the number of phone registrations increased each week. A few farmers even coined the phrase "Phone Line is Life Line."

As a result of knowledge sharing, many farmers took precautions, which helped save their crop. For instance, Babubhai Poppatji Thakore, a farmer from Banaskantha, village Biyok, Vav block, was able to save his castor crop from an attack of disease with information obtained from the radio programme. Prior to that, he had no knowledge to identify the pest attack or apply the pesticide dosage required for pest control. He remarked that the radio program was like his teacher because it prevented him from making mistakes and imparted corrective measures.

Developing listeners' groups and taking clues from them: The first few episodes encouraged farmers to initiate their own listeners' groups. This next phase focused on promoting the practical application of the new techniques on agriculture. During the beginning of the Kharif season, information was provided mainly on water conservation. Three episodes in a series ('Paani Phela ...Bandho Paal') offered advice on the planning needed for the crops on the basis of soil and water conditions. The programmes also took note of the feedback provided by farmers, including Bhagvanji Ketaji from a rain-fed village of Diyodar block of Banaskantha district. He had built a small farm pond and was thus able to sustain his crops during the dry spell. Similarly, farmers like Sanjay Vanani, from Surka village of Botad block of Bhavnagar district, reported that his investments in water conservation work enabled him to support his Kharif crop, and also sow his Rabi crop. Other educational content in the episodes during this phase centred on identifying friendly worms to reduce the use of chemical pesticides and encourage farmers to contact local agricultural universities, the *Krishi Vigyan Kendras* and partner organisations of Sajjata Sangh.

This phase consolidated and built on the development of the listeners' groups. In response to the demand of the farmers from Banaskantha, Kutch and Patan Districts, the 50th episode covered the listeners' group from Ranavada village of Kankrej block of Banaskantha. Approximately 150 listeners from this village participated and offered several valuable suggestions. Many listeners suggested that the radio programme expand its horizons beyond agriculture. The listeners group requested that the programme provide information on animal husbandry, the other livelihood avenue of the rural masses. There were also demands for information on to reduce salinity. In the subsequent programmes these issues were addressed.

The new initiative: Aavaaj Otalo, Extension of Radio with other ICT: The experience from the radio programme and lessons learned in its production provided a sound foundation on which to build Aavaaj Otalo. Since the community radio was familiar, transition to Aavaaj Otalo was easier. This phase covered the good practices, innovations and experiments carried out by farmers. Farmers were encouraged to share their experiences which were then broadcast on the radio programme. Initially, many of these innovators tried out new crops, used mulching techniques, and also used local pesticides in place of chemical ones. For example, Yatin Pal of Timana village of Talaja block of Bhavanagar District provided information on his experience with mulching and the application of this technique to his chickoo plantation. He was an inspiration and model for many other farmers in the area. Similarly, Gordhanbhai from Moti Khodiyar village of Mendarda block of Junagadh District reported that he used organic pesticides in place of chemical ones, which recorded an increase of 17-18 mounds per bigha. Kanjibhai of Jivanpar village of Kalyanpur block of Jamnagar District prepared an organic pesticide to protect the crops from white flies. He sprayed this homemade pesticide and gained an extra yield of 38 mounds of cotton for every bigha.

Many listeners also reported having used trycoderma, bio-compost and certified seeds for sowing. These stories of success and innovations were captured through inputs from the listeners' groups with which the team interacted. In turn, these efforts inspired young farmers to share their experiences and motivate others. To mark the celebration of the 75th episode, DSC requested the Director of the Agriculture Department to grace the occasion. The programme also read out the compliments sent across by the Agriculture Minister of Gujarat. Scientists from different agricultural universities participated to discuss a range of agricultural-based issues. This phase focused on providing farmers information on the effects of climate change. The radio team made efforts to assess weather conditions for the next six days and relayed this to farmers. This enabled farmers to prepare for emergencies like unseasonal rains, winds, excess heat and cold conditions. While, farmers had been experiencing these situations for a long time, they unable to relate them to the broader context of global climate change. The radio team also piloted a text message model, which later grew into an important model to disseminate information. With mobile phone services now being increasingly used by farmers, the team realised that an intervention had to be designed to address the need for timely information. Thus the concept of Aavaaj Otalo was born.

The birth of a new concept required research to broaden its scope. Research was conducted and the Aavaaj Otalo concept was taken up on an experimental level. In these efforts, the IBM lab, a student of the IT department of Stanford University and another student from the University of California, Berkeley joined the DSC radio team. The IBM lab provided technical support whereas DSC managed programme content. The IBM lab registered 1,000 farmers on the toll-free number and then set up the Interactive Voice Recording System (IVRS). Thus, along with the radio, two other ICTs were deployed. A total of 72,000 questions were registered on the toll-free number.

Aavaaj Otalo was implemented for a very short period. When the contract with IBM expired, DSC decided to continue Aavaaj Otalo with technical support from a team member who

represented the technical partner. However, this meant that farmers had to pay for calls since the toll free service was no longer available. Although, the calls continued, the numbers dropped.



Popularising Avaaj Otalo: During this phase, intensive use of telephone and Avaaj Otalo was undertaken to increase participation of farmer listeners. The radio team also focused on increasing participation of the listeners, which resulted in the year designated as “listeners inspiration” year. Farmers were motivated to try out new experiments in farming and animal husbandry. A new segment titled “Sajjata Na Rang Maa ..Rang Lagyo Kheti Maa”, was initiated, which discussed the entire process of innovations conducted by the farmers. Experiences of drip irrigation and methods adopted by farmers to increase milk production were shared. Problems narrated by the farmers were used to develop the content of the radio programmes. Listeners were given awards in recognition of their efforts. Experienced farmers were selected to give answers to questions asked by the farmers. While this initiative received mixed response, it increased the interaction between farmers of north Gujarat and Saurashtra. With the increased influence of Avaaj Otalo, the content of the radio programme also changed considerably. Jatan, an organisation working on organic farming, initiated a similar programme for spreading its organic farming movement. DSC also undertook research on the use of Avaaj Otalo and its impact on agriculture. In 2009, a paper was presented in a Computer and Human Interface Conference and awarded the “Best Research Paper”.

Exploring new possibilities: In 2010, DSC and Sajjata Sangh noticed that Avaaj Otalo was

proving to be an effective initiative. The year saw about 200 listeners' groups making more than 20,000 calls. Hence, DSC decided to explore ways to continue it. Around the beginning of 2011, new sections were added such as "voice sms". Currently 1,500 farmer listeners are being provided information on new experiments in agriculture through *Avaaj Otalo*. There are 30 lines on a dedicated phone number to 'Avaaj Otalo'. This number registered over one lakh calls and every caller was responded to. More than 200 voice messages on agriculture advisory were also broadcast. Interestingly, since the information provided on *Avaaj Otalo* acts mostly as advance information, this service has caused a reduction in the number of questions and calls on the radio programme.

Till date, each radio programme produced has been archived and is accessible to the caller at any time. It was decided that the fifth year of the intervention would be the year of promoting organic farming. During this year, there was an emphasis on the reduction in use of chemical pesticides and to increase the use of organically developed pesticides and organic compost to arrest soil and water degradation. Two changes were made in the format in keeping with these changes. In the "*chatryonavochil*" section, cases studies of farmers who had undertaken organic farming and reduced the costs were presented. A news section titled *Sajjata Samachar* was introduced, which provided updates on factors that would reduce costs and risks in agriculture, government policies and relevant research.

The radio programme has been running non-stop for the last five years and *Avaaj Otalo* has now run for almost three years. Though there is great demand for the extension services provided, the scale of the project is not large enough to be sustained on its own. At the listeners' event held in 2010, many farmers assured to pay an annual fee of Rs.1,000 to Rs. 1,500 but even that is not enough to cover the costs required to run an intervention of this nature. The format of radio has also become less popular due to the rapid spread of television. On television too, the government and even the private channels now offer farmers programmes of a similar nature. Even though these programmes are mostly promotional in nature and often not backed by research and farmers' participation; yet farmers prefer the graphics and visuals to the audio medium. Since the last three years, a consistent demand emerging from listeners' events is to initiate the "*Sajjata No Sang... Lave Kheti Ma Rang*" on television. The demand is rational, but resources for this initiative must be organised before it can become a reality. The costs are huge and unless a donor contributes, little can be done.

Outcome

Both the media - the Community Radio as well as the *Avaaj Otalo* – have successfully brought knowledge from the laboratory to the farmers. Both have facilitated exchanges of learning among farmers scattered across the state. Some very specific outcomes emerging during the development of the interventions are as follows:

Radio and Avaaj Otalo have become media for change: Today, the radio programme reaches out to over 0.75 million listeners in Gujarat. The audience research unit of Akashwani (Government Radio Station) has reported that the programme is the second most popular

programme relayed for farmers. With the large outreach of the radio programme and Avaaj Otalo, awareness on profitable farming has now spread to many farmers. Frequent discussions on different crops on the radio programme have motivated farmers to adopt practices that are cost effective. A few examples of how the radio and Avaaj Otalo inspired farmers to improve their farming techniques are presented in the box below.

Box 1 : Changes Unfolding

Vallabhai Tadha, a farmer from Trapaj village of Mahua block of Bhavnagar District, has studied up to the 10th standard. Relying on the information from the radio programme, Vallabhai used certified seeds for sowing. He also limited the use of chemical pesticides and fertilisers and used sprinklers for irrigation in his farm. Earlier, he earned Rs. 80,000/ annually. Now he earns Rs. 2,00,000/ from his land.

Narottambhai of Doliya village of Sayala block of Surendranagar District is the owner of two acres of land. He learned from the radio programme that soil assessment was the foundation of all agricultural planning, following which he had his soil tested. He also ensured water security by recharging the bore well. After having assured irrigation, he used the right amount of water and became more conscious of the use of fertilisers. He also began to use organic fertilisers. These changes increased his production of cotton from 30 mounds (600 kg) per one bigha to 40 mounds. Jaswantbhai Jivabhai Solanki, a farmer of Bhadroli village of Kalol block on Panchmahals, owns 11 bighas of land. Jaswantbhai took the radio programme's advice about climate change and the resultant uncertainty of weather very seriously.

As counter measures, he opted for mixed cropping, used certified seeds and sowed cotton seeds along with oil seeds. This increased his production by seven times and doubled the production of paddy. His annual income has now increased to Rs. 1,50,000 from Rs. 50,000.



Listeners' groups are new agents of agriculture extension: From the second year onwards, the radio programme motivated farmers to select a public place to listen to this programme. This led to the formation of listeners' groups, which carried out discussions after listening to the programme. Today there are 80 listeners' groups in Gujarat, which are gaining benefits from the Avaaj Otalo programme. These listeners' groups have become important sources of information for other farmers. Instead of depending on traders, farmers have begun to depend on advice from this set of well-informed listeners.

Linkages have been sought and developed: Listeners' groups have undertaken various agricultural experiments and participated in training programmes and exposure visits organised by Sajjata Sangh. For instance, the listeners of Bansakantha have visited other innovative projects elsewhere in Gujarat. Groups have approached local agriculture universities and partnered with them to carry out field-level demonstrations. They have also established linkages with KVK, Agriculture University and various departments of the government.

Learning

The radio and Avaaj Otalo initiatives have revealed several learnings which have the potential to be useful to others who plan to initiate similar interventions. Some of them are:

Development communication will succeed if we acknowledge that the listeners are our teachers: Both interventions gave prime importance to the views of the listeners. The perspective was that since the farmers were going to be the ultimate users of the information, farmers must have the ultimate say on the types of information needed. As professionals involved with the intervention, we need to take cognisance of farmer demands and act accordingly.

The choice of medium is very critical: Farmers already use and are familiar with the radio and mobile as communication media. It was strategic for DSC to use these media/ICTs for spreading information. In addition, other media like newsletters, calendars and audio CDs may also be used to reach out to the farmer. Docudrama is an effective strategy for information broadcasting. For a subject like agriculture, where the information is very specific, a lecture format or just an interview format may do. However, this can be boring and monotonous. The docudrama format can make listening interesting and help retain more information received. Farmers can also relate to the characters of the docudrama and obtain solutions to their problems.

Programme developers must fly it past experts: It is important content shared with listeners is technically sound. Receiving the go-ahead technical experts and inviting them to speak on issues builds the credibility of the program.

Conclusion

Radio as a mean of agricultural extension is widely accepted now. The method chosen by

Sajjata Sangh to consult the farmers to understand what they want and to use the docudrama format rather than the 'lecture method' were innovations that have made listening a joyful experience for farmers. Added to this was the use of the mobile technology to give information about real time problems. The 'seeking of questions and engaging experts to answer' approach contributed to the success of these initiatives. Farmer at distant locations without the support of any resource agency or extension arm were able to resolve their problems. Rightly said, the "Sajjata No Sang, Lavekheti Marang" and "Avaaj Otao" has become lifelines to many farmers in Gujarat.

Notes:

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CHAPTER 3

Seed of Hope

Vipul Sheladiya and Ravindra Pansare

Introduction

This case highlights the role of varietal change in production economics. It showcases the introduction of a newer and better variety of seed from another region into the project area, which led to a reduction in cultivation costs incurred by farmers. The intervention initially focused on introducing a “scientific” package of practices and as it gradually unfolded, it also introduced a seed variety of wheat that required less water for cultivation. This new wheat variety was a boon to the farmers in the semi-arid region of Gujarat where water is a scarce commodity. The variety has made it possible for the farmers to save water at a time, when during the last decade, the gross cropped area for wheat in Gujarat has shown an increase by almost half a million hectares¹.

Context

Wheat is one of the most popular food grains grown in Gujarat. This crop is grown during the Rabi season and the districts of north Gujarat and Saurashtra account for over 65 percent of the total production of wheat in Gujarat². The area under wheat cultivation has shown a steady increase during the last decade. As of now, the area under wheat crop cultivation in Gujarat is around 1.25 million hectares³. The increase has been phenomenal over the last few years considering that in 2003-04, wheat was grown in only 0.75 million hectares⁴. One reason attributed to the increase in area is the increase in command area under irrigation due to the work done through participatory irrigation in the state. Also added to this has been the watershed work done since the last two decades.

Even though conditions are favourable for the production of wheat in Gujarat, the yield remains low. The state accounts for less than 3 percent of the overall wheat production in the country⁵. The production is around 2.6 million tonnes from the 1.25 million hectares, which brings average production to only 2.1 tonnes per hectare⁶. Two wheat varieties, GW 496 and Lok 1, are predominantly cultivated in Gujarat.

The features of these and other varieties of wheat can be seen in Table 1. Both varieties require an average of 8-10 waterings. Because of the need for heavy irrigation, farmers in Saurashtra and northern Gujarat depend heavily on underground sources of water for irrigation. In 2011, Sajjata Sangh documented the experiences of wheat growers using the new wheat variety, which revealed that irrigation accounted for almost 20 percent of the total cost of agriculture. The cost of irrigation was approximately 32 percent of total production cost in case of the LOK 1 variety, which required at least 10 waterings. Farmers found it extremely difficult to invest such a large amount in irrigation.

Table 1: Popular wheat varieties with their characteristics

Number	Serial Wheat	Details
1	GW-496	Research year: 1989, Cultivation area: Gujarat, Irrigated crop, High disease prevention, More production
2	GW-273	Research year: 1997, Cultivation area: Central Region, Irrigated crop, High disease prevention, More production, Late cultivation possible
3	LOK-1	Research year: 1981, Cultivation area: Central Region, Irrigated crop, High disease prevention, More production, Timely cultivation
4	GW-173	Research year: 1992, Cultivation area: Central Region, Irrigated crop, High disease prevention, More production

Source: Compilation from hand outs and literature available at the Main Wheat Research Station, Vijapur

Further, with the price of wheat hovering around Rs. 12,000 - 14,000 per tonne and with an average production of 2.1 tonnes per hectare, wheat cultivation was a loss-making proposition for farmers. The PoPs followed by farmers did not adhere to recommended standards and the quality of the seeds purchased were steadily on the decline with spurious seeds flooding the market. Further, most farmers used seeds from the previous year, which took a toll on production. Added to this was the increase in costs of agricultural inputs. With most farmers depending on diesel-run water pumping devices, the costs were constantly on the increase. It is in this context that the Sangh members decided to build the capacity of farmers to increase production by promoting the use of good quality seeds and measured doses of fertilisers along with adherence to PoP standards.

Intervention

Despite the increase in the area under wheat cultivation, Gujarat has been witness to a steady decline of area under food crops⁷. The main reason for this is the comparative increase in income one enjoys by shifting to a commercial crop. One recent study mentions the rapid change in the composition of Gujarat's agrarian economy with cash crops expanding their share at the expense of food grain crops⁸. This study reveals that the total value of food grain crops fell from 15.8 percent in 1999-2000 to 12.9 percent in 2006-07⁹. However, the study also notes that while the area under cultivation of food grain crops has shown a decline, wheat has shown a very interesting trend. The net cropped area under wheat, which is a Rabi crop in Gujarat, has increased from 0.75 million hectares in 2004-05 to 1.25 million hectares in 2007-08. The study concludes that though the growth in wheat cultivation has been phenomenal, Gujarat is still behind other traditional agricultural states in terms of the output per hectare of net cropped area.

Aware of the findings of this study, Sajjata Sangh and its members representing various agrarian socio-ecologies discussed the issue in a board meeting in 2007. In the Annual

General Meeting of 2007, the Sangh decided to initiate efforts to enhance farmer incomes through promotion of improved cropping and agricultural practices. The members decided that with wheat showing an increasing trend in the area under cultivation, it would be ideal to focus on reducing expenses incurred during wheat production and correspondingly also increasing its production, thereby enhancing the livelihood of farmers.



The beginning: Sajjata Sangh began the task of gathering information from various government departments and agriculture universities in Gujarat. The National Food Security Mission during 2007-08 had selected six districts (Ahmedabad, Mehsana, Sabarkantha, Banaskantha, Dahod and Panchmahal) from 141 districts across the country to intensify its efforts to boost wheat production¹⁰. This was important information and needed validation at the farm level. With support from the member agencies of the Sangh, information was collected from progressive farmers, which helped the agencies establish the causal relationship between factors that kept the cost of production high on one hand and also kept the yield below the desired level. A two-day workshop was organised at the Anand Agriculture University campus in 2008 in which progressive farmers, experts and scientists participated. Each partner organisation of the Sangh invited five progressive farmers from their area along with one worker having expertise in agriculture. Around 57 farmers including six women farmers from 10 organisations participated in this workshop. Since the farmer participants were from different regions in Gujarat, and they all grew wheat of different varieties, the workshop generated significant learning for both the farmers and scientists.

The findings derived from this workshop were discussed in a meeting organised with scientists from the Vijapur Wheat Research Centre and agriculture specialists from member

organisations in February, 2008 at the DSC office. The discussion centered on the issues raised at the workshop, which included irregularity in irrigation, increase in the production cost, poor quality of wheat seeds and the PoPs. This confirmed the need to promote scientific farming and improved agricultural practices to improve wheat cultivation. A decision was made to provide farmers with knowledge and technologies of cultivation to increase incomes and ensure the effective dissemination and adoption of the proposed intervention via field level training demonstrations, trainings and video shows.

A change in approach was needed as well. Capacity building of beneficiaries emerged as an important factor in determining the success of the intervention. Instead of extension workers from organisations disseminating new and improved technologies to farmers, it was decided to involve farmers themselves in the process of farmer-to-farmer information dissemination. For this, the information needed to be prepared in the local language and distributed in an audio visual format for illiterate farmers. Sajjata Sangh, with support from agriculture experts of partner organisations, university scientists and research stations, worked together to develop a monthly crop calendar, which included information on a range of issues including preparing the land to crop storage methods after the harvest. Sajjata Sangh also prepared an audio video film that provided information on aspects of wheat production. The Sangh also brought out special issues of wheat in *Divadandi*, a bi-monthly magazine developed to educate farmers on crop cycles, cost reduction, risk reduction and increase in yield. In November 2008, DSC developed a booklet titled "Frequently Asked Questions" for farmers, which dealt with the production of wheat.

The search for a new variety of wheat: Farmers were benefited by these experiences, and gained substantial awareness about sustainable practices of wheat farming, which could boost productivity of land and minimise costs. However, the search for a solution was still ongoing. Farmers in Saurashtra were unable to expand the area under wheat cultivation owing to an acute scarcity of water. Many of them could not grow wheat at all since the crop required at least 7- 8 waterings. While these dialogues were taking place, the Sangh identified wheat varieties that required less irrigation from research conducted by the ICAR Research Station in Central India. These varieties had also been scaled up in Madhya Pradesh. In November 2009, an exposure visit to this research station was organised for farmers and partner agencies to learn about this new variety and examine the possibilities of its adaptation in the context of Gujarat.

Farmers were taken to visit the Sironj block of Vidisha District in Madhya Pradesh where large-scale adaptation of this new variety had taken place. Professional Assistance for Development Action (PRADAN) played a key role in the scaling-up process and encouraged Sironj farmers to adopt these varieties. The farmers of Gujarat interacted with the farmers of Sironj to understand the reasons behind improvements in productivity. They observed first hand that the varieties could be grown with only 2 to 5 waterings instead of 10 to 15 waterings. Language was never a barrier and farmers were able to see the farms, the soil and the standing crops. They also examined the seeds used by local farmers and how these seeds fared in the market in terms of price and quality of the grains. Farmers also visited the central research station at Indore to gather more information on the PoPs and to determine how they could procure the seeds for themselves.

Based on the first-hand inputs from the Sironj farmers and later validated by the research scientists at Indore, the farmers, in consultation with their partner agencies, decided that a few of them would experiment with this variety to see the results for themselves. They were apprehensive about the contention that two watering sessions were enough. Farmers assumed that the climatic and soil conditions were variable and the same variety of wheat might need an extra watering when sown in Gujarat. Farmers procured three varieties of seeds (See Table 2) from the research station in Indore, even though it was difficult to get permission to get breeder seeds from Madhya Pradesh to Gujarat owing to regulatory restrictions on their inter-state movement. The ensuing season was just round the corner and farmers knew they were in for a gamble.

Table 2: The details of the three varieties

Serial Number	Varieties	Characteristics
1.	HI-8498	Research year: 1999, Cultivation area: Centre Zone, Less (Malav Shakti) irrigated, High disease prevention, More production
2.	HI-1500	Research year: 2003, Cultivation area: Centre Zone, (Amrita) Un-irrigated, High disease prevention, More production
3.	HI-1418	(Naveen Chandosi) Research year: 1999, Cultivation area: Centre Zone, Less irrigated crop, High disease prevention, More production, timely cultivation required

Source: Compilation from www.iasri.res.in

Nine farmers from five partner agencies in Amreli, Bhavnagar and Rajkot Districts experimented with three varieties of HI-8498, HI-1500 and HI-1418. Four out of the nine farmers preferred the HI-1418 variety as a result of their interaction with farmers in Sironj. They procured this variety (also known as *Naveen Chandosi*) due to its low water requirement as pointed out by the Sironj farmers. Details of the supply of seed purchased for experiment are provided below:

Table 3: Details of the supply of seed purchased for experiment

Organisation	Variety	Seeds in kgs.	Name of the Farmer
SSKK Amreli	Malav Shakti HI-8489	40	Rameshbhai Hadiya
	Amrita HI-1500	20	Shantibhai Sabhaya
	Naveen Chandoshi	25	Shamalbhai Kartiya
	Naveen Chandoshi	25	Laljibhai Patel
DSC-Dhari	Amrita HI-1500	25	Ukabhai
VishwaVatsalya Trust-Bagsara	Naveen Chandoshi	25	Jagdishbhai Patel
Gram Nirmal Samaj- Mahuva	Amrita HI-1500	5	Jagdishbhai
	Malav Shakti HI-8489	10	Vimlaben Patel
Vrukshprem Trust- Upleta	Naveen Chandoshi	25	Menshibhai

Source: Data provided by relevant member organisations of Sajjata Sangh

The seeds bought by farmers during the exposure visits were sown in their farms. These farms thereafter served as demonstration-cum-experimentation farms. Farmers from their own and neighbouring villages, who were unable to participate in the exposure visits, were able to observe the growth of the crop and learn about these new practices. Many did not believe that with two irrigation cycles, one during 30 days after sowing and another during 75 days after sowing, the crop would be ready. However, they had to believe it when they saw it with their own eyes. In the aftermath of this success, many farmers wanted to purchase these seeds and some of them placed orders with one or the other amongst the nine farmers. One farmer procured a kilogram of the seeds, made *rotis* (Indian bread), and then consumed them before placing his order. He wanted to assure himself that the wheat was consumable and tasted good.

While the experiment was in progress, Sajjata Sangh collected day-wise data on costs incurred by farmers in growing the wheat. It wanted to make sure that the costs were less and that the yields were the same if not higher than before. Farmers kept records in the record book and towards the end of the season, these records provided significant data pertaining to yield and costs. In addition to the farmers who were involved in the experiment, other farmers who referred to this data soon realised that they could increase their production at a lesser cost. They approached the partner organisations of Sajjata Sangh to help them obtain supplies of the seeds. Due to the large demands for these varieties, Sajjata Sangh and the Modasa unit of DSC coordinated with the Wheat Research Centre at Indore to get more supplies of these varieties. They also consulted traders who were supplying the certified seeds and purchased seeds from them. The following year, the coordinated effort of the agencies helped procure seeds of these varieties on a large scale (See Table 4 below).

Table 4: Seed varieties purchased for scaling up the initiative

Name of the organisation	Amruta HI-1500 (in kg)	Malav Shakti HI 8489 (In kg)	Naveen Chandosi HI-1418 (in kg)	Total (in kg)
AKRSP(I) – Gadu	120	120		240
GNH - Mahua		1600		1600
MKT - Meghraj	800			800
M.G. Patel	800			800
VRTI - Bhuj	120			120
Satvik - Bhuj	200			200
Prakruti Foundation	80		520	600

Source: Records of Sajjata Sangh Members

The nine farmers, who had cultivated this crop in the demonstration plot, sold the produce to other farmers and friends in neighbouring villages. These farmers together produced and sold 5,000 kg of seeds to others.

Sajjata Sangh made it a policy to keep all stakeholders within the loop including agriculture specialists and implementing partner organisations, while it carried out this intervention.

Scientists at the Vijapur Wheat Research Station were also experimenting and conducting their own field trials of new varieties, almost on similar lines of those developed in Indore. The demand for varieties that required less water inspired them to expedite their trial and bring out the new variety for Gujarat. Sajjata Sangh also partnered with the Coastal Salinity Prevention Cell and Satvik of Kutch to spread the message about the low water demanding wheat varieties.

Outcome

The introduction of a new variety of wheat that required less irrigation has been a great success. Some of the outcomes of this intervention are:

It is agreed that no crop is as season and date of sowing specific as wheat: Comparing varieties like HI 8498 and HI 1500, which are varieties of Madhya Pradesh with old varieties of Gujarat without considering growing situations and type of wheat is not valid and technically untenable. This experiment does not compare Madhya Pradesh varieties with Gujarat varieties. Rather, it is a one season assessment involving selected farmers who demonstrated the new durum wheat varieties like HI 8498 and HI 1500 of MP with old aestivum varieties like LOK 1 and GW 496 of Gujarat. These varieties can be compared with GW 322, GDW 1255 and GW 11 with the help of Wheat Research Station in Vijapur, which has been an excellent research station developing versatile varieties that have performed well across boundaries of wheat zones or states. This is evident from the fact that the GW 322 and GW 273 wheat varieties of Gujarat are among the top 10 varieties of the country despite the area under wheat cultivation in Gujarat being very less.

The experiment has been successful. The intervention has motivated farmers and the scientific community in equal measure. Farmers are demanding supplies of the new variety of seeds for cultivation. Savings generated by way of less water use are likely to add to green credits, which is an important consideration in the current scenario. The increased productivity and cost reduction per hectare from the new Madhya Pradesh seed varieties have laid the foundation for hope for better food and water security in the state.

Expenses in cultivation have decreased: While groundwater is free of cost, the electricity or diesel operated pumping devices needed to draw the ground water constitute a significant portion of costs. The earlier varieties, GW - 496, 396 and LOK 1, required on average 7-8 irrigation at an interval of 10-12 days. The varieties that were introduced as part of the intervention required two waterings. The cost has reduced for the farmer. Another important reason for lower cost concerns the removal of weeds. Farmers had to bear the expense for removal of weeds through weedicides. More watering meant higher incidence of weeds in the farms and therefore higher costs incurred by farmers. With less watering required, there is now a lower incidence of weeds.

Costs also have reduced due to reduced expenses in fertiliser application. Most farmers applied urea before irrigation and claimed they could see the colour change in the wheat crop a day after irrigation. They attributed this change to the application of fertiliser, which according to them, increased the yield of their crop. With reduction in the costs of irrigation,

weedicides and labour for removal of weeds, as well as use of amount of fertilisers, the cost per hectares has reduced from Rs. 30,320 in the previous season to Rs. 27,435.00.

Farmers have seen significant change in production figures: The less irrigated variety has given higher yields than the varieties that required more irrigation. The per hectare yield for the new variety is between 2,500 kg and 2,800 kg. This is about 15-17 percent more than the earlier varieties grown by farmers. In addition to this, water that is saved translates into increase in area under wheat cultivation as well. Farmers have experienced almost a four fold savings in water. Practitioners expect that farmers will make use of the water that they save in increasing the area under wheat or for cultivation of other crops.

The intervention is spreading fast: It is known that if any experiment yields results, farmers replicate it on a large scale. This happened in case of this variety as well. Only nine farmers carried out the experiment in the first year. The capacity building that took place on their farms and the development of the education materials and scientific information in local language led more than 800 farmers to join in the second year. Many farmers also visited the Vijapur Wheat Research Station to know more about the low water demanding wheat variety. The research station also coordinated with Sajjata Sangh for demonstration of GW11 at Amreli and Mehsana District.

Learning

The introduction of a new variety of wheat seeds and the processes that were followed by the practicing organisation has yielded interesting learnings for others to emulate. These include:

Livelihood promoters must think and act according to prevailing local conditions: The green revolution made our country food secure. However, this happened at a cost. The production paradigm gave emphasis to crops that required the valuable resource of water. This was well-suited to the situation in north India where ground water is available in plenty. However, it was ill-suited to Gujarat, particularly north Gujarat and most parts of Saurashtra, where water resource is scarce. Falling water tables in many parts of the state compounded the problem. This intervention, however, focused on addressing the specific needs of farmers according to prevailing local conditions of less water availability. It introduced a solution that suited the geographic context and enhanced agricultural productivity.

Practitioners need to think out of the box: The context became the point of inspiration. Rain-fed conditions required an intervention that could help farmers save on this precious commodity but still give enough production to meet their requirements. The intervention did just that. Even though the seeds were already available with research stations and had been successfully piloted in similar conditions, the extension arm of the state failed to take note. Civil society, which had a grip on reality, played a leading role in this process of expansion and knowledge dissemination.

Good networking reduces the time taken to reach scale: Networking has its benefits. The flow of information is faster and also regular. The experiment that was carried out in Amreli by a small agency - a member of Sajjata Sangh - and spread to many other locations, and not just within the district. The news of the new variety and its benefits is now known to many farmers in other districts of Gujarat. The discussions within the network and the opportunity given to the members to discuss the experiment made this reaching out possible. The news of the new variety being successfully tried out was also discussed within the scientific community

Knowledge of rules and regulations pertaining to seeds is essential: There are certain rules that govern the import or transfer of seeds from one region to another. This applies to a breeder seed as well, which is essential for developing foundation seeds and thereafter certified and truthful seeds. The livelihood promoter engaging in such an experiment needs to be aware of such rules and regulations to avoid complications and delays.

Conclusion

The experiment has been successful. It has been able to motivate the farmers and also the scientific community in equal measure. Farmers are demanding supplies of the new variety of seeds for cultivation. The savings generated by way of water saving are likely to add to the green credits, which is an important consideration in the current scenario. The seed has laid the foundation for hope. The hope is for both food and water security for the country.

Notes

1. Gujarat Agricultural Statistics. (2009). Government of Gujarat, Gandhinagar.
2. Ibid.
3. www.indiastat.com
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6. Shah, Tushaar, Ashok Gulati, Hemant P. Ganga Sreedhar and R.C. Jain. (2009). "Secret of Gujarat's Agrarian Miracle after 2000", Economic and Political Weekly.
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8. <http://nfsm.gov.in>
9. Comparative assessment between LOK 1 and HI 1500 through field level observation and internal data compilation by Sajjata Sangh partners.
10. Ibid.

CHAPTER 4

Bringing Back the Lost Smile A Case on Weather-based Crop Insurance

Natu Macwana

Introduction

According to a study by IFPRI (2010), agriculture in India contributes to around 24 percent of the GDP and provides employment to over two-thirds of the country's labour force; however, practicing agriculture has always been a risky proposition. Farmers have to contend with a number of issues like fluctuation in the market price of the produce, fluctuation in yields and deterioration of their land and water resources. These factors contribute significantly to make their income unstable and unpredictable. Added to all these are natural calamities, such as drought, excessive rainfall and pest outbreaks, which often destroy or damage crops. On the other hand, the costs of agricultural inputs purchased from the market are steadily on the rise. Prices plummet because of adjustments in local or world markets. Institutional finance is almost never available to small and marginal farmers. In the few cases it is available, procedural formalities are so complex that farmers shy away from it and rely on middlemen or moneylenders instead to avail credit on time. The types and severity of the risks that farmers confront vary in different farming systems, agro-climatic regions and local contexts. The net result is that agriculture is a particularly risky and burdensome activity for small-scale farmers in India. However, alternative livelihood options are limited. The following case describes an attempt to insure farmers against the vagaries of nature. It puts forth an intervention that came at a point of time when farmers had exhausted all options but still were not able to confront natural calamities.

Context

Gujarat is one of the most drought prone states in India. Around 70 percent of its area is classified as semi-arid and arid¹. Rainfall is highly erratic in Gujarat, ranging from as low as 458 mm to as high as 1,493 mm annually (IFPRI, 2010). Both Kutch and Saurashtra are perennially dry regions. Gujarat also faces severe soil degradation and a large part of its 1,600 km coastal area is also affected by salinity. Continuous drought and low rainfall for almost four consecutive years (1999-2002) was followed by five years of heavy rainfall (2003-2007) (IFPRI, 2010). The General Insurance Company's (GIC) Crop Insurance Cell has estimated that more than 90 percent of crop losses in Gujarat could be attributed to one single factor - erratic rainfall².

Farmers in rain-fed areas are more prone to rainfall-related risks. Unpredictable weather is their biggest adversary, something that can seldom be controlled. Interestingly, many of these risks can be managed. Farmers, rural communities, financial service providers, input suppliers, private insurers and relief agencies each use different strategies to cope with these chronic and catastrophic risks. But the difficulties and costs involved in managing covariate

risks (those risks that affect large numbers of people at one time) make the management of these risks difficult and challenging. Farmers and rural communities are typically not in a position to manage covariate risks without outside support. Unfortunately, receiving support from outside is often challenging. Financial service providers have limited reach in rural areas and insurers typically serve only the least risky clients. Even assistance from governments and relief agencies is often unavailable or inaccessible.

Traditional risk-management arrangements have failed to provide an adequate safety net for the poor. They are often forced to sell their limited disposable assets (e.g. livestock to begin with and, finally, land) to cope with untimely crises and hence remain mired in poverty perpetually. Crop insurance, a risk management tool available in today's economic context does not seem to provide remedy against these odds although a component of insurance is often added to the credit when bank advances credit to farmers. Existing crop insurance schemes are usually yield-based and provide coverage against most of the exogenous losses that may occur during the production stage. These schemes are also marred by several shortcomings such as long settlement periods and non-transparency in loss assessments. However, this instrument, if designed properly can still provide an alternative for the farmers. It can reduce the amount of financial risk and mitigate the losses encountered by farmers. One of the products, the weather insurance product, if designed on the basis of locations, crops grown and climatic properties and productivity levels, has the potential to provide farmers with better risk mitigation methods.

Intervention

Ever since its inception, Sajjata Sangh has initiated “watershed plus” activities that aim to provide benefits to farmers whose land had been treated with soil and water conservation measures. Activities initiated by Sajjata Sangh and its partner members, focus on productivity enhancement and piloting models of marketing that can help farmers add value to their produce. The idea of rainfall insurance was discussed in a meeting of the members of Sajjata Sangh in 2006. The members felt that it was important to initiate an activity that would help reduce risk of production. Though the Weather Based Crop Insurance Scheme (WBCIS) is popular in many states of the country, the Government of Gujarat has not implemented it till date. Thus, the members agreed that they needed to pilot an insurance product before replicating it on a larger scale.

The pilot: To gain insights regarding weather-index insurance, Sajjata Sangh in 2006, instituted an action-research project with financial support from the Aga Khan Foundation (AKF) under the Sustainable Community-based Approaches to Livelihoods Enhancement (SCALE) project. The action research designed a weather-index based insurance product to provide a cushion to farmers against crop losses on account of weather-related vagaries. Based on this research, an insurance package named Visistha Varsha Vima Policy was customised for groundnut growers in Khambaliya and Kalyanpur talukas of Jamnagar district. The package was designed to provide cover against weather perils like deficiency in rainfall volume and erratic distribution of showers during the crop growth period. The customised insurance package was piloted in the operational area of one of the member partners, Saurashtra Voluntary Action (SAVA) with 35 farmers (covering

39 acres of land) at a fee of Rs. 750 per acre. Promotional events were undertaken to increase awareness on insurance products among farmers. The most notable feature of the policy was that payment of claim was not dependent on loss. Farmers automatically became entitled for payment in case of deficient volume or erratic distribution of rainfall, as measured by the local weather station. The pilot was received well with each of the 35 farmers receiving a claim of Rs.1,010 at the end of the season. Taking this positive experience further, SAVA mobilised another 110 farmers and insured 180 acres of land under groundnut crop the very next year (2007).

Expansion and product improvement: During the Kharif season of 2008, Sajjata Sangh expanded the weather insurance programme to five talukas - Ghogha and Talaja in Bhavnagar District and Dhari, Khambha and Rajula in Amreli District Insurance coverage was provided for three crops - cotton, groundnut and maize. The product was designed in a way that it also covered the loss incurred on account of excess rainfall and thus was an improvement over the Visistha Varsha Vima Policy that had been piloted previously. Another added feature in the policy was claim settlement on account of “consecutive dry days” which meant that if there was no rain for 25 days consecutively, farmers were entitled to a claim. A total of 350 farmers covering the three insured crops across the above five talukas took policies for 427 acres in that year, out of which 203 farmers became eligible for claims based on rainfall situation in the talukas of Dhari, Khambha and Talaja. The amount of claim varied from Rs. 465 to Rs. 713.

Box 1 : Difficulties experienced in piloting the product

1. There were delays in developing the customised product by the insurance companies.
2. The reference points used by the Agriculture Insurance Company (AIC) were far off from the Indian Meteorological Department (IMD) stations. With just 16 IMD stations and many being over a hundred kilometres away from the villages, the rainfalls were not accurately measured.
3. There were design-related loopholes as well. Excess rainfall during any single phase, if more than twice the trigger during a particular phase, was considered for “carry forward” to the next phase. These systems in the design went against the interest of the farmers.
4. Claims below Rs. 400 were below the minimum payment limit as per the rules of the insurance company and hence not paid. This had a negative impact on policy holders.

Taking the intervention to scale: With an experience of almost three years, Sajjata Sangh decided to expand the weather-index based insurance in 2009 to eight more drought-prone districts - Surendranagar, Junagadh, Amreli, Bhavnagar, Dahod, Panchmahal, Bharuch and Narmada with financial support from Oxfam, India. This was done according to the demands of the farmers belonging to the regions where Sajjata Sangh partners were operating. The expansion of the insurance programme to eight districts and to more farmers was not an easy task. Member agencies faced several difficulties (See Box 1) in introducing the product to the farmers, convincing them to pay premiums and settling their claims.

To enhance partners’ understanding of weather-indexed crop insurance, Sajjata Sangh

organised a workshop at DSC in 2009, which was facilitated by the Director of Market Pulse Knowledge Network Ltd. The workshop helped build the capacity of the partners and many of them, for the first time, understood the nuances of such weather-based insurance schemes. Participants were given awareness on various insurance product designs and their applicability and relevance in different critical stages of crops. The workshop also informed them about threshold values, triggers and pricing of insurance products. Significantly also, the workshop came out with a strategy to scale up weather-based insurance, which is discussed in figure 1 below.

Figure 1 - Strategy for Scaling up Weather-Based Insurance in Gujarat



The workshop discussed issues confronted by partners in the previous years, some of which needed immediate attention. The problem of not having enough IMD stations within the vicinity of the villages could be addressed to a certain extent. The AIC agreed to consider the data of rain gauge stations of other government departments in the area. With the help of Market Pulse, a total of 30 term sheets (policies) were designed for marketing. The eight partners of Sajjata Sangh intensified their efforts to

reach out to the 425 villages identified from the previous year. A total of 1,377 farmers, of which 59 percent small and marginal farmers and another 9 percent women farmers, purchased the weather-based insurance products. Due to the strong follow-up with regional and head office of the AIC, Sajjata Sangh settled claims within a fortnight of the completion of the product stages such as sowing, germination and flowering. A total of 1,277 farmers received claims as a result of either deficit or excess rainfall during the season. The total payout received by the claimants was Rs. 17, 98,000 against the premium amount of Rs. 17, 92,101 paid by them.

Engaging in policy dialogue with the state government: At the beginning of 2010, Sajjata Sangh conducted a state-level workshop on weather insurance with the aim of initiating dialogue with the state government. The idea was to involve state government officials so that they were motivated to consider introducing the Weather Based Crop Insurance Scheme (WBCIS) as a state-sponsored programme. The event was attended by farmers, government officials, officials from NABARD and representatives from a conglomeration of many weather insurance companies. It also witnessed a sizable civil society representation with delegates present from Andhra Pradesh, Maharashtra, Rajasthan and Gujarat, who shared their useful experiences from experiments carried out at their respective field locations. The role of the state government was discussed during the deliberation since it was quite proactive in other states. There were also deliberations on the concerns of high premium rates and reference weather stations.

The intervention on developing and promoting weather insurance by the Sangh thereafter received support from NABARD, which sanctioned Rs. 8.379 million for a three-year period to subsidise the cost of the premium. The Coastal Salinity Prevention Cell (CSPC), Ahmedabad also provided a grant of Rs. 0.429 million for sponsoring the implementation of promotional activities, to help reach out to farmers in coastal areas with such an insurance product. Encouraged by the response received by the workshop, the Sangh members conducted taluka level workshops at different locations. Partner agencies roped in members of the legislative assemblies, agriculture officers and members from the District Panchayats in these workshops. Partner agencies also made special arrangements for representatives of the Agriculture Insurance Corporation (AIC) to attend the workshops and promote their insurance policies for farmers.

Almost everywhere, the workshops received good response. Each of these taluka level workshops involved a component of distribution of payout cheques. Quick and real time settlement of claims satisfied policy holders and encouraged partners and farmers to approach the government officials at the district and taluka levels to discuss the matter with higher authorities. This process helped in educating the farmers and the officials to ensure their participation in the long run.

Constraints encountered: One of the main constraints encountered was with respect to the high premium rates of the product. Often because of high premiums, small and marginal farmers remained out of the reach of the available agriculture insurance products. There was a misconception among farmers that they would receive a payout in case of any eventuality. In Ghagha and Talaja taluka, for example, farmers who availed of the policies during the first two years did not do so in the third year because they had not received any

payouts during the first two years. They did not realise that the payouts were conditional to the triggers and believed they had been cheated. There were issues of lower payouts as well. The claims data during the Kharif season of 2010 (See Table 1) show that the payouts were much lower compared to the sum assured. Added to this issue was the perpetual increase in premium rates almost every year.

Table 1: Premium and payouts in Khambha for groundnut cultivation (in Rupees)

Year	Premium	Payout	Farmers Covered	Sum Insured
2008	550	465	45	7,500
2009	660	79	80	5,200
2010	750	62	145	5,000
2011	850		46	5,500

These issues were discussed with AIC after the first draft of the products designed came for approval during Kharif 2011 (See Table 2 for the process adopted to design and implement the insurance product). Sajjata Sangh members realised that accepting the product in its current design with high premium rate and no significant changes in the benefit package for farmers would be futile. Therefore, it suggested a complete break from promoting weather insurance during Kharif 2011 and a reassessment of a future plan. However, seven partner organisations decided to take up a few products after AIC accepted their conditions, following which they covered 2,626 farmers with a total acreage of 2,910 acres across 18 talukas. Together, the farmers paid an amount of Rs. 13, 34, 618 as premium.

Designing the product: The product was developed through a participatory process, which has been explained in Table 2 below:

Table 2: Process adopted to develop an insurance product

Practice	Process	Stakeholders
Designing the product	<ul style="list-style-type: none"> • Reviewing the suitability of the product and its design • Identifying gaps that need to be addressed for improving its design • Selecting of design questionnaires through questionnaire-based exercise • Review of 15 years of rainfall data • Sharing draft product with farmers • Dialogue with insurers • Consultation at regional and district level with farmers on available term sheets • Facilitating workshops for partner organisations • Mobilising farmers and technical staff of the insurance company for product draft • Bargaining with the insurance company on premium and sum insured as per the term sheet • Acceptance and finalisation of product/term sheet 	Reviewing the suitability of the product and its design

Educating members	<ul style="list-style-type: none"> Partners meetings Orientation workshops Exposure visits to understand approach and strategy 	Sajjata Sangh Partner Organisations
Marketing	<ul style="list-style-type: none"> Awareness generated through a documentary film titled "Bhini Bhini Haas" Pamphlet and poster distribution in local language Launch programme, village rallies, night meetings, video shows and resource group trainings Providing time-to-time consultation to farmers about the final insurance policy 	Sajjata Sangh Partner Organisations
Premium collection	<ul style="list-style-type: none"> Farmers need to enroll their names and submit their land survey numbers and bank details (bank name and number account) in prescribed proposals form Acknowledgement receipt is given to farmers Verification of the land ownership and details mentioned in the proposal form Submission of premium to Sajjata Sangh Submission of aggregated premium to insurance company 	Designed by insurance company in consultation with Sajjata Sangh partner organisations
Claim administration	<ul style="list-style-type: none"> Sharing of monthly rainfall data with farmers Preparing proposed claim data for each of the products at the taluka level in coordination with the insurance company Sharing proposed claim data with farmers in taluka level Final claim settlement and amount is disclosed to partners Claim disbursement to farmers in workshop Coordination of post claim settlement issues such as bounced or returned cheques 	Sajjata Sangh Partners

Sajjata Sangh also piloted a weather insurance product during Rabi 2010 for two crops - wheat and cumin - covering attributes such as temperature, humidity and unseasonal rainfall. The pilot reached 1,409 farmers covering 1,599 acres of land in 12 talukas in six districts. This piloting over four long years yielded a mixed outcome.

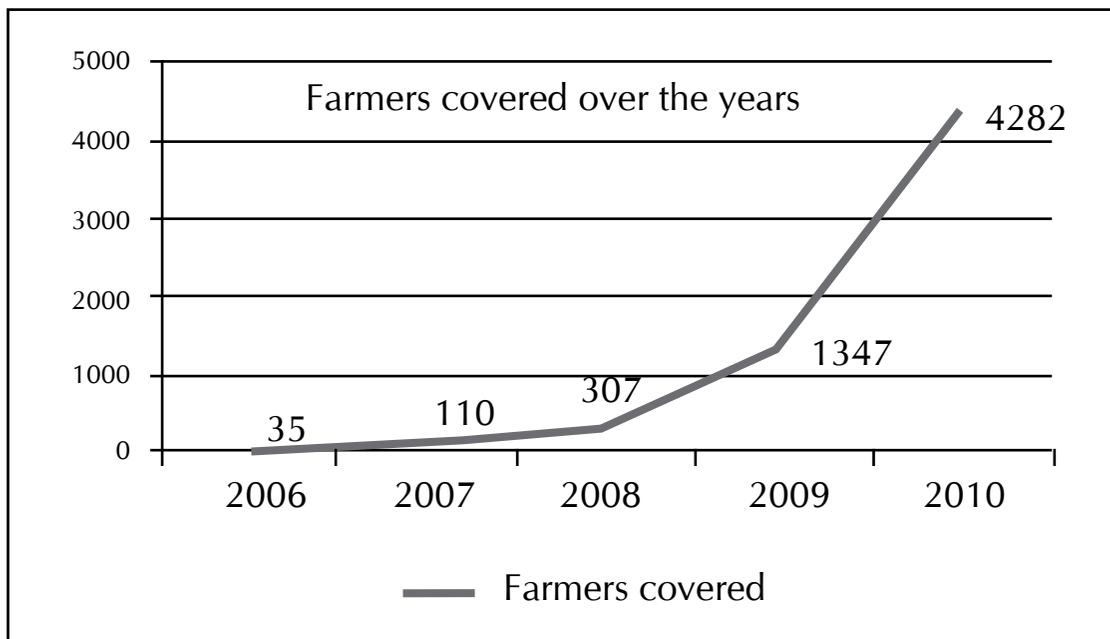
Outcome

Provision of the weather based insurance was a boon to many farmers in Saurashtra. Some important outcomes include:

Recovering investments made by farmers: The most immediate outcome was that farmers were recovering their investments where rainfall figures showed deviations from the normal trend. A total of 4,282 farmers, of whom 2,818 (67 percent) belonged to the small and marginal category, were covered under the weather insurance programme during Kharif 2010. Farmers contributed Rs. 2,772 million as premium. Of these, 3,118 (74 percent) farmers received a total payout of Rs. 2,790 million.

More farmers are showing interest in the product: Because of the effective approach followed by Sajjata Sangh during the Kharif season, the size of its weather-index based insurance portfolio increased by nearly 350 percent in terms of the number of farmers and almost 400 percent in terms of the total acreage brought under insurance since 2006. Since then, each year the number of farmers increased (see graph).

Figure 2 - Coverage of weather indexed Insurance in Sajjata Sangh partners' operational area



Improved understanding about product customisation among civil society and the insurance agency: Sajjata Sangh succeeded in convincing AIC to customise the products to suit the farmers' needs in the operational areas of its member organisations. Adopting a consultative approach helped in this regard. It also helped build the capacity of the project staff and they were able to customise the product by setting up rainfall triggers at different critical stages of the crops. Staff members, leaders of farmers' organisations as well as policy holders have a greater understanding of the terms and conditions and of the different definitions of the product. It was because of this improved understanding that Sajjata Sangh dialogued effectively to carve out products appropriate for different crops in all the 25 talukas.

Wider recognition at the national level: 2009 was a rewarding year for Sajjata Sangh as its efforts in initiating and promoting rainfall insurance in Gujarat were recognised at the national level. The Sangh received a Citation of Appreciation for good practices in community-based disaster risk reduction from the Evangelical Fellowship of India Commission on Relief (EFICOR) and Sphere India. The Sangh's efforts were further appreciated and recognised by an article titled, "Life at the Grassroots Level" published in Money life, a personal finance magazine, in its July 2009 issue. Sajjata Sangh was also invited by GIZ (Deutsche Gesellschaft fuer Internationale Zusammenarbeit), Micro Insurance Academy, International Network of Alternative Financial Institutions (INAFI) and the Administrative Staff College of India to share its experience on micro insurance. A paper titled, "Marketing Complex Financial Products in Emerging Markets: Evidence from Rainfall Insurance implemented by Sajjata Sangh in Gujarat" was published in the Journal of Marketing Research, USA in 2010. This recognition helped in developing the confidence of the team and encouraged it to take steps to expand the scope of work in years to come.

Increased interest of member organisations in the Sajjata Sangh network: Sajjata Sangh generated demand for insurance by tapping the potential for the rainfall insurance cover among its partner organisations. The Sangh provided a platform for its member organisations to popularise and expand the concept of weather-based insurance. Since this was a unique partner support programme, the implementing organisations appreciated the network's activities. The insurance programme has also helped participation of the member organisations in the annual general meeting, regional meetings, trainings and workshops. The network has strengthened as a result of this intervention.

Learning

Implementing the intervention in such diverse conditions has served as a huge learning opportunity for Sajjata Sangh. These include:

Strategic collaboration with the state government is important: The intervention around weather-based insurance aims to reduce the risks of farmers in a drought-prone agro climatic zone. However, the cost of the premium even after the subsidy is high. This takes the product beyond the capacity of small and marginal farmers. It is important that the state government provides financial support (as NABARD did) to keep the premium at a level at which farmers are able to access the insurance. This seems to be a better role for the state where it can fix premiums and leave the initiation, implementation and management of insurance programmes to NGOs, rather than being directly involved.

Insurance alone makes little sense; it needs to be supported by plus linkages: Integration of insurance with agriculture development services with a focus on risk mitigation and productivity enhancement is required to provide a more comprehensive solution to customers and to reduce transaction costs. Along with an insurance cover, farmers must be given a seasonal agro-advisory primer on practices, timely information on pests, diseases, value addition etc.

Reaching the farmer's door is necessary: Promotional activities for the insurance product were used to convince farmers about the benefits of the insurance products being sold to them. Practitioners learned that door-to-door visits explaining the products, providing leaflets in local languages and screening of audio-visual programmes served well to convince the farmers. That insurance is a matter of solicitation was proved again.

Designing a weather-based insurance product is a complex one: Designing the index-based insurance contracts is a tricky job as one is required to identify a weather index that correlates highly with agricultural losses and thus minimises the basic risks. With index contracts, it is possible for policy holders to receive a payout even when they have not suffered losses, and conversely, policyholders may not receive a payout when they have suffered losses. Moreover, an individual farmer with rainfall insurance could lose crops to drought and not receive an indemnity if the drought is not recorded at the reference weather station. The diversity of microclimates often found within relatively small geographic areas means that basic risk is an inherent and widespread problem. It is within this kind of context that such products are designed. With climate change becoming

a reality, huge investments are needed to have reference stations as close as possible to enable such measurements. It is the state that has this investment capacity, and it must play a greater role in this process.

Conclusion

Experiences during the last four years have been very useful for Sajjata Sangh in understanding the risk minimisation needs of the farmers. It was realised that not just insurance as a financial intermediation, but efforts around agriculture extension can also be useful to mitigate risk. Farmers admitted that insurance helped them cover losses due to weather-related vagaries. However, their crops are also affected by numerous other risks and hence insurance alone may not be useful. Farmers also encounter problems of price fluctuation, pest attack and post-harvest losses. Keeping in mind these sets of issues, during 2011, the Coastal Salinity Prevention Cell, approached Sajjata Sangh to develop a Weather Insurance Plus programme. This programme has been piloted and has reached to about 2,369 farmers covering 2,653 acres of land. The product includes agro-advisory services such as information on crop-related and salinity-related measures through special voice messages once a week. Farmers are also provided a platform to interact with research scientists. Enrolled farmers are linked to a Farmer's Diary that provides crop-wise monthly sets of activities and promotes recommended practices. Sajjata Sangh will continue to innovate to minimise the risks that small and marginal farmers encounter as they engage in the task of feeding the nation.

Notes

1. IFPRI, Shah and Gulati 2010
2. As per data from the General Insurance Companies

CHAPTER 5

Vayde Se Fayda Cotton Growers Participate in Multi Commodity Exchange for Price Risk Management

Ashok Vyas and Mansukh H. Gadhia

Introduction

Cotton farmers of Gujarat, like most other farmers in the country, toil hard to earn a living. Unfortunately they remain at the mercy of traders for selling their produce. The traders enjoy the advantage of having access to information and warehousing facilities, which allows them to participate in commodity exchange platforms and trade in future derivatives, thus making good profits. Farmers, on the other hand, lack the wherewithal to avail these services and are compelled by circumstances to depend perpetually on the traders to sell their produces at whatever price they offer. The intervention implemented by AKRSP(I) aimed at helping the Farmers' Federation in Chotila in Gujarat engage in markets through an electronic exchange and hedging mechanisms for protecting farmers against market price fluctuations in cotton, thus helping them secure a higher income.

Context

Cotton is the predominant fabric used in the textile industry and a popular cash crop in India. In Gujarat, nearly 41 percent of the total cultivated area is under cotton cultivation¹ with farmers referring to it as “white gold”. In Surendranagar District, almost 60 percent of the total cultivated area is under cultivation of cotton crop². In almost all the villages in Surendranagar where AKRSP(I) works, cotton is grown by a majority of the farmers. The introduction of BT Cotton about five years ago had popularised cultivation of the cotton crop, which was earlier grown only by well-to-do farmers. Today, even a small farmer having little access to irrigation has the potential to invest his financial resources to grow cotton. However, cotton farmers usually suffer from the volatility of cotton prices and from the lack of fair methods of price determination. Through interactions with cotton farmers, Sajjata Sangh realised that farmers, especially the small and marginal ones, suffer exploitation because they sell their produce in smaller quantities. They do not have much information about market prices and neither do they have the wherewithal to discover its market price. Most farmers have no access to warehousing facilities and conditions at their homes are not conducive for storage. Hence, they cannot hold the produce for long.

All these factors together lead to a situation where the net income realised by the farmers is substantially lower than what it should be. The problem is further compounded by unhealthy practices resorted to by the intermediaries, right from the local village market to the Agricultural Produce and Market Committees (APMC). Intermediary agents announce prices almost on a daily basis throughout the picking season. On any given day, the prices they offer are 10 - 12 percent lower than the prevailing market price of the commodity on that day. However, since agents take care of spot payments,

weighing and transporting, this saves around 4-5 percent of the costs, which farmers would otherwise have to bear if they carried the commodity to the market for trade. In most cases, farmers sell cotton only at the village level and are unaware of the new trends in marketing like the forward market (See explanation in Annexure 2).

Forward markets, which have been prevalent in Gujarat for almost a century, offer futures contracts to buyers and sellers of a commodity. There are five National Commodity Exchanges in India and 16 Regional Exchanges of which three are located in Gujarat alone. Futures contracts perform two important functions of price discovery and price risk management with reference to the given commodity. Through participating in the futures markets, a producer can get an idea of the price likely to prevail at a future point of time and therefore can decide when to sell. In the absence of futures market, farmers are unaware of future prices at the time of sowing. However, the commodity exchange platform allows farmers to be familiar with future prices when they are sowing the crop. Further, farmers can sell in advance at the time of sowing itself, where the agreed commodity at the agreed price can be delivered at the time of harvesting. Thus, farmer can insure themselves against price fluctuations with this future market mechanism. Though such market mechanisms have been devised to provide benefit to the farmers, their participation in these exchanges remained limited. Market mechanisms never sought to educate the farmers on the modus operandi of their operations, includes documenting and dealing through an electronic exchange – which the farmers were not accustomed to. As a result, the farmers were exposed to the vagaries of the market.

Against this background, AKRSP(I) decided to carry out an intervention to provide cotton-producing farmers a certain measure of protection against price fluctuations during harvesting time. The intervention was implemented through the derivative instruments for hedging the price at the Multi Commodity Exchange Platform (MCX). AKRSP (I), a member organisation of Sajjata Sangh, works in 225 villages in seven blocks in Surendranagar District of Gujarat augmenting the livelihoods of more than 25,000 households through its interventions, which include soil and water conservation, agriculture extension and micro credit. AKRSP (I) has been actively working with farmers and helping them to secure their livelihoods through the transfer of appropriate knowledge about agricultural production. As a principle, AKRSP (I) works through its village institutions, which are involved with providing services related to seeds, fertilisers and pesticides. AKRSP (I) also promotes many supra bodies, which are federations of these village institutions, including the Chotila Federation, was formed in 1996 with the objective of supplying good quality seeds, fertilisers and pesticides. This federation represents 30 villages and has a membership of 2,500 farmers.

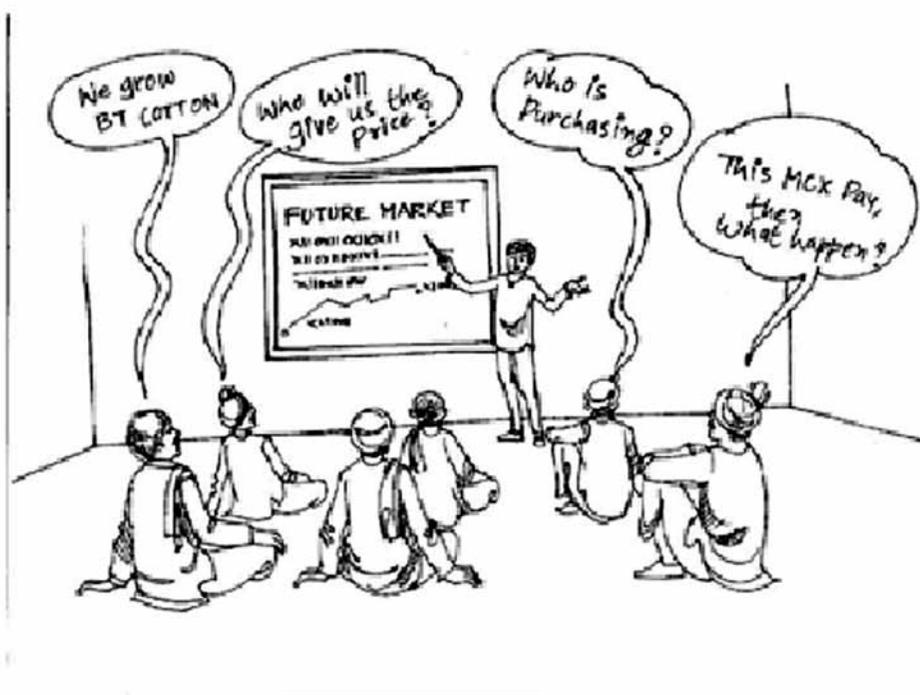
Intervention

In 2007, the issue of market arrangements was discussed in a meeting facilitated by AKRSP(I) with partners of Sajjata Sangh, which also included a representative from the Multi Commodity Exchange. The Sangh members, for the first time, were briefed about MCX, its functions and how farmers could participate in this exchange platform. It was decided that an event should be organised with farmers and this concept be introduced to

them. Thereafter, AKRSP(I) organised an event to discuss this issue with the farmers. Nearly 900 farmers from 45 villages participated and learnt about the commodity exchange and its functions. However, farmers had their doubts (See Box 1), which they raised in the course of the meeting. Subsequently, AKRSP(I) carried out many informal discussions individually and also collectively in villages. Based on these interactions, AKRSP(I) decided that working through a farmer's institution would enable the intervention to reach out to many farmers. Along with Sajjata Sangh, it discussed the idea of such an engagement in a farmers' meeting and it was here that AKRSP (I) expressed its desire to take this up as a pilot.

Box 1: Doubts expressed by farmers

- The farmers considered the forward market as “Satto” or speculation.
- The price displayed at the MCX was for Hybrid cotton, whereas the farmers were cultivating BT variety of cotton. Therefore, farmers assumed that they were growing a different variety of cotton.
- Farmers were concerned about the mechanisms that would regulate the market to assure that rates would be honoured.



For the purpose of piloting this project, a core team comprising representatives of AKRSP (I), NABARD, Cardinal Edge (a consultancy firm based in Ahmedabad), MCX and Sajjata Sangh was formed. A detailed project proposal for funding this initiative was prepared with support from Cardinal Edge and submitted to NABARD for approval. AKRSP (I) was certain that the engagement of one of its long-standing federation of village institutions,

the Chotila Federation, was an excellent starting point for piloting this initiative. AKRSP (I) requested NABARD to provide financial support (See Box 2) and this was made available. The objectives that were drawn out for this pilot project were:

1. Providing the farmers information about the market on a regular basis.
2. Providing the farmers information on both Futures and Spot prices.
3. Providing training to farmers on futures market, functioning of commodity exchanges and terminologies of the MCX market mechanism.

Since this was going to be an intervention involving different stakeholder institutions - the Chotila Farmers' Federation, AKRSP(I), Cardinal Edge, NABARD and Sajjata Sangh - it was important that the proposal drew upon the strength of each and clearly establish the role that each member would play (See Box 2). It was also important to ensure role clarity to avoid confusion during the implementation of this initiative.

Box 2: Specific roles of the participating stakeholder institutions

The Chotila Federation

- The federation will implement the project with support from AKRSP(I).
- The federation will help select the villages and the farmers for marketing.
- The federation will regularly disseminate market-related information.
- The federation will engage in all types of record keeping.

Sajjata Sangh

Sajjata Sangh will facilitate the process of linkages with MCX.

AKRSP(I)

AKRSP (I), the implementing support agency will build the capacity of community members and ensure timely implementation of the project. It will provide the platform for organising meetings, trainings and workshops. It will also provide support for accounting and be responsible for all the financial transactions.

NABARD

NABARD will provide financial support for this pilot initiative. The support will include the following:

- Margin money
- Resources for training and capacity building of the NGOs and farmers
- Resources for recruitment of professional agencies to provide technical support
- Resources for paying the brokerage charges for the trading that occurs.
- Resources for the Mark-To-Margin and additional margin for the mandatory

The project was sanctioned on November 2nd, 2007 and the farmers were to participate in the project from September 2007 to February 2008 – during the cotton crop season.

Building capacity of the staff: After the proposal was sanctioned, a staff meeting was held at Sayla programme area to develop clarity on the concept of forward trading, which enabled

AKRSP (I) staff to explain the intervention coherently to farmers. Another meeting was held in August 2007 with the federation office bearers to help them understand the deliverables of the project. This meeting discussed how the MCX operated as an exchange platform. Representatives from MCX interacted with farmers and explained how the “Vayda Bazaar” or future market had the potential to benefit small and marginal farmers.

Farmers had several concerns and raised quite a few questions. Initially, they felt that this was not a market but *Satto* (speculation). Eventually, they were convinced that this would be a legal engagement and an engagement not for speculating but for securing the price. It was also difficult for farmers to understand the process of securing the price. Farmers expressed that they would be happy if at the time of selling the cotton, the market dipped since that would give them a better price. However, if they could not speculate the right price and the market rose and went beyond the price at which they had agreed to sell, they would lose their money. Clarity was rendered to each member who participated in the selling process. There were also issues related to the price that was being announced. Farmers assumed that the MCX provided price for the local variety of cotton or hybrid cotton, while they cultivated what they knew was BT cotton. It was difficult for the farmers to understand that the BT variety was also hybrid. Many failed to understand this and therefore stayed away from the transacting process.

Regular meetings of the Chotila Federation gave the project implementation team, including the representative from the commodity exchange, the opportunity to allay farmers’ apprehensions. Together, the federation and AKRSP(I) decided that such a role should be played by two local people, who were then deputed on a regular basis to provide daily market rates during field visits. It was also decided that such rates would be sent across through text messages on mobile phones and be placed on the notice boards of the *panchayats*. This would make farmers aware of the daily price and understand the trend of prices in general.

Farmer selection process: The project selected 100 farmers for the pilot. The task of selecting the farmers was left to the federation. Since the minimum unit for trading at MCX was four metric tonnes, it was decided that the produce from 3 - 4 farmers would be aggregated for trading purposes. The trading in cotton usually starts around October and therefore in a meeting with the farmers in October 2007, a farmers’ list with the names of those who were interested in participating in this intervention was drawn up.

During a previous meeting of the federation, the operational strategy had been finalised for field level implementation. This strategy covered the following aspects:

1. A member had to be a producer with a minimum of three acres of land under cotton cultivation and also must have participated in other interventions of existing projects of AKRSP(I). This criteria was kept to exclude traders so that only farmers who produced cotton could participate and deliver the commodity after harvesting.
2. Priority was to be given to small and marginal farmers.
3. Support from the federation was to reach a total of 100 farmers, which also included those who were members of the existing village institutions of the federation.
4. AKRSP (I) would provide support in selection of the field level staff for linkages between

the federation and the farmers.

5. Market rates were to be regularly shared with other farmers at village level meetings.
6. Selling would be done not by individuals but in groups consisting of 3-4 farmers each in select villages.

The implementation strategy relied heavily on the selection of farmers and paved the way for an enhanced understanding of those who would participate in the process. The federation worked towards ensuring that member institutions understood the intervention and selected the farmers accordingly.

Participating in the markets: The idea behind selecting Chotila Federation to provide the institutional platform for the project was that it was an experienced federation, which had dealt in businesses earlier. The project, in collaboration with the federation, decided that piloting would be restricted to 5-7 villages. For implementation at the field level after discussion with the federation, farmers' groups were formed and the group size was kept small (3-4 farmers each) for easy and smooth functioning. Two field level staff helped in regularly maintaining the linkages between farmers, the federation and AKRSP (I). Regular meetings were organised for review and planning purposes. Trading started on December 17th, 2007 and continued till the fifth day of February, 2008. A total of 67 farmers from seven villages participated in the trading. The purchases took place from MCX between February 28th - March 12th, 2008. (the details of the trading process can be seen in Table 1). In addition, participating in the future markets required certain formalities to be fulfilled. Those who were to engage in the process needed to have the following:

1. A Demat Account
2. A Brokerage Account with an authorised brokerage firm
3. A Bank Account

In order to open these accounts, the individual/body needed a PAN and proof of address. Since none of the farmers had a PAN, it was decided that the federation - a registered body - would conduct all the deals on behalf of the farmers. Since the federation had a PAN and other relevant papers and was a registered body, the farmers agreed to be represented by the federation. Bank account details and PAN was provided to Kotak Mahindra Bank's brokerage unit to open the Demat account. The account became operational on 17th December, 2007 as soon as the first transaction was entered. All the transactions thereafter were routed through this Demat account.

Table 1 : Trade Statement

Trade date	Trade Type	Rate	Lot
17-Dec-07	Sell	453	2
17-Dec-07	Sell	452.6	2
19-Dec-07	Sell	453.6	1
19-Dec-07	Sell	454.4	1
19-Dec-07	Sell	454.4	1
20-Dec-07	Sell	456	2

5-Jan-08	Sell	475	1
5-Jan-08	Sell	475	1
11-Jan-08	Sell	474.9	4
11-Jan-08	Sell	474.9	4
15-Jan-08	Sell	484.8	2
25-Jan-08	Sell	479.8	1

The table shows the contracts that were entered into at the MCX platform through the Kotak Mahindra Bank, the brokerage arm. The “buy” column indicates that the cotton contract was bought over and the same was squared up on later dates. Here, one lot refers to four metric tonnes. Since this was an electronic exchange, the buyer of the lot remained anonymous. The responsibility of paying up for the loss or profit lay with the MCX. All transactions were conducted through the electronic gateway of the bank.

The market operates on speculation. For example, the farmer locks the rates in the month of October for future cotton in MCX at Rs. 550. He need not do the transaction immediately. Suppose the rate during the harvesting time in the local *mandi* is Rs. 450 and the farmer sells the same in the local *mandi* and settles the accounts (at Rs. +95). If this mechanism had not been followed, the farmer would have received only Rs. 450 at the time of selling and not Rs. 450 plus another Rs.95. (See Table 2 that describes the process.)

Table 2: Details of transaction at MCX

Sl No.	Particulars	Qty in Man	Price in Rs.	Total
1	Sale at MCX	1	550	550
2	When produce is ready	1	450	450
3	Buy-simultaneously at MCX	1	455	455
	Total Cash Realisation			545
	At MCX (1-3)			9
	At Local Mandi – 2			45

Sl No.	Particulars	Qty in Man	Price in Rs.	Total
1	Sale at MCX	1	550	550
2	When produce is ready sale at local Mandi	1	650	650
3	Buy-Simultaneously at MCX	1	655	655
	Total cash Realisation At MCX (1-3)			545-105
	At local Mandi – 2			650

The reverse can also occur. In case the price at the local market goes up, the farmer still receives the amount that he traded at MCX. Though in this case the realisation is lower,

it is not lower if the markets were down. Therefore, much depends on the capability to speculate the price at which the farmers are ready to make the deal. No physical trading happens in any of these transactions.

Outcome

This initiative with the farmers' institution and the MCX provided remarkable results, which are categorised into non-financial and financial. The following non-financial gains were realised by farmers:

Price discovery and price dissemination: Before this project, farmers were unaware about price discovery mechanisms and price dissemination. Now farmers receive regular updates on prices of the commodity on a regular basis. There was a time when such market rates announced made little sense. Today, not only those individuals who trade at MCX are aware of the regular future and spot market quotes, but they also know what they can do to start receiving its benefits. This has been possible because the federation informs the villagers via its staff and market quotes are also displayed on the office notice board.

Farmers are better negotiators today than they were before: Regular dissemination of the prices has resulted in increasing the negotiating power of the farmers with the local traders. This also benefited other farmers who did not participate in the pilot but had access to the information about the offered prices in the villages. Many local traders who procured cotton had to adjust their rates in conformity with the national level market rates.

Farmers have sharpened their skills of speculation: Since the intervention provided the market rate almost on a day-to-day basis, farmers were able to gauge the trend of the market. Due to their guessing of the increasing trend of the market (in 2007 market rate was low in October and then gradually went upward till February), farmers could hold back cotton, sell it at a later date and fetch a better price.

Financial outcomes

Increased income from trading activity: Starting from the very first picking, the average price realisation for the entire season was Rs. 100 more per quintal compared to that of the previous season. The realisation from the second picking was on an average more by Rs. 160 per quintal compared to the previous season. During the second picking, 25 percent of the total produce arrived at the market as compared to around 16 percent in the previous year. The average price realisation for the third picking was Rs. 205 per quintal more than the previous year.

Learning

The intervention was a complex one. The farmers believed that they had a better price if the market fell and were at a loss if the market improved. However, they learned through experience and over a period of time when and at what level they could engage in the futures market. Some very specific sets of learning emerging from this intervention are:

Striking a balance between role sharing and coordination is vital: Four organisations were involved in this intervention and therefore, the task of coordination became vital. The process was streamlined through role clarity processes at the very beginning of the intervention. NABARD provided the funding for the project; MCX provided the technology and education about the concept; AKRSP(I) managed community mobilisation, training and overall coordination and the Chotila Federation represented the farmers dealing in the commodity.

Engaging in the commodity market should be seen as a price risk management tool rather than a profiteering engagement: Since the commodity market fluctuates almost on a day-to-day basis and this is more so because of the price being at the global level rather than the local level, it is often difficult for a farmer to understand the trend of prices. But the commodity market offers an opportunity to the farmer to agree to sell the produce at a price comfortable to him/her. It hedges the farmer from the risk in case the price falls at the time of honoring the contract. Farmers have to understand this concept and it is the responsibility of the intervention agency to drive home this point from the very first day.

One cannot implement this intervention without investing resources in capacity building: Before implementing such a type of innovation, training on different market approaches is essential to sustain the intervention. Agencies that are keen on investing resources in training must be supported by the government in building awareness about such market mechanisms.

Need for policy dialogue to enable the smallest of the small farmers to benefit: It is important to review the current minimum lot size of four tonnes per contract so that small farmers can benefit from this kind of market engagement. Perhaps the minimum lot size should be one tonne so that small farmers are able to participate in the futures market. These small farmers are the ones who require more protection against the vagaries of the market. The logic of four tonnes was taken when the price of cotton was around Rs. 25,000 per ton. However, with increase in the price of cotton to almost Rs. 40,000-45,000 per ton, the logic does not have a pro-poor focus anymore.

Conclusion

The work done by AKRSP (I) is worthy of emulation. The process of engagement is complex, requiring both capacity and awareness building about contemporary market mechanisms and working through existing producer institutions, which can pave the way for making such efforts sustainable. The benefits of such engagement are likely to protect the poor from commodity price fluctuations. In addition, interventions of this nature can further strengthen the capacity of communities to use market mechanisms for price discovery, price dissemination, protection against price fluctuation and increasing their negotiating power.

Notes

1. District Agriculture Census, Surendranagar, District Panchayat Annual Report 2009-10
2. Ibid

ANNEXURE 2: FORWARD MARKETS

Forward Markets Commission (FMC) headquartered at Mumbai, is a regulatory authority which is overseen by the Ministry of Consumer Affairs, Food and Public Distribution, Govt. of India. It is a statutory body set up in 1953 under the Forward Contracts (Regulation) Act, 1952. The Act provides that “the Commission shall consist of not less than two [but not exceeding four] members appointed by the Central Government [one of them being nominated by the Central Government to be the Chairman thereof...]” Currently the Commission comprises two members among whom Mr Ramesh Abhishek, IAS is the Chairman, and Mr D.S. Kolamkar, IES is the Member of the Commission.

The functions of the Forward Markets Commission are as follows:

- i. To advise the Central Government in respect of the recognition or the withdrawal of recognition from any association or in respect of any other matter arising out of the administration of the Forward Contracts (Regulation) Act 1952.
To keep forward markets under observation and to take such action in relation to them, as it may consider necessary, in exercise of the powers assigned to it by or under the Act.
- ii. To collect and whenever the Commission thinks it necessary, to publish information regarding the trading conditions in respect of goods to which any of the provisions of the Act is made applicable, including information regarding supply, demand and prices, and to submit to the Central Government, periodical reports on the working of forward markets relating to such goods.
- iii. To make recommendations generally with a view to improving the organization and working of forward markets.
- iv. To undertake the inspection of the accounts and other documents of any recognized association or registered association or any member of such association whenever it considers it necessary.

Futures Trading

Futures contracts perform two important functions of price discovery and price risk management with reference to the given commodity. It is useful to all segments of economy. It is useful to the producer because he can get an idea of the price likely to prevail at a future point of time and therefore can decide between various competing commodities, the best that suits him. It enables the consumer to get an idea of the price at which the commodity would be available at a future point of time. He can do proper costing and also cover his purchases by making forward contracts. The futures trading is very useful to exporters as it provides an advance indication of the price likely to prevail and thereby helps the exporter in quoting a realistic price and thereby secure export contract in a competitive market. Having entered into an export contract, it enables him to hedge his risk by operating in futures market. Other benefits of futures trading are:

- i. Price stabilization in times of violent price fluctuations - this mechanism dampens the peaks and lifts up the valleys, i.e. the amplitude of price variation is reduced.
- ii. Leads to integrated price structure throughout the country.
- iii. Facilitates lengthy and complex production and manufacturing activities.

- iv. Helps balance supply and demand positions throughout the year.
- v. Encourages competition and acts as a price barometer to farmers and other trade functionaries.

Futures trading is also capable of being misused by unscrupulous speculators. In order to safeguard against uncontrolled speculation certain regulatory measures are introduced from time to time. They are:

- i. Limit on open position of an individual operator to prevent over trading;
- ii. Limit on price fluctuation (daily/weekly) to prevent abrupt upswing or downswing in prices;
- iii. Special margin deposits to be collected on outstanding purchases or sales to curb excessive speculative activity through financial restraints;
- iv. Minimum/maximum prices to be prescribed to prevent future prices from falling below the levels that are non-remunerative and from rising above the levels not warranted by genuine supply and demand factors.

During shortages, extreme steps like skipping trading in certain deliveries of the contract, closing the markets for a specified period and even closing out the contract to overcome emergency situations are taken.

Prospects

With the gradual withdrawal of the government from various sectors in the post-liberalization era, the need has been felt for various operators in the commodities market to be provided with a mechanism to hedge and transfer the risks. India's obligation under WTO to open the agriculture sector to world trade would require futures trade in a wide variety of primary commodities and their products to enable diverse market functionaries to cope with the price volatility prevailing in the world markets.

CHAPTER 6

Making of a Farmers' Company Avirat Agro Business Producer Company Limited

Ashok Shelar

Introduction

The story of Avirat Agro Business Producer Company Limited, established at Khambha in Amreli District, depicts an intervention of organising the farmers into a collective called “producers company”. This case narrates the process that was adopted to establish the company, the nature of tasks undertaken to further the interest of the member producers and the outcome and learnings that the intervention yielded. A network agency of Sajjata Sangh, Shikshan and Samaj Kalyan Kendra (SSKK), supported the local agency in carrying out this intervention.

Context

Shikshan and Samaj Kalyan Kendra (SSKK), a partner organisation of Sajjata Sangh has been working in Amreli District since 1980. In 1997, the agency started working on natural resource management and development in around 16 villages around the small block headquarters at Khambha. It took up the work of watershed development as a Project Implementing Agency (PIA) and as mandated, established several village level watershed associations and institutions in these villages. Watershed development activities were completed during 2004-05. The watershed committees that oversaw the work still had resources left in their accounts, which came from people' contribution to the project. Members of these committees now felt that the time had come to undertake other activities that would help the farmers retain interest in the institutions. It was at this juncture that they held a meeting of the office bearers of the 16 watersheds and discussed the scope of work that could be undertaken. It was envisaged that this planning would help member farmers optimise the resources developed by them since the initiation of the watershed work. They also realised that watershed work had upgraded the water resources and reduced the incidence of soil erosion. They now required investments in the land and in agricultural operations to obtain the benefits of these developments.

Intervention

Watershed development in Gujarat, initiated during the latter part of the 90's, had almost come to an end by 2004-05. The associations that were formed to oversee watershed activities were involved in soil conservation work, and at one point of time, were bustling with activities. With the work on conservation coming to an end and without other activities to invest their time and energy in, they were heading towards closure. It seemed that the investments made by many NGOs in developing the capacity of these institutions would go to waste. It was extremely necessary to restructure these institutions and lead

them to the path of watershed-plus activities such as agriculture extension, demonstration of high yield variety, promotion of organic cultivation, etc. However, an institutional form was also required to make these associations independent and sustainable. Nearly all the members of Sajjata Sangh were discussing options to meet this need.

Search for a new institutional design: The meeting of the office bearers of the 16 watershed committees was held on the January 18th, 2004. It was discussed that since soil and water conservation work was now over, the watershed committees could focus on issues such as reducing cost of production while also increasing productivity, developing linkages with the market to get a better price for their produce, learning about new methods of agriculture, reducing the use of pesticides and chemical fertilisers, and working as a group to impress on the local administration the need for regular supply of power. The group realised that the current form of the institutions, without a legal entity, would not help them to carry out the aforementioned. Hence, forming a collective was necessary.

The officers decided to establish a federated association and named it AVIRAT (Amreli Vistar Rachnatmak Nang). They also decided to register this association under the existing Society Registration Act and prepared its articles of association and memorandum. It was agreed that there would be one share per member, i.e. one member from each of the 16 watershed associations. They selected the president and secretary from each of the member watershed associations and formed a committee of the newly formed federated association. The committee included the President, Vice president, Secretary, Joint secretary, Treasurer and another 11 members from among the 16 member PIAs. It was decided that the association would obtain grants and contribution from the membership and obtain support from the government and NGOs to carry out the mandate developed for the association. As a first step, they collected Rs.100 as the annual membership fees and Rs. 500 for life time membership. All the farmers from the 16 PIAs could subscribe to the shares and become members at their level and, thereafter, the amount would be deposited in the account of the federated association as shares from the member village institutions. The meeting had been convened by SSKK, which provided the support to help arrive at the memorandum for AVIRAT. The responsibility registering AVIRAT was given to one of the members.

Almost at around the same time, Sajjata Sangh organised a workshop on the issue of sustainability of institutions that had been established to carry out watershed work. This workshop discussed the future role of these institutions and decided that with the development of land and water by the watershed development programme, the institutions could be involved in other kinds of activities that were intrinsically associated with agriculture. Sajjata Sangh was also considering a strategy to develop watershed-plus programmes, which would include organic farming, minor irrigation methods, exposure visits and demonstrations of new practices around agriculture. Since the cost of agriculture had shown a definitive increase in the recent past, methods were on the anvil to work on reducing this as well. Partner organisations of the Sangh decided to establish their own federation of such watershed associations. Both SSKK and the Dhari unit of DSC had also started building federations of the village level watershed associations.

The follow-up meeting of AVIRAT was organised on the February 10th, 2004 at Pachpachiya. This was almost a month from their first meeting. The meeting was convened to gain clarity on the registration process and discussed certain areas of concern. These included:

1. An organisation registered under the Trust Act cannot make profit according to the law
2. Such a legal entity could not undertake any trading activities, engage in production-related processing, not derive any profit from such activities

The members realised that the Trust Act, under which they had initially wanted to register their institution, would not help them fulfil their objectives. The member institutions were all associated with agriculture, and they wanted their federation to make efforts to achieve a better price for their produce. The law prescribed that they would not be able to participate in trading activity and hence collectively bargaining and transacting produce was impossible. Similarly, they would have liked to buy pesticides, fertilisers and seeds directly from the companies. This would have come at the dealer's price which on an average is 30 to 50 percent cheaper than the retail price. The said legal form would not allow them to undertake such activity. Having realised these limitations, the group decided that the option left to them was to register the federation under the Cooperative Act, which had provisions of trading and profit making. However, they resolved that before they actually proceeded to do so, they needed to understand this act comprehensively.

A third meeting was therefore organised at Kotda village on April 18th, 2004. This meeting was attended by the Manager of the District Cooperative Bank. He shared information on the Cooperative Act and also apprised them of the relative advantages and disadvantages of a cooperative. When the members learnt that cooperatives were easily influenced by vested interests and easy prey to political interference, they decided against getting registered under the Cooperative Act and resolved to work without any legal entity. The efforts of SSKK and Sajjata Sangh were thereafter aimed at helping the associations and its members to remain engaged with watershed-plus programmes. They carried out activities such as crop demonstration, land assessment, crop-based training, developing market linkages with supplying agencies, and carrying out exposure visits to organic farms. They also were in search of an act under which they could register as a legal entity.

In 2005, the Government of India passed the Producer Company Act under the Company Law. As per its provisions, producers could collectivise to form their own company. All the members of such an association would have to be producers. This new provision gave hope to the members. Subsequently, Sajjata Sangh organised a workshop at DSC to create more awareness about producer companies in 2006. Experts from the National Dairy Development Board (NDDB) were invited as resource persons. About 16 member organisations including SSKK attended the workshop. The workshop provided inputs on how this Act differed from the Cooperative Act. The same can be seen in Table 1 below:

Table 1: Differences between the rights of a producer company under the Company Act and a cooperative society under the Cooperative Act

Serial Number	Cooperative Society	Producer Company
1.	Can undertake activities only in certain geographical areas	Can undertake activities and training anywhere in the country
2.	There are possibilities of loss due to lack of awareness of the members	The alertness of the Board of Directors can save the company from making losses
3.	The government can appoint its representative who will manage the cooperative	There is no provision under which the government can appoint its representative to supervise functioning
4.	In certain cases, the government has the ability to supersede the elected member of the governing board	There is no provision of a governing board. However, there is a space where the government can participate in the functioning of the board
5.	The elections takes place according to government rules	Only members of the producer companies can elect the board
6.	The government can interfere in all the functions of the cooperative	Only the Board of Directors has the authority to make independent decisions

Source: Compiled by Sajjata Sangh

Consolidation and moving ahead with the design: The workshop at NDDDB provided insights into the formalities of establishing the company. After the workshop, a sharing session was carried out at Khambha in March 2006. This convinced the members of the necessity to register as a Producer Company, which would enable them to undertake trading and be linked with the corporate world.

A meeting was organised on May 17th, 2006 at Umariya, with the director of the District Rural Development Agency (DRDA) and the coordinator of Sajjata Sangh. It was decided that the members of the 16 watershed associations would become the first Board of Directors. A chartered accountancy firm at Amreli was entrusted with the work of registering the company according to procedural formalities, the interpretation of which was beyond the understanding of most of the members. After the decision of registering the producer company, the board of directors passed a resolution in every watershed association. In the initial phase, Rs. 5,000 was collected from each of the 16 watershed associations. They had also appointed from amongst them a Chief Executive Officer (CEO) for the company. St that time the company was in the process of getting registered and could not pay a salary. Since the work required obtaining of papers related to many aspects from the members, SSKK provided material and monetary support to help carry out this process. The amount collected from the 16 watershed associations was used to pay the legal charges of the company.

Registering the producer company: The first and foremost task was to obtain the paper that

helped to register the name of the company. Form No. 1 – A was submitted to the company registration office. Under which AVIRAT Agro Business Producer Company came into being. Thereafter, the objectives and AOA (Articles of Association) of the company were prepared. The members, the organisation (SSKK) and the chartered accountant (CA) helped to undertake these tasks. A resolution was taken from each of the associations for selection of a Board of Directors. Certificates stating that they were Agriculture Producers were obtained from the village *panchayat*. It was not easy to obtain this certificate. Expectations of a bribe by the village secretary had to be thwarted and hence this delayed the process. The directors thereafter obtained their photo identification cards and residential proof which were also in some cases obtained from the village *panchayats*. Formalities were cleared and the directors' signatures were taken on the computerised stamp paper. In addition to this, necessary paper work was also done by the chartered accountant and this included filing documents like Form No. 18 giving details of the registered office address; Form 32 giving details about each director; Form 1 for affidavit, etc. The power of attorney was prepared by every member and one member was selected for follow up of this work with the Registrar of Companies. All these papers were handed over to the CA who was authorised by the company to ensure the completion of the formalities. Since the CA firm was not aware of the registration process, Sajjata Sangh provided the Act translated into Gujarati. The biggest challenge for the team was that most of them were working with voluntary organisations and were hence not much aware about the company laws and guidelines. In addition, the registration process proved to be a costly affair. With the company being registered from Ahmedabad, the documents were sent from Khambha to Amreli. The CA in Amreli thereafter took relevant advice from the Company Secretary. Nearly twice the fees actually required were paid for the activity. A total fee of Rs.45, 000 was paid for the registration. The Avirat Agro Business Producer Company was finally registered on June 6th, 2006.

Once the registration process was completed, the Board of Directors of the company was elected at its first meeting. Then the board of 16 members nominated one among them as the chairperson and another as the vice chairperson. At the time of first registration, the Registrar of Companies had given permission for shares worth Rs.5,00,000. As the producer company expanded its operations, it increased its share capital to Rs.12,00,000. The company had to follow procedures to increase the share capital base. It made another investment of Rs. 30,000 to obtain permission to raise the value of the share capital to Rs. 15, 00,000. As the company grew, it shifted out of the building that housed the organisation since the original building was situated in the interior part of town and less accessible to the members. The company obtained a new lease and now conducts its operation from a separate building that is also used by the Agro Service Centre.

The company received extensive support from its CEO, Mr. D. P. Patanwadia, who has extensive experience in working with the Gujarat Land Development Corporation. With his vast knowledge on agriculture and orientation towards the development sector, Mr. Patanwadia has provided tremendous support to the company. He is now responsible for the administrative tasks. The CEO is supported in all his administrative, accounting and other important work by the Director of SSKK and from time to time by other staff members of SSKK. The organisation also provides support for developing proposals, discussion with CA, carrying out correspondence with the income tax department and auditing accounts.

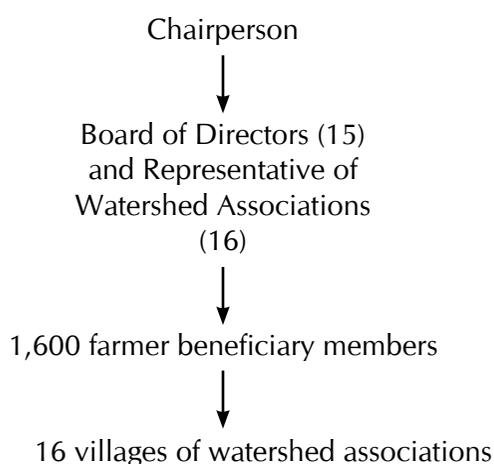
However, as time passed, many of these tasks are now being managed by the company officials themselves.

Working towards services for the members: After the setting up of AVIRAT, several applications were made at Noida, Uttar Pradesh for obtaining identification numbers for their directors. Identification proof, photos, PAN number of every director were sent along with the application. These were rejected five times because of technical errors related to mismatch between the registration amount mentioned in the documents and the amount submitted for registration to the Registrar of Companies. Finally, the Board of Directors received the DIN numbers, for which the company paid Rs. 18,000/- as fees. According to the advice of the Company Secretary and the Registrar of Companies, Rs.3,700 was spent to get the share certificate of Rs.10 printed. The registration process was cumbersome and time-consuming. In addition, the company had to maintain several documents according to the law. These included the following:

1. Share Register
2. Register for fixed assets
3. Share allotment register
4. Register of members and shares
5. Register of share transfer
6. Register of Directors and Managing Director
7. Register of Directors' share and debenture holding
8. Register of charges
9. Register of contracts
10. Register of discloser

Such were the difficulties that were experienced in the initial stages. Many a time, the inexperienced team faced challenges in dealing with maintenance of suitable form and registers. Over time, the staff understood the nuances of these processes.

Structure of AVIRAT AGRO BUSINESS PRODUCER COMPANY LIMITED



The company also provided the service of obtaining the licence for seeds and pesticides. A licence from Gujarat State Seed Corporation was obtained after paying a certain amount as deposit. All the necessary numbers for trading, like the TIN number, PAN number and VAT number were also taken. The total fees for acquiring these numbers amounted to another Rs.50,000/-. The company was in need of financial capital to initiate the trading once it had obtained all these licenses. Therefore, it embarked on raising the capital from its member associations. A total amount of Rs.12,51,000 was acquired as share capital. This amount was kept in the savings account that was opened at the branch of a nationalised bank at Khambha.

The second set of actions initiated by the company aimed at motivating farmers to undertake organic farming. The producer company developed a vermin compost plant at Khambha. However, this activity did not do well because farmers gave more importance to chemical fertilisers and pesticides. Therefore, the company helped in setting up a centre to provide pesticides and seeds to farmers. Members demanded that supplies of fertiliser were given at subsidised prices through the Gujarat State Cooperative Marketing Federation Ltd. but the rules prohibited supply to such a company since fertilisers could be supplied only to cooperatives by the marketing federation. Good quality seeds were supplied after establishing linkages with the Gujarat Seeds Corporation. The Government of Gujarat provides good seeds to farmers at subsidy plans under the Seed Village Scheme programme. Therefore, a licence from Gujarat Seed Corporation was obtained and a Village Seed Programme was initiated. Since then over 850 farmers have obtained a subsidy of Rs. 1.87 thousand in wheat and over 2,400 farmers have obtained subsidy of Rs. 18,07,500 in groundnuts. Both these seeds were in great demand in the area and the subsidised seeds came as a relief for farmers, who could now save on additional costs incurred in buying the same seeds.



The company soon established its own agro centre to help the members obtain good quality fertilisers and pesticides at affordable rates. The Agro Service Centre was set up by the company on the main road of Khambha. The centre also manages an information kiosk to provide information to its members as well as others who visit to obtain such inputs. Farmers from more than 50 villages in and around Khambha have been availing of the facilities provided by this centre.

The company has recently extended its facilities towards the Krushi Mall in Khambha, which houses non-profit shops to provide the necessary items and information related to agriculture run by the farmers in their own villages (See Box 1). At present the mall provides pesticides, tools and seeds. The company has developed linkages with the Krushi Mall as a result of which pesticides from the manufacturing unit reach the farmers directly. The farmers pay as per the cost which are known and extra to take care of the administration expenses. Under this scheme, pesticides are available at a 40 percent less cost than the price in the market. Life time membership is fixed at Rs.1,500 for a farmer and this is refundable once the member withdraws. The company has helped in setting up the Krushi Mall in three villages and also initiated the process to set up the same in another five villages.

Box 1: Krushi Mall

The Krushi Mall concept is centred on organising farmers and building their capacity in trading activities. According to this concept, 100 farmers from one village form a group and each member makes a deposit of Rs.1,500. They purchase the material required against payment of cash. One leader is identified from the group and commission of 3 percent is paid to him for administration and other work relating to the mall. A farmer can purchase pesticides, fertilisers, seeds, tools, machineries, etc. from this mall. Material and equipment is provided to farmers directly by the company. Because the cost of middleman is avoided in this process, farmers obtain material and equipment at a cost that is 40 percent lower than the market rate.

AVIRAT also receives another 2 percent commission or service fees for covering administrative cost and for building the linkages. At present AVIRAT has built linkages with Maha Gujarat Agri Cotton producer company Ltd. Operations are transparent in nature. Farmers can see rate sheets and decide what s/he wants to purchase. With quality supplies, the farmers also benefit.

Other member services provided by the Producer Company

In addition to these activities, the company has also been providing other very important services to the members. These include:

Training and education: To increase productivity, the company undertakes training of the member farmers. The company has organised training on crop development, seed cultivation, and crop disease and prevention for crops like groundnut, cotton and wheat. Members of the company are also taken on exposure visits to agricultural research stations in Junagadh and Vijapur.

Organic farming: Excessive use of pesticides and fertilisers has affected the fertility of

land and increased the cost of agriculture. This is not in the favour of members of the company. Therefore, to motivate the farmers to adopt organic farming, frequent exposure visits and training programmes are also organised. One effort to this effect has been the establishment of a vermin compost plant at Khambha. The vermin compost is given to the member farmers on no profit, no loss basis. As of now, 13,000 kg of vermin compost and approximately 12,000 kg of worms have been given to about 50 farmers. This has increased the fertility of 60 hectares of land. However, the outreach remains on the lower side as farmers still have apprehensions that production will fall if they move out of the chemical regime.

Risk insurance cover: With agriculture being an unpredictable livelihood and more so in Gujarat, any risk cover is advantageous to the farmers. With support from Sajjata Sangh, meetings to popularise the weather insurance product were held in 16 villages. The agriculture insurance company provides weather based crop insurance. In 2008, 47 farmers took advantage of the insurance risk cover. The insurance scheme was availed by another 130 farmers during 2009. The next year 150 farmers availed of the scheme. Though the farmers have received smaller amounts, many have realised the benefit and the importance of risk cover and hence have been taking the insurance.

The work of the company is almost like that of any developmental agency. It has been working for the upliftment of its own members, relying less on grants and more on making it run like a business. It has been a journey of discovery for the members and, after examining many options, they have chosen to remain a business entity. As producers, they chose the producer company format to best serve their interests. The work and the services that the company has developed for its members and the linkages it has forged with like-minded agencies and business groups have given the members numerous benefits.

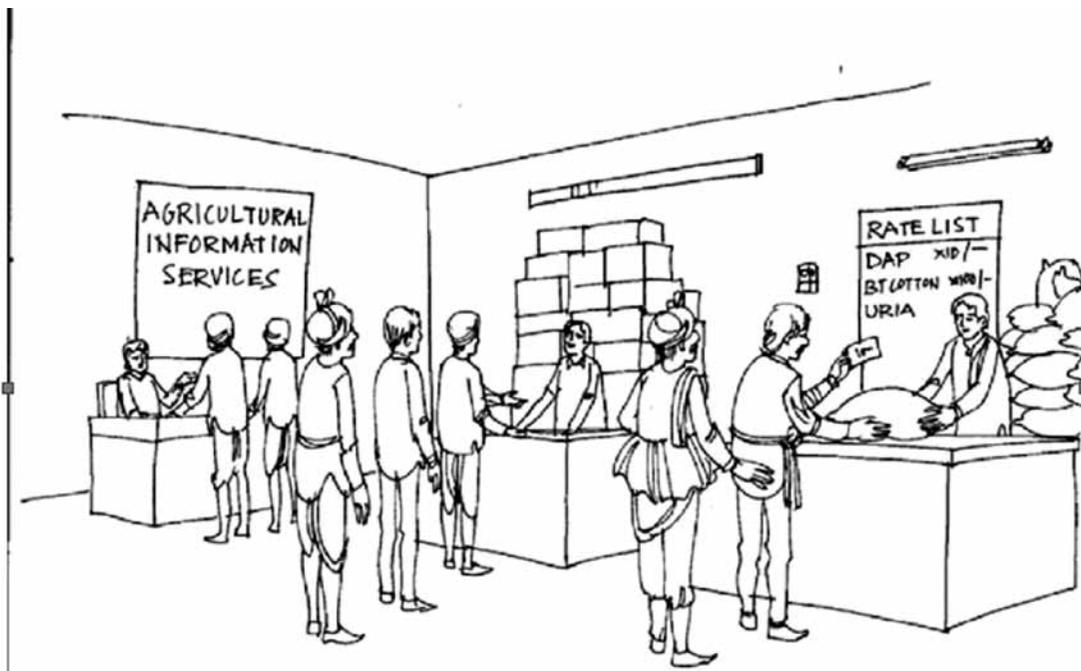
Outcome

AVIRAT Agro Business Producer Company Limited has been striving hard to provide services at an affordable cost and also recovering the costs of doing so. Since the year the company was registered, it has made many forays into initiating ventures to serve its members. Some of the outcomes of its efforts are:

Farmers have access to quality seeds and at affordable rates: Farmer producer members buy seeds from the company directly. Over 2,600 farmers have been buying inputs from the service centre of the company almost on a regular basis. With the company negotiating a better deal with the seed supplying agency, in most cases, these seeds come at a cheaper price than that available at other retail outlets. With certified seeds being sold from these outlets, even those requiring only half a bag supply get the benefit of certified seeds. The linkages with the Seeds Corporation of Gujarat has helped over 1,600 farmers to get subsidised seed kits. This has saved money to the tune of over 2.0 million during the past four years. The concept of Krishi Mall has reached to 300 farmers in three villages and there is a likelihood of another 500 becoming members.

Farmers have access to education and recent trends in agricultural practices: The

information desk at the Agro Centre advises farmers on agricultural practices. Business interests often take a back seat in such information sharing. Farmers are advised on the right doses of pesticides and fertiliser applications. With this, farmers benefit and hence remain as members. The access to education has provided inputs to over 1,600 farmers every year. Farmer members are also taken on exposure visits. About 50 members have benefited from these visits.



The company has shown elements of making profits. This enterprise and institutional form is based on the principle of making profits for its members. In the worst case scenario, it should be covering up the costs of its operation. The efforts of the agency have been to move towards this situation. During the last financial year 2010-2011, the company broke even and recovered some of the costs incurred in the years before (See Table 2 below). The company is working towards bringing in more farmer members and increasing its business transactions. The signs of this are fast becoming visible.

Table 2: Showing turnover of Avirat Agro Business Producer Company Limited

Year	Total Transactions Completed	Total Cost Incurred	Profit/Loss
2006-07	Nil	18,483	-14,685
2007-08	42,685	92,530	-30,317
2008-09	1,41,917	2,12,757	-29,735
2009-10	6,67,175	8,11,164	-81,034
2010-2011	18,43,721	2,13,570	-1,77,447

Source: Compiled by Sajjata Sangh

Learning

Establishing a producer company has served as an eye opener to SSKK and for all partner organisations of Sajjata Sangh. The process of formation of the producer company has yielded specific sets of learning. These are:

Members must be aware of institutional options: The intervention demonstrated that although the idea of having an institution was generated by the promoting organisation, yet the form under which it was finally registered was decided after upon a good round of discussions with the future members. The discussions on the advantages and disadvantages of the institutional design gave the farmers sufficient reasons to choose the producer company format.

Focus on self sufficiency rather than charity: Members realised they would have to raise their own capital to work with. They knew that sooner or later, the charity arm would stop offering alms. So instead of waiting for such a situation to arise, they decided to raise their own capital. As farmers, they were used to working hard and doing business, and realised the need for self sufficiency.

One learns as one takes on responsibility: Initially, farmers were unaware of the producer company format. Even those who were supposed to know the rules of the game had to research it. Farmers made efforts to become accustomed to a new form of working, especially by undertaking new responsibilities.

Promoting agency should handhold till a point: In this case, SSKK provided the support towards arriving at an informed choice. Once that was done, and the farmers selected their option, SSKK provided the needed linkages and support. The rest of the process, for example, the finance for registration, the finance for the share capital and the working capital, was organised by the farmers' collective. The promoting agency continues to act as a facilitator without interfering in the day-to-day affairs of the farmers' company.

Conclusion

The establishment process of the company was critical. Options were discussed threadbare and the decision of the farmers' collective prevailed. SSKK promoted the collective, provided the linkages and supported it when needed. The farmers' collective began with activities that benefited them and with passing year, it added a few more feathers to its cap. The company is today all set to make the first break-even.

Case Writers' Biographies

1. Dhirubhai Vagadia is the Executive Director of Sikshan Ane Samaj Kalyan Kendra (SSKK).
2. Paresh Dave is the Communication Manager at Development Support Centre (DSC).
3. Vipul Sheladiya is an Agriculture Specialist with Sikshan Ane Samaj Kalyan Kendra (SSKK).
4. Ravindra Pansare worked as an Agriculture Specialist with Sajjata Sangh.
5. Natu Macwana was the Executive Director of Sajjata Sangh from Sept 2008 to Feb 2012.
6. Ashok Vyas is a Senior Manager (Rural Business Development) with AKRSP(I).
7. Mansukh H. Gadhia is a Programme Specialist in Agriculture with AKRSP(I). He is also a part of the Sayla Spear Head Team in Surendranagar District.
8. Ashok Shelar is a Program Coordinator with Sikshan Ane Samaj Kalyan Kendra (SSKK). He is also a Founding Director of Avirat Agro Business Producer Company Limited.

SAJJATA SANGH

Sajjata Sangh is a network of Non Government Organisations engaged in natural resource management through a participatory process in different parts of Gujarat. The need for networking was initiated in order to facilitate the process of mutual learning and support among participating NGOs. Sajjata Sangh is registered under Registration of Societies Act and the Public charitable Trust Act. The promoters of Sajjata Sangh include NGOs with long-term involvement in rural development process in general and in natural resource management in particular.

THE LIVELIHOOD SCHOOL

The Livelihood School is an academic institution promoted by BASIX group, a Livelihood promotion institution. The mandate of the School is to build up a scientific knowledge base on livelihoods and disseminate the same to livelihood practitioners for enhancing their understanding and implementation capabilities, who in turn will promote large number of livelihoods

AGA KHAN FOUNDATION

The Aga Khan Foundation (AKF) is a private, non-denominational, development agency, established by His Highness the Aga Khan in Switzerland in 1967. The Foundation seeks sustainable solutions to long-term problems of poverty through an integrated, community-based, participatory approach that reinforces civil society and respects local culture. In India, AKF works essentially in three thematic areas: Health, Education and Rural Development. It also works to strengthen civil society institutions



Sajjata Sangh

A network of NGOs engaged in
participatory management of Natural Resources



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