

# Appraisal of the Farmer Club Models in West Bengal

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## Summary

The Farmers Club Program (FCP) began in 2005, with the aim of 'Development through credit, technology transfer, awareness and capacity building' and assistance from NABARD and other rural banks, NGOs and KVKs. After 2014-15, the government of India began promoting turning successful Farmers' Clubs (FC) into Farmers Producers' Organisations (FPO), which are to be registered under the companies act.

This report examines the use of FC and FPO as models with potential to provide effective linkages between farmers and service providers, based on FCs visited in four districts of West Bengal. These clubs, which ranged from mature to newly established clubs, are assisted by UBKV and the KVKs. They also range from district FC that spread across a number of nodes to small village level nodes. Some of the larger FCs reviewed were involved in business activities, while most were involved in accessing government grants and assistance to undertake trials through SRFSI or to receive information and assistance from authorities.

Key services and benefits provided by some FPO and FC include: improved access to information and training services; machinery services; improved and cheaper access to inputs, improved access to finance; post-harvest processing and storage; marketing services; and networking services. Most farmers were happy with the benefits they received from their organisations and they are proving a valuable means of scaling out CASI technologies.

However, FPO are structured with many of the features of cooperatives, which any review of the literature shows suffer from a number of weaknesses due to this structure and also have additional problems when many of their members are illiterate. In particular, the twin roles of members as patrons and investors create tensions for their management in addition to the well-documented problems with investment and governance in cooperatives.

Two factors critical to the success of a cooperative include a comparative advantage over investor owned firms (which may exist for many at present) and high levels of social capital or trust among members (which tends to decrease in bigger and less homogenous groups). Some suggest that a small number of members is an advantage in India, but there are examples of large cooperatives as well. If the FC acts more as farmer productivity groups, they are less likely to have sustainability issues, but they will provide less services to their members and not be as effective in providing linkages to services.

The key problem with these models is that they require considerable investment by government in financial support and training if they are to become FPO. Consequently, the expansion of FCs needs to be managed because if it is too quick, the required support will not be available, which is the reason many clubs fail, with knock-on effects for future involvement of farmers in groups and for adoption of new technologies.

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Most groups we studied appear to be increasing opportunities for women, either in the main group or by forming a women's group. However, this would need to be encouraged as well as monitored and supported, at least in the initial stages, as they may not occur without this kind of attention.

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# 1. Background

Activity 3.3 of the SRFSI project involves an evaluation of the service provider models and systems for different farmer groups, especially women farmers. A key focus of this is the effectiveness of linkages between farmers (particularly women farmers) and service providers assessed through key informant surveys in at least four districts. In West Bengal, this activity is the responsibility of Uttar Banga Krishi Viswavidyalaya (UBKV) and Curtin University assisted by Krishi Vigyan Kendras (KVK) in the districts and the Department of Agriculture (DoA), Government of West Bengal.

The models examined in West Bengal were Farmer Club models assisted by UBKV and KVKs. This paper reports on the findings derived from a visit to Malda and Coochbehar districts and nodes in the SRFSI project by a team from UBKV and Curtin from 23rd to 27th September 2016. An itinerary for the visits and the members of the team are given in Table 2 and Table 3 of the Appendix. Interviews and FGDs were conducted with farmers (as groups), owners and drivers as service providers (SPs) operating ZT machines, village and block input suppliers, machinery dealers, the five nodes in Coochbehar district and the five nodes in Malda district (see Table 1).

## 2. Features of the farmers' club models

### 2.1 Background

When the National Bank for Agriculture and Rural Development (NABARD) was established in 1982, the government also established the 'Vikas Volunteer Vahini' (VVV) programme, which in 2005 became the Farmers' Club Program (FCP) (NABARD 2016). The objective of the programme is 'Development through credit, technology transfer, awareness and capacity building'. The clubs are assisted in their establishment and operations by NABARD and others such as rural branches of banks, NGOs and Krishi Vigyan Kendras (KVKs).

KVKs are agricultural extension centres created by the Indian Council for Agricultural Research (ICAR) and its affiliated institutions at district level to provide various types of farm support to the agricultural sector, with many coming under State Agricultural Universities, in the case of West Bengal, that is UBKV. KVKs conduct testing and demonstrations of location-specific technologies, undertake extension programs, including training and assist with sourcing of critical agricultural inputs.

After 2014-15, the FCP programme began to focus on strengthening capacity building and training of the stakeholders so that successful Farmers' Clubs could become Farmers Producers' Organisations (FPOs). FPOs are being promoted by the government of India to collectivise farmers so that they can become registered under the companies act with the objective of improving access of member farmers to investments, technologies, inputs and markets (Department of Agriculture and Cooperation, Government of India, 2013).

Another feature of the Indian rural landscape is the presence of Self Help Groups (SHGs). In the Indian context, SHGs are an informal association of 15 – 20 poor/marginal women who come together to enhance their financial security. They begin with regular compulsory savings on a weekly or monthly basis, these savings are then used to meet the credit needs of members (Isern et al. 2007). They sometimes move on to obtaining loans from credit organisations, but may also involve themselves in social services.

The Farmers' Clubs discussed in this report range from mature clubs, which started out prior to 2005, two newly established clubs, which have started as a result of the SRFSI program and associated programs. Some details of these clubs are given in Table 1.

**Table 1: Background of Farmers' Clubs investigated in this report**

Name	Location	Nodes	Model*	Establish	Members
Satmile Satish Club "O" Pathagar	Chhatelajan village, Cooch Behar district	Folimari, Ghughumari, Patchara	Yes	1974	110 (35 female)
Sabuj Mitra Farmers Club	Durganagar village, Cooch Behar district	Durganagar	Yes	2011	122 (20 female)
Tufanganj Anwesa Welfare Society	Mansai village, Tufanganj-II, Cooch Behar district	Mansai	YesNo	2003	7 (2 females)
Mahadipur Farmers' Club	Mahadipur village, Chanchal-II, Malda district	Mahadipur	No	2012	22 (5 female)
Sabuj Bahini Farmers' Club	Bidyanandapur, Chanchal-II, Malda district	Bidyanandapur	No	2010	10 (0 female)
Sonarai Farmers' Club	Sonarai village, Chanchal-II, Malda district	Non SRFSI node	No	2015	21 (8 female)
Manickchak Progressive Farmers Club	Manickchak, Malda district	Manickchak	No	2015	12 (1 female)
Vivekananda Farmers Club	Kalinagar village, Gazole, Malda district	Kalinagar	Yes	1998	42 (14 female)
Gourangapur Farmers' Club	Gourangapur village, Gazole, Malda district	Gourangapur	No	2013	11 (1 female)

\* Whether the club is undertaking business operations

## 2.2 Key features of each Farmers' Club visited

### 2.2.1 Satmile Satish Club "O" Pathagar

The Satmile Satish Club "O" Pathagar in the Chatelajan village of Coochbehar District, West Bengal started in 1960 and has been through a few reorganisations and changes of focus. This model is an example of a club that operates across the district and, hence, is located across nodes (see Figure 1). Currently it has a membership of 110 (35 of whom are female) and a management committee of 9 (4 are female). Members have to complete a form and pay fee of Rs5 per person per month. Members get benefits from cheaper purchases of inputs, such as fertiliser and pesticides, and also get loans easier.

The Club is playing the role of a 'single window service providing unit' in the district and its adjoining areas. The service providing includes both farming (agriculture, animal husbandry, fishery etc.) and non-farming (health, education, child care etc.). It is well-supported (technically/financially) by a number of organisations including UBKV, KVK, DoAWB and has links with NABARD, Credit agencies and machinery dealers. It provides members with services that include:

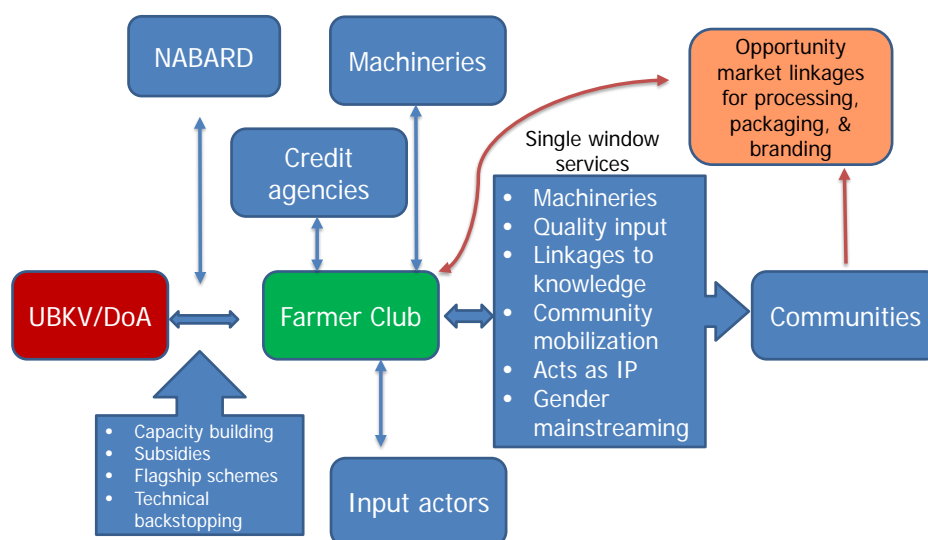
- Hiring of machinery and operators
- Provision of quality inputs
- Act as linkage to knowledge including government schemes, solving production problems
- Community mobilisation
- Gender mainstreaming.
- Capacity building (by organising Farmers Training Programmes)
- Fish fingerlings

The FC, currently, has three wheat ZT machines, two multi-seeder ZT machines, one rice seeder and three tractors and have six trained operators at the time the fieldwork was conducted. They are becoming a

distributor for rice transplanter machines and they also plan to buy three more machines. In the 2016/17 Rabi season, their targets were:

- Wheat 3000 Bigha (400 ha); compared with 1000 (133.33 ha) in 2015
- Maize 1000 Bigha (133.33 ha), compared with 450 (60 ha) in 2015
- Lentil 300 Bigha (40 ha) , compared with 150 (20 ha)
- Mustard 300 Bigha (40 ha), compared with 150 (20 ha).

For this, they need to expand the number of machines. They plan to hire out to members and non-members. Previously with just their tillers and tractors, the repair outlets were temporary, but they have now transferred into permanent shops, and now also have the facilities to repair machinery.



**Figure 1: District model of Farmers Club providing services: Satmile Satish Club “O” Pathagar**

*Source: Presentation by SRFSI West Bengal Team during the Sep 18-21, 2016 P&E Meeting, Darjeeling, WB, India*

### Key points about the model

- The Farmers Club, in this model, is playing the role of ‘interface’ rather than Service Provider only
- This model provides good linkages between farmers and service providers and input providers and increases the adoption rate of CASI technologies
- This model relies on an effective club being present that receives support from universities and government
- Two-way link is closely monitored/maintained by the Farmers Club
- As with any cooperative model, governance and sustainability will be concerns. This will become a bigger concern as the quantity and variety of services provided by the club increases
- The Farmers Club is gradually shifting towards ‘business mode’ from ‘welfare’ model
- Because it operates across villages and nodes, it is acting as a conduit for scaling out CASI technologies by providing machinery, input and knowledge services. Gradually, it is expanding its area and sphere of operation.

### 2.2.2 Sabuj Mitra Farmers’ Club

Sabuj Mitra Farmers’ Club started in 2011 as a welfare club and due to issues related to farming. It began trials with SRFSI in 2013. It currently has 122 members (20 of whom are females) and a management committee of 11 (2 are female). Members have to fill out a membership form, pay INR100 as membership

fee and then pay INR 50 per month. This club is based around the Durganagar node and provides services mostly at the node level. The main services it provides for members are:

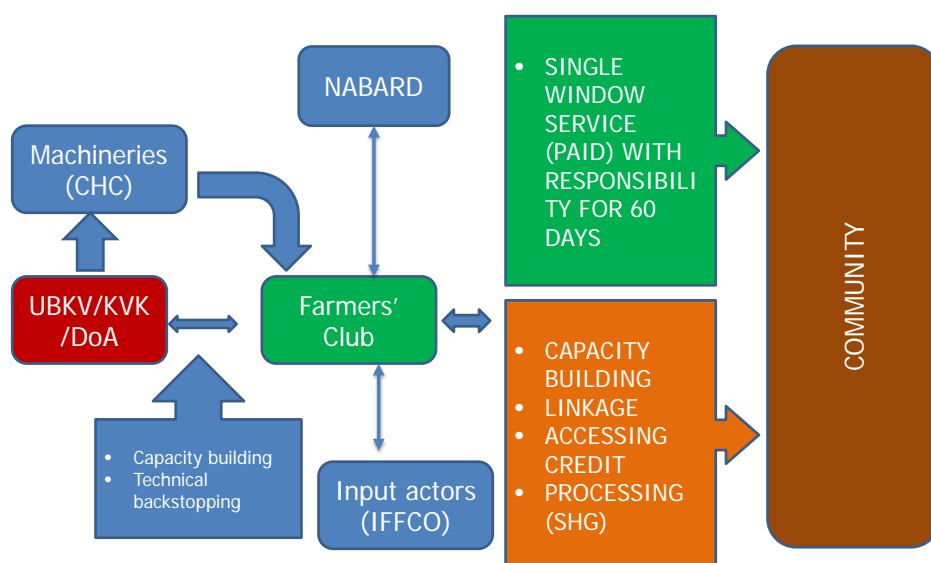
- Hiring centre for tractors, trailers and ZT machines
- Information about production through monthly meetings
- Text messages about weather information, disease warnings, prices
- Loans to members from member capital and help with accessing capital
- Help accessing government grants
- Help in marketing maize and lentils
- Provide contracting service for maize and lentil planting and establishment for the first 50 days, e.g., seeds, fertiliser, seeding. Last year, they charged Rs 3,000 per bigha for maize and Rs1,500 for lentil.

Non-members can also hire the machinery and contracting services and attend some of the meetings, but do not get the same amount of information. For Rabi season 2015/16, contracting included:

- Maize: 50 farmers and 200 bigha (26.67 ha)
- Lentil: 50 farmers and 200 bigha (26.67 ha)
- Maize yields were approximately 30 mon per bigha (approx. 1.2 tonnes; 9 tonnes per ha)
- Lentil yields were approximately 3.5 mon per bigha (approx. 140 kg; 1.05 tonnes per ha).

The plan for the rabi season, 2017 was maize 500 bigha (66.67 ha) and lentil 500 bigha (66.67 ha). They now own a tractor which they bought with a loan from the State Bank of India, with a 35% subsidy from the Government of Bengal. Their activities are managed by two SRFSI and two farmer club field technicians.

The club is supported by UBKV, KVK and the DoA and has links with NABARD, machinery dealers and input actors including Monsanto and IFCO (Figure 2).



**Figure 2: Node level model of Farmers' Club providing services: Sabuj Mitra Farmers' Club**

Source: Presentation by SRFSI West Bengal Team during the Sep 18-21, 2016 P&E Meeting, Darjeeling, WB, India

### Key points about the model

- Dissemination of knowledge, inputs, machine, technical and other information is the central theme
- Close co-ordination between different stakeholders/actors
- This model provides good linkages between farmers and service providers and input providers and increases the adoption rate of CASI technologies

- This model relies on an effective club being present that receives support from universities and government
- It is expanding its operations to non-members and to other nodes, which leads to outscaling of CASI technologies
- Having business outlook (no free service) and acquiring infrastructure for the same
- Obtained the status of 'Custom Hiring Centre' for catering the mechanisation need of adjoining areas.

### **2.2.3 Tufanganj Anwesa Welfare Society (TAWS)**

The Tufanganj Anwesa Welfare Society (TAWS) is an established Farmers Club in the Mansai node that has a close relationship with other Farmers Clubs in the district including the Sabuj Mitra Farmers' Club and SSCOP. It has 30 members (2 of whom are female) and 7 members in the management committee (2 are female). It is supported by and closely associated with NABARD, UBKV, DoA, and the National Urban Livelihood Mission (NULM). NULM undertakes development in tribal villages, promote self-help groups, the development of farmers' clubs and farmer producer organisations (POs), vermi-composting and marketing and orchard management.

The group is acting as a marketing outlet and have a seed grading machine. They are planning to purchase their own ZT machine and hire a tractor. However, only two local tractor drivers are trained on ZT machines. The club is taking an active role in dissemination of CASI technologies following Node Level Service Provider model.

### **2.2.4 Mohadipur Farmers' Club**

Mohadipur Farmers' Club started in 2011 with 11 members with three objectives: development in agriculture; education; and health. Currently, their main focus is on agriculture, rural livelihoods and general level of life and cleanliness. Implementation of SRFSI activities in this node synergised the approach towards farming. As a result, the Farmers Club, presently is focussing on increasing awareness among farming folks towards improved agriculture (CA, mechanisation, market driven agriculture etc). Change in cropping system (e.g., sizable reduction in boro paddy area), varietal replacement is noticeable due to the effort of the Farmers Club. But insufficient capital base and the lack of sufficient energetic young club members seem to be a serious hindrance for its operations. It has now has 27 members with 4 females. Membership costs Rs100 per month.

### **2.2.5 Sabuj Bahini Farmers Club**

The Bidyanandapur abuj Bahini Farmers' Club started in 2010 with 10 male members. Permanent members pay a monthly fee of Rs50. Non-members can become quasi-members by paying a fee of Rs.10 per season; they have 252 members, of whom 20 are female.

Their mission is overall development of agriculture and communication with credit and information agencies. Their present focus is on agriculture and livestock (cattle, poultry, goat, fisheries). Their role in SRFSI trials is to out-scale to farmers in the same villages and nearby villages. So far, they believe that doing so much else, there is no time to form a women's club.

### **2.2.6 Sonarai Farmers' Club**

Sonarai Farmers' Club started in 2015 with 13 males; they now have 21 members of whom eight are females. Membership costs Rp300 per month. Female membership is due to the encouragement of UBKV. The group is not in SRFSI, but was formed due to the SRFSI program. They saw multiple farmers doing trials and were encouraged and because they regard the technology as beneficial and are convinced they



are ready for outscaling. This Rabi season they plan to sow maize using ZT machines with recommended varieties.

### **2.2.7 Manickchak Progressive Farmers Club**

The Manickchak Progressive Farmers Club was formed in a SRFSI node in 2015 with 11 members (one female) and has not increased membership. Its main functions include:

- Agricultural development
- Access for their members to the Kisan credit card, which enables them to get loans.
- Orientating and creating awareness about coming certified seed producers.
- Demonstrating ZT technology to other farmers.

### **2.2.8 Vivekananda Farmers club**

The club was established in 1998 with 11 members, but now has 28 members (14 of whom are female). It was established to:

- Get the Kisan credit card so they could get subsidies and loans (i.e., farmers who are a member of a farmers club and have the credit card can get loans from the bank at a lower rate).
- Produce good quality seed.

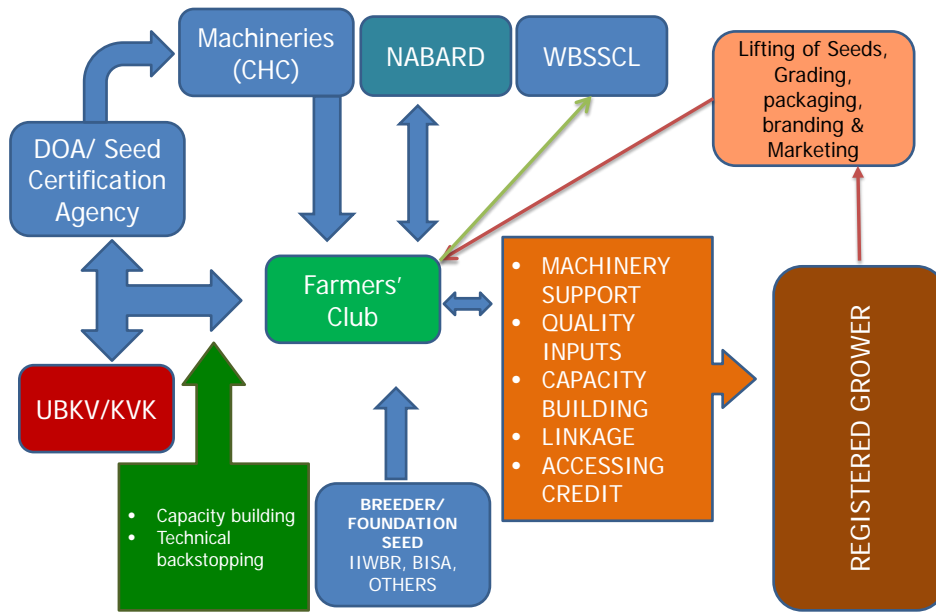
Members pay R100 per month. Currently membership is fixed and new members will be allowed every five years. This is because the money from membership fees is invested and members get the interest divided among them equally; if a new member joins they would also get the interest, but would not have provided the capital base, thus the 5-year interval.

From 2007 to 2011, the group was not functioning as a result of non-repayment of loans that were obtained and resulting misunderstandings between farmer club members and people of the village. They blamed the farmers club and believed there was carelessness and mismanagement. With the help of local people and Dr Tapamay, the club was re-registered and started again in 2012/13 as part of the AUSAID Climate Resilient Cropping Systems scoping study.

The club is now receiving support from UBKV and KVK and is linked with the DoA and seed certification agency for seed certification, NABARD, machinery dealers, and foundation seed suppliers (Figure 3). They are now producing certified lentils and some certified wheat seed. UBKV have the seed certification licence and have a contract to supply certified seeds to the West Bengal government and last season supplied 19 tonnes. Services provided by the club include:

- Machinery hire
- Information and capacity building
- Quality inputs
- Improved credit access.

Linkages with the SRFSI project have led to changes in cropping systems and an increase in cropping intensity. This, in turn, has led to increased income for farm-households.



**Figure 3: Node level model of Farmers' Club selling certified seed: Kalinagar Vivehanagar Farmers' Club**

Source: Presentation by SRFSI West Bengal Team during the Sep 18-21, 2016 P&E Meeting, Darjeeling, WB, India

### 2.2.9 Gourangapur Farmers' Club

The Gurangapur Farmers' Club committee was established in 2013/14 for the CRFS program of UBKV with 10 members (one female). It now has 11 members of whom one is female. The Club has been inspired by UBKV to solve agriculture problems and are also involved with DOA schemes and SRFSI.

The impact of the club has been to help create awareness of the benefits of ZT; previously rotations were 90% rice – rice with 60 to 65% fallow in Kharif 1. Others included:

- rice – wheat - (some jute)
- rice – mustard – maize

Now, Boro rice is being replaced by lentil (in a few cases, followed by mung bean). They did not have a tractor, but now have got a government grant to become a custom hiring centre. This has inspired non-members to become involved with CASI technologies.

This farmer club is trying to cater to the needs of their respective farming communities. Some of the key features include:

- Started business in 2015-16. Previously helped farmers in providing credit from bank & KCC from DoA
- More or less zero capital during the start of the project
- Almost all the areas in CA lentil are under out-scaling part; technology disseminated as no-till surface seeding of lentil because it performed better than ZT seed drill lentil. Therefore, the turnover on ZT machineries are mostly dependent on CA wheat and CA maize. The coverage of CA maize is still very low.
- Poor collaboration with NABARD. Therefore, two farmers clubs could not avail of CHC Scheme because of the terms and conditions of the bank. This issue has not been settled yet.
- No Single Window System has been developed to date.

## 3. Other issues

### 3.1 Issues at the farm level

Most farmers interviewed were involved in the SRFSI trials, although many were not. Most believe that the trial performance of the ZT are improving with time – due mostly to better machine operation and effective weed control. Consequently, farmers are generally positive about the potential benefits of the machines (technology); with reduced labour and costs, reduced irrigation costs and time, more efficient use of fertiliser, increased soil fertility and in some cases better yields. However, there has been better outscaling in nodes with good trial results. Some of the key issues at the farm-level include:

- Narrow sowing window means that sometimes machine are not available to other farmers at the right time.
- The benefits of ZT are perceived to be better with wheat and maize than rice. Higher yields (winter crops) occur because of the earlier/advanced sowing following rice leading to better yields.
- There are problems with trained ZT operators who are contractors moving on when they get a better job. It is perhaps better if farmer club members were trained as operators.
- Some women are interested in operating machinery, but none are trained as drivers and may have limited time due to domestic duties. In some nodes, the operators are doing a better job because they are now trained and experienced.
- They see opportunities for using ZT (e.g., jute, potato, pulses etc.) in other crops than SRFSI crops.
- Prefer training over ICT for information, but one club is using mobile phones and text messages to provide information about weather, prices and disease outbreaks. Farmers are interested in receiving such messages in this way.
- Rice transplanter:
  - Requires one pass with rotavator plus RT, whereas conventional requires one pass of cultivator plus two with the rotavator. Also requires four man days per bigha which equals Rp1200.
  - Rice transplanter is difficult to use with heavy rainfall and rice seedling only 15-18 days old so has problem when submerged.
  - Also had difficulty getting parts of machinery for repairs.
  - Some problems with uneven distribution of plants and forced to gap-plant. However, when planted with rice transplanter, they get better tillering.
  - Moving along roads is a problem.
- Some problems in some places accessing fields in Rabi season for tractors and ZT machine. Some nodes have overcome this. The main problem is timely availability of machine.
- Some farmers are aware of flat-fan nozzles, but others are not.
- There are some newer types of weeds appearing, so they need information about how to control them. Spray drift from glyphosate that affects jute crops is an issue. Also sometimes, new herbicides are available too late. They also lack post-emergent herbicide for lentil and mustard.
- Only few farmers are doing soil testing and are not confident in doing this. Some low pH soils and also have zinc and boron deficiencies.
- ZT has led to change in rotations from rice-rice in some nodes, with consequent increase in profitability, decreased water usage and less effect on water table. Also led to increase in cropping intensity.

### 3.2 Issues for female farmers

- Women appear to be as interested in CASI technologies and as willing to adopt it as men, provided they are exposed to the technologies, although they have less opportunities to observe than men as they are less likely to be invited to demonstrations and are more constrained in their travel outside their village.

- Women who have experienced ZT farming systems see their advantages as labour saving and drudgery-reducing, decreased cost of cultivation, seed saving, irrigation water and time saving, less time fertilising, and earlier planting of wheat and maize crops following rice can lead to improved yields. Since women are the main ones involved in weeding crops in CT systems, the herbicide management involved with ZT systems is seen as having the potential to decrease the drudgery of weeding, leaving more time for household and other activities.
- Benefits of farmers clubs to women include:
  - Information about different technologies, which leads to yield increases, income increases and, hence, improved livelihood. Increased income is being spent on improved dietary nutrition, improved schooling for children, and is resulting in less tension and conflict in the household, as well as more leisure time
  - Increased confidence responding to outsiders and improved status of family.
  - 10 – 12% of women are widows, and they are not cultivating their land because they lacked the knowledge. If we can involve them, they will be aware and involved.
  - If women are involved in all aspects of agriculture, it will be better for men in terms of their time and for family income.
- Women are becoming more involved in farming to meet the needs of the family and men are supporting this because it means greater net income.
- Consequently, women are interested in receiving training and exposure visits, but are also constrained in the ability to travel for training and prefer local programs. They are also interested in training in alternative livelihoods and in processing and packaging of crops such as lentils.
- Women in multiple locations expressed interest in driving tractors and operating ZT and rice transplanter machines.

### 3.3 Issues for tractor operators and mechanics

- High moisture at start of season creates some problems because of clumping leading to gaps on seeding. They need to wait until moisture right.
- Need follow up training in operating and repairing ZT machine and in using laser levellers.
- Need more operators trained. UBKV is the only trainer, so they may need to train the trainers. Problems with drivers include: driving too fast; dropping the machine too fast before they are moving.
- In some areas there are problems with moisture stress, so need location-specific recommendations because different soil and moisture issues will lead to improper seeding depth.
- Have observed that when the ZT machine is operated too fast, it increases the probability of gaps and uneven distribution of seeds.
- Obtaining small parts is not a problem, but some experience difficulties with big parts, because of a lack of local dealers.
- Issues with ZT machines:
  - Rusting of fertiliser boxes.
  - Needs modification to reduce clogging of seed
  - Mechanics finding some plates and pipes breaking repeatedly when planting wheat and maize. Multi-crop ZT planter is better and the plant is more durable.
- Rice transplanter:
  - They do not have good information on which rice transplanter machines are best.
  - Government is providing subsidies for machines, but not providing information on the performance of machines.
  - Availability of parts and poor manufacturing are problems with some machines.
  - Problems with eight-row planter on uneven land.

### 3.4 Issues for inputs suppliers

- SRFSI project has increased demand for products, which has increased their sales. Also selling a wider range of herbicides. If it continues, they believe it will be good for business.

- They have no problems accessing fertilisers and seeds, although some problems accessing some of the newer chemicals required for CASI technologies.
- One issue is that farmers are not acquainted with the new chemicals and are not willing to accept another chemical from the same group.
- While there is a social bar for women to become input dealers, one of the dealers indicated that his license was in the name of his wife, and she runs the shop particularly when he is away.
- They are using and selling fan jet nozzles; but only one has sold a boom with fan jet nozzles, to a farmer using a battery operated sprayer. Farmers are not aware of booms and to a lesser extent fan jet nozzles as it has only just been introduced, so there is scope to promote use of booms with flat fan nozzles. There is only one distributor of three nozzle booms with flat fan nozzles. It is not easy to get sufficient pressure with knapsack sprayer for three nozzle boom sprays.
- They are sending soils to the government labs, but take a long time to get the results back.
- According to the pump set dealer: There has been no effect of the SRFSI program on demand for pumps, but demand has increased due to several factors, such as the subsidies and other changes. The major problem with electric pumps is the regular power cuts and voltage fluctuations. The dealer suggests moving to solar systems; he will get a solar dealership from the manufacturer and wants to try. The solar pump uses the same motor as electric pump, of which it is just the modification and it is highly portable.
- Most input dealers provide advice to farmers, but there does not appear to be much training to update their knowledge and skills, particularly for CASI technologies.

### 3.5 Issues for agribusiness

- Farmers in West Bengal are using too much pesticide and old herbicides which are not appropriate for CASI farming systems. There is currently a lack of availability of the new chemical molecules required for these systems, particularly those for unpuddled transplanted rice
- There are insufficient suitable machines available to help implement the CASI farming systems, and the situation will become worse if something is not done as demand increases with the adoption of ZT and rice transplanter machines.
- Farmers are familiar with 2,4D, but are not aware or do not see the benefits of the newer chemicals, which are sometimes cheaper, but in any case are more effective for some weed and crops.

## 4. Discussion of Farmers' Clubs as an effective means to facilitate linkages between farmers and service providers

Farmers' Clubs take two forms:

- Farmer productivity groups
- Farmer business groups, particularly when they become Farmer Producer Organisations (FPOs).

Farmer Producer Organisations can be registered under the Companies Act but also under central and state cooperative society laws (Department of Agriculture and Cooperation 2013). The Government of India has developed a suite of policies to promote and support FPOs. The objective of mobilising farmers into FPOs is 'to enhance production, productivity and profitability of agriculturists, especially small farmers in the country' (p. 18).

### 4.1 Services provided by farmers' clubs

Currently the farmers' clubs investigated provide a range of services and benefits including:

- Improved access to information and training services: Farmers organised into groups are more attractive to providers of technical information and advice because they provide access to larger numbers of farmers who have similar needs. They also provide a conduit to spread this information

amongst members and non-members. This is done in a range of ways including through meetings, discussions and text messaging. This is especially relevant for the spread of CASI technologies.

- Machinery services: FCs are providing hiring or contract services to members and others of machinery suitable for the adoption of CASI technologies including tractors, ZT machines, levellers, rice transplanters. In some cases, the club becomes a local distributor for ZT and other CASI machines and arranges with mechanics and repair shops for repair and maintenance of the machinery.
- At least one farmer club is integrating the provision of information and experience and machinery services by providing contracts to establish and manage crops for a fee using CASI technologies up until the crops are well established. This acts as a demonstration of the performance of the technologies as well as providing training and experience to the farmers in growing the crops using those technologies.
- Improved and cheaper access to inputs. Farmer Clubs are able to purchase or acquire inputs in larger quantities and consequently at cheaper rates. Also because they can pre-order reasonably large quantities of harder to get products such as some herbicides, they overcome the problem for some farmers of buying these herbicides.
- Improved access to finance. Farmer clubs in India have greater access to savings and loans provided by banks and in some cases, the clubs provide loans to members out of club resources.
- Post-harvest processing and storage. Some clubs are involved in post-harvest processing either using their own machinery or through arrangements with other organisations to hire or use their machinery. This enables farmers to capture the value of processing or to become involved in higher value enterprises such as certified seed.
- Marketing services. Farmer clubs undertake a range of marketing services from provision of price information through consolidating product and arranging for its sale to arranging contracts with buyers and organising the farmers to produce the required quantities, undertaking sorting and grading, arranging transport to market and facilitating payment.
- Networking services. These services overlap with some of the other services as they involve improving linkages for farmers with other service providers, financial institutions, buyers and traders, processors and government programs.

The provision of these services by farmers' clubs fulfil many of the requirements for improving the linkages between farmers and service providers that are required to facilitate the scaling out of CASI technologies. These services are not commonly rendered by all the Farmers Clubs discussed above. However given the potential benefits, other Farmers Clubs can/may adopt this model in future.

## **4.2 Strengths, weaknesses and structures of Farmer Clubs and Farmer Producer Organisations**

When FCs start to become businesses, whether they are registered as FPOs or not, they essentially take on the features of a collaborative or cooperative group. The Government Policy Document for FPOs (Department of Agriculture and Cooperation 2013) includes such features: Voluntary and open membership; Democratic farmer member control; Farmer-Member economic participation, which are similar to those of cooperatives. Consequently they are likely to have some of the problems encountered by cooperative forms of structures that have been well documented (e.g. Lele (1981); Murray-Prior (2007)).

In some cases, the FCs and FPOs have been formed to take advantage of government grants, subsidies or the provision of inputs as mentioned previously. There is literature to suggest that farmer groups formed for these purposes have become dependent on government, are creatures of government policy, or have become subject to political interference (Murray-Prior 2007). Government support can be both a help and hindrance. While the support remains, the cooperative continues, but once the support is removed/withdrawn, the cooperative is likely to collapse. This also applies to support from NGOs of donor-funded projects.

The features of cooperative organisation such as voluntary and open membership, democratic member control, member economic participation are consistent with many of the principles underlying FCs and FPOs and these underlie the key difference that distinguishes their structure from that of investor-owned

firms (IOFs). That is, members have two roles in the organisation: as patrons (i.e., selling or marketing through the cooperative) and as investors (i.e., the major source of investment funds) (Nilsson 2001). This can be both a source of strength and weakness. If social capital is high, it is a source of strength, as members will work hard to help the cooperative work. However, there is often too much emphasis on the patron role, with members wanting a low price for inputs or a high price for outputs leading to financial problems. Additional problems with collective models include investment problems and governance problems.

The critical success factors for cooperative forms such as FCs and FPOs are: a comparative advantage arising from market failure and trust among members (Murray-Prior 2007).

Do the FC and FPO models have a comparative advantage?

Situations for comparative advantage include: dealing with monopsony or oligopsony situations; when farmers are making high levels of transaction-specific investments; when there are substantial economies of size associated with processing; when marketing services are not provided by the private sector; and when a cooperative has an advantage in receiving access to higher-priced markets. At this stage, the key driver for their success appears to be that there is market failure in the sense that the provision of services required to support the adoption of CASI technologies is poor. There is a shortage of machinery, trained operators, herbicides, and importantly knowledge and skill in using CASI technologies. The models discussed above have addressed these issues, but importantly are also acting as farmer productivity groups through the opportunities they provide to access information, discuss problems and successful strategies and provide training opportunities for their members. Whether their comparative advantage will remain as the private sector begins to become involved in the provision of services for CASI technologies remains to be seen, but at this stage they appear to be a viable model.

Do they encourage trust? We have seen evidence from the experience of the Kalinagar Vivekananda Farmers club, that issues can arise with management of the club. In this case it resulted in non-payment of loans, that can result in a lack of trust of members and other stakeholders in the group. Homogeneity of members have been shown to increase the chances of success as it increases social control and reduces governance problems. Consequently, small homogeneous groups, not unlike many of the FCs have some chance of success.

One of the IFFCO managers interviewed had experience with a project in 40 villages and suggested that to have a viable business, the profit and risks need to be shared by the operators or owners. In his experience, a group of no more than 4-5 dynamic people worked best, with the income and risks being shared between those members. Therefore, there may be a potential problem with FCs that have a large number of members if 4-5 seems to be optimal for similar groups. While the maximum number of members to create a viable farmer-owned business will vary with culture, our experience in the Philippines is consistent with the view that for cluster marketing groups the number of members should not exceed 15 and this is normally in situations where the group is not running a large business or taking out loans. Some evidence exists also that for microfinance groups, a maximum of five is desirable, except for specific cultures and political situations. It might be possible to have a small group running the business but obtaining most of the product from the surrounding small farmers – a variation of the nucleus estate model. A nucleus estate can create a monopsony situation, but if the group is a member of the local community from which they buy the product they may be constrained by social pressure from taking advantage of this situation. Other success factors from the literature that are relevant to this discussion include (Murray-Prior 2007):

- Easy, low cost access to remunerative market opportunities
- External resource support is needed for pump priming
- Have professional managers who involve the members.

Some of the clubs (e.g., certified seed clubs) have better access to market opportunities due to the support they receive from government and NGOs. However, while this is an advantage, it means there are problems with scaling out as external resource support is limited and may not be available if large numbers of clubs were formed. Many of the clubs interviewed for this study rely on this support to

establish them, to support them through their growth problems and to provide information, training and resources.

Acquiring and maintaining professional management is a problem for all business, not just farmer-owned businesses, but it can be a particular problem for cooperative forms. The democratic structure of FPOs makes it difficult to control managers, but also many farmer members of boards, some of whom may be illiterate, lack the skills to supervise managers adequately. When local managers are used they may lack education and management expertise. Furthermore, members may have different interests, while the goals and interests of managers differ from those of members, which makes it difficult to make optimal investment decisions leading to economic inefficiency.

Considerable time needs to be spent in developing leadership and management capacity of the farmer club leaders (and members) so that they understand and have the skills necessary to run businesses established under the Farmers' Club. Consequently, farmer clubs need to be assisted through a development process, a fact that is acknowledged in the government policy.

Farmer clubs will also benefit from being a member of a farmer club network or a meta-facilitation group for clubs. These networks provide an opportunity for clubs to learn from each other, share training opportunities and potentially conduct business with other clubs. However, such networks often require support, from either government or NGOs, to establish and maintain until they become self-supporting.

Currently, many FCs do not have large numbers of women as members, although in many cases that is because the husbands are the members. In some cases, this occurs because each member has to pay a fee, so the household has one member paying the fee. A positive finding was that most men were in favour of women being involved and some have helped establish separate female Farmers' Clubs.

In summary, FCs and FPOs provide advantages as a conduit to assist with the scaling out of CASI technologies, but they require considerable investment by government in financial support and training. Consequently, the expansion of FCs needs to be managed because if it is too quick, the required support will not be available and many clubs may fail, with knock-on effects for future involvement of farmers in groups and for adoption of new technologies. They will also be useful in involving women in management of farming activities and in linking them to service providers.

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## Appendix

**Table 2: Itinerary of UBKV, Curtin team visit to Coochbehar and Malda districts**

Date	Events
Thursday, 22 Sep	Travel to Coochbehar
Friday, 23-Sep	Visit Satmile Satish Club “O” Pathagar and appraise business model
Saturday, 24-Sep	Visit Sabuj Mitra Farmers Club, Durganagar& Tufanganj Anwesa Welfare Society and appraise business models
Sunday, 25-Sep	Travel to Malda
Monday, 26-Sep	Meet with Sabuj Bahini Farmers’ Club, Bidyanandapur, Sonarai Farmers’ Club, Mahadipur Farmers’ Club & Manikchak Progressive Farmers Club and appraise business models.
Tuesday, 27-Sep	Visit Kalinagar Vivekananda Farmers club and Gourangapur Farmers’ Club and appraise business models. Meet with Malda agribusiness community about support for outscaling the SRFSI project
Wednesday, 28-Sep	Travel to Bagdogra and write reports

**Table 3: Team members**

Organisation	Team members
DoA, West Bengal	Debashis, Manabendra
Curtin University	MF Rola Rubzen, R Murray-Prior
UBKV	KK Das, T Dhar, A Ghosh, Paramita, Prateek, Apurba