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WOMEN'S COLLECTIVES: Changing the Lives of the Rural Poor in India

Evolving a unique, farmer-focused research methodology, drawn from several complementary approaches, this research project brings about positive changes in the lives of women in this remote area, encouraging them to view themselves not as secondary drivers of agricultural output but as principal farmers, researchers, teachers and active agents of social change

People and the Socio-ecological Landscape

CHURINSORO IS A VILLAGE under Ayodhya *panchayat* of Baghmundi block, Purulia district, in West Bengal. This is one of the remote and most under-developed areas of West Bengal. A few years back, it was a hotbed of the Naxalite movement. It shares its boundary with Jharkhand and the jungles and hills on the border made it a haven for the passage of Naxalites. Government programmes and facilities were far away from the reach of the people.

The village people are a homogenous tribal group (*Santhals, Ho, Bedia, etc.*) and they maintain exclusive identities. Socialization is generally endogamous and they identify more with people belonging to their tribe; and within their community a level of cohesiveness exists. To some extent, these people are discriminated and isolated from mainstream society. Their livelihood basket is excessively laborious, involving back-breaking physical labour with low returns. Women suffer most in these conditions; their identity is that of a labourer, whether they work in their own fields, or on others'; go to the forest to collect wood or do earth-cutting work.

Most villagers are food insecure with only 50–60% of their food grain requirement being met through on-farm production. This then leads to migration out by family members, particularly young men, resulting in on-farm labour shortage and social upheaval

Technically speaking, Churinsoro falls in the East India Plateau (EIP) agro-ecological zone VII. The region is characterised by high but variable rainfall (1,100–1,600 mm, 80% from June to September), frequent and sometimes long dry spells within the monsoon, little irrigation (~8% of area), high runoff and soil erosion, terraced mono-cropped paddy lands and subsistence agriculture. Uplands are often degraded and make little contribution to overall productivity. Poor farmers have little, if any, of the lowlands, where rice has traditionally been grown. There is very little rainfed *rabi* crop and yields are generally low (rice <2 tonnes (t)/ha, pulses <0.5 t/ha). There is little mechanization; seeds of crops other than rice are usually hand-broadcast; weeds are removed by hand; and fertilizers (if used) are hand-broadcast. The use of inputs is inhibited by the extreme risk-aversion of these poor farmers, combined with the inherent risk of farming in this area. This results in a state in which most villagers are food insecure with only 50–60% of their food grain requirement being met through on-farm production. This then leads to migration out by family members, particularly young men, resulting in on-farm labour shortage and social upheaval. These drivers contribute to widespread malnutrition, low levels of literacy, particularly among girls, and limited access to medical services due to low disposable household income.

The Research Project

Considering the complicated context, the need to develop a scalable, context-appropriate model, which will ensure sustainable changes, was important. A research project was designed, with an aim to improve livelihoods by enabling local farmers develop flexible and responsive cropping systems, which utilize available water resources better, thereby building resilience to climate change/variability at the household level. This research project was built on the findings of the Australian Centre for International Agricultural Research (ACIAR) Project, 'Water harvesting and better cropping systems for smallholders of the East India Plateau', led by Professor Peter Cornish, University of Western Sydney (2006–11). The new project was designed for both research and development outcomes. The research component was funded by ACIAR, which aimed to refine and validate it over a larger geographic area in three districts in EIP. This process is driven by farmer-led, experiential learning, facilitated by PRADAN and supported by the ACIAR, Asian Vegetable Research and Development Centre (AVRDC), Advance Centre for Water Resource Management (ACWADAM) and Bidhan Chandra Krishi Viswavidyalaya (BCKV), to make the research transdisciplinary. The project was from a period of 2012–16.

The project has evolved a unique, farmer-focused research methodology drawing from several complementary approaches including Participative Action Research (PAR), Agricultural Research for Development (AR4D), systems thinking, trans-disciplinarity, and collective or social learning theories. A common characteristic to all these methodologies is maintaining a focus on the farmer as the centre of all research activity. The core element in our approach is our process of farmer engagement. Farmers are involved in all aspects of the research process, including:

- Identifying and developing research questions.

In tune with our farmer-focused approach, the project works with a group of women farmers, who are collectivized under Self Help Groups (SHGs). Churinsoro had 3 SHGs, which collectivized approximately all the households in the village

- Imposing experimental treatment in farmers' fields and maintaining agronomic management.
- Assisting in data collection and maintaining observations of treatment effects.
- Contributing to interpretation of experimental results, adding practical insights.
- Communicating research results to other farmers.

In tune with our farmer-focused approach, the project works with a group of women farmers, who are collectivized under Self Help Groups (SHGs). Churinsoro had 3 SHGs, which collectivized approximately all the households in the village. SHGs create a platform for sharing learning and building systems for mutual help; they are an approach to cohesiveness and collectiveness that bring remarkable changes in their lives. The project focused on community processes and SHGs were the platform.

Project Inception and Initiation Process

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Keeping up the spirit of participatory approach at every level, the first inception workshop with other project team partners—ACWADAM, AVRDC, BCKV, ACIAR and PRADAN professionals—from the respective project locations was conducted. In the workshop the model/ framework for the project was developed, which brought in the intersectionality of roles of each different partner and their distinctive research, combining it with development objectives. Some of the basic principles were outlined in this meeting. These were:

- The SHG would be our focus and the women will lead.
- No alien crop would be introduced initially; rather, the focus would be to understand the existing crops
- The research questions would be linked with the community's aspiration.

This workshop was followed by series of workshops and meetings with the other partner, the community of Churinsoro, especially the SHG members and their spouses. These meetings and workshops were predesigned, and participation of community, both women and men, was ensured. In this meeting, all other partners, that is, ACWADAM, AVRDC, ACIAR and PRADAN professionals, were present. PRADAN professionals were the key facilitators of these events. An overview of the objectives and the purpose of the project were shared with the villagers. PRA tools were used for problem mapping vis-à-vis the objective of the project, whereby the land problems across different categories of land, the crops grown in those lands, productivity, irrigation, livestock and such other problems were deliberated upon in depth. During these events, research questions and experiments were articulated and designed jointly with the community. The community as researcher was established from the very beginning. The point that it is their land, it is their agriculture and it is their research began getting embedded through these processes.

The Project Operations

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A. Selection of farmer researchers and the experiment plots

For an on-farm research activity, we require willing farmers. The engagement of the community from its inception set the way of them being equal partners. The first step in the project, once the research questions were arrived at, was the selection of

One category was the 'core farmer researcher', whose data would be collected intensively; the second category was the 'medium researcher', whose research data on some parameters would be collected; and the third category was the 'basic farmer researcher', whose production data would be tracked and collected

farmers. When discussing the agenda, the SHGs brought in a very interesting dimension. They said all members, that is, some 30 odd families, need to be involved in the research. This compelled us to think out of the box because, for us, experimentation and monitoring such numbers was an uphill task. Initially, we had planned for two types of farmers; one were the Researcher farmers, who are to participate in the research with ACIAR and PRADAN as partner, with a recommended package of practices for research in the new and innovative farming system. And the other were the Control farmers practising traditional agriculture.

Taking up the challenge, after discussion, we came out with three categories of Researcher farmers. One category was the 'core farmer researcher', whose data would be collected intensively; the second category was the 'medium researcher', whose research data on some parameters would be collected; and the third category was the 'basic farmer researcher', whose production data would be tracked and collected. This was required to compare and contrast the traditional crops grown with traditional practices. This was acceptable to the women and they quickly divided the households into three categories depending upon their interest in research and land holding. The point in landholding was very interesting because they thought with prudence that farmers with low landholding should not risk with the experiments.

Thirty households of that village hamlet were included, which led to better management of research activities. For example, the cattle grazing problem, cited as one of the major blocks for expanding vegetable and other crops, was dealt with smoothly. To attend to the need of fodder for cattle, villagers grew napier grass in small plots, which in itself is a step forward towards change in agriculture. After the selection of the farmers, women SHG members were given the space for selecting the land and/or plots for various research experiments. The minimum land requirement was 10 decimals of medium upland category, which the women identified, keeping in mind ease of management and demonstration. Taking the decision as an institution made the experiments in various plots easy.

B. Systems and processes

Weekly SHG meetings: One of the key components of the work was that the SHGs were at the helm of managing the research programmes. This was one of the focuses in our approach. The SHG weekly meetings became the forum for updating and discussing progress regularly. PRADAN professionals, in the beginning, attended the weekly meetings and later attended them fortnightly. In these meetings, the schedules of the experiment were set up. The details of each experiment, with instructions, were deliberated upon, explained and discussed. The women followed up with the schedule, monitoring and evaluating the progress. Any problems that came up were discussed and addressed by all the SHG members. The implementation of the components of the research in the field and the precision of following it was ensured in the field visit by them. The women themselves actively conducted the research, and would update the progress they had made in the meeting. They would explain to the men about the experiment and its components and would jointly do it with them. This becoming a part of their weekly

The idea was to build the capacity of women and impart all the relevant technical and other knowledge in simple language in this platform. The SHG members were trained in operating various agricultural tools and implements and in the new agronomic practices in the field

meeting made the monitoring and evaluation a seamless process.

The SHG platform was set up as the nodal forum for any communication by the other partners too. In the weekly meetings of SHGs, the partners explained their research component. The idea was to build the capacity of women and impart all the relevant technical and other knowledge in simple language in this platform. The SHG members were trained in operating various agricultural tools and implements and in the new agronomic practices in the field. For any new demonstration, the collectives were the base, and the Farmer Field School (FFS) model was followed. AVRDC, in charge of crop diversification and improving agronomic practices, followed the FFS model and the SHG became the platform. The ACWADAM staff trained the women in measuring the water table, infiltration and residual moisture, using corresponding instruments. They used to keep separate staff to do that in their other project. Here they were building the capabilities of the women, which was something new for them. The data they collected was accurate. A mini weather station was set up in one the members' households and the women were told how to operate it and what to measure. The low literacy rate was a hindrance in keeping record and reading the gauges, but the information was understood by almost all. Data interpretation and analyses was carried out with the SHG women, which built their level of confidence and understanding on the movement of water and its relation with crops.

Agriculture seasonal meeting at the community level:
These meetings were more like a community learning forum. These took about 4–5 hours, organized in the middle of the *kharif* and *rabi* seasons, and at the end of one cycle of research, which usually coincides with end of the agriculture season. These events were designed well in advance and all the partners—AVRDS, ACWADAM, BCKV and SHG institutions—participated in them. PRADAN played the role of the key facilitator.

The discussions in the mid-season meetings were about the research experiments that were happening, during the period. These meetings included field transacts in the beginning of the meeting during which observations were shared by everyone and commented upon. Space was created by the facilitator to hear specific community observations. A critical discussion on the five WHs (Who, When, What, Where, Why and How), supported by field transact observations, took place. Probable solutions and actions to be taken were also discussed jointly.

The end of the season meetings at the end of one cycle of research, including both the agriculture seasons of *kharif* and *rabi*, was an annual event attended by all partners. Data was shared through graphs and other simple tools; and analyses of the data, both scientific as well as community wisdom of the community, was done. The experience was consolidated and new action plans for the next year were set up.

C. Exposure, learning forum and out-scaling

The farmers' chosen plots for experiments were next to the road leading to the main road of a few other villages. Many farmers, therefore, became curious about the experiments being undertaken and the resultant crops drew their attention and triggered interest. Some

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unplanned exposure happened initially when the community shared their experiences informally. During the second annual event, a focussed group discussion (FGD) on agriculture practices and its implication on their lives was also conducted in a workshop with three sets of farmers; research farmers, controlled farmers and spouses of research farmers. The purpose was to get a broader view and compare the research and control farmers, the changes that take place around them, and their perception and reaction to those changes. During the FGD, when the women were speaking about positive changes in their lives, they came up with the idea of helping others bring about changes in their lives. Thus, the idea of a learning forum emerged, inspired by the 'professional learning forum' used for school education. In the words of Louise Stoll and others: "Developing professional learning communities appears to hold considerable promise for capacity building for sustainable improvement."[1]

The SHG institutions in their various forum meetings spread the word about their planned schedule for inviting villagers to see their life changing achievements. These exposure visits were free, wherein farmers and SHG members from other villages came on their own to hear and observe the activities. The women, along with the PRADAN professional, designed the visit and the steps of the field transact. Building from their own experiential learning, women asked the visitors trigger questions, to help them explore better. The women also decided not to restrict the exposure visit to agriculture, but to also speak about the changes brought about in their life. In all, 28 exposure events were conducted, covering all the 90 SHGs spread across 34 villages. To make the learning comprehensive, each group was brought in for a visit at the beginning of the agriculture season when the land was being prepared and seeds were being sown. The next visit took place towards the end when the crop was in full fruiting stage and harvesting had begun. The women farmer researchers were confident about their knowledge and learning, which was reflected during the visit when they fielded all kinds of questions from the visiting farmers. Some offered to support the visitors and guide them in the field if they wanted to adopt these new practices.

The Outcomes and the Results

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During a mid-term review of the project, around 2015, we followed a detailed study to understand the outcomes and the changes that this research project was bringing in the community.

Methodology adopted to assess: In order to get both the qualitative and quantitative data, individual interviews with the research farmers were conducted, using a questionnaire that aimed at capturing the changes in different aspects of their life. The qualitative data was mainly obtained through group interviews, workshops and FGDs. Keeping the commitment to the project outcomes, we clustered them in three broad categories and the questionnaire followed the same three broad categories: first, the changes in agricultural practices and how it impacted women's lives; second, establishing the relationship between different practices in agriculture with women's nutrition and hygiene condition;

[1] *https://link.springer.com/article/10.1007/s10833-006-0001-8*

The idea of adopting SRI paddy in the lowlands and Aerobic Direct Seeded Rice (ADSR) in the mid-lowlands and mid-uplands came up. SRI multiplied production in their fields, thereby enhancing the food security[2] period and ADSR helped to bridge the hunger period to make the villagers fully food secure families

and third, gender dynamics, which broadly captured women's empowerment and how this process of engagement brought transformational changes in women's lives. There were 20 participants; each of them was asked a total of 37 questions (10 in the first, 12 in the second and 15 in the third categories), which took around 45 minutes to 1 hour time. An FGD was conducted with 16 women who answered 10 questions primarily based on the three categories mentioned above, in order to understand the role of a group/community process in change and the role the group plays in their lives and how they have integrated those changes. PRADAN professionals conducted the data collection processes.

The Outcomes and Results

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1. Change in the cropping system led to change in income and better living conditions

Paddy is the staple food of the villagers; hence, they wanted to cultivate paddy in a better way to get a higher yield. The idea of adopting SRI paddy in the lowlands and Aerobic Direct Seeded Rice (ADSR) in the mid-lowlands and mid-uplands came up. SRI multiplied production in their fields, thereby enhancing the food security[2] period and ADSR helped to bridge the hunger period to make the villagers fully food secure families. The graph[3] (Figure 1) shows the shift in the number of families to food sufficiency. The women adopted many new agricultural practices such as inter-cropping of maize with legumes for the first time, adding to the income of each family. The pit-and-trellis method was adopted for creepers; new tomato varieties were grown along with other vegetables such as pumpkin, garden peas, cabbage, etc. Pulses such as pigeon pea and horse gram were the newly adopted crops that brought cash and food diversity for the family. Data reflected that, at present, 70% of the families have 12 months of food security and 30% between 6 and 10 months.

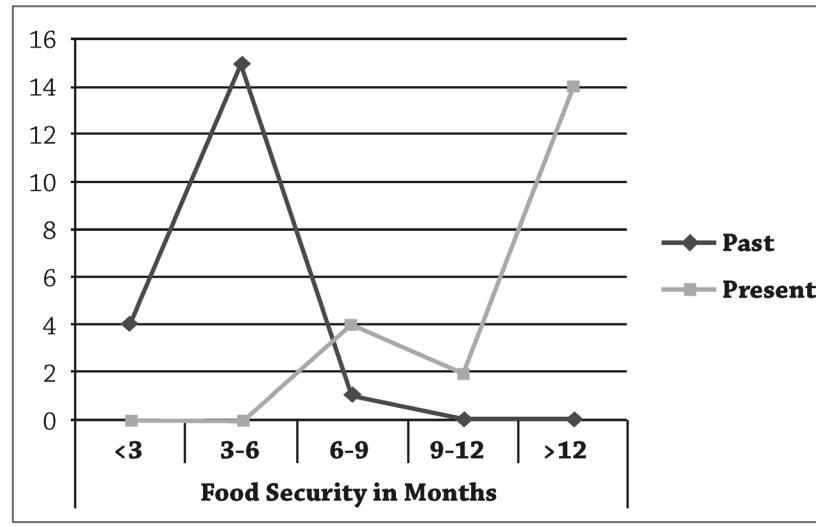

Figure 1: Comparison of Food Sufficiency/Security

2. Reduced deforestation and drudgery of women

The introduction of innovative tools such as the line marker,

[2]*Food security here implies availability of cereals/grains for consumption*
[3]*Data was collected from sample farmers through a questionnaire and consolidated.*

Sadhmoni *didi* says, "Besides food, I spend most of my earnings to pay for my child's education in a private school for which I pay Rs 1150 per month."

wheel hoe, cono-weeder and earthen-up machine in agriculture brought significant and relevant changes in farmers' engagement in agriculture, making it less time-consuming and reducing the drudgery. The new and innovative agricultural interventions brought better returns and decreased forest dependency tremendously. This impacted the health and environment of the women positively. Due to the diversity in agriculture, and the reduced time and drudgery, women now have more time for themselves, their children and family. As a result of food sufficiency and the increased income in the family, women are prioritizing their children's education. The study also reflected that 80% of the family now spent most of their income on their children's education and food. Sadhmoni *didi* says, "Besides food, I spend most of my earnings to pay for my child's education in a private school for which I pay Rs 1150 per month." The mindset of the women shows a distinct change, from when food used to be their main focus to thinking and prioritizing about educating their children and sending them to private schools for better education. This shift to a better lifestyle and well-being marks a significant transformational change in the women's lives.

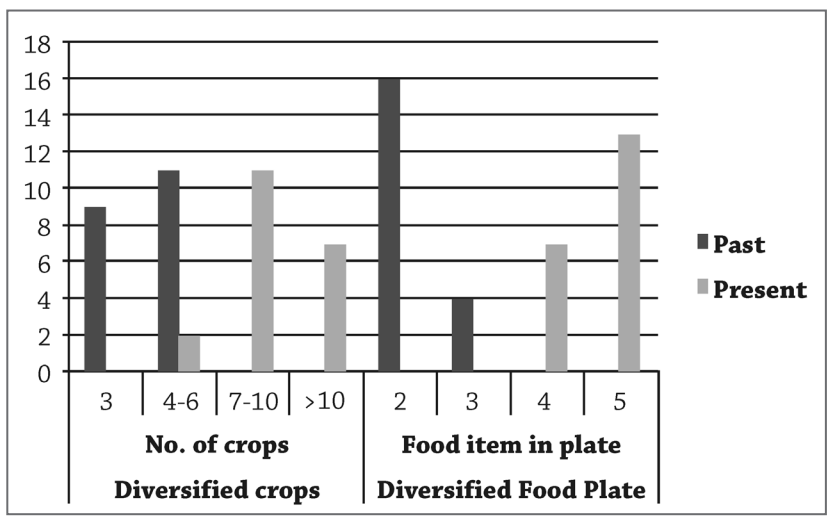

Figure 2: Diversification in Crops and Diet: A Comparison

3. Agriculture as a source of nutrition and hygiene[4]

New innovative agriculture practices brought food sufficiency to the families and food security in terms of quality and quantity of food intake. There was change in the food intake of the village women, in terms of an increase in the quantity as well as better quality. Five years earlier, women/families used to have one meal a day, comprising only rice with salt and, sometimes, wild leafy vegetables at night.

To appease their hunger in the day, they would eat wild potatoes or starchy corn, when available. However, after the project, they have three meals a day, which includes starchy rice in the morning and for lunch with different vegetables that they cultivate and buy from the market. Dinner is boiled rice, vegetables and *dal*. The study revealed that the vegetables, including French beans, peas, ridge gourd (which they consumed for the first time), bottle gourd, pumpkin,

[4]*The data and analysis has been drawn from the report of Sturat Vermaak and Damien Balzer, two undergraduate students of University of Wester Sydney, who did their research work in the project area.*

Hemlata Mandi proudly pronounces, "Now I have enough time for myself because I do not need to go to forest, so I oil my hair and bathe with soap every single day and wash my clothes with a washing soap, I feel healthy and good."

bitter gourd, cow-pea, chick pea, spinach, water spinach, mustard leaves, *dal*, etc., are now consumed by the families. The consumption of meat has increased in the last five years, with 65% of the families reporting that they have meat, eggs and fish 2–3 times a week and 35% have these 2–3 times a month. Earlier, families only consumed meat during festivals or when a relative visited them. The awareness and knowledge about good and nutritious food is quite high now among the women. Although the women find their current diet quite healthy and nutritious as compared to the earlier five years, they think there is need to improve their diet by adding consuming meat, fish, egg, pulses, vegetables, green leafy vegetables, milk and fruits regularly.

4. Improvement in hygiene conditions: An unanticipated outcome

The women said that, earlier, because they were very busy working in the forests, they did not have time for themselves and their children. Usually they used to bathe once in a month or two with mud and wash their clothes with ashes and warm water. Engagement in the agricultural research project allowed them time and more income to take care of themselves. Hemlata Mandi proudly pronounces, "Now I have enough time for myself because I do not need to go to forest, so I oil my hair and bathe with soap every single day and wash my clothes with a washing soap, I feel healthy and good." They also make sure that children stay clean and healthy, give them a bath every day before sending them to school and ensuring they wear clean clothes.

5. Women's empowerment and engagement in agriculture

Women's empowerment in this context was seen in multi-dimensional aspects that include decision-making power based on income, expenditure, time, labour, assets, skills and knowledge about new agricultural techniques. Being part of a patriarchal system, Churinsoro was also governed and headed by men in every aspect, right from decision-making to income, expenditure, labour, accessing skills, education and so on. However, the inception of groups and the agricultural research project initiated different gender dynamics among the villagers. The project and groups (SHGs) created space for women to be involved in decision-making, where they start saving their income, planning agriculture, deciding what crops to cultivate and which technique or system to adopt. The improved agricultural production, resulting from the research planned and decided

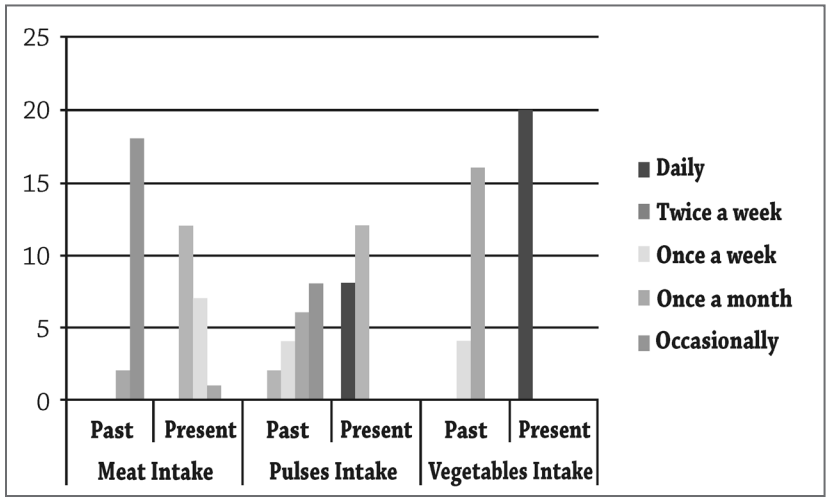

Figure 3: Diet Changes Past and Present

Hemlata Mandi claims, "If I give money to men they will finish it off drinking; that is why I take charge of the expenditure at home."

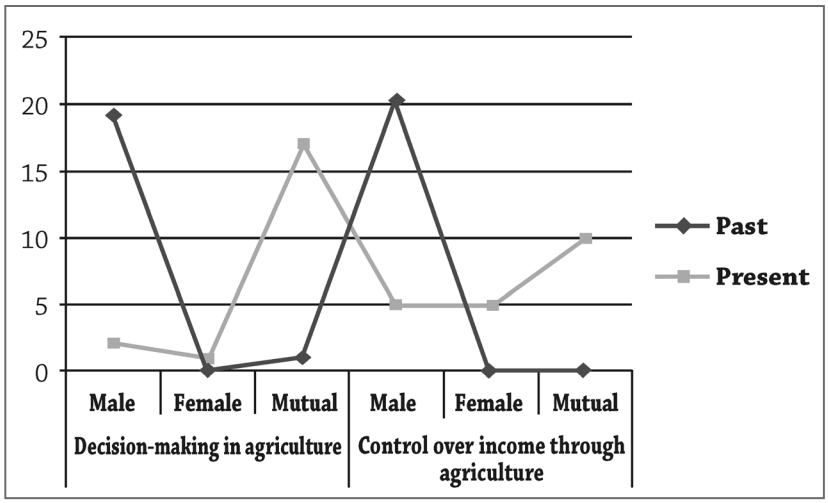

Figure 4: Change in decision making

by women, brought about a new perception of women among men and society. About 75% of the women shared that now they are treated equal to men to a large extent. A mutual decision-making process is adopted in their home and women have increased their say about the agriculture and the expenditure of the family. Hemlata Mandi claims, "If I give money to men they will finish it off drinking; that is why I take charge of the expenditure at home." This ensures a better family life as shown in the research conducted in many places around the world, that income controlled by women is more frequently used on food and health care for the family, particularly for children (UNICEF 2011; Smith et al. 2003).

A noticeable shift happened in the distribution of roles for agriculture work, with new innovative agriculture interventions such as a new cropping system and mechanization. The women shared that agriculture activities such as sowing/transplanting, weeding, harvesting, collecting of harvested crops, which used to be the duty of women, are now performed both by men and women equally. The women also shared that currently women are able to reduce their workload during pregnancy and in the lactating stage due to this role-sharing. The women articulated that their improved knowledge in agriculture gave them recognition as farmers. About 80% of them said confidently that they can teach other farmers what they have learnt.

The SHG is another factor contributing to women's empowerment, claims a group of women, "As a group we are one family; we share our strengths and weaknesses, sadness and happiness," says Anjani Mandi, an intelligent and shy middle-aged women. The SHG plays a vital role and is a learning forum for women, where they plan their agriculture, experiment, reflect and review their concrete experiences, to get a better yield and income the coming year. This group provides a space for women to save and take loans whenever required, reducing the need to borrow money from middlemen on high interest rates or mortgage their land. With their own money, they take loans at a small amount of 26% interest rate annually, with flexible repayment options. The SHG is also regarded as a second family by the women because through the group they help each other in agricultural research activities, from the planning and

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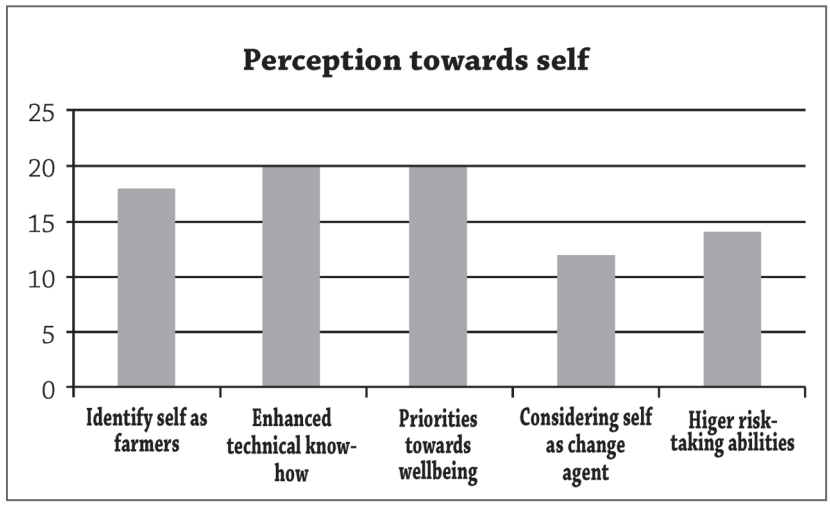

Figure 5: Perceptions of Women

sowing stages till the harvesting; this strengthens the processes and brings them success. The group integrates the changes and supports and encourages women to learn and act more independently and confidently. As a group, they (women) also reported that they teach women and men farmers from other villages what they have learned from the agriculture project. These women's groups started to establish an entrepreneurship model by teaching others for a remuneration of Rs 300 per day per group. The women say they feel *good and confident* and now aspire to continue good agriculture practices, grow new, high-value cash crops, access markets for their produce, housing, electricity, toilets and an all-weather road. Furthermore, in order to mitigate the gaps in agriculture, they are ready to take up an irrigation project, which will provide them surplus water and give them additional income and enhance their well-being. Figure 5 captures the change in perceptions of the 20 women SHG members, who were interviewed and who participated in FGDs.

Insights and learnings

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This agriculture research program was unique for two reasons. First, the research was conducted with real farmers and on their own fields. Second, women were given primacy as farmer researchers. The project mainly focussed on women as individuals, to enhance their sense of agency and build her capacity (human capacity). Experience shows that a local need-base planning is more effective than a project need-base planning because it incorporates data that is based on reality, providing more space to women to plan and act as per their needs and problems rather than stick to the strict guiding principles of a project, as is the usual way. Moreover, it takes into consideration indigenous knowledge and practices, thereby developing the women's capacity to solve their own problems.

The progress from a farmer to a researcher to a teacher is a gradual and continuous process. It involves planning, experimenting, reviewing and reflection, with insights and lessons being learned from the past experiences and changes implemented to improve performance in future activities. This process follows the model of cognitive development, as depicted in Figure 6.

Various PRA activities reveal that women do more than 85% of the farming work. They are not acknowledged for the work

These researcher farmers are now role models. Farmers from outside the research village observe them and their farming practices and desire to learn from them

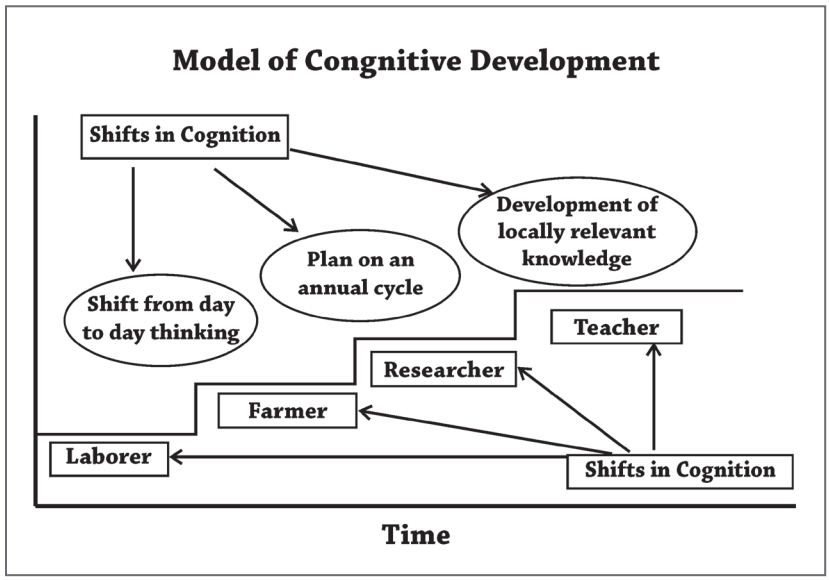

Figure 6: Model of cognitive development

they do. If they work on their family's farms, they are seen as assisting in family work. If they are working on someone else's field, they are treated as labourers and paid lower wages than the men labourers. None of the women considered themselves as farmers in their identity or as their occupation. The engagement approach and the processes[5] adopted in this project ensured a shift in their identity—from being a farm laborer to a farmer to a researcher and finally to a teacher. These researcher farmers are now role models. Farmers from outside the research village observe them and their farming practices and desire to learn from them.

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Ritesh Pandey *and* ***Wanborlang Khymdeit*** *are based in Baghmundi, West Bengal and* ***Kuntalika Kumbhakar*** *is based in Delhi.*

References are available on request at newsreach@pradan.net

[5]*We followed the learning cycle of 'Kolbs Learning theory' in our engagement.*