

A Patch of Green in the Forest: Organic Farming in Paraswada

SHACHI SETH AND PANDIT ARJUN

Shifting from agricultural practices that were expensive, unsustainable, harmful to the environment, degenerative to the soil, and biased towards rich farmers, the women of Paraswada, Madhya Pradesh, with PRADAN's support, decide to make the transition to organic methods of farming, which include using indigenous seeds, SRI, crop diversification, bio-manure and a host of other practices, showing positive and promising results

The Green Revolution is well-known for its dramatic effects on the global yield of food grain and other agricultural products. It is often considered an example that defied the Malthusian theory of the end of the fast-growing world population, by introducing technology to expand production and crop-yield. With Dr. Norman Borlaug's creation of high-yielding varieties (HYVs) of seed, the revolution spread all over and was a much-celebrated success. Advertisements and video documentaries showed spreads of lush green and bountiful crops swaying in the wind, representing prosperity.

India too underwent the Green Revolution and aimed to reduce the high number of famines, by which it was characterized. It mainly focussed on the expansion of farming areas, introducing double cropping in existing farmlands, and using HYVs of seeds. The use of chemical fertilizers and pesticides was required alongside. Whereas all these methods were successful in increasing farm yields, these also required specific inputs, preferred mechanization and the introduction of chemicals in the environment.

The Green Revolution in the farms was accompanied by a whole slew of policy and institutional interventions. It included the building of large dams and the setting up of agriculture universities and research stations. It resulted in the setting up of the Public Distribution Systems (PDS) with Food Corporation of India (FCI) storage facilities. There were also several grain procurement protocols—such as Minimum Support Price, nationalization of banks to push rural credit, and last but not the least, fertilizer subsidies.

The Green Revolution is now criticized by some who consider it expensive, unsustainable, harmful to the environment, degenerative to the soil, and biased towards rich farmers. Additionally, the focus on seed replacement and now on genetically modified (GM) seeds has caused many indigenous varieties to get wiped out from farms.

As the practices of the Green Revolution spread, richer, landed farmers have benefitted tremendously. Endowed with enough income to purchase the additional capital and inputs needed, in order to gain full benefits of the Green Revolution, the richer farmers have seen an exponential increase in farm yields. The poorer farmers, on the other hand, usually, are not able to fully absorb its benefits, especially because most inputs require a higher disposable income than theirs.

Most importantly, the concentration of large irrigation schemes in a few, selected areas created an artificial divide between the haves and have-nots. The lack of proper irrigation infrastructure makes it tougher to sustain crops, which are high in water demand. Usually, the poor farmers end up borrowing money from the local moneylenders, and when the yield is insufficient due to a bad monsoon, they get caught up in a cycle of debt. India has seen high rates of poor farmer suicides in the past decade due to high debts, fed by the lack of proper irrigation, finance and other facilities. Coupled with the factors of soil degeneration (due to extensive chemical use and relentless mono-cropping), the loss of indigenous seeds, the decreasing water table and the increasing water demand, conventional Green Revolution

The Green Revolution is now criticized by some who consider it expensive, unsustainable, harmful to the environment, degenerative to the soil, and biased towards rich farmers. Additionally, the focus on seed replacement and now on genetically modified (GM) seeds has caused many indigenous varieties to get wiped out from farms

practices may not be the ideal solution to increase agricultural productivity.

BACKGROUND

Noticing the limitations of conventional agriculture practices, PRADAN introduced practice of organic farming in the Paraswada block, Balaghat district in Madhya Pradesh in 2009. The area is marked by a rich forest cover, irregular terrain and low rainwater retention. In 2008, PRADAN practitioners identified certain core problems faced by farmers

in the area. Not only were most farmers troubled by poverty but years of chemical use and a heavy dependence on the monsoons for irrigation had also adversely affected the environmental health of the area, resulting in lower productivity.

Soil health in the area was poor due to soil erosion. Paddy productivity was low and irrigation infrastructure limited. Due to the dependence on the rains for water, farmers usually practiced mono-cropping (rice, mainly). Through the rest of the year, the men would usually migrate to urban areas in search of work. The women and men in the villages would work as labourers on bigger and richer farms, which could afford irrigation and other inputs. Most of the family income came from wage labour rather than agriculture. In forest villages, women would collect leaves from trees, make disposable bowls (*pattar dona*) and sell these in the market. Alternatively, they would cut bamboo that would be sold to the forest department or in the market.

Women did not participate much in making decisions related to farming. Whereas they

did a number of jobs from sowing seeds to spraying insecticides, the status of 'farmers' was reserved for the men. Women's participation was low, as was their socio-economic status. None of the market decisions, policy decisions or income-related choices was made by women. The inputs in farming were heavily dependent on the market; women, however, would not be allowed to leave the house to buy seeds, pesticides, fertilizers, etc., and their role, therefore, was limited to a great extent.

Nutrition levels in this area are low due to the limited variety of food grains, vegetables, etc. Smaller farmers are usually unable to negotiate when selling their produce in the market, and pricing decisions are often influenced by the powerful farmer lobbies. As input prices stayed steady (or even increased), the prices received by the farmers for their produce were falling. The poor farmer, hence, usually got caught in a trap of high costs and low price returns. This further affected the nutrition, as purchasing vegetables, grains, fruits, etc. was expensive and often unaffordable.

ORGANIC FARMING IN PARASWADA

The chief objectives of the shift towards organic agriculture were:

- ♦ Decreasing farmers' dependence on the market (both in terms of inputs and output)
- ♦ Increasing the community's control over the farming and market processes
- ♦ Employing practices that are traditionally relevant and based on the community's preferences
- ♦ Working towards reversing the soil and environmental damage done by chemical farming

CREATING AWARENESS AND ACCEPTANCE

The programme started by PRADAN was not an all-out organic farming programme initially; rather it was focussed on increasing yield despite the low inputs, thereby making farming sustainable. Initially, therefore, the training largely focussed on System of Rice Intensification (SRI)—a low water, labour-intensive method of paddy cultivation. The programme even promoted certain chemical uses along with organic elements until the health hazards of the chemicals became evident to the practitioners, and they moved towards a more organic approach.

As of now, the programme has multi-fold aspects, chiefly focussing on the following:

- ♦ SRI in paddy and vegetation
- ♦ Organic soil nutrition management
- ♦ Pest and disease control
- ♦ Promotion of indigenous seeds

One of the biggest hurdles for practitioners is to motivate women to adopt new practices, as well as train them in the processes. SHGs play a role in mobilizing the women, collectivizing them and setting up a basic ideological start point for the development practitioners to intervene. The PRADAN team in Paraswada used a number of tools to create and spread awareness among the women. Apart from SHG meetings on the topic, discussions were held at various hamlets after showing documentaries such as the talk show, *'Toxic food—Poison on our plate'*, *Satyameva Jayate*, and *Jaiv vividhtha ki pahel*, a short movie based on various organic farming practices and indigenous seeds.

Films and videos were used to show the women the differences between traditional farming and SRI (also known as SriVidhi), experiences of organic farmers. The films showed the steps, processes, and results in detail and helped spread awareness among the women. Further, a group of women farmers were selected and sent for exposure visits to Center for Sustainable Agriculture (CSA), Hyderabad, and Subash Sharma's plot (a farmer who practices natural farming in Yevatmal district, Maharashtra), where they interacted with and learned from other women farmers, practising organic agriculture.

Chayanwati *didi* fondly recalls memories of her visit to Hyderabad where she met a number of women farmers who have adopted organic practices. After attending seminars, talks and a *krishi mela*, both her knowledge and her confidence increased tremendously and inspired her to work harder. She wishes to go back there again, this time with indigenous seeds from the area that she can sell at the mela. She is proud to have travelled farther than most people in the village, and is also respected by the other women.

Across villages, seeds are preserved and collected in a Seed Bank set up by the women farmers. A number of indigenous seeds and plant varieties that had almost disappeared due to the flooding of hybrid seeds in the market have been re-collected and are stored in the bank. Organic farmers can purchase these seeds cheap, and can later preserve the seeds from the plants that they grow. Even within paddy cultivation, which was the chief crop in the area, farmers have begun a shift to indigenous seeds.

Not only did the practices focus on the preservation of seeds, but the women were also taught correct ways of seed plantation. Seeds are planted systematically and in lines,

not haphazardly. Rather than putting numerous seeds, the women have been trained to plant a single seed at a spot and care for it. The trainer used an analogy and compared too many seeds in the same spot as a family where too many children are competing with each other to get access to nutrition. Hence, just as the distribution may not be equal or sufficient in a case where too many people are competing for it, similarly the nutrition needed for a single healthy plant would get divided among a number of seeds. Analogies that the women could relate to their lives, films that showed visual proof and experiences of people—all these acted as mobilizers.

The soil health of the area has undergone heavy degradation due to the use of chemicals, monoculture (causes the soil to be stripped of the same nutrients over and over again without a chance to replenish), deforestation, etc. Maintaining good soil health is an essential objective of organic farming practices in the area. The use of green manure (locally grown plants that act as manure), bio-manure, vermicompost and *Jeev amrit* (a concoction of neem leaves, cow dung, cow urine, jaggery and soil) replaces the expensive and unhealthy fertilizers in a sustainable, albeit, labour-intensive way. To prevent degradation of crops through pests and insects, *neem kadha* is prepared and sprayed on the crops at regular intervals. Unlike chemical inputs, these organic fertilizers and pesticides are either available naturally or are prepared by the women, using naturally available products.

The yield from organic crops has been heartening. Whereas a majority of the produce is consumed by the family, with time, farms have started producing a surplus. Vegetables are consumed within the family, distributed to relatives, sold in the village, and even sent to markets. This is in contrast with the experience of poor families with conventional farming, in

which the sole crop grown was paddy, farmers were heavily dependent on the monsoon, had to buy rice and seeds from the shops, along with other inputs, and, in the end, there was no assurance of the yield until the rains arrived.

MARKETING STRATEGY

The first step to marketing the produce of those women farmers using organic practices is to help them secure a place in the market. Initially, the yield was just enough for the family's consumption; as yield increased, the involvement with markets became more essential. In the beginning, a few men from the community would go to sell their produce, that too only in the nearby areas. As the women gained agency and control over their produce, it became easier for them to step out of their homes.

Trading in the local Paraswada market, especially with the capacity to make financial negotiations, is a sufficiently big step for these women, who had seldom stepped out of their homes earlier. Women farmers now go to local markets, sell their produce and keep the money for themselves. A small centre has been set up where the vegetables, etc., are packed ready to be sold. Even in the main local market, the women sit together under the banner of the Federation and with clear signs labelling their produce as organic.

In an area where women would rarely go to the market, let alone take financial matters in their own hands, almost 100 women now regularly go to the market to sell organic vegetables. Some of the women have taken up the responsibility of collecting the village supplies and taking them to outside markets in Balaghat and Mhow, even supplying for weddings and large functions.

The women have been meeting with local authorities, including the District Collector, in order to get an assigned place in the market for an organic farming shop.

CHANGES TO WOMEN'S LIVES

Financial independence: Women had little or no access to their family earnings and the income usually stayed in the hands of male members. The formation of SHGs, not only helped women gain some financial support, their small savings went a long way in creating aspirations of financial independence. The training in organic farming acted as a perfect platform for women to realize these aspirations. There has been approximately Rs 20,000–25,000 increase in the annual income for these farmers and the costs of farming have gone down because most inputs are now home-made. This has helped the women gain the respect of their families and the society, both of who were earlier highly skeptical and

Table 1: Yield with Organic and Chemical Farming

No.	Method Adopted for Transplantation	Seeds	Type of Practice	Average Yield (Quintal/Acre)
1	Conventional paddy	Open pollinated	Organic and chemical	8
2	SRI paddy	Hybrid	Chemical	17
3	SRI paddy	Open pollinated	Organic and chemical	16
4	SRI paddy	Indigenous seeds	Organic	18

critical of these adventurous ways. It has also given them spending power for themselves and the ability to invest in their children's lives.

Identity as farmers: Women in the area have long been involved in tasks related to the farm and have been burdened by drudgery, without ever getting the credit for the same. The identity of the farmer

usually evokes the image of a man, working and toiling hard. Shanti didi says, "We women do most of the work in the farm but the mere task of ploughing would give all the credit to the man. Often, when we called ourselves 'farmers', the men in the village would ask us to go plough our fields on our own. Without proper machines, it is often tough to do so; however, the women now collect and do shared farming, where we all work together on one of the women's farms and then move on. We have managed to shut up the closed-minded men and women by showing them our successful farms."

Women farmers have managed to create a dent in the thinking of the people and proven that women too can be 'farmers'. They are now more vocal about their identity and their contribution to farming, with a better sense of themselves and their identity. A pleasant change this, from the time when women's thoughts were dominated by traditions, rules and the voices of the men in their lives.

Nutrition and variety in food: The farming practice of mono-cropping was common in the area, with paddy as the chief crop. The farmers in the area have diversified the grains they produce, with wheat and maize crops lining a few patches of land. Additionally, vegetables and fruit have become a part of their diet,

Women farmers have managed to create a dent in the thinking of the people and proven that women too can be 'farmers'. They are now more vocal about their identity and their contribution to farming, with a better sense of themselves and their identity

along with homegrown spices. Children are now eating more and better than before and even get to eat a larger variety—this is definitely a step up compared to earlier.

From the women in Sawarjodi: In Sawarjodi village, the three women we talked to gave us a vivid picture of the entire programme. Sawarjodi is a model village in the organic

farming programme with a strong Federation, and a growing community of organic farmers. The women have undergone a seminal journey through the Federation and are some of the flagbearers of the programme. Earlier, the women were shy and kept to themselves but they have now found a community and a voice through their respective SHGs. Initially, when during their training in the SHGs, they were asked to start farming not only were they apprehensive because of the social taboos on women stepping out of their homes but also because of the lack of water. Having seen their families and other people in the village struggle to get water, the effort seemed futile and too burdensome; the risks were large.

Around this time, some of the didis went to Jharkhand for a field visit and saw water conservation structures that helped retain rainwater. Meeting the women responsible for these and hearing their stories acted helped the *didis* gain willpower. Upon returning, the women got together and conducted a training for other members, made a micro-plan on farming and decided to construct rain water conservation structures. The women planned and constructed a number of small ponds, *dobas* (farm pond), in the area. Not only has this significantly reduced the drudgery involved in going far to fetch water, it has also helped raise the water table in the area.

Farming is now not entirely monsoon-dependent and these small structures have managed to provide a sustainable amount of water to nearby farms and fields. Subsequently, the women got deeper into organic farming practices and are now confident, profitable farmers.

The women's lives have changed in multiple ways. Even though, their farms need a lot of personal attention, their work has become smoother on the whole. They proudly comment on how they need not buy any supplies from the market apart from salt and spices (of which, turmeric is grown by the women in their farms). Vegetables are all grown locally, as are rice, wheat and some herbs.

Ladies' finger (*bhindi*), brinjal (the local favorite—*bhaata*), pumpkin, onion and garlic are all grown on the farms, along with local vegetables like barbatti. Chaiti *didi* from Sawarjodi says, "Now we eat more food, better food, larger variety in our meals, and yet we manage to save enough money for our personal needs. We don't have to work as hard to get full meals. Our farms take care of that. We have all started sending our children to new and better schools. Our family assets have increased and now some of us have motorcycles and televisions. At the same time, our health-related troubles have reduced. We fall sick more often earlier, being in the direct presence of toxins from the chemicals. Now, even if we fall sick, we actually have money to go to the doctor."

CHALLENGES TO ORGANIC FARMING

Whereas training in organic farming has been given to a lot of people across various villages

Farming is now not entirely monsoon-dependent and these small structures have managed to provide a sustainable amount of water to nearby farms and fields. Subsequently, the women got deeper into organic farming practices and are now confident, profitable farmers

in Paraswada, the programme has seen, on the one hand, phenomenal success in certain areas and has had, on the other, relatively low acceptance in others. Many families in the area chiefly relied on agriculture in the past but as farming became more expensive and erratic, farmers in India are undergoing a crisis. The women think that people don't do organic farming in the area because they are still caught in the belief that

hybrid seeds will give them more yield without realizing the long-term repercussions and un-sustainability. So much so, nobody keeps indigenous seeds and it is almost impossible to find local plant varieties. Organic farming requires more work at home such as cooking the fertilizers and manure, and most people prefer to have readymade chemicals that they can spray on the crops and get rid of problems. The increased drudgery often discourages women from taking up the practice.

The women assume that richer farmers do not go in for organic farming because they can afford the costs that chemical farming requires, plus they need to compete in the market. The market for organic farming is almost non-existent, and most farmer lobbies cater to richer farmers, and hence introduce policies that promote the use of chemicals. Whereas government support for organic farming has increased over the past few years, it is still relatively negligible.

Organic products also require certification, which is a long and tedious process for most villagers. One of the women pointed out how chemically treated edibles are often sold without a warning or a license, but for an organic farmer to sell his product as organic, she needs a certificate. Better government

alignment may help involve more farmers with organic farming and create a movement towards more sustainable practices of agriculture.

The current market is tough to break through for the new, small farmers, given the level of acceptance and normalization of chemical-fed crops. With economies of large-scale production, government subsidies, faster growth rate of crops, etc., the prices for conventional agriculture products are often lower. The average consumer prefers to buy cheaper products, especially if they are unaware of the differences.

Organic farming requires greater labour inputs per unit of output initially but the *didis* have to usually price their vegetables close to the market price; hence, they feel as if there is a devaluation of their work. If the produce is certified organic by the government, the selling price is higher and the profits for the farmer are higher, even without an increase in input costs. The lack of certification, thus, acts as an impediment in the *didis* getting their entire producer's surplus.

Nonetheless, the Federation's banner under which the organic products are sold has managed to sell enough to benefit the women farmers it supports. Brinjal sales have, in fact, been very encouraging. Hemlata *didi* from Takabarra village says, "It is tough to attract customers in such a competitive market, but those who have used our vegetables often come back to us. The taste of our organically

The current market is tough to break through for the new, small farmers, given the level of acceptance and normalization of chemical-fed crops

grown vegetables is sweeter and they are healthier and fresher. *Bhaata* (brinjal) grown by us gets sold out, despite us selling it at a higher price (Rs 40 per kg). We are hoping that other vegetables will also find the same success as more and more

people get hooked on to the taste."

Additionally, with time, the government has also increased its support to the organic sector and almost 400 farmers in the area are now certified 'organic farmers'.

The programme for organic farming under PRADAN has done phenomenally well in certain areas. Nonetheless, certain areas have not been able to adopt the practices as well. First, the training is provided to women, who are part of the Federation. This leaves out a large number of women in the area. Because organic farming land has to be isolated from chemical-use land, and most farmers use chemicals in their crops, the availability of clean patches is a problem. Villages such as Sawarjodi and Takabarra have become model villages, often displayed to development practitioners as examples. Nonetheless, a number of other less successful villages remain in the shadows. Not only is there little knowledge of the reasons for their failure, the women from these areas have not yet found enough success to motivate them. More concentrated efforts in the areas lagging behind, better efforts to understand women's challenges, and an active policy of advocacy for organic farmers may help PRADAN achieve its objectives in a more uniform manner.