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## AGRICULTURE

WE ARE one of the founding members of a State-level network formed to spread the ideas of sustainable agriculture and have continued to work in close collaboration with fellow NGOs in 9 districts of West Bengal. The main direction for and close supervision of our work comes from Service Centre (DRCSC) of Calcutta. Our emphases change from time to time but these are strategic revisions, not in any way affecting our principal goal of making the rural population aware of the various factors that affect the security of their food and livelihood and of the principles of sustainable agriculture. We also offer farmers theoretical and practical help with various alternative ways of farming. We work directly with them as they try out new systems and techniques. We also document, in great detail, local resources and their use.

This year we worked in 16 villages in three blocks of North 24 Parganas district. We have named the principal component of our programme the Small Farm Improvement Programme and we worked with 271 farmers in 11 villages who formed themselves into 17 groups. It is never too early to hope that they will turn out to be the vanguard of the revolution we are working to usher in. We have identified five main problems for them and the area in general.

These are

1. gradual and irreversible erosion of the productivity and fertility of the soil;
2. loss to crops because of pests;
3. ever increasing presence in the soil of harmful elements that come with chemical pesticide, fertiliser, nutrients, and artificial irrigation, and their widespread and lasting impact on the food chain;
4. unrestricted use of ground water possibly leading to arsenic in this water which is the main source for drinking;
5. vanishing flora and fauna, which means a loss of irreplaceable genetic diversity and wealth.

All these developments mean agriculture is geared

the same few crops season after season, year after year, and is totally dependent on chemical inputs. This in turn means loss of employment opportunities and food security for a large section of the rural population, if not round the year, at least seasonally. What farmers learnt over generations of practical work is becoming irrelevant. In the face of standardization, they are being forced to forgo and forget the area-specific orientation of their knowledge of seeds, technology, methods, nutrition; instead, regimentation is bringing in new experts who, firmly committed to securing profit for their employing companies, recommend and then enforce

systems and techniques that are generally irrelevant, mostly useless; and frequently harmful, to both man and nature.

The main thrust of our work is to make the small farmer see what ails him and why, and to try together to find a way out of the mess. The first step is to hold an awareness camp in a totally new area or village and tell a group of farmers the basics of sustainable agriculture and how it can help avert an environmental disaster whose portents they can all see. This year we met 81 farmers in two villages for such talks. Some of them will come back to us and then we shall organize orientation camps. This year we met 106 farmers in seven such camps in five villages; they had attended awareness camps last year. We discussed with them the various visible and short-term and also invisible and long-term imperatives of chemical-dependent agriculture, and also the basic principles of sustainable agriculture and the techniques it requires to be followed in our area. We kept watch on how they responded. Some came back to us with more questions, some started experimenting with the new suggestions, and we then called all of them for what we term an introductory training. There were two of these for 33 farmers in two villages. We collated and compared the data they and we had collected in their respective villages about agriculture and related resources, analysed these with their help to find out if, and how, they were likely to help or hinder sustainable agriculture. We also emphasized the need for keeping meticulous records of whatever they would be doing in the fields. At the same time we gave practical demonstration of techniques of water and soil conservation etc. As they started putting these new ideas into practice they had frequent problems, questions, doubts and our workers were always at hand to discuss matters. A time soon came when individual problems assumed wider proportions, and then we arranged follow-up trainings for those who felt they could do with one. These also gave farmers from different villages a chance to meet and exchange ideas and experiences among themselves. This year 31 farmers spent time with us at three such trainings, in as many villages.

Apart from these formal sessions our workers frequently meet small groups of farmers to discuss various issues. We call these study circles. This year we held 120 such meetings in 13 villages in which a total of 1366 farmers were present. To keep our workers — one project leader, three trainers, and five field workers — in good fettle for the myriad questions and issues that are raised in these various forums of interaction there were 21 general meetings and 7 workshops for all of them, and 4 meetings for only the trainers. We are confident that our team is now competent to conduct practical courses in sustainable agriculture in any area of West Bengal, barring the hilly terrain.

In another programme, which we call collaborative field trials because the farmers work in close partnership with us, we encouraged selected farmers to introduce in parts of their holdings crop

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diversity, new crops, sustainable technology, management techniques, and integrated pest management which treats crops, plants, birds and animals, fish etc. as a total entity in nature. The ultimate goal is soil and water conservation, reduction or elimination of the use of chemicals in agriculture, and increasing bio diversity. In the pre-Kharif season 86 farmers tied new things in 1.7 acres of land, in the Kharif season 43 tried these or others in 0.8 acre, and in the Rabi season we had 45 partners in 1.25 acres. Work on seed multiplication, selection, collection, and distribution continued throughout the year.

#### KITCHEN GARDEN

Standard response to this programme of ours is to wonder why at all this should be necessary when, so goes received wisdom, every village home has creeper vegetables on the roof, and some vegetables growing around the house, without the need of any care, for is not the rural soil very fertile? Unfortunately the reality is not quite like this. Yes, some houses do have some vegetables growing but there are many others which have no vacant space, or has space but no sun there. And, let there be no mistake about this, everything needs tending, the more scientific the better. Indeed, that is the key to our programme. We would like every house to have some supply of vegetables throughout the year, not from haphazardly grown plants but from a carefully mapped and laid out garden, no matter how small the available space is, which uses as much as possible waste water and no chemical fertiliser or pesticide at all. And one more thing, for hedge we recommend some herbal plants, as every household needs them for common ailments.

This might appear a wonderful idea but unfortunately there are not many takers for it. For one thing, rural Bengal is not overtly nutrition-conscious and greens are good if you get them, but for most people potatoes would do. Second, people have become conditioned to working for cash. Women in a family would rather use what little time they can spare from domestic chores on work that would fetch them ready payment and not go for work that would save them spending that money. Third, planning for or working on a vegetable plot is not a glamorous way of spending time and energy.

This year we made and maintained 17 model gardens in 6 villages - two at Andharmanik, and three each at Bajitpur, Belyakhali, Gokulpur, Kolsur and Rudrapur. For each of these we made a resource map of the household, surveyed what fruit and other trees it has, prepared a calendar of its existing in-house sources of vegetable, a detailed design of the plot showing the paths of sunlight, areas and times of shade, and sources of water, preferably from the house. Our workers are responsible for these gardens, and the idea is to have something on

permanent display to enthuse neighbours. Our workers are always ready to offer suggestions to anybody interested in having a garden of their own and we also have regular training sessions. These last are generally of five types. First, there are meetings with around 40 persons in new areas to tell them what sustainable agriculture is and to find out how many of them would be interested in working for a garden in their own house.

These last for about 5 hours. Those who show interest, and most of them turn out to be women, are now called by a day-long concept camp where our ideas are explained in detail and certain elementary techniques introduced. The need for herbs in daily life is also broached.

After they have begun work our workers keep in touch with them and around 20 of them are invited after a few months of work to a three-day intensive session at Swanirvar. Experience is shared, much new information is given, more techniques are explained, and they now move deeper into the reasons behind and goals of our programme. Then there are follow-up meetings. Our workers and supervisor keep in constant touch with these "gardeners" but when it appears that they need a collective discussion they are again asked to Swanirvar for one. The number of participants and duration both vary according to the specific needs of the situation. This meeting we call a follow-up training. Apart from these somewhat graded courses there are study circles for regular exchange of information and solution of problems, often held locally.

This year we had just one meeting in a new area, 6 concept camps with 92 women attending in all, 2 intensive sessions with 33 women, one follow-up meeting with 12, and 164 study circle meetings with 1572 participants. Our workers met among themselves 20 times, they held 5 workshops, they met altogether 161 members of the Kishor Kishori Bahini on eight occasions on kitchen gardens, and 150 of them on nine occasions on use of herbs.

What has been the upshot of all this? Apart from the 17 model gardens that our six workers have set up, this year 236 new gardens were producing full scale in 11 villages. Our workers advised on and supervised the gardens in eight villages, while KKB members took charge of those in the other three. Apart from this, 500 households in these 11 villages who have no land at all to grow plants, are using roofs or frames for creeper vegetables. We provide them with seeds for the first season and explain to them in detail how their very limited space is to be used to maximum advantage.

Herbs are a priority with us. When our teachers noticed that many of their children developed sores in the mouth around the onset of winter we planned and then held meetings with 270

mothers in 11 villages to tell them what the children could. eat to get the required vitamins most cheaply, and also distributed seeds for such things to those who could not afford or otherwise get hold of them.

We also asked the mothers to use neem oil for various skin problems and showed them how to make it.

Getting good seeds is essential but not easy. This year we collected, and most of this was given to us free, from six villages 14.34 kg of seeds of 18 kinds of vegetables and distributed these among 223 gardeners. Now they will keep seeds from what they grow, for their own later use or for distribution. In two villages we already have two such seed banks. The KKB helped our workers in preparing nurseries but we had to supplement these efforts by buying from the outside market as we are keen to introduce some new and uncommon varieties in our area. In 8 villages we distributed 3085 saplings of 5 types of fruit trees among 1000 families, and 983 saplings of bay leaves and black pepper among 500. In 11 villages 1000 cuttings of ten types of herbs were distributed among 170 families.

Brainwashing has been thorough and we face a lot of mental resistance to the idea of using herbs for common and frequent complaints. One reason certainly is that one has to spend time and energy on preparing herbal medicine and most people have become averse to doing this when other types of medicine are so easily available. But still, more and more people are growing herbs themselves for their own use with help from us, and there are also many who do not do that but come to our workers for herbal succour. We keep a record of only those to whom we distribute medicine, and this year we treated 346 persons with 45 types of herbs for 18 types of complaints.

The high school syllabus for Class VII contains a few references to herbs and students every year dutifully memorise them for the class examinations, move on to the next class, and forget them effortlessly. We hope things will change for students of two local high schools, at Uttar Media and Polterati, for there the school authorities were happy to agree to our proposal that one of our workers take one period a week on herbs. We talk about seasonal illnesses and complaints, and herbal prophylactics and remedies, and also show them how to make oils, pastes and ointments. A video recording has been made of this. This is a very popular period with the children, who report to us whenever they make practical use of what they learnt. We have also participated in three local Health Melas, with information and models of kitchen gardens and herbaria. Altogether 1500 visitors came to our stall.

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This was the sixth year of our work on this programme and even as we say we have made some real progress there is no denying that a major source of disappointment shows no signs of going away. People know their own problems but will not agree to work for their amelioration; either everything is somebody else's responsibility or it makes no sense to do what the neighbours are not doing. It is for sociologists to say why and how the general population has become so unsure of their capacity, so diffident about the chances of the individual who decides to swim against the tide, but our main problem is to convince people that they can take better and cheaper care of their health if they take a few small decisions, give some time to them, and have the courage to think for themselves. Everywhere our gardeners say the general health of their family has shown a marked improvement since they started to eat their own produce and those who, use confirm that their medical expenses have consistently gone down. We can only hope their neighbours are watching, observing and learning,