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## Agriculture

It has now become clear that spreading the concept of sustainable agriculture will be the main thrust of our programme in the coming years. The task is enormous, and beyond the capacity of any single NGO. We are part of a State-level network which has 102 NGOs and 16 individuals as members, Swanirvar being one of the seven NGOs from six districts that form the core of this. Development Research Communication Service Centre, better known as simply Service Centre, funds the entire work of this core network and the planning is done at monthly meetings of all the core members.

The main thing is to persuade the farmer to abandon the various ways of chemical-based agriculture. It is true that he does not need much persuasion to agree that what dazzled in the short run has proved to be of very dubious value in the long, but there is little information and much confusion about the alternatives and their efficacy. We thus need have, first, well-informed trainers who will, then, talk to farmers, At Swanirvar we held two introductory trainings, both of five days duration, for men. The first was attended by 28 NGO staff and one farmer, with six trainers, and the second had 18 farmers and five trainers. There were three four-day trainings for women, one attended by 19 members of Development Dialogue, a Murshidabad NGO, the second by people from an NGO in Malda and the third on herbal medicine.

We hold awareness camps, spread over a day or two, when we go to a new village or to a new area in one where we already work. We field five such camps for men and an equal number for women. Village-level meetings, generally lasting between an hour and two, are known as study circles and there were 26 such meetings for men, and 25 for women. We also put up stalls at six local fairs, performed our own plays on agriculture at seven places on invitation, and produced Gambhira shows at two places. Earlier, many NGOs in the network sent people to Andharmanik where a reputable team from Malda taught them the basics and intricacies of this musical medium of communication.

There were four residential workshops in Calcutta to upgrade the skills of trainers, workers and in some cases selected farmers, and our workers took part in all of these. Besides, there was a workshop at Bidhan Chandra krishi Viswavidyalay on non-chemical pest control. Through the network we have established profitable relations with various State and national-level resource institutions.

All these trainings and workshops are followed up with a variety of actions in the fields. Some of these are being detailed a little later. If the figures do not flatter us, it is chiefly because changing farming habits is as difficult and patient a process as changing food habits, the more

so as there is financial uncertainty involved, a risk that a grower cannot take where, as here, there is no insurance. So progress is slow, and conviction is not immediately translated into imitative action.

We are stressing the utility of a kitchen garden for every family, specially landless ones, so that optimum use is made of homestead space to provide year-round nutrition, and also a few herbs for medical use. Altogether 314 households in 11 villages had one such, garden, some more well-kept and more useful than others. It is symptomatic of the times that people are more expectant than active, and in this small matter of kitchen gardens too, we have found that some families would rather let them wither than put in labour themselves. Swanirvar has never believed in spoon feeding, and so the initial enthusiasm has waned into only weeds in certain plots.

Boro rice, grown in the rainless winter, is a direct result of the green revolution, and as such the hybrid varieties, intensely cultivated, guzzle underground water, and require an inordinate amount of chemical fertilizer and pesticide. We are trying to popularise alternatives; 379 farmers in eight villages grew wheat this year. Pulses, besides being Ph alternative to the paddy, would also be a residual moisture crop rainfed areas like ours, and can be grown on bunds and fences. They can also be grown on highlands during the rains. Ten farmers in one village grew Mug, 18 in another grew Khesari 50 in two more grew Arhar. We want new crops so that the present pattern is altered to ecological benefit, and people have taken to cultivating groundnut, Kusum, Khero, Rajma, and rice bean. Once farmers accept these and other new crops, we can convince them to change over to rational rotations and to try out various combinations traditional and/or new.

Vegetables being much more money-spinning in the short run, farmers prefer them, with the result that orchards are gradually disappearing, and also many individual varieties of trees. This is ecologically unsound as we need roots of various lengths to draw nutrition from different layers of the soil. We run nurseries to provide seedlings, and in cases saplings also, to people. This applies to trees for timber, shade and nitrogen-fixing species too, and we distributed over 2600 saplings this year. We continued with budding and grafting of fruit trees, including jejube, lichee, lime, lemon, and others of uncertain English nomenclature. Experience has shown that betel nut trees have a better survival record if planted after at least two years of germination, so we did not distribute any Supari seedling from our nursery this year.

We are having some success in persuading farmers to use natural fertilisers so that the use of synthetics comes down. One of our most successful programmes has been the use of Dhaincha as green manure, which 84 farmers in seven villages put in their fields before'

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transplanting paddy. Another introduction that will stay is azolla, a nitrogen-fixing fern, which multiplies fast in local water bodies, and also in the water standing in paddy fields. Many farmers in four villages used it extensively and with very satisfactory results. We brought rock phosphate from Purulia, bearing the transport expenses, and then sold it at cost price to 246 farmers in seven villages. There is a much larger demand for this but our supplier pleads helplessness.

This year we set up a unit producing mushroom spawns - these are to be distributed among villagers who will produce mushrooms, a very good source of protein, and eat/sell them — and biological fertilisers. This unit, run by a worker whom we had sent for training to various places, produced 71.8 kg of azotabactor and 28.35 kg of phospho solubilising bacteria. All of this could not be used last year, and we also used some we had from other sources, but the records show 21.7 kg PSB was used by 53 farmers in four villages and 23.6 kg azotabactor by 64 farmers in four villages.

Compost tea, an easy-to-make liquid manure so called because of its colour, has now caught on. In four villages, 46 farmers themselves made 1725 litres and used it in their fields with good results.

Neem, tobacco, mustard apple, garlic, chilli, jute seed and turmeric are among the principal sources from which we made botanica pesticides. Farmers learnt from us and used their own concoction it 41 eggplant plots, nine paddy plots, one jute, groundnut, and cauliflower plot each and two plots each of sesame and Patal.

Six farmers, with eight bighas (=2.6 acres) of contiguous land, opted for integrated pest management in the boro season. This is a combination of cultural, physical and botanical methods and we expect it to grow more popular.

After years of complacently believing in the chemical-based way to nirvana in the field of farming, agricultural thinkers and policy makers in the government are now changing their approach, and taking steps to encourage sustainable agriculture and discourage the old ways. We have developed friendly relations with the local government agricultural personnel and receive their cooperation freely. The task is one that heeds harnessing all possible capabilities and that is still a far-away dream.