SAVING SEED & PRESERVING CULTURE

Lidia Montemurri visits the Basudha Research Station in North Eastern India

Above: Bagging rice at the Basuda Research Station.

Last year I had the privilege of spending some time at Basudha farm in the Bankura district of West Bengal, the eastern Indian state bordering Bangladesh. The farm is situated a three hour train journey and a couple of hours’ bumpy bus ride from Kolkata.

As you approach Bankura district you begin to appreciate just how rural and luxuriantly forested this region is. Alongside the road a vibrant patchwork of cultivations alternate with villages built in the traditional adobe style, teeming with humans, animals and ancient votive shrines.

Left: Chirumani (left), Melanie (seated) and article author Lidia (right).

Basudha Research Station
Basudha (Earth Mother in Bangla, the local language) is a research station and demonstration farm primarily for the conservation of indigenous rice varieties set in the middle of rice fields and surrounded by native forest.

A range of over 40 traditional vegetables, oil seeds and herbs are also grown such as chilli, aubergine, mustard, onion, okra, red carrot, cauliflower, spinach, coriander, ginger, turmeric, tomato, legumes etc.

The farm is always open and anyone in need of using the well or advice on crops, dropping in
Above: Basudha’s adobe farm building.

Left: Seed stock for Vriha.

Below: Threshing rice.

The farm is run by Dr. Deb Deb, a ‘blow-in’ to the area, who has purposely chosen not to fence the farm to inspire a feeling of trust and communal ownership amongst the inhabitants of the surrounding villages, and in so doing has won the love and respect of the wider community. Grazing animals are usually tethered or well herded by the shepherds, who ensure farm crops are not damaged. The only threat are roaming wild elephants against which fencing would be virtually ineffective; these are kept at a distance by lighting fires and by gangs of men shouting and making a lot of noise, as we experienced one exciting night.

An arboretum of native medicinal and fruit trees, all individually tagged in Hindi and Latin, has been planted to provide shade, nutrition and educational sessions. Myself and Mel, my traveling companion, spent long dreamy hours in the shade of the large Sal trees (Shorea robusta, West Bengal’s answer to the oak in its ability to support a large number of life forms).
Debal Deb

Debal Deb is the instigator of many inspiring events that take place at Basudha and its surrounds. He is a scientist, an ecologist and an activist. He travels indefatigably the length and breadth of the eastern states, educating farmers on the importance of preserving traditional crops and growing techniques as well as warning them against the dangers of GMOs, while trawling for varieties of rice or vegetables to collect when he is not giving talks at esteemed universities around the world. He also regularly hosts lectures at the farm.

Basudha ethics strongly encourage all-round participation but fewer women than men attend as cultural mores and family life restrict their choices. Nevertheless some women, who turn up with their children in tow or leave them in the care of relatives, regularly visit the study circle, and have taken on important roles in the emancipation of their communities. One such woman is Suniti, the mother of two lively boys. She spoke about heirloom crops and the GM threat at a recent rally in Kolkata. Her speech was reported in local newspapers. She is also one of the project co-ordinators of the People’s Biodiversity Register.

Basudha’s Mission

Though multifaceted, Basudha’s mission is very much about conserving rice varieties. In 1995 Deb started researching heirloom varieties in the tribal regions of West Bengal and with a small group of scientists and entrepreneurs established Vrihi (‘rice’ in Sanskrit), the first non-governmental rice gene bank in eastern India. Vrihi is a seed exchange and farmers’ consortium in the nearby town of Beliatore which is accessible to a greater number of farmers than Basudha. The now 618 members from six eastern states can obtain heirloom varieties suitable for their land free of cost and in exchange they are requested to provide 1kg (2.2lb) of traditional rice seeds.

Members pledge to retrieve and conserve heirloom varieties in situ and are actively encouraged to establish their own community seed bank. The collection at Vrihi now holds over 570 varieties mostly donated by farmers. Eight varieties are new breeds created by the team at Basudha (in situ collection) crossing some of the landraces.

Basudha was built in 2002. Starting with a meagre 0.7ha (1.7 acres), Deb and his team have achieved great things. They now rent a few acres surrounding the farm to accommodate all the cultivations. While I was staying at the farm Deb came back exultant from a New Year foray into Bangladesh. His elation was especially owing to having managed to locate and retrieve a 20 variety strong instalment for the collection. A number of these rice strains possess the unique and utterly life saving genetic characteristic of resistance to salinity. One can appreciate how far from the empty promise of high-yield Green Revolution varieties, such strains would mean the difference between life and death in geographical areas prone to the recurring and devastating incursions of the Bay of Bengal sea water. These varieties are now safe in both Beliatore and the Bangladeshi seed bank.
Seasonal Activity
Every June, as the monsoon rains soften and moisten the earth, the land is ploughed by oxen, and 2 x 2m (6.5 x 6.5ft) plots are planted with the tender rice saplings. Each and every one of the varieties in the collection is grown every year at Basudha with a carefully chosen anti cross-pollination planting design. The planting pattern also rigorously takes into account the flowering times. All work is carried out manually or with the oxen. After the monsoon showers (on which young rice plants thrive) growth is completed during the October dry spell.

Come November, the first varieties are ready for harvest, and this runs through to the end of December. Only the best panicles (the ears of the rice) are selected from the very heart of each plot to ensure the purity of the samples. Then they are subjected to scientific scrutiny for the recording of data according to IPGRI guidelines.

Traditional & New Practices
The farm wants to be an example of green building and technologies for the area by reinforcing the value of some traditional practices and proposing new ones. Financial constraints and an unswerving commitment to a sustainable lifestyle and farming methods result in a virtually plastic free, largely oil free (save for occasional jeep runs to the rice seed bank) and chemical free environment on the farm.

Mulching and weed control for example are unaiderd by rolls of black pvc sheeting or mypex. Thick layers of forest leaves are used instead, providing great nourishment as they break down.

Seeds are soaked in fresh cow urine (containing hormones that mimic the seeds') to aid germination and cleanse them of pathogens. Companion planting with marigolds and other local flowers is used in vegetable plots as their root exudates prevent the formation of harmful fungi in the soil. Along the same principles all vegetables are planted in an intercropping grid i.e. aubergine, onions and chilli. This enhances mutual plant health and maximizes the use of land available. A solar panel provides just enough electricity for a few light bulbs and fuel for the clay cooking stove comes from the forest debris.

Water conservation is paramount and the health of the soil is fostered to ensure it retains its moisture. Crops that naturally survive extreme soil moisture variations are grown. Water is pumped by hand from a deep well and thriftily used. Monsoon rain water is harvested in a large tank and a device of traditional design also collects the morning dew, filling a few bottles every week.

Recent Developments
Since I left the farm I received the happy news that a delegation from Vrihi headed by Debal Deb was invited to Delhi to receive the prestigious National Plant Genome Saviour Award issued by the Plant Variety Protection and Farmer's Rights Authority, Government of India, for the work carried out on two folk varieties especially Jugal, which produces seeds with two grains in it, and Sateen, which has three! They will be used for future breeding programmes.

Doctor Debal Deb (Dr. Dynamite Deb as I've affectionately renamed him) is the driving force behind this extraordinary hub of gentle but powerful grassroots reclamation of land, identity and food security, but it's thanks to the innate wisdom of the inhabitants of the area and their response to his vision that all this has been possible. All activities of the Trust are funded entirely by the founders' contributions and donations by friends ☼

Lidia Montemurri was born in Milan. Her background bred a passion for justice and nature and a love for the arts. In 1994 she moved to Ireland, and a life changing trip to Sri Lanka led to a decision to move to the countryside and grow organic food. Early last year she embarked on a second trip to India, volunteering for Vrihi/Basudha in indigenous crop conservation.

If you would like to find out more about Basudha, go and help, or make a donation see: www.cmtdiv.org

Dr Debal Deb's book, Beyond Developmentality, is available from www.carthecan.co.uk