

Seeds for tomorrow

GRAIN

“I receive the seed, breed from it and then return it to the centre”, said Shahida, a young woman with four children living in the village of Datinakhali in the district of Cox’s Bazar in the far south-east of Bangladesh. A routine procedure, it would seem, except that the “seed” that Shahida is referring to comes not from plants but from animals: she has received three pairs of chickens (cocks and hens), several cows and a nanny-goat. Once she has bred the animals, she returns them, along with half the offspring they have produced. Holding her youngest child in her arms, Shahida points to a hen running around her yard. “That’s one of the 30 chicks I bred with the birds I borrowed”, she explained. “I am now breeding chickens and selling them in the local market.” We went round behind her house, against the walls of which sticks of cow dung were drying in the hot sun, to be used as fuel. She pointed out a brooding hen, sitting on eggs in a grass-thatched hut.

Shahida may not be classified as economically well off: her small cash income probably means that she and her family are included among the one billion or so of the world’s poorest people, who live on less than a dollar a day. But, although she lives in a region vulnerable to cyclones, Shahida considers herself fortunate. She cultivates a host of crops, including paddy rice, beans, chilli and aduki beans, and saves seeds from one year to another. She rears chickens, goats,

ducks, cows and even a few buffalo. She has a small fish pond and she collects salt from the salt-flats. She, her husband and her four children are self-sufficient in food, eating well throughout the year. They earn a small cash income from selling chicks, young goats and duck eggs.

Shahida has received help from UBINIG (Policy Research for Development Alternatives), a policy advocacy organisation, in organising her farming activities. She was able to branch out into animal husbandry, which brings her family its main cash income, only because UBINIG lent her the first animals. By returning the original animals and half their offspring, Shahida is helping to extend the scheme to many more families. UBINIG’s headquarters are in Dhaka, but it runs a training centre a couple of hours’ drive from Cox’s Bazar town. It promotes *Nayakrishi Andolon*, a form of ecological agriculture that works with nature, not against it. It is based on a simple guiding principle: observe, learn, taste and experience the processes of life, and transform them in order to unleash *ananda* – the joy of living. UBINIG carries out both an ecological and a social function: it conserves and propagates crops and animals that have evolved over thousands of years to thrive in the saline conditions dominant in this coastal area of the Bay of Bengal; and it helps poor farming families to improve their livelihoods.

Recovering from chemical farming

According to Rafiqul Haque Tito, UBINIG’s regional coordinator, one of the centre’s key roles today is to help local farmers to recover from the ravages of chemical farming. “Bangladesh is a hotbed of diversity”, said Tito. “We have six seasons, including the *boro*, the dry season. In the past many farmers used the dry season to plant winter crops, including nitrogen-fixing plants that helped to restore the fertility of the soils. With the advent of the Green Revolution in the 1960s, the ecological balance was disrupted. Farmers were encouraged to bore wells, to irrigate the land and to get a third harvest, using high-yielding varieties (HYVs) of paddy rice. It made farmers rich for a while but it has created all kinds of problems.” Today the region has to buy from outside crops



Photo: GRAIN

Shahida at her smallholding near Cox’s Bazar, south-east Bangladesh.

that it used to be self-sufficient in, such as pulses, garlic, onion, chilli, cabbage, beans and peas. The rivers have become polluted with pesticides. Farmers are having to populate their fish ponds, still a prominent feature of the landscape, with fish purchased from outside. With the prevalence of HYVs, originally supplied at very low prices, farmers have lost some of the resilient local varieties. In a similar way, local breeds of chickens, goats and cattle are also beginning to die out.

In heroic fashion, UBINIG is helping the farmers to fight back. In its vegetable gardens, it is cultivating 92 different species of plants, including a large number of medicinal plants. Of these, 28 are wild plants that can either be eaten or used as medicinal plants (sometimes both). It has hundreds of different varieties of some of these species, possessing, for instance, over 2,000 varieties of paddy rice, some of which are saline-resistant. It has also assembled a remarkable collection of indigenous chickens. “The government says that Bangladesh has just five or six local varieties of chicken, but we alone have 35”, said Tito. Some, like the *heza* (which means porcupine in Bengali), are semi-wild and their populations have fallen to dangerously low levels. “By lending out breeding pairs, usually to local women, we are increasing the numbers of the endangered chickens and providing livelihoods for the women”, said Tito. Over 500 women locally are benefiting from the scheme.

UBINIG is swimming against the tide. With government backing, industrial poultry farming has been growing rapidly




Several rare local varieties of chicken in the run at the UBINIG centre.

and, along with it, outbreaks of bird flu. Thousands of chickens were slaughtered earlier this year in northern Bangladesh after the biggest ever outbreak of bird flu. Tito said that the government had been doing everything possible to reassure worried consumers, pointing to a text message he had just received from the authorities to reassure him that it was safe to eat industrial chicken. "They have been sending out these messages regularly to all the country's mobile phone users but still people are much happier to eat our chickens. They are resilient and don't catch bird flu. They eat healthily, scavenging for scraps for three quarters of their food, with feed making up the other quarter. They take three months to be ready to eat and they taste much better. Our farmers are finding that they are in big demand at the local markets."

Eschewing tobacco

More and more families are turning to UBINIG for help. Inland, to the east of its training centre, a large area is devoted to tobacco monoculture. "Tobacco farmers use pesticides at every stage", said Tito. "The rivers have become contaminated, and forests are being destroyed because of the huge amount of firewood used in the kilns to cure the tobacco." Because the work is so labour-intensive, families also rely heavily on child labour. Recently 200 families sought out the centre to provide them with seeds as they intend to give up tobacco cultivation and return to traditional farming.

Flooding is part of the ecosystem and people have learnt to live with it. "The centre was flooded a year ago, with the water rising two metres inside

the building", said Tito. "Despite the disruption, a flood every five or six years is good, for the silt it leaves behind replenishes the soils, making them more fertile." Shahida agrees. "We are used to it and it improves our land", she said. "It causes problems only when the authorities want to evacuate us because of flood warnings and we refuse to go unless they let us take all our animals with us." What is new, however, is the force and the frequency of the cyclones and the relentless rise in sea level. A low-lying country, Bangladesh is extremely vulnerable to climate change. It is clear that in future the saline-resistant varieties of paddy that Tito and his colleagues are carefully preserving and propagating are going to be increasingly in demand. These tried and tested plants may yet have a key role to play in defending livelihoods. 



Sustainable agricultural experiences shared in LEISA Magazine

Small farmers worldwide have vast experience, but much of their valuable knowledge is often not shared beyond their own community. This is a pity because there is much to be learnt from them. Exchanging such experiences can help other farmers to improve productivity and generate income in an ecologically sound way.

LEISA Magazine finds and publishes such experiences. In this way, a success story from Bolivia can inspire farmers in, for example, Bhutan. LEISA Magazine is one of the rare publications that bring together the practical experiences of those working on sustainable agriculture around the world.

LEISA Magazine has subscribers in 163 countries. The magazine is read by agriculture/development fieldworkers, researchers, teachers, policymakers and entrepreneurs.

A global network

LEISA Magazine has a global edition and six regional editions (*see below*). They all provide their readers with accounts of practical experiences on sustainable small-holder farming, and offer debate, background information to the news, and information on books and websites. All the editions together have a readership of about a quarter of a million people.

The regional editions are published by the LEISA Network, a global partnership of organisations committed to the cause of small-scale farm families. These farmers have been sidelined by "modern" agricultural development. However, small-scale farming continues to be a crucial source of livelihood and food security for an estimated 600 million families. It harbours and nurtures biodiversity, it safeguards the resilience of agro-ecological systems against natural and human-made disasters, and it serves as custodian of cultural traditions.

Birthday

Next year, the magazine celebrates its 25th birthday. The whole year will be devoted to the theme of family farming; every issue will focus on a sub-theme within this. More information on the jubilee will appear in the December issue of LEISA Magazine, which focuses on climate change.

The next regular issue of the LEISA Magazine, due out in September, will be on social inclusion and is entitled "Respect through farming". Previous issues of LEISA Magazine include: "Living Soils", "Ecological pest management", "Healthier farmers, better products", "Securing seed supply" and "How farmers organise".

LEISA Magazine is published quarterly by ILEIA (the Centre for Research and Information on Low-External-Input and Sustainable Agriculture). The six regional editions of the magazine, published by partner organisations are: *LEISA Revista de Agroecología* (in Spanish, for South America), *SALAM* (in Bahasa Indonesia), *AGRIDAPE* (in French, for West-Africa), *LEISA India* (in English), *LEISA China* and *Agriculturas* (in Portuguese, for Brazil). All editions are freely available on the network's website (www.leisa.info).

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