

Cows give fulfilment in life

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Photo: Compas

More than 80% of the rural families in India own cattle, including half of the families who fall below the poverty line. Most of these cattle are of indigenous non-descriptive breeds, considered unproductive by most educated livestock specialists. In spite of various incentives, the cross breeding programmes by the government and various NGO's have only resulted in a limited number of crossbred animals. Why is this? And what do rural people want themselves? KPP, a Compas partner organization in Karnataka, India, has started a support programme for indigenous cattle breeds.

Some 10 years ago, Mr. Purushothama Rao, a farmer expert, inspired a group of farmers in and around the village of Tumari in Karnataka, India to work towards organic farming. Mr. Rao's farm was a living example of the potential of this option, and as a group they exchanged experiences about the transition from conventional to organic farming. In 1996 this group of farmers formed the organisation Krishi Prayoga Pariwara (KPP), the Fraternity of Experimenting Organic Farmers. At present, the organisation counts some 5,000 members in 60 villages. The members operate in groups and meet regularly to discuss their findings related to *Grama Vikasa*: holistic development based on organic farming, with a spiritual and cultural orientation.

Enhancing income opportunities

The farmers are supported by two post-graduates in agriculture, who guide them in their experimentation, support marketing of the produce, and maintain links with scientific institutions. Moreover, KPP members revise ancient texts to find practical ideas for testing and improving organic farming techniques, such as seed treatment, pest management, processing, and storage. Several projects have been undertaken over the past years. Apart from promoting organic agriculture and establishing direct producer-consumer linkages, KPP has worked in several fields to create additional income generating opportunities for the rural families.

During the past two years they have worked, for example, on a process for preparing organic *Kumkuma*, which is the

bright red powder traditionally applied on the forehead of people. Its production has created an additional income for some 5000 rural women. Other activities include experiments to control the common disease called 'yellow leaf complex' in arecanut, one of the most common cash crops in the area, and supporting youth in vegetable growing as an alternative cash crop. To support the farmers' post-harvest technologies, small machines and equipment have been developed, such as the *amla* seed remover, amla flake maker, a juicer and a ginger slicer. The farmers have also decided to work on identifying and revitalising indigenous cattle breeds with the help of a spiritual leader.

The sacred cow

In India, cows have been treated as sacred - as *Laxmi*, the Goddess of wealth, and as the cosmos in which all gods and goddesses reside - for centuries. The cow is worshipped every day and has a sacred place in family rituals, as the cow's blessings are needed to ensure a happy family life. The cow is called *Kamadhenu*, which means 'the one that gives the desire (or higher fulfilment) in life'. The cattle of India are of *Satwik* character, which indicates a state of self-contentment with little material wealth. It is believed that the soil and the environment is made *Satwik* by cattle, and that living with cattle will lead to an increased *Satwik* character of the person, and result in a more holistic society.

Indian rural life depends on cattle for both happiness and economy. Cows are not worshipped in vain; within the sacred-

ness of the cow lies an ecological rationale and conservation imperative. Cattle make use of crop waste and uncultivated land, thus providing organic fertilizer and enhancing crop productivity. The cow is also a source of food and leather. All its products, like urine, dung, milk, curd and clarified butter (*ghee*) are used in agriculture and health, as well as in different rituals. Cattle power is also used in transport. And its contribution is strongly linked to the work of women, in feeding and milking the cows, collecting cow dung, and nursing sick cows to health. Women are the food processors in the traditional dairy industry, making curds, ghee and buttermilk. Ghandi once remarked: "The cow was, in India, the best companion. She was the giver of plenty, the mother of life. Not only did she give milk, but she made agriculture possible."

Crossbreeding with Indian cattle

In India there are 26 descriptive indigenous breeds of cattle as well as numerous non-descriptive breeds. They are Zebu cattle of the *Bos indicus* type, which are characterised by a hump on their backs; most breeds also have long horns and extra skin under their neck (*dewlap*) and between the forelegs (*navelflap*). This extra skin surface, together with other special characteristics of the skin and hair, indicates their capacity to resist heat and external parasites. Well-known local milk breeds in India are Sahiwal, Gir, Red Sindhi and Rathi. Other known local breeds have different capacities, like extra resistance against heat and external

parasites, resistance to diseases, and the ability to thrive and produce under stressful conditions.

But, over generations there has been a change in the position of cattle. Increased beef exports have led to a decline not only in livestock numbers, but also in the rich diversity of cattle breeds known for their hardiness, milk production and draught power. This decline of animal wealth is seriously affecting the local economy and rural livelihoods. Because of the increased exports, the price of cattle has gone up, and there is less dung available for manure and cooking fuel.

Moreover, the indigenous cattle breeds have been considered unproductive by western standards, whilst many Indians have been educated to look at cattle from a merely economic point of view. This marked the start of various projects to bring in exotic cattle breeds, and to stimulate cross breeding. Unfortunately, the indigenous milk cattle breeds were not considered for these cross breeding programmes. Instead the Jersey and Holstein Friesian breeds were introduced. These are of the *Bos taurus* type of cattle, hump less and without the skin characteristics which provide resistance to heat and external parasites. This is one of the main reasons why the crossbreeding with these cattle was not successful in India.

Results of crossbreeding

The farmers in KPP were disturbed by the fact that the crossbred cattle were not performing well in their area. These animals require more concentrates and roughage than the indigenous breeds, and often suffer from diseases and disorders, for which qualified veterinarians have to be called in. Poor farmers are unable to cope with the increased costs of maintenance and the dependency on external inputs, such as antibiotics and other chemicals. Moreover, the farmers attach importance to fat percentages in the milk,

persistence of production, looks and temperament of the animals, and are not impressed only by high yields.

The farmers of KPP concluded that except for a few incidences of success, crossbreeding at large has been not economically viable. This made them decide to look at local cattle breeds afresh. A survey conducted by a KPP team found that, for example, one local breed known as Malnad Gidda can yield between 3 and 5 litres of milk per day, which is comparable to 4 to 6 litres of milk yielded by cross breeds in the KPP project area. Through selection and careful breeding the yields of this breed can be improved. This indicates the potential of improving indigenous breeds in a natural way. The National Dairy Research Institute in Bangalore has expressed its interest to support this programme.

KPP also listed statements of the farmers regarding indigenous cattle: they are more suited to the varying local agro-climatic conditions, feed on local plants, and increase soil fertility. Their milk is rich in vitality and nutrients, and local veterinary practitioners can help the farmers to maintain the health of the cattle. This ensures employment for the local people and preserves bio-diversity.

Working with local breeds

The KPP local cattle breed conservation and improvement project has the following objectives: to study the present-day situation of local cattle breeds, to document traditional veterinary practices and to experiment with them, to revitalise cattle fairs, to upgrade and improve selected local breeds, and to distribute the cattle of the improved local breeds to interested farmers. Moreover, KPP is collecting relevant literature on ethno-veterinary medicine, documenting the role of indigenous cattle in family life, revitalising the local health traditions based on cow products, and disseminating all infor-

mation to interested farmers.

The findings of this KPP study is documented in a booklet 'Kamadhenu', which describes the characteristics of the four main local cattle breeds of Karnataka State: Amrithmahal, Hallikar, Krishnavalley and Deoni. It also supplies information and includes good pictures of many other Indian cattle breeds. The booklet gives several preparations from Ayurvedic medicine based on cow products, and their effect on human health. Examples are: *Panchagavya*, a combination of five products - urine, dung, milk, curd and ghee - used in cancer treatment, and the cow dung based soap to cure certain skin problems.

Breeding centre

In the project area of KPP a local spiritual leader, Sri Raghaveshwara Bharathi Swamy, guides a cattle conservation and breeding centre situated on the 120 acres of land belonging to the monastery. He is also implementing various other social development programmes for around 15,000 families. KPP has brought animals of various indigenous breeds, selected by a veterinarian and a local cattle middleman, to the monastery. The centre is playing a key role in the selection, breeding and distribution of local breeds, while also producing a variety of cow-based products for human health. They are supported by experienced Ayurvedic doctors and by a research institute in Nagpur, Maharashtra State.

In July 2001, the new cattle shed of the monastery was inaugurated with a ritual to bless the newly arrived cows and to get blessings from the cows in return. KPP will be able to reach more families with the guidance of this spiritual leader, as he is visited by hundreds of disciples every day. With his support the booklet 'Kamadhenu' will reach a large section of the population, and thus enhance the process of reflection on the value of local breeds and cow-based products.

Sri Swamy says: "We want to conserve the local breeds, because the cross breeding programmes have harmed this society a lot. The local breeds are disappearing along with the indigenous knowledge attached to them. The cattle grazing land is also disappearing and farmers now depend on others for many things. Here, we have animals of several Indian breeds that are threatened by extinction, like the Punganoor from Andhra Pradesh, the Vechur from Kerala, the Kangayam from Tamil Nadu, and the Krishnavalley from Karnataka. Nature and people want evolution and not revolution. Evolution is a holistic way. For us this is real development."

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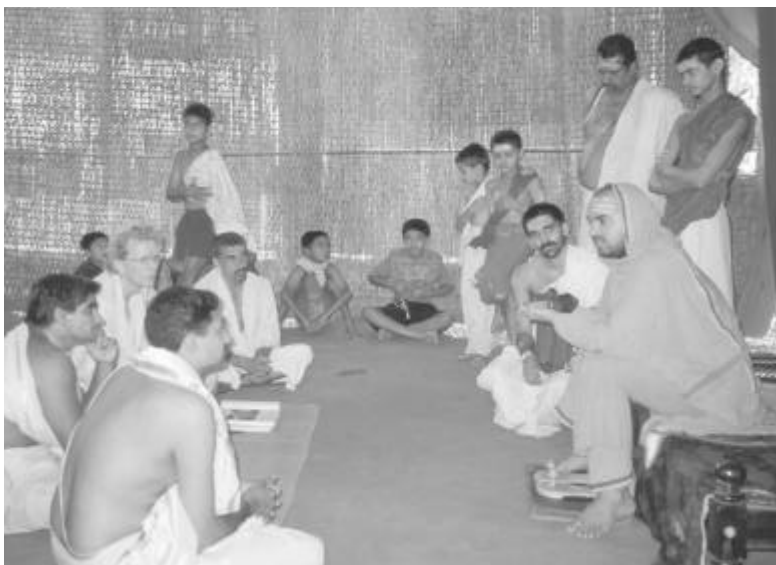


Photo: KPP

Sri Swamy (right) exchanges views about endogenous development with farmers, KPP staff and visiting guests