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Indigenous Women, Seed Preservation and Sustainable Farming

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ABSTRACT Seed is a 'means of production' as well as a product, whether a tribe doing shifting cultivation or a peasant doing settled agriculture. The seed acts as a source of grain and also a future source of seed. For farmers and tribals seeds have high utility cum social and ecological value. The development of sustainable agriculture it closely related to the process of social reproduction, in which women are the central actors. The rapidly increasing literature on women and environment makes a strong case for women centralism to promote a more sustainable agriculture. The emerging paradigm of sustainable farming also emphasizes that in spite of women being central in agriculture and resource management, and have the potential to apply their knowledge and practices, nevertheless women remain marginal in many of these new research and development programmes.

INTRODUCTION

Somewhere along the way the unbridled pursuit of 'progress', guided by the lopsided models of development, began to destroy life without any assessment of how fast and how much of the diversity of life on this planet is disappearing. The act of living and of celebrating and conserving life in all its diversity in people and in nature seems to have been sacrificed at the alter of progress and the sanctity of life has been substituted by the sanctity of 'development'. In this context development is regarded as the introduction of 'scientific agriculture, 'scientific animal husbandry', 'scientific water management' and so on indentified as a patriarchal project that serves as a source of violence not only to nature but also to women who are primary sustainers of society. Also the reductionist and universalizing tendencies of such programme in the name of science become violent and destructive in a world which is inherently interrelated and diverse (Shiva : 1995). The feminine principle, on the contrary, is based on the concept that women are associated with nature in terms of social and biological production and reproduction becomes an oppositional category of non-violent ways of conceiving the world, and of acting on it to sustain all life by maintaining the inter connectedness and diversity of nature. It allows an ecological transition from violence to non-violence, from destruction to creativity, from anti-life to life giving processes, from uniformity to diversity and from fragmentation and reductionism to holism and complexity. Also the holism implied in the feminine principle must be distinguished from the universalism of the modern 'scientific' era. While the former respects and nurtures diversity the latter undermines it under its homogenizing and centralizing thrust and in the end destroys diversity. From being the creators and sustainers of life, nature and women are reduced to being resources in the fragmented anti-life model of 'development'.

In a fast changing era of 'development' it becomes imperative to recover the feminine principle as the basis for development which conserves nature and is ecologically prudent. As the recovery of the feminine principle is an intellectual and political challenge to 'development' identified as a patriarchal project of domination and destruction of both women and nature, an attempt is made in this paper to show how in the Alu Kurumba tribe in the Nilgiris district, the feminine principle in a state of threat still nutrures the concerns of ecology for sustainable cultivation and in turn, helps to preserve biodiversity.

Though the principle of creating and conserving life might have been lost to the ecologically alienated, consumerist elite, still the above principle of creating and conserving, which Mies (1986) refers to as the Production of life, is still followed. It is still maintained in the life style of the men and women of the forest dwelling and peasant communities in small pockets of the present developing world. What is presented below is one such positive case study.

AREA AND PEOPLE

The Nilgiris

The Nilgiris or Blue mountains identified as one of the world's eighteen hot spots of biodiversity

(Gadgil, 1994) are located along the weastern ghats, in Tamil Nadu, which form the most important topographic feature of peninsular India. At the national level the Nilgiris are considered as one of the first biosphere reserves with an *in situ* conservation approach or an open conservation system. The diversity of natural resources of the Nilgiris biosphere has not only a wide variety of flora and fauna but also the diverse landscape that is known for its interesting character that is, 'its cultural polyvalence' (Sudarsen, 1996). Different tribes with diverse cultures inhabit the area. Their survival depends on the natural resources of this tract. The different tribal groups inhabiting the Nilgiris are the Toda, the Kota, the Kurumba, the Paniyan, the Irula and the Sholiga. All these tribal communities living at the different altitudes of hill ranges of the district forming an inseprable component of the ecosystem. They practise different occupations, ranging from simple foraging, pastoralism, shifting cultivation, traditional cultivation to modern farming, horticulture and wage labour. Not only the above tribal group but the entire population of the district is being influenced by the mountain range, through differential rainfall, modulating climate, river water flow, ground water recharge and providing a wide range of natural produces.

The special climatic and soil conditions of this district apart from making it a prime spice growing area in recent years have also been in focus for growing plantations like coffee, tea and other cash crops like pepper, and garlic. The forests apart from providing raw materials to the industries have also been a rich source of medicinal plants both to the inhabitants of the district and to the outsiders.

The Alu Kurumba

Among the different tribes inhabiting the district Alu Kurumba still practise shifting cultivation and traditional agriculture. The attribution of the name Halu Kurumba or Alu Kurumba or Pal Kurumba may be either due to the belief among them that the word 'Halu' or 'Alu' or 'Pal' refers symbolically to purity in thoughts or mind as the word 'Pal' or 'Alu' means milk. Another belief held among them for tribe being called Alu or Pal Kurumba is that in the past to clean the house they used cow dung mixed with milk.

The Alu Kurumba who are the indigenous people of the Nilgiris district are forest-dwellers depending for their very survival on the shifting cultivation and as well as on collection of forest produce and small games. In recent years due to the forest policies and other developmental schemes introduced by the government and also due to the influences of people and economic compulsions, the Alu Kurumba who were once primarily shifting cultivators, moved out of the forests to other areas in the district. Due to the above influence not only there was a change in their settlement pattern but also their subsistence pattern of life style is undergoing a rapid change. As a result the Alu Kurumba resettled in different areas of the district were under obligation to go for non-traditional occupations for sheer survival.

Locale of the Study

Four Alu Kurumba settlements were studied. These are : Nedungalkombai near Manja Kombai village, Bellathy settlement near Manjur village, Kottakombai settlement in Coonoor taluk, and Bavayuru settlement in Kottagiri taluk. Out of these only two settlements, namely Bavayuru and Kottakombai settlements are still practising shifting cultivation and traditional agriculture. Among these two settlements, the Alu Kurumba of Kottakombai practice exclusively shifting cultivation and the Alu Kurumba of Bavayuru practice traditional agriculture along with plantations like tea and coffee.

Kottakombai

The Kottakombai, or Burikal Kombai as is commonly known among the Alu Kurumba, is located near Kottekal, that is, eight to ten kms away from Nedungalkombai village in Coonoor taluk. At present only eight families are residing in the settlement and the rest of them have left the settlement in search of other modes of livelihood. There are two big thatched huts where the families live, and two small huts are earmarked for women to stay there during their days of 'pollution'. On the one side of the settlement there is a kitchen garden on a patch of land and on the other sides of the slopes, shifting cultivation is done. Here varieties of traditional cultivars are grown.

Bavayuru Settlement

The Bavayuru settlement located within the precincts of a large private tea estate on the hills of Kottagiri taluk is surrounded by mono- culture plantations, that is, tea or coffee. In spite of the pressure from the government and other developmental agencies like UPASI (United Planters Association of South India) to go in for monoculture which is a cash commodity, the Alu Kurumba of Bavayuru settlement still practise traditional cultivation in small fragments of land apart from cultivating cash crops. In spite of the unmistakable symptoms of the emerging unsustainability of current patterns of resource use and production practices, the survival struggles of the tribals of the above two settlements are in fact struggles for the preservation of diversity. The core of the paper will deal with the role of indigenous women in seed preservation. They are ultimately responsible for sustainable agricultue and in turn conservation of biodiversity.

WOMEN'S ROLE IN SEED PRESERVATION

According to the world conservation strategy, conservation is the management of human use of the biosphere so that it may yield the greatest sustainable benefit to present generation, while maintaining its potential to meet the needs and aspiration of future generations ...' (Dankelman, 1989). Thus conservation is positive, embracing preservation, maintenance, sustainable utilization, restoration and enhancement of the natural environment (IUCN, 1980).

In this context, the Alu Kurumba still practise shifting cultivation and traditional agriculture. The indigenous women of these groups play an increasingly important role in sustainable agriculture by conserving biodiversity by way of utilizing their profound knowledge of not only plants and animals in their living environment but through the multi functional approach promoting the preservation of the species of plants and animals.

While most of the areas in the Nilgiris district are marked by an increasing trend of modern agricultural scenario which is characterized by homogeneity in major crops it is very interesting to find the existence of a variety of cultivars in the agricultural pursuits of those groups of the Alu Kurumba. The indigenous varieties of crops cultivated by the Alu Kurumba are well suited to the socio-economic organization and nutritional habits of the people, besides the varieties being in harmony with the prevailing agro-ecological conditions. Moreover the cultivation methods including mixed cropping of these subsistence farmers, involve minimal expenditure. Further by carefully selecting and preserving the seeds which exclusively done by womenfolk, the tribal agriculturists avoid their dependence on external sources of supply of seeds and farming accessories.

In all the agricultural operations done by the Alu Kurumba though the entire household is involved still the role played by women is significant and particularly very important to the conservation of crop genetic diversity. The Alu Kurumba woman does the whole range of agricultural activities in such a way that her participation in agricultural operations becomes almost indispensable.

In shifting cultivation from the moment the patches of land is cleared by cutting and burning bushes and shrubs of medium height to digging the soil womenfolk are involved in sowing, weeding, transplanting, leveling the field, harvesting, thrashing, winnowing and storing the grains. By undertaking varied agricultural activities the women among the Alu Kurumba make a substantial contribution to the household food production besides also ensuring household food security. Thus women among the Alu Kurumba continue to be important to the food production systems. They have a role in selective breeding of cultivars through application of their knowledge and experience. Further it is the womenfolk who do the seed selection, storing and preserving of seeds for the next season. The Alu Kurumba women take special care in identifying the viable seeds once the crops ripen and attain maturity in the field and particularly in the area where the harvest is good. Women with their knowledge and expertise start earmarking those plants with crops which are fully grown, healthy and appear viable for next seasons replanting.

The Alu Kurumba of both Kottakombai and Bavayuru settlements practise mixed cropping pattern. Women start collecting the healthy ear

heads at different cultivars throughout the season since each crop has to be harvested at different times of the seasons on attaining maturity. Thus women apart from doing all sorts of agricultural activities also keep identifying and collecting the healthy and viable seeds of the different crops. Moreover among the Alu Kurumba since there is no very strict division of labour, a woman is provided with the context in which she is able to take part in all agricultural operations which give her an opportunity to identify right from the beginning the healthy and potential seeds for next season planting. Immediately after the harvest is over, thrashing of the grains is done and this is followed by winnowing. During this process the woman make sure that all the unwanted things like chaffs, weed seeds, bran and immature viable grains are eliminated and care is taken to select good seeds for next season's planting. Once the seeds of different cultivars are selected, they dry the grains in the hot sun for a few days by spreading them thinly and evenly on clean ground to ensure the uniform drying. The women continue to dry the seeds till they are satisfied that the seeds contain no moisture content so that they will not be affected by pests. Another method used by the Alu Kurumba women to ascertain whether seeds are properly dried or not is to squeeze a few seeds between the palms or under the foot. Seeds are crushed between the teeth to test whether they are still soft and contain moisture.

After ensuring that the seeds are dried properly different varieties of seeds are stored by the women in different ways. In the case of millets and cereals the women pick out healthy sheaths with viable seeds and dry them under the sun for a few days. Without separating the grains from the sheathes they are stored in clean cloth bags or in sacks or in earthen pots lined inside with cow dung. And in some cases seeds that are separated from the sheaths are dried, and stored in the earthen pots or in gunny sacks. Similarly in the case of *Makka Juwan* (Maize) too healthy, dried and big cobs with well formed grains are collected and stored in earthen pots by avoiding seeds which are colorless, immature and undersized. And seeds of pulses like *Avarai* (Beans) and its different varieties like *kuna pala avarai, pala avarai, kunja avarai, sona avarai,* along with *mochai avarai* are cleaned and mixed with red clay and kept again under the sun for a few days before they are stored in air-tight containers. According to the Alu Kurumba women mixing of red clay is done to protect the seed from insect or pest attack as the clay forms a thick coat around the seeds that could hardly be penetrated. Similarly seeds of other millets like *ragi* (Finger millet), *juwan* (Sorgum vulgare), *thinai* (Italian millet) and *samai* (*Panicum miliare*), are kept separately in layers of clothes wrapped up tightly. They also keep pieces of some local roots along with the seeds as there is a popular belief that these roots protect the seeds from pest attack.

A kitchen garden is also maintained by the Alu Kurumba women. Seeds of various vegetables like *kathrikai* (brinjal), *thakkali* (Tomato), *vella vengayam* (garlic), *mellagu* (pepper), *jini mellagai* (small variety of red chillies), *thotta masu* (red chillis) are dried separatley. Generally when women want to select the seeds of the above vegetables they allow those vegetables especially the good ones in the plants to ripe fully. Once ripen they are carefully plucked off and kept tethered either in the roof above the hearth for drying or the seeds are spread in a cloth in the sun. In the case of *kathrikai* (brinjal) seeds are stored by allowing the fruit to ripen on the plant itself. Then the dried fruit is plucked and tied above the hearth for further drying till the next season arrives for sowing. Seeds of *thakkali* (Tomato), *poosanikai* (Pumpkin) are dried and mixed with ash before storing. Thus ash and red clay are used as indigenous pesticides to prevent pest from damaging the seeds.

Among the Alu Kurumba in general the 25 paise coin plays a vital role in all their rituals be it a ceremonial or just a case of seed preservation. Women while preserving the seeds carefully for next season's planting do not forget to keep a 25 paise coin along with the seeds. They attribute the reason for keeping 25 paise coin along with the seeds as (*kanikkai*) an offering to the gods to ensure the food security in the future.

Also women in their state of pollution do not enter the place where the grains are stored and seeds kept for sowing. Once the required quantity of seeds are selected, they are kept separately as seeds for the following sowing season. The women do not use the preserved grains for

consumption. At the same time if the neighbours or friends or relatives request them for seeds for sowing they never hesitate to give a handful of seeds to them. The seeds thus given ensure continuity and perpetuation of the crop cultivation.

The so called improved or high yielding varieties of seeds also gradually displace the genetic diversity of agricultural crops. Unlike hybridization of modern times, among the Alu Kurumba hybridization involves collecting of handful of seeds of all cultivars (cereals and pulses) from each household and handing it over to the village. *Manukaran* (headman and priest) who in turn offers the mixture to the local deity. Having offered a *puja (prayer)*, he shuffles all the seeds and distributes the mixed grains equally to all the households of the settlement who go ahead with sowing. Thus the hybridization of traditional cultivars which involves mixed cropping ensures not only biological diversity but also equal distribution of crop varieties gives a sense of seed security to all the families of the group.

Thus the above traditional crop varieties used by the tribals are the ones carefully selected and preserved by the women over the years through their knowledge and experience. All the cultivars which are used by them besides being resistant to natural vagaries also ensures good yields. Moreover, the traditional land preparing process and the seeds used by the tribals do not strain the natural resources but provide rich nutrients to the soil. Because several varieties of cultivars cultivated by the Alu Kurumba and selected by the women are in majority legumes that are highly nutritious and rich in protein content and that do not require heavy inputs of irrigation and fertilizers. Thus agriculture modeled on nature and based on woman's participation with nature has been self-reproducing and sustainable because the internally recycled resources provide the necessary inputs for seeds, soil, moisture, soil nutrients and pest control. As a result the cultural tenets of the emerging sustainable paradigm emphasize that women are central in agriculture and resource management and therefore they have the potentiality to apply their knowledge and practices which in turn help conserve the crop diversity which really forms the biological resource base for food security.

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