Nayakrishi Movement

Reinstatement of Women in Agriculture

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Cet article décrit la façon dont les femms rurales pauvres reprennent leur place traditionnelle en agriculture au Bengladesh grâce au mouvement Nayakrishi. Ces dernières décennies ont vu les femmes marginalisées dans leur production agricole à cause de l'adoption du programme appelé « la révolution verte » issu des méthodes modernes de fermage. Par ailleurs, le mouvement agricole Nayakrish démarré par les femmes dans une région rurale, s'est révélé une alternative à la révolution verte en ce qu'il assigne des rôles égalitaires aux femmes et aux hommes dans la production agricole.

A capitalist ecological revolution in the North accelerated the extraction of cash crops and resources in the South, pushed the Third World peoples onto marginal lands and filled the pockets of Third World elites.

This paper analyzes the exclusion of women from agriculture in Bangladesh due to the intervention of "modern" agriculture and discusses their recent inclusion in agriculture through the Nayakrishi farming system. To examine the issue, this paper employs the perspective of ecofeminism. It is, therefore, necessary to define what is involved in the use of this approach.

Ecofeminism

Ecofeminism, a social movement that emerged in the 1980s, incorporates insights and perspectives from liberal, cultural, socialist and radical feminism to define the connection between women and nature. According to ecofeminists, both women and nature are exploited due to the patriarchal science and development models. Modern science, which began as a project of western patriarchy, established men's supremacy over both nature and women (Mellor; Shiva 1996). Vandana Shiva claims that the dominant science system liberated man, but subjugated both nature and women. Male-dominated science controls women's body and work and establishes male domination over all spheres of society like politics and the economy. The modern "science-led" development methods have excluded women and converted nature into a slave of man. In this male-dominated development process, nature's wealth and women's (unwaged) work are considered "unproductive" while men's work is considered and essential part of development (Shiva 67). The devaluation of nature's wealth and women's activities caused environmental degradation and subordination of women.

The application of the western model in the Third World countries has damaged the ecology and marginalized women in Third World countries. Carol Merchant looked at the problems of the Third World women in terms of colonial relations between the First and the Third World. According to her, from the late eighteenth century onward, a capitalist ecological revolution in the North accelerated the extraction of cash crops and resources in the South, pushed the Third World peoples onto marginal lands and filled the pockets of Third World elites. Colonialism dispossessed peasants throughout the developing world of their entitlements to land and to full participation in the agricultural economy (Shiva 1991). In the Indian Subcontinent, British colonists rule introduced the system of *Zamindari* or landlordship to help divert land from growing food to growing opium and indigo, as well as to extract revenue from the cultivators. This process destroyed the farmer's economy and agricultural production.

The intervention of the "green revolution" in the region in the 1960s to increase yields by using High Yielding Varieties (HYV), irrigation, chemical fertilizer and pesticides has mechanized the agriculture. Agricultural development initiated by the green revolution heralded the debacle of local knowledge in agriculture and facilitated the emergence of multinational corporations in the trade of agricultural inputs such as seeds, fertilizer, pesticides, and cultivation tools. The indiscriminate use of HYV, fertilizer and pesticides has damaged the fertility of the soil and the entire ecology.

In recent years, biotechnological inventions which ignore the knowledge of local people have contributed to the destruction of biodiversity and made the Third World farmers dependent on multinational corporations. According to Shiva (1995), biotechnologies are mainly used for the breeding of uniformity in plants and animals. If

production continues to be based on the logic of uniformity and homogenization, uniformity will continue to displace diversity and create monoculture in agriculture.

Most biotechnological research is done in the North mainly under the patronage of the multinational corporations. Biological and genetic diversity which provides raw materials for plant breeding and biotechnology is found in developing countries. These materials have been created, modified, maintained, and conserved by numerous generations of indigenous communities. The biotechnologists working in the multinational corporations modify plant materials by inserting a gene here and there. They then take the credit as "inventors" ignoring the creativity and many years of work that Indigenous communities put into developing the products (Hobbelink). Fowler argues that patenting appears to be the only viable form of assuring control and ownership of biotechnological innovations. Shiva (1993a) argues that patent protection ignores farmers as innovators and transforms them into a supplier of free raw materials and makes them totally dependent on industrial supplies for vital inputs like seeds.

In selecting seeds, the plant breeders are concerned with the marketing qualities and the quantity of grain while women select seeds based on their cross-crop effects, stability, multiple uses, and maturation dates.

"Modern" Agriculture and the Exclusion of Women

The intervention of modern or dominant agriculture system has excluded and marginalized women in Bangladesh. Modern agricultural techniques appeared in the region during the 1960s when the green revolution swept the Third World with its promise of eradicating hunger by increasing food production. Jiggins writes that the green revolution was successful in augmenting food supplies by increasing the crop yields. Heavily cropping varieties of rice and wheat seemed to be the best answer to hunger. However, the limitations of modern agriculture soon became clear. It affected the environment as well as the class and gender relations in rural Bangladesh. The benefits of modern agriculture have accrued only to wealthy farmers who can afford to buy seeds, agricultural tools, fertilizers, and pesticides.

The new varieties of seeds used for agricultural production needed vast amounts of water which quickly depleted ground water resources. Heavy cropping caused soil erosion, and the crops were susceptible to pests (Mellor). Moreover, the increased use of fertilizer and pesticide degenerated the soil and contaminated water sources endangering the fish species which are the main source of protein in Bangladesh (Sachs; Grist).

Poor rural women were severely affected by modern agriculture. On the one hand, increased need for cash incomes in rural households to cover the cost of agricultural inputs has forced women to work as agricultural labourers. On the other hand, the "green revolution" displaced women's wage-earning opportunities through mechanization. Before the arrival of modern agriculture, women were primarily responsible for seed conservation, germination and testing. For example, in relation to rice, the main crop in Bangladesh, women's knowledge and labour was essential to assess how well seed was likely to germinate, how much rice could be realized by processing paddy, how much seed and rice would survive storage, how much value was added to paddy whether for home consumption or marketing, and how the by-products would be used (Abdullah and Zeidenstein).

The introduction of HYV required a major shift in the cropping system (Sachs). Farmers have to purchase the new HYV seeds rather than using the seeds women have saved from the previous year's crop. Plant geneticists and seed collectors have also disregarded women's knowledge in seed conservation and ignored the value of their seed stores. Lipton points out that the plant breeders put emphasis on qualities that bear little relation to poor farmers' need. In selecting seeds, the plant breeders are concerned with the marketing qualities and the quantity of grain while women select seeds based on their cross-crop effects, stability, multiple uses, and maturation dates. In most cases, agricultural scientists ignore the locally desirable traits. For example, in selecting high yielding varieties of rice, scientists primarily consider the grain yield of the varieties and ignore many other qualities such as taste, nutrition, and biomass (Sachs). However, for rural families, rice not only supplies grain, but also other things such as straw. Women use rice straw for thatch, mats, and fodder, and use husks for fuel. HYV rice selected to reduce lodging (falling over), are shorter, and provide less straw.

The commercial production of seeds affects both biodiversity and the autonomy of farmers, particularly women (Mellor). Shiva (1993b) claims that purchased seeds displace women from decision-making and custodianship of seeds and transform them into unskilled labour. The seed corporations breed seeds in such a way that these cannot be preserved in the household for a long time by using Indigenous knowledge. Hybrid seeds are "biologically patented" in that the offspring cannot be used as seeds and farmers must go back to corporations to buy seed every year. Shiva (1993b) argues that patents on seeds are a twenty-first century form of piracy, through which the shared heritage and custody of women peasants in the

Third World is robbed and depleted by multinational corporations.

Shiva (1993c) depicts the negative impact of modern agriculture by using the example of bathua. Bathua, an important green leafy vegetable with very high nutritive value is grown in association with wheat. With the intensive use of chemical fertilizer, bathua has become a major competitor of wheat and has been declared a "weed" to be eliminated by herbicides. The elimination of bathua deprives the rural poor of a free source of nutrition.

Following the arrival of modern agriculture, women not only lost their role as seed conservators and storers, but they have also become redundant in post-harvest work. The introduction of technology in agricultural production has reduced the opportunities for poor rural women to work as wage labourers by mechanizing the tasks they have performed over the years. For example, the introduction of rice mills throughout Asia has made redundant the labour of women who were formerly involved with the winnowing, threshing, and husking of rice. According to Abdullah and Zeidenstein, rice-husking mills in Bangladesh took away the main source of employment for rural women

The modern development paradigm in agriculture not only robbed women of their traditional role in agriculture but also excluded women from acquiring the knowledge necessary for modern agriculture. To scientists and agriculturalists, women's knowledge about seeds, plants, and production techniques ise irrelevant and backward though women have historically been savers and storers of seeds (Sachs). They rarely considered rural women as clients for agricultural research and development programs or users of improved technology. Jiggins observed that technical training and extension programs have been exclusively targeted at men thereby denying women opportunities to improve their skills and access to important channels of communication and state-sponsored support services.

Tauli-Corpuz observes that the link of women with nature is deteriorating because of the creation of new needs and the introduction of new techniques in agriculture ignoring indigenous knowledge. The exclusion of women from the modern agricultural practices and the preference of men in farming activities have masculinized agriculture and redefined the gender relations in rural Bangladesh.

In this context, the Nayakrishi movement is a movement which reinstates women in agriculture by recognizing their knowledge and encouraging them to participate in every step of cultivation.

Nayakrishi Movement and the Participation of Women in Agriculture

The Nayakrishi movement has initiated an alternative, environment friendly agriculture system. In this system, farmers' activities are not only limited to producing crops, they are also involved in maintaining soil fertility, conserving the environment, preserving seeds and other genetic resources, as well as raising poultry and fish by using local, Indigenous knowledge. The Nayakrishi farmers see the total yield of a farming household from a holistic approach including environmental soundness, rather than calculating the quantitative productivity of a single crop. Drawing on Shiva (1989), it can be said that to Nayakrishi farmers, production, yield, and economic value take on an entirely different meanings. These are defined for nature and for women's work as satisfying basic needs through an integrated agriculture system. Such an agriculture system is productive in terms of food, water, fodder, fertilizer, fuel, livestock, and fisheries.

In the Nayakrishi farming practice, seeds and genetic resources are conserved at the household as well as community level to make farmers independent of multinational seed companies.

There are more women than men in the Nayakrishi movement. The present proportion women and men are 62 per cent and 38 per cent respectively. At the initial stage of this movement women from poor farming backgrounds took the leading role. Male farmers took part in Nayakrishi only *after* realizing the benefits of this holistic farming system. From the beginning, women farmers were more interested in Nayakrishi for obvious reasons. They came forward because they were the worst victims of the so-called modern agriculture.

In the Nayakrishi farming system, farmers do not use chemical fertilizer, pesticides, and ground water for irrigation since these have harmful effects on the environment. They perceive that pesticides used to protect the crops from pests in the conventional agriculture system not only kill the pest but also destroy all life forms necessary for the fertility of soil. Since monoculture (cultivation of uniform crop) and unreliable seeds are the two main reasons of pest attack, Nayakrishi farmers do mixed-cropping and use local varieties of seeds (UBINIGa). Mixed-cropping manages the pest through constant regeneration of biodiversity. In the mixed-cropping system, farmers cultivate multipurpose trees for fuel wood, house construction materials, and fruits around the paddy and vegetable fields. To maintain soil fertility, farmers use crop rotation techniques and compost instead of chemical fertilizer (UBINIGb).

In the Nayakrishi farming practice, seeds and genetic resources are conserved at the household as well as com-

munity level to make farmers independent of multinational seed companies. Women preserve, store, germinate, and tests seeds for cultivation. The popular perception of rural women about the possession of seeds is that the loss of seeds from the household also means the loss of their power. In the agrarian culture, the women are the ones who conserved, preserved, and germinated seeds before the intervention of modern agriculture. The intricate knowledge of seed preservation and germination is transmitted from mother to daughters, sister to sister, mother-in-law to daughter-in-law.

The Nayakrishi farmers prefer local varieties of crops for cultivation since these seeds can be preserved in households and are more suitable for the land and eco-systems. The women members of the Nayakrishi have started to rebuild their own "seed wealth" centres. The concept of developing centres for seeds contrasts strongly with concepts of "seed banks" or "gene banks." The peasant women are against any centralization of seed wealth in the form of a commercial bank. They prefer to preserve seeds in their home.

Regam writes that farmers have established community seed wealth centres which enable them to exchange seeds and seedlings with incurring any costs. The community seed wealth centres have been set up on the basis of knowledge and experience of women in seed preservation. In these centres women regularly meet and share knowledge about seed preservation, horticulture, and food processing. For seed preservation and germination women use their traditional knowledge. For example, in preserving common seeds of rice, pulses, and wheat, women collect good seeds and clean them by hand to remove dirt and degradable organic matter. These seeds are dried under the sunlight for several days and then kept in a cool place and poured into a *kalash* (an earthen pot). Dry sands are placed on the top of the pot and the pot is sealed with clay. This pot is kept in a cool, shaded place. Vegetable seeds are sometimes kept in colored bottles (Mazhar). Seed preservation materials and processes vary on the basis of the type of seeds.

The Nayakrishi women run nurseries in their homesteads to produce seedlings. In the nurseries they plant different local fruits and timber trees such as jackfruit, mango, banana, Neem (Azardiracta indica), Arjun (Terminalia arjuns), and Shegun (Tectona grandis). They collect different varieties of the same types of these trees. For example, the Nayakrishi farmers have collected 27 varieties of paddy, 38 varieties of jackfruit, ten varieties of mango and 12 varieties of banana from different rural areas. Collecting and cultivating different varieties of crops and trees, the farmers regenerate biodiversity and preserve genetic diversity (UBINIGc).

In the Nayakrishi farming system, women's participation is not limited to seed conservation and homestead gardening. They also participate in marketing the crops, plants, and vegetable, raising poultry and livestock, and producing compost. The Nayakrishi farmers, both male and female, sell their products in local markets. Consumers are also interested in buying the products since these are free from chemical fertilizers and pesticides. In one area, the Nayakrishi farmers have formed their own market to sell products.[1] They gather in the area twice a week and sell their products collectively.

The key figures in the Nayakrishi farmers' network are the *gram karmi* (village extension workers) who persuade farmers to learn this new farming system. The experienced male and female farmer work as *gram karmi* to extend this movement by mobilizing farmers in rural areas. These workers tell their friends, relatives, and other villagers about the movement and share their experience. Akhter claims that more than 25,000 farming households in Bangladesh are practicing Nayakrishi farming system.

The participation of women in agricultural production and marketing has elevated their status in the family as well as in the community. Since women in rural Bangladesh usually do not own land, their role in possessing as well as sharing seeds and associated knowledge and marketing crops in the Nayakrishi movement increases their dignity and power. Rengam claims that the incidence of violence against women in the villages where Nayakrishi movement began has decreased because women are essential to the movement.

Conclusion

In rural Bangladesh, women's level of participation in agriculture determines their status. The Nayakrishi farming system, currently practiced in some rural areas in Bangladesh, has reinstated women in agriculture. Women who were marginalized after the introduction of the modern agriculture system in Bangladesh are essential to agricultural production in the Nayakrishi. Women participate in all steps of production from seed conservation to crop marketing and their contribution in agricultural production has raised their status in the family as well as in the community.

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[1]See, for example, www.63.241.184.166/tcdcweb/experiences/social/cases/4-nayakrishi(1).htm.

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SUSAN MCCASLIN

AN INNOVATION TO GOD THE MOTHER

(To St. Julian of Norwich)

Bless us

God the holocaust mother
God the harried housekeeping mother
God the multi-tasking mother
God the dogged and determined mother
God the mother sleeping fitfully in boxcars
God the roughed up mother
God the mother of anorexic girls
God the singed mother of furnaces
God the mother subsisting on beans
God the mother typing God knows
God the poet mother
God the engineer mother
God the weeping mother
God the fatigued mother
God the wild and sequined mother
God the sweet mother napping
God the crosswise mother dancing
God the resurrected mother singing opera
God the Christly mother
God the born again mother in the stable of suburbia
God the Messiah mother
God the long-awaited mother of messiahs
God the mother saying Kaddish for her mother
God the babbling, pellucid grandmother
God the foreshortened mother
God the motherless mother
God the untamed hyena mother
God the designing mother of looms and tapestries
God the intertidal mother with anemones and starfish in her hair
God the lioness mother in her pride

Bless us
Bless us

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