Technological empowerment of women in agriculture

The situation in India
by Subbiah Arunachalam

When Indira Gandhi was Prime Minister, Indians used to say, half jocularly, that she was the only man in the cabinet. But the reality is different for most women in India, as in many other developing countries. Not only in rural households but even in urban middle class families, women often do most of the work yet have little say, as Subbiah Arunachalam reports.

In a number of developing countries, the girls suffer particular discrimination in terms of the quantity and quality of the food provided, of education and health care and with regard to social status. Infanticide even takes place in the most extreme cases, as happened just two years ago in the southern Indian state of Tamil Nadu, where hundreds of new-born female babies were killed.

In the lower income families, unemployed husbands beating their wives and taking away their meagre earnings for buying liquor is a common phenomenon. Women in such families have not only to do all the household work including cooking, looking after the children and fetching firewood and water often from a long distance but also have to work outside the home to earn some money to keep the family going.

Ironically, the woman is glorified in literature and art: the country itself is called Mother India and in the Tamil language is personified as a beautiful and noble woman. On the other hand development programmes have been built on the premise that what is good for men is good for the family. But in many areas, this is patently not the case, because women effectively provide the
largest share of the family’s basic needs. If both the exchange value of labour, which is economically visible, and the invisible use value are taken into account, then it would be clear that women contribute as much as, if not more than, men to the world’s economic output.

A study of the M S Swaminathan Research Foundation in Chennai has shown that in Pichavaram and Muthupet, two coastal villages near the temple town of Chidambaram, women take care of nearly 75 per cent of the responsibilities but are involved in less than 30 per cent of the household decisions. Such a condition are not conducive to sustainable development.

Women play an important role in agriculture, in the production, storage and processing of food. Studies conducted in sub-Saharan Africa have shown that rural women work, on an average, 50 per cent more hours per day than men on both agricultural and other tasks. Often the work women perform involves much drudgery and brings in very little income. A 1984 study in Botswana indicated that although women contributed close to 70 per cent of the value production they received the benefit of less than 15 per cent of national agricultural outlays.

Bina Agarwal, one of India’s leading experts in gender studies in economics, has shown that in farms growing high yielding varieties of rice (paddy) in the southern Indian state of Andhra Pradesh, female casual labour, hired on a daily wage basis, contributes nearly 46 per cent of the total labour time involved, and it is used predominantly in sowing, interculture and harvesting and to some extent in threshing. Of the total labour time spent on sowing, as much as 67.4 per cent is contributed by female casual labour. The corresponding figures for interculture and harvesting are 6.9 per cent and 61.6 per cent.

In the Himalayan kingdom of Nepal, women provide more labour inputs in major cropping enterprises than men, says a recent report by Punya Regmi and Karl Weber. Except for ploughing, puddling, bund/channel repair, irrigation and threshing, Nepali women shoulder more responsibility and workload. Indeed, in activities such as manuring, transplanting, seed selection and grading, interculture/weeding, and bundling/loading, they bear the lion’s share.

Also, in societies where men migrate in search of work, women become the principal breadwinners. “In spite of the key role of women in crop-husbandry, animal-husbandry, fisheries, forestry and post-harvest technology, those in charge of formulating packages of technologies, services and public policies for rural areas have often tended to neglect the productive role of women,” says Bina Agarwal. Indeed, women face severe handicaps. By and large, women, in the rare cases where they own land, have limited access to extension advice, productive land, institutional credit, and improved production, processing and transport technologies. Most women don’t own land, anyway.

“They are, in fact, the largest group of landless labourers, with little real security in case of break-up of the family through death or divorce; inheritance laws and custom discriminate against them,” says M S Swaminathan. Conditions are deteriorating so fast that the women’s share of the world’s poor has risen steadily in the past two decades and stands close to 70 per cent today, making feminisation of poverty a major issue. How can we reverse this neglect and help these women to earn their due? For Shilpa Patel of the M S Swaminathan Research Foundation, helping them upgrade their skills would be the first step towards empowering them - skills that would enable them to overcome drudgery and improve their efficiency, productivity, and capacity to earn.

That is precisely what a team of the J R D Tata Eco-technology Centre in Chennai, led by K Balasubramanian (Bala), has been doing successfully. Bala points out that the only assets these women have are time and labour and the one way to help them is to add value to their time and labour. It makes sense, as studies have shown that the income of women is usually spent on food, health of the family and education of the children and that often money in the hands of men gets squandered on liquor and non-productive pursuits.
In a well thought out programme, Bala and colleagues are actually performing a social scientific experiment using selected villages as their laboratory. Through simple knowledge-intensive interventions, they are not only helping women to learn new skills but also showing them how to market their produce and to access relevant information. While they are keen to bring about gender equity through technological interventions, they strive hard to ensure that their interventions are ecologically viable, economically feasible and socially acceptable. It is important in a society stratified by multiple variables such as caste, class and gender that the interventions are planned carefully and executed with the community's participation.

The villages were selected on the basis of needs. In the initial phase, the project team and the village community discuss the project as a joint venture in technology innovation and management. In the next phase, a structure for interactive learning is established. Two or three members of the project team live in the village. Traditional wisdom is blended with modern science, and the technology is tested, reviewed and evaluated by the village community.

Training, technical support and systems management are planned in such a way that an organisational base is created for sustaining the process after the withdrawal of the project. A successful example is the ongoing seed village project at Kannivadi village in Dindigul district of Tamil Nadu, where Bala's colleagues are trying to add value to the time and labour of landless and other poor women through skill empowerment. By providing skills in quality hybrid seed production and vegetative propagation and with appropriate market linkages the project aims to enhance the income of these women.

Local farmers are trained to produce these seeds so they could employ these women. From August 1996 through to September 1997, nearly 100 acres of land came under hybrid seed production, including sunflower, brinjal (egg plant), bhendi (ochre), tomato and cotton. More than 140 women have been trained so far and 160 more are currently receiving training. The enthusiasm and sense of achievement of the participants must be seen to be believed. Another success story is being unfolded at Srinangapuram in Theni district of Tamil Nadu. In this cotton-growing village, Bala's team is training the village women in the production of Trichogramma sp., a parasitoid for cotton pests, and in placing the 'Trichogramma' cards in cotton fields. Use of this biopesticide has helped reduce the application of chemical pesticides in the farms of participating farmers.

In December 1997, the M S Swaminathan Research Foundation took stock of these efforts in two seminars, one on technological empowerment of women in agriculture and another on replicable models of women's empowerment and sustainable development. The challenge is huge. One is reminded of Robert Frost's famous words: "And miles to go before I sleep."

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