



Women in Sugarcane Farming: Challenges and Opportunities

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ABSTRACT

Sugarcane industry in India is an important contributor to the national economy through the production of multiple products for national and international consumption. The production and processing of sugarcane is a major source of employment in the country. Women form the backbone of sugarcane cultivation; they still tend to exist as “the hidden farmers” with almost negligible access on land, resources, technologies, financial services, markets and even education. With the growing feminization of agriculture, there is need to develop specific strategies for women in sugarcane agriculture to develop their skills and strengthen their capacities as it significantly contribute to domestic production and employment.

Key Words: Sugarcane, Farm women, Gender inequality, Empowering skills.

INTRODUCTION

Sugarcane and beet are being produced in over 130 countries, with sugar cane accounting for 65-70 per cent of global production. Developing countries will account for nearly all future production growth raising their share from 67 per cent in the period 1998-2000 to 72 per cent by 2020 (Singh *et al*, 2013). The sugarcane industry in India is an important contributor to the national economy through the production of multiple products for national and international consumption as well its contribution to recent regulatory requirements for bio-eth-anol to be included as a constituent of petroleum-based fu-els.

The production and processing of sugarcane is a major source of employment and livelihood in India. Sugarcane is an annual crop engaging around 50 m. farmers of which approximately half are women. Even though women form the backbone of sugarcane cultivation, they still tend to exist as “the hidden farmers” with almost negligible access on land, resources, technologies, financial services, markets and even education. Despite their exclusive inputs in agricultural operations like farm yard manure application, sett planting and treatments, hand weeding and de-trashing, cane bundling, disposal of trash and plant

protection measures, the output of the land controlled by women is drastically lesser than the male counterparts. In addition, besides the significant contribution of women in farming, considerable disparity in wages still exists between the male and female labourer (Wichterich, 2000). On an average, women labourers are paid only 50 per cent as compared to the male counterparts per day for the same work duration.

Women continue to provide a large proportion of the labour that goes into agriculture, FAO's estimates show that women represent a substantial share of the total agricultural labour force, as individual food producers or as agricultural workers, and that around two-thirds of the female labour force in developing economies is engaged in agricultural work (Carr *et al*, 2000). Apart from direct participation in farming, women are also at the forefront of sugarcane research, cultivation and processing as researchers and academicians. Statistical projections indicate that if women have same access to resources as men have in sugarcane farming, land exploitation can increase by 20-30 per cent, raising the economy by 2.5-4.0 per cent. An increasing body of literature on gender-related aspects of trade has been emerging over the last decade. However, there is little

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empirical information available about women's involvement in trade expansion, and the impact of agricultural trade liberalization on women's rights and roles in agriculture and the rural economy. Therefore, a paradigm shift is required to alter the role of women in increasing sugarcane agriculture productivity and production.

This article shall provide a platform for discussing the challenges and issues faced by women that may be useful to prepare a road map for women empowerment in sugarcane farming by researchers, farmers, policy makers and administrators.

Women's Work And Globalization

Women have always worked in the production of food and other products in rural areas. However, official statistics are determined by reporting in line with official definitions of agricultural work, which tend not to recognize women's contribution to agricultural activities, despite efforts to improve gender-differentiated data in agricultural census and household surveys. Women in agriculture in the most developing countries play important roles in household food security as income earners, nurturers, and managers of natural resources and biodiversity, although the success with which they are able to execute these roles is often mitigated by restricted access to land, labour, capital and technology. Food security and family well-being are clear reasons for protecting or enhancing women's access and control over land and other productive resources.

Studies have shown that resources controlled by women are more likely to be used to improve family food consumption and welfare, reduce child malnutrition (Rossi Rocha *et al*, 2007) and increase overall well-being of the family. The necessity for thorough assessments of how trade liberalization may or may not impact on food security, nutritional status and/or access to agricultural inputs and other productive factors - from a gender-differentiated perspective - should be seen in this context. With the growing feminization of agriculture, there is need to develop specific strategies for women in agriculture. Apart from conferring land rights, it

is also essential that Ministry of Woman and Child Development (MWCD) work in close cooperation with Agriculture to develop their skills and strengthen their capacities as well as access to cheap finance and other inputs.

Most women workers in India are engaged in agriculture, where livelihoods are insecure and wages are low. There also exists a significant gender gap in terms of wages. Women's unpaid work is "invisible" and unrecognized both socially and in the national accounting schemes. Actions to improve women's work and livelihood outcomes in a context of globalization include: Support processes to engender global trade agreements and treaties; Support efforts to promote policies and institutions which give women, especially rural women, employment, ownership and access to economic resources, assets, capacity building and social security; Attention to training and re-focusing of skills continue to strengthen the networks of women workers in the informal sector and extend and deepen the reach of information and communication technologies (ICT) beyond the educated middle class, including women.

New Opportunities For Women

Women empowerment refers to increasing the spiritual, political, social or economic strength of women. It often involves the empowered developing confidence in their own capacities. The increased input of female labour into agro-processing and manufacturing export activities tends to be associated with the ongoing process of liberalization in trade and investment, and with the expansion of TNC (transnational corporations) operations in developing economies. These new job opportunities do not always result in improved living conditions for women and their families. Heightened demand for female labour is not usually associated with higher wages but is widely observed to be associated with an increase in flexibility of the labour market. This generally goes hand in hand with low wages, lack of social protection, and poor contractual conditions such as very short-term contracts with reduced benefits, long working hours, and no rights of association, all of which exacerbate the exploitation of women and child labour.

The greater involvement of female labour in producing export crops does not correlate with a substantial increase in women's income, owing to low wage-levels, and women's contribution to family income may actually decline (Joekes, 1999). In monetary and non-monetary terms, this may further reduce her bargaining power within the household. In addition, since a large part of rural women's contribution to the household livelihood is not monetary, in order to estimate women's gains from job remuneration in exports it is necessary to consider the opportunity cost of women's labour.

While women in rural areas may benefit from increased employment in the agro-export sector, they also tend to bear a disproportionate share of the costs associated with the conflicts and crises of the trade liberalization era. Following the East Asian crisis of 1997-98, for instance, around 25 per cent of those who dropped out of the labour force were women, compared to 7.4 per cent of men. Additionally the number of women with more flexible and short-term contracts in agricultural related activities rose (Kendre, 2011).

Empowering Through Skills Training

For generations of workers in the sugar cane plantations of north-eastern Brazil, the long months between harvests have been a time of hunger. Sugar cane cutting is hard labour. Women workers rise in the early hours to prepare food for their families and leave for work before dawn, working long hours in the scorching sun. Alternatives are limited. An innovative training programme which offers participants training in non-traditional jobs is using the time between the harvests to change women's prospects, with transformational effects. There are success stories of woman sugarcane growers achieving higher productivity by adopting new improved planting techniques, best agriculture practices, irrigation, systems that reduce water consumption and integrated pest management practices. This can be achieved only through training women growers and encouraging their participation in all agricultural activities.

As a part of women resource development, Vasantdada Sugar Institute annually organizes Shetty Dndyan Laxmi training programs

specifically for women cane growers from the Maharashtra state on improved cane cultivation technologies. The program was initiated in the memory of Late Vasantdada Patil, Founder President of the institute and is very appropriate forum where the women sugarcane growers from Maharashtra state get an opportunity to gather, combine, interact, share and also learn the advance practices in sugarcane farming. Open house discussion sessions are conducted at the end of every training program. These training programs have been immensely helpful for the women trainee farmers to enhance their skill, gain knowledge and confidence (Deshmukh, 2013).

Women in the sugar industry need better communication, networking and information exchange among other women. Many women working in the sector support their family and are unable to attend industry meetings, workshops or training session. It is needed to disseminate information to them via other communication means and information sharing, viz e-mails, online networking, social networking etc. To fulfill gender equality through several Articles of the Constitutional mandates, the government of India has taken several steps to empower women and women welfare through a series of women specific scheme and creation of National Policy for Empowerment 2001.

For economic empowerment, it is necessary for women to have access to and control over productive resources for some degree of financial autonomy. Congregation of women plays a dominant role in women empowerment. Self Help Group (SHG) is a good medium to congregate women. By the end of December, 2011, 7.89 lakh women from 12,243 villages were participating in 61,072 SHGs. The total saving of these women was about Rs 176 crore and the total internal loan was Rs 493 crore. Loan received from various banks to SHGs was Rs 384 crore (Anonymous, 2004).

In nutshell, to enhance the capacity and capability of women farmer in sugarcane, they need to be given comprehensive understanding of necessity of training each activity. In extension program, exclusive training program should be organized for women farmer on each topic/subject.

Preferably, women trainers should be engaged in initial period and once the women farmers become aware of various activities and inputs required, faculties of various discipline can be brought in training to strengthen the concept and practicability of the training. The exposure involving various aspects of sugarcane cultivation to women farmers will empower them to give desired results. The training and exposure should be a continuous process to acquire knowledge about latest technologies and their utility in practical operations.

Participation of Men And Women in Different Sugarcane Farming Operations

Sugarcane farming is performed by men and women both, their practical level can differ in various activities (Table 1). Various sugarcane farming operations like ploughing, spraying, cleaning irrigation channels, earthing up, spraying plant protection chemicals and off barring are being done exclusively by men. These activities are laborious and cumbersome and hence being done by men. Activities like spreading setts in the field, sett planting and covering, hand weeding and detrashing are done exclusively by farm women. These activities are also laborious but do not demand physical energy as required by the activities done by men. In all the other activities, there exists wide variation (Shanthy, 2010).

Futuristic Role of Women In Sugar Cane Cultivation

The Prime Minister of India, Pundit Jawaharlal Nehru, Once said *"In order to awaken the people, it is the women who have to be awakened, Once she is on the move, the family moves, the village moves, the nation moves"*. Sugarcane cultivation is whole time engaging agricultural activity. The crop being of a sturdy nature, it can absorb shocks such as water stress, lack of fertilizers etc. However, the effect of neglect is evident on its yield and productivity. Presently, the sugarcane crop is showing day by day decrease in its cultivation of sugarcane. Considering the future need of sugar for the country, it is imperative to re-examine the issues of sugarcane cultivation

right from selection of variety till harvesting at appropriate time. Therefore, the journey of sugar cane crop invites attention at every stage of its growth. However, it must be emphasized that through sugar mills, the sugarcane crop brings out overall development in that area. The area under sugarcane has increased in our country, but the average yield and sugar recovery are low compared to their potential and remained stagnant over the years. The reasons for low sugarcane yield and average sugar recovery are as follows:

1. Inadequate availability of quality seed material
2. No proper adoption of the varieties having high yield and high sugar
3. Inadequate irrigation facilities and poor water management practices
4. Poor drainage and ill-health of the soil
5. Lack of adequate and timely application
6. Inadequate farm mechanization in major farm operation
7. Inadequate efforts to control insects, diseases and weeds
8. Negligence to ratoon crop
9. Lack of participation of sugar mills in development activities
10. Lack of efficient technology transfer mechanism
11. Inadequate farm credit

In future, the above reasons of low sugarcane and sugar productivity will continue, in addition to following major problems and limitations:

1. Limitation to increase the area under sugarcane
2. Increasing cost of cultivation
3. Soil fertility deterioration
4. Disturbance of cyclic nature on sugar production
5. Shortage of man power
6. Shortage of electric power
7. Fragmentation of land
8. Diversion of sugarcane area to other competitive crops

Table 1. Extent of participation of men and women in different sugarcane farming operations (N=94) a case study from India

S.No.	Activities	Coimbatore		Puducherry		Chidambaram	
		Men	Women	Men	Women	Men	Women
1	<i>Land preparation</i>						
	Ploughing	100	-	100	-	100	-
	FYM application	13.33	86.67	8.82	91.18	16.67	83.33
	Forming ridges & furrows	100	-	100	-	100	-
2	<i>Planting</i>						
	Sett cutting	60	40	17.65	82.35	83.33	16.67
	Sett treatment	20	80	-	-	6.67	93.33
	Sett transport	-	100	14.71	85.29	-	100
	Spreading setts	-	100	-	100	-	100
	Sett planting & covering	-	100	-	100	-	100
3.	<i>Weed management</i>						
	Spraying weedicide	100	-	100	-	100	-
	Hand weeding	-	100	-	100	-	100
4.	<i>Fertilizer application</i>						
	Applying Super PO4	66.67	33.33	44.12	55.86	40	60
	N&K top dressing	46.67	53.33	38.24	61.76	43.33	56.67
5.	<i>Irrigation</i>						
	Guiding irrigation water	93.33	6.67	41.18	58.82	86.67	13.33
	Cleaning channels	100	-	100	-	100	-
6.	<i>Earthing up</i>	100	-	100	-	100	-
7.	<i>Detrashing</i>	-	100	-	100	-	100
8.	<i>Plant protection</i>						
	Supply of water	6.67	93.33	-	100	10	90
	Mixing chemicals	86.67	13.33	85.29	14.71	80	20
	Roguing affected clumps	93.33	6.67	82.35	17.65	90	10
9.	<i>Harvesting</i>						
	Cutting the cane	86.67	13.33	55.88	44.12	80	20
	Detopping the cane	6.67	93.33	5.88	94.12	26.67	73.33
	Cleaning the cane	6.67	93.33	5.88	94.12	26.67	73.33
	Bundling	10	90	11.76	88.24	13.33	86.67
	Transporting the cane	60	40	38.24	61.76	66.67	33.33
10.	<i>Ratoon management</i>						
	Collection of trash	13.33	86.67	8.82	91.18	13.33	86.67
	Trash disposal	26.67	73.33	20.59	79.41	16.67	83.33

(Source: Shanthi, 2010)

Multi Dimensional Role of Women in Cane Cultivation

The cane cultivation, at various level of growth, needs specific attention. Women, by nature have a focused view, sincerity and commitment to work. Their sense of belongingness is of high order. If women are actively involved in the cane cultivation activity, they will carry out their role very effectively and timely. If sugarcane cultivation activities are done on time, it has a positive effect on productivity. Cleaning of the field, seed selection, de-trashing,

sett treatment, sett distribution, planting, transplanting, weeding, irrigation, fertilizers applications, plant protection, harvesting, binding of the cane, transport, loading, of the cane in the vehicles in plant cane and trash mulching, stubble shaving, weeding, spraying, gap filling, and plant protection activities in ratoon crops require careful implementation of package of practices. All these activities need close supervision and monitoring. Unfortunately, all these activities though carried out, it is done in a routine manner by the growers and are not supervised or monitored properly.

CHALLENGES FOR WOMEN WORKERS

Poor health and malnutrition

In rural areas, women's health is grossly neglected, even if she is the main person in the household. She will try to neglect her own health, while taking care of others which reduces her capacity to work (Gore *et al*, 2013)

Land Ownership

The land ownership is, by and large, held by the male farmers which make women totally dependent on her husband. Thanks to the amendments brought in Hindu Succession Act and some states have taken steps to joint ownership of husband and wife and gave co- parcenory status to daughters and widow of predeceased son.

Importance of latest technology in agriculture

The women do not get an opportunity to learn latest technologies in agriculture and other means of productivity enhancements. The training and extension activities but are also considered as unimportant.

Lack of education

Women in rural areas are comparatively not educated because of sheer workload they have to carry from their childhood. Preferential treatment is given to male child in every respect such as schooling, clothing and food whereas female child is deprived of all these and continues work till she gets married. Even after marriage, workload and responsibilities increase manifold. Moreover, considering the small and marginal farmers, a large labor force is required to carry out agriculture operations and female from the house deployed for that and even this, female work as labor on others farm too to earn livelihood. The above mentioned points of handicaps are only indicative but not exhaustive.

CONCLUSION

Women's increased responsibilities in recent decades for reproducing and maintaining the family, in most lower-income countries, have resulted in rather complex and demanding

livelihood strategies. In country like India, both men and women are equal partners in farming operations, more so in a labour intensive long duration crop like sugarcane gender determines who has access to the local resources and what kind of access they have. These diversified livelihood strategies have to respond to the internal and external dynamics that typically influence rural families. Technology training and input support to women farmers can create a positive impact on participation of women in sugarcane agriculture. The Government of India and the state governments have taken firm and proactive actions for giving women a right role in various activities and involved them in every sphere of life as enshrined in the constitution of India.

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