

Gender participation in maize production system in Tribal areas of Udaipur district, Rajasthan

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■ **ABSTRACT :** Women in agriculture play a vital role in wide range of activities, thereby contributing to sustainable agricultural development. To achieve inclusive agricultural growth, empowering women by having comprehensive understanding about work participation, gender issues, drudgery and health and nutritional status is necessary. The study was conducted in tribal development block of Udaipur district namely Kherwara. Data were collected from 160 tribal farm families by a pre-designed interview schedule. Different socio-personal characteristics revealed that most of the tribal women were in older age group, belonged to nuclear and not heading the family, illiterate and engaged in all type of agricultural activities and rearing small herd of livestock. Based on the study it was seen that farm women's participation was seen highest in removing of stalk, weeding, harvesting and post harvesting activities. The reason underlying may be that selected area have highest male migration rate for alternate employment and due to this women are more involved in all types of farm activities except ploughing and leveling.

■ **KEY WORDS:** Tribal, Gender participation, Maize production system

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Farming in India is mainly a family occupation. Most of the family members are actively engaged in farming. The farming capabilities for taking timely and judicious decisions by the farm families have a direct bearing on the agricultural development in country. There has been little realization about the contribution of women in the economic activities of a country. The female population constitutes nearly half of the total population. It is a well recognized fact that more than 60 % of agricultural operations have been traditionally handled by women. They also play a pivotal role in agriculture and livestock management. They still continue to share

number of farm operations with men from early ages of invention of agriculture to the present day of modern agriculture. The daily work schedule of rural women is very demanding and arduous. It is estimated that during peak period, women work every day for about 8-9 hours in agriculture and 4 hours in household activities and there are certain agricultural operations in which female agricultural workers are considered better than male workers as studied by Bhole and Pattai (1998). Women carryout many jobs as weeding, transplanting, harvesting, threshing and storing grains, tending animals and providing fuel and water (Swaminathan, 1993). Looking at the

significant role of tribal women in agriculture and allied activities, the study on tribal woman's role in maize production system was undertaken keeping in view of the increasing importance of involvement of tribal women in agricultural production system. Farm women are the backbone of Indian agriculture. Growing food has been an interminable saga of her life. Rural women often manage complex households and pursue multiple livelihood strategies. Their activities typically include producing agricultural crops, tending animals, processing and preparing food, working for wages in agricultural or other rural enterprises, collecting fuel and water, engaging in trade and marketing, caring for family members and maintaining their homes (SOFA Team and Cheryl Doss, 2011). Rural women play key roles in agriculture sector by working with full passion in production of crops right from the soil preparation till post harvest activities (Ahmed and Hussain, 2004). They are integrated into the rural economy, however, their relevance and significance in agriculture cannot be overemphasized (Rahman, 2008). The present investigation on role of tribal women farmers in agriculture in Udaipur district was undertaken with the objective to study gender participation in maize production operations.

■ RESEARCH METHODS

The present investigation was carried out in the Kherwada Tehsil of Udaipur district of the Rajasthan state, which is one of the tribal districts of the state. In selecting the district the main consideration was the agriculture as the main occupation of people living in such villages. In this area male migration rate is also high. From the selected tribal villages, 160 respondents were randomly selected. The structured interview schedule keeping in view the objectives of the study was prepared and used for the data collection. Data were collected by arranging personal interview from the total selected 160 tribal farmwomen. An exploratory research design was used for this study as the study was concerned to find out the gender participation in agriculture.

■ RESEARCH FINDINGS AND DISCUSSION

Women make important contributions to the agricultural and rural economies of all regions of the world. However, the exact contribution both in terms of magnitude and of its nature is often difficult to assess

and shows a high degree of variation across Countries and regions. This paper presents an overview of the evidence on the participation of women in maize production system.

Background characteristics of respondents :

Background characteristics of respondents engaged in Maize Production System pertaining to age, caste, family type, size, years of farming, education, occupation, income, land holding size were analysed and presented in table .The majority of respondents (45%) belonged to age group of 30-40 years followed by 40-50 years (30%) and 20-30 years (22.50%). All belonged to schedule tribe and 91.25 per cent had nuclear families. Majority (60 %) had medium size family with 5-8 members, followed by small family size (25 %) and only 15 per cent with large family size. Majority 45 per cent were engaged in farming since last 20-30 years, 30 per cent of them were engaged in farming from 30-40 years and 22.50 per cent from 10-20 years. The wide range of year of farming was found because of male migration. The young male population of selected village is migrated to nearby urban places for income generation.

The results also revealed that maximum 65.62 per cent respondents were illiterate while majority *i.e.*, 13.12 per cent were educated upto middle school, 12 per cent received education upto high school while only 4 per cent were graduate. It was elicited that main occupation of 84.37 per cent of respondents was agriculture and service while 15.62 per cent of them were involved in agriculture only.

Data depicted that a majority of 85.62 per cent of respondents were small farmers, 10 per cent were marginal farmers while only 4.37 per cent possessed large landholdings. All of them had irrigated land but 25 per cent also had unirrigated land.

Gender participation in maize production system:

Women play a significant role in farming and managerial activities. An analysis of gender participation in different activities of maize production system from Table 1 depicted that under the land preparation activity removing of stalk and stubbles was observed as women dominant activity (91.25), which was either done manually or by hand operated tools like daranti, favda, kudali etc. The preparation of channels for irrigation was also found women exclusive (60.20%) and women

dominated (30 %) which also depicted highest women participation. In manuring activity transportation of manure was 66.87 per cent women exclusive and 33.12 per cent women dominated. In sowing activity seed treatment was totally (89.25 %) done by women, whereas seed broadcasting activity was found 40 per cent women dominant. The results of weeding operation revealed that this activity was mostly done by women only. The male participation was very less. In plant protection nipping was observed as women dominated operation (76%), harvesting activity was also found with high women participation. Similarly baggage and transport, stripping

and maize shelling were also observed as high women participatory operations, which were either dominated or exclusively done by women.

The study conducted by the AICRP FRM on maize crop in rural area was compared with the present study and it was observed that in tribal area participation of women is high in agriculture operation due to high rate of male migration (Annual Report AICRP-H.Sc.(FRM) 2015-2016).

Only two activities which were men exclusive were ploughing by country plough and levelling and it was also found that these two activities were mechanised and

Table 1 : Percentage distribution of gender participation in different activities of maize production system

Sr. No	Farm activity	Gender participation				
		Women exclusive	Women dominant	Men exclusive	Men dominant	Equal participation
1.	Land preparation					
	Removing of stalks and stubbles	1.25	91.25	0	0	7.50
	Ploughing	0	0	100	0	0.00
	Leveling	0	0	100	0	0.00
	Compartment bundling	17.50	14.94	0	0	67.56
	Preparation of channels for irrigation	60.625	30	0	0	9.38
2.	Manuring					
	Transportation of manure	66.875	33.125	0	0	0.00
	Mixing of manure	72	28	0	0	0.00
	Spreading of manure	39.375	20	0	0	40.63
3.	Sowing					
	Seed treatment	47.25	42	0	0	10.75
	Seed dropping	39.375	28.125	0	0	32.50
	Dibbling	0	0	0	0	0.00
	Broadcasting	0	40	0	10	50.00
4.	Weeding					
	Weeding (Plant to plant)	66.875	33.125	0	0	0.00
	Interculturing (Row to row)	76.25	10.625	0	0	13.13
	Top dressing	55	16.875	0	0	28.13
5.	Plant protection					
	Spraying	12	17	0	0	71.00
	Dusting	12	17	0	10	61.00
	Nipping	5	76	0	0	19.00
6.	Harvesting					
	Picking	21.25	56.875	0	0	21.88
	Gathering	34.375	23.125	0	0	42.50
7.	Baggage and transport					
	Bagging at field	19.375	56.875	0	0	23.75
	Manual carrying and loading	31.875	24.375	0	0	43.75
8.	Stripping	0	82	0	0	18.00
9.	Maize shelling	0	82	0	0	18

improved technology like tractor was used to perform. Results also depicted that the activities like preparation of irrigation of channels, transportation of manure, mixing of manure, seed treatment and dropping, weeding, interculturing and top dressing, picking and bagging at field were done by women only. These activities were found either women dominating or women exclusive. Chayal and Dhaka (2010) conducted study on analysis of role performance of women in farm activities also revealed similar results.

Perusal of the data in regards to participation of tribal farm women in harvesting and post-harvesting operation revealed that the highest participation of the tribal farmwomen was observed in nipping, picking and harvesting followed by harvesting, storage, bagging / packing and stripping and maize shelling, respectively.

The variation of women's participation in various operations of maize production system may be due to regional differences but by and large field preparation, weeding, harvesting, maize stripping and shelling were the activities dominated by women farmers.

Chandra (2005) in a study on "participation of tribal women in agriculture" found that participation of respondents was more (75%) in five agricultural activities viz., preparation of land, raising of seedlings, weeding, harvesting and cleaning of seeds.

Summary and Conclusion :

Women play a significant and crucial role in agricultural development and allied fields. It is most unfortunate that the role of women in agriculture is not yet highlighted in India. They continue to remain as an invisible workers. It was observed that more than 75 per cent women are involved in activities like winnowing, weeding, grading, harvesting and cleaning of field farm operations. Various activities done by women in agriculture and allied field such as manually handling loads/material, harvesting, transplanting, land preparation,

cleaning of animal sheds, feeding the animals and disposal of cow dung involved a variety of postures like sitting, squatting, stooping, sitting cum bending, standing cum bending, erect standing etc. There are various ill effects and musculoskeletal problems of such postures and in order to minimize the adverse effects of these postural discomfort and hazards, an ergonomic evaluation of occupational and farm activities need to be conducted.

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