

## PARTICIPATION OF FARM WOMEN IN AGRICULTURE AND ANIMAL HUSBANDRY

Chhaya Badiger<sup>1</sup> & Shobha Huilgol<sup>2</sup>

Nearly half of the available human resources in India are women. It has been roughly estimated that women represent 50% of population and have contributed about 10% of income and own less than 1% of the world's property. According to 1991 census the total population of women was 406.61 million of which 304.04 (75%) are living in rural areas and most of them are illiterates, and are below poverty line having poor economic status and also to this is added the male dominance.

The gender basis has been observed in all agricultural systems present, major obstacles in achieving sustainable development. In comparison with men, rural women have more limited access to all kinds of resources. Women need to be viewed not as beneficiaries but as active participants in the process of development. There is a need to change her capacity to work, her knowledge and her skills. Hence, the study was conducted with a following objectives.

1. To know the extent of participation of farm women in agriculture and animal husbandry.
2. To know the frequency and amount of work done in agriculture and animal husbandry.
3. To know the health hazards observed by the farm women in agriculture and animal husbandry.

### METHODOLOGY

Under the NATP project on "Empowerment of Women in Agriculture" in Karnataka

state Dharwad and Hubli blocks were selected for the study purpose. In Dharwad block the villages selected were Yadwad, Mugad and Garag. In Hubli block Byhatti, Kusugal and Hebsur, were selected.

In each village 90 respondents from small and marginal farm families were selected. These respondents were divided into 6 self-help groups each constituting of 15 members. With the help of structured schedule information was collected from a total sample of 540 farmwomen. Personal interview method and PRA techniques were adopted to gather the data. The data was analysed with the help of statistical tools.

Mean weighted score (MWS) was calculated by multiplying the cell frequencies by their respective weight, adding them and then dividing the sum by total number of respondents/group discussion.

$$MWS = \frac{f \times \text{Scale score}}{N}$$

Where,  $f$  = frequency

$N$  = Total number of respondents/  
GDs (group discussion)

The scores varied on five-point scale ranging from 1 to 5

In the total sample 85 to 90 group discussions were held, each group consisted of 6-7 farmwomen of SHG's. MWS range was categorised as follows –

MWS : 4.5 to 5.0 – Most frequently

MWS : 1.5 to 4.5 – Average

MWS: 1.0 to 1.5 – Least frequently

1. Asso.Prof.& PI 2. S.R. F., NATP,(Home Science Ext.),College of Rural Home Science, UAS, Dharwad (Karnataka)



## RESULTS AND DISCUSSION

From the table 1, it is observed that, cent percent participation of farm women were observed in sowing, transplanting, weeding, winnowing, drying, cleaning and dehusking. Least women participation was observed in shifting produce to threshing floor, leveling, raising nursery and marketing.

**Table 1. Extent of participation of farm women in farm activities N = 540**

S. No.	Farm Activities	Participation of farm women in farm activities (%)
1.	Ploughing	-
2.	Cleaning	90
3.	Leveling	30
4.	Raising nursery for seedling	44
5.	Sowing	100
6.	Transplanting	100
7.	Manure application	84
8.	Fertilizer application	79
9.	Weeding	100
10.	Thinning	94
11.	Gap filling	87
12.	Irrigation	45
13.	Plant protection measures	-
14.	Cutting	70
15.	Picking	92
16.	Shifting produce to threshing floor	25
17.	Threshing	31
18.	Winnowing	100
19.	Drying	100
20.	Cleaning	100
21.	Dehusking	100
22.	Shelling	98
23.	Grading	97
24.	Storage	90
25.	Marketing	45
26.	Processing	90

From the table 2 it is revealed that weeding, sowing, picking and cleaning of grains were the agricultural activities most frequently performed by the farm women having mean weighted score 4.5 to 5. Leveling, threshing and irrigation were the activities least frequently performed having mean weighted score 1 to 1.5. Amount of work done was

more in activities such as cutting, weeding, threshing and irrigation (MWS 4.5 to 5) and least amount of work done was observed in leveling of land, cleaning, winnowing, marketing and processing (MWS 1 to 1.5).

**Table 2. Frequency of work and amount of work done in agriculture N = 540**

S. No.	Farm Activities	Frequency of work MWS	Amount of work done MWS
1.	Ploughing	-	-
2.	Cleaning	1.25	1.36
3.	Leveling	1	1.16
4.	Raising nursery for seedling	2.4	4.2
5.	Sowing	4.78	3.43
6.	Transplanting	3.18	4.25
7.	Manure application	1.23	2.44
8.	Fertilizer application	1.93	1.78
9.	Weeding	5	4.8
10.	Thinning	2.7	4.27
11.	Gap filling	2.22	4.65
12.	Irrigation	1.2	4.68
13.	Plant protection measures	-	-
14.	Cutting	3.9	4.9
15.	Picking	4.7	3.35
16.	Shifting produce to threshing floor	1.6	4.25
17.	Threshing	1	4.79
18.	Winnowing	1.42	1.32
19.	Drying	3.23	4
20.	Cleaning	4.7	2.1
21.	Dehusking	1.16	3.2
22.	Shelling	4.12	2
23.	Grading	1.15	4
24.	Storage	1.36	1.8
25.	Marketing	1.6	1.28
26.	Processing	1.66	1.51

From the table 3 it is clear that maximum number of the respondents expressed that fatigue was observed in weeding followed by sowing, winnowing, cleaning and transplanting activities. Performing the farm activities like cutting, transplanting, sowing, and cleaning/leveling, picking and cleaning of grains observed maximum backache. Cent percent of the respondents reported the pain in limbs while performing the picking activity followed by cleaning of grains.



**Table 3. Health hazards observed by farmwomen in agriculture** N = 540

S N.	Farm Activities	Fatigue	Backache	Pain in limbs	Pain in finger tips	Skin allergy	Eye problems	Blindness	Food Poisoning
1.	Ploughing	336	48	60	24	84	222		12
2.	Cleaning/leveling								
3.	Raising nursery for seedling								
4.	Sowing	408	144	72	60	192	222		54
5.	Transplanting	318	282						
6.	Manure application	432	48						
7.	Fertilizer application								
8.	Weeding								
9.	Thinning / gap filling	378	534	72	600	168	42	126	
10.	Irrigation								
11.	Plant protection measures								
12.	Cutting	378	102	540	78	42	30		
13.	Picking								
14.	Shifting produce to threshing floor								
15.	Threshing	378	102	540	78	42	30		
16.	Winnowing								
17.	Drying								
18.	Cleaning	378	102	540	78	42	30		
19.	Dehusking								
20.	Shelling								
21.	Grading	378	102	540	78	42	30		
22.	Storage								
23.	Marketing								
24.	Processing								

Multiple responses are there

From the table 4 cent percent of farm women take participation in animal husbandry activities like grazing of animals, care of animal at the time of delivery, feeding colostrums to calves taking out the animal and offering water to animal followed by colostrum management, cleaning of cattle shed, boiling milk, churning milk, cleaning of utensils used for milking and preparation of feed, cleaning of cattle shed collection and disposal of dung. Fifty percent of farmwomen perform the activity such as preparation of cow dung cake. Purchase feed from market, preparation of feed at home, taking animal for artificial insemination and preparation of special feed for the sick animal are the animal husbandry activities performed by least percent of farmwomen.

**Table 4. Extent of participation of farmwomen in Animal husbandry activity** N = 540

S. No.	Animal husbandry Activities	Participation of farm women in animal husbandry activities (%)
1.	Cutting collection and making bundles of fodder	80
2.	Purchase of fodder	30
3.	Transportation of fodder	82
4.	Chaffing of fodder	42
5.	Feeding of animals	70
6.	Grazing of animals	100
7.	Purchase of feed from market	20
8.	Preparation of feed at home	20
9.	Cleaning of cattle shed	92
10.	Collection and disposal of dung	83
11.	Disinfecting cattle shed	40
12.	Cooking feed at the time of delivery	63



13.	Care of animal at the time of delivery	100
14.	Cutting of naval cord/ disinfecting naval cord	50
15.	Feeding colostrum to calves	100
16.	Removing mucus and cleaning of calves	75
17.	Cleaning/bathing of animals	80
18.	Taking out the animals	100
19.	Preparation of cow dung cakes	50
20.	Cleaning of utensils used for milking and preparation of feed	90
21.	Offering water to animal	100
22.	Deworming	-
23.	Taking animal for vaccination	-
24.	Taking animals for artificial insemination	20
25.	Removal of ticks	75
26.	Colostrum management	94
27.	Milking of animals	88
28.	Processing of milk into milk products	60
29.	Boiling of milk	90
30.	Churning of milk	90
31.	Sale of butter, ghee, khoa, cheese	40
32.	Marketing of milk	45
33.	Identifying the diseased animal	30
34.	Bringing doctor or taking the animal to the veterinary hospital	-
35.	Giving medicines	-
36.	Preparation of special feed for the sick animal	20

13.	Care of animal at the time of delivery	1	4.5
14.	Cutting of naval cord/ disinfecting naval cord	2.67	1
15.	Feeding colostrum to calves	2.18	4.2
16.	Removing mucus and cleaning of calves	1	2.6
17.	Cleaning/bathing of animals	4.27	2.62
18.	Taking out the animals	1	4.45
19.	Preparation of cow dung cakes	2.56	5
20.	Cleaning of utensils used for milking and preparation of feed	2.9	4.77
21.	Offering water to animal	4.1	4.6
22.	Deworming	-	-
23.	Taking animal for vaccination	-	-
24.	Taking animals for artificial insemination	3.6	2
25.	Removal of ticks	3.8	3.53
26.	Colostrum management	4.7	4.42
27.	Milking of animals	4.2	4.7
28.	Processing of milk into milk products	3.16	5
29.	Boiling of milk	4.11	4.55
30.	Churning of milk	4.05	4.55
31.	Sale of butter, ghee, khoa, cheese	2.1	4
32.	Marketing of milk	3.2	4.3
33.	Identifying the diseased animal	1.6	1
34.	Bringing doctor or taking the animal to the veterinary hospital	-	-
35.	Giving medicines	-	-
36.	Preparation of special feed for the sick animal	1	1

**Table 5. Frequency and amount of work done in Animal husbandry N = 540**

S. No.	Animal husbandry Activities	Frequency of work** MWS	Amount of work done** MWS
1	Cutting, collection and making bundles of fodder	4.6	3.37
2	Purchase of fodder	1	1
3	Transportation of fodder	1	1
4	Chaffing of fodder	2.07	5
5	Feeding of animals	3.69	4.28
6	Grazing of animals	2.7	2.92
7	Purchase of feed from market	3.69	1.8
8	Preparation of feed at home	2.7	5
9	Cleaning of cattle shed	1	3.91
10	Collection and disposal of dung	1	4.28
11	Disinfecting cattle shed	2.87	1
12	Cooking feed at the time of delivery	3.31	2.78

From table 5 it is observed that colostrum management and cutting collection and making bundles of fodder were the activities performed frequently which have got highest mean weighted score followed by cleaning / bathing of animals, milking of animals, boiling of milk, offering water to animal, purchase of feed from market and feeding of animals. Purchase of fodder, transportation of fodder, cleaning of cattle shed, collection and disposal of dung, taking out animal and preparation of special feed for the sick animal were the activities performed least frequently.



Regarding the amount of work done, chaffing of fodder, preparation of feed at home, preparation of cow dung cake, processing of milk into milk product were completely performed by the women having mean weighted score 5, followed by milking of animal, boiling of milk, churning of milk, colostrum management, cleaning of utensils used for milking, care of animal at the time of delivery and taking out the animals.

From the table 6 it is found that more than half of the respondents observed fatigue due to cutting, collection and making bundles of fodder, chaffing of fodder and transportation of fodder. Zoonotic infections and body ache are the health hazards expressed by collection and disposal of dung. Only few farmwomen expressed body ache due to cutting, collection and making bundles of fodder, transportation of fodder and chaffing of fodder.

**Table 6. Health hazards observed by farm women in animal husbandry activities**

N = 540

S N.	Animal husbandry Activities	Zoonotic infections	Fatigue	Bodyache	Skin problem	Any other
1.	Cutting collection and making bundles of fodder		336	24		
2.	Transportation of fodder		378	90		24
3.	Chaffing of fodder		438	54		78
4.	Feeding of animals					
5.	Grazing of animals					
6.	Preparation of feed at home					
7.	Cleaning of cattle shed					
8.	Collection and disposal of dung	294		228		
9.	Disinfecting cattle shed	30			174	78
10.	Preparation of cow dung cakes					
11.	Cleaning of utensils used for milking and preparation of feed					
12.	Deworming					
13.	Removal of ticks					
14.	Milking of animals					
15.	Processing of milk into milk products		108	120		252
16.	Churning of milk					

## CONCLUSION

The nature and extent of women's involvement in Agriculture and Animal husbandry activities vary greatly from region to region and even within a region, it varies widely among different farming systems and socio ergonomic status of families. In agricultural operations with respect to the amount of work, maximum number of women are participating in cleaning of the grains, fertilizer application, gap filling, transplanting,

sowing, grazing nursery for seedling, picking, drying etc. In animal husbandry operations, major amount of work done by the farm women are cutting, collection and making bundles of fodder, feeding of animals, cleaning of cattle shed, collection and disposal of dung, feeding of colostrums to the calves, boiling of milk and churning of milk. Technological empowerment of farmwomen in these agricultural and animal husbandry operations is of urgent need to reduce the drudgery.

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