

## **Gender issues in food, feed and fodder production**

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### **ABSTRACT**

**Key words:** Drudgery, Farmwomen, Health hazards, Women's participation, Access and control

Gender refers to the socially or culturally established roles of women and men. Though gender is universally one of the key ways in which societies and culture allocate rights and responsibilities, yet the different roles of women and men in agriculture and other related aspects have frequently been ignored in research and extension activities. This is due to gender blindness and assumption that all the farmers are men. Another reason for men oriented research and extension is possibly the inability to see women as farmers and understand that women farmers have different research and extension needs than men. As a result instead of "gender neutral" the technology has become "gender biased" or men oriented. Hence, we can say women in general and rural women in particular are given secondary status in the society. This situation needs to be changed. Women have to be considered as equal partners in the process of agricultural development. This can be achieved through the study in terms of division of labour between men and women, drudgeries experienced by them and Suggest technologies available for them. Keeping above situation in mind the present study was undertaken with the following objectives:

1. To find out the inter gender drudgeries of farm families.
2. To derive a technological framework for reducing drudgeries.

### **Methodology**

The study was conducted in Jhansi district of Bundelkhand. Eight villages (one village from each block) were randomly selected for investigation. From each village

25 farm families were selected with the help of proportionate random sampling for each category of farmers i.e. small, medium and large. By this way total 200-farm families were interviewed with the help of pre-tested interview schedules.

### **Drudgeries faced by male and female farmers**

Drudgery profile of the respondents on gender basis was assessed under following.

1. Workload involved in different activities
2. Occurrence of health hazards under different operations
3. Time duration involved in different activities

#### **1. Workload involved in various activities:-**

Workload of male and female farmers was analyzed in terms of heavy, moderate and light for each operation

#### **Operation wise workload perceived as heavy by respondents in Food, Feed & Fodder Production**

Out of total, seven operations were perceived as heavy. Data in table1 indicates that majority of the respondents perceived the operations as heavy like Ploughing in manual sowing (57.5%) Carrying and dropping seeds (57.5%), weeding or interculture operation (61%), harvesting by traditional sickle (54%) loading and unloading of straw(49%), ground nut digging (82.5%) and manual threshing (58%).

**Table 1. Activities perceived as heavy by respondents in Food, Feed & Fodder Production**

<b>Operation</b>	<b>Perception</b>			
	<b>H</b>	<b>M</b>	<b>L</b>	<b>WM</b>
Ploughing in manual sowing	115 (57.5)	59 (29.5)	26 (13)	
Carrying and dropping seeds*	115 (57.5)	51 (25.5)	34 (17)	2.41

Weeding / Intercultural Operation	122	46	42	2.5
	(61)	(23)	(21)	
Harvesting by sickle	108	62	30	2.39
	(54)	(31)	(15)	
Groundnut digging	165	27	8	2.79
	(82.5)	(13.5)	(4)	
Manual Threshing	116	64	20	2.48
	(58)	(32)	(10)	

### **Gender wise distribution of respondents in performing heavy activities of Food, Feed & Fodder production**

As far as the participation is concerned data in table 2 indicates that out of the total heavy activities women in majority were performing Carrying and dropping seeds (78.57%) harvesting by sickle (60%), digging of ground nut (78%) and weeding or intercultural operations (51%). While threshing manual (68.18%) was mainly done by male and female both. Ploughing in manual sowing (which was practiced by only 57 respondents) was specially performed by the male farmers (100%).

**Table 2 Gender wise Distribution of respondents in performing heavy activities of Food, Feed & Fodder production**

<b>Heavy</b>	<b>W.M.</b>	<b>M</b>	<b>F</b>	<b>B</b>
Ploughing in manual sowing *	2.51	56	0	0
		(100)	-	-
Carrying and dropping seeds*	2.39	2	44	10
		(3.57)	(78.57)	(17.86)
Harvesting	2.39	24	120	56
		(12)	(60)	(28)
Digging	2.79	20	156	24
		(10)	(78)	(12)
Threshing Mannual *	2.48	10	4	30

		(22.73)	(9.09)	(68.18)
Inter cultural Operation/weeding	2.5	40	102	58
		(20)	(51)	(29)

\*Particular activity is not performed by all the respondents

### **Operation wise workload perceived as heavy by the respondents in Animal Husbandry**

In case animal husbandry aspect (table3) the activities perceived as heavy by the respondents were fetching fodder (63%), chaffing manual (61%), taking animals for grazing (56%), care at the calving time and care of sick animals (59.5%), cleaning animals shed and collection of dung (61.5%) and dung cake making (62.5%).

**Table3. Operation wise workload perceived as heavy by respondents in Animal Husbandry**

Operation	Perception			
	H	M	L	WM
Bringing Fodder	126	58	16	2.55
	(63)	(29)	(8)	
Chaffing Manual	122	58	20	2.51
	(61)	(29)	(10)	
Taking animal for grazing	112	62	36	2.48
	(56)	(31)	(18)	
Care at the calving time	119	59	22	2.49
	(59.5)	(29.5)	(11)	
Cleaning Shed & collecting dung	123	52	25	2.49
	(61.5)	(26)	(12.5)	
Taking Dung on head	102	46	52	2.51
	(51)	(23)	(26)	
Dung cake making	125	46	29	2.48
	(62.5)	(23)	(14.5)	

### Gender distribution of male and female farmers in performing heavy Animal Husbandry activities

In case of heavy activities of animal husbandry (table 4) female farmers were doing cleaning of animal shed and dung collection (69%), carrying dung on head (77%) and dung cake preparation (91%). Male farmers mostly took animals for grazing (76.5%) while both male and female almost equally doing manual chaffing of fodder (32.5%) and care at the time of calving and care of sick animals (49%)

**Table4. Gender wise distribution of male and female farmers in performing heavy Animal Husbandry activities**

Heavy	WM	M	F	B
Bringing Fodder	2.55	38	92	70
		(19)	(46)	(35)
Chaffing by sickle*	2.51	65	32	25
		(32.5)	(16)	(12.5)
taking Animal for grazing	2.48	153	25	22
		(76.5)	(12.5)	(11)
Care at the time of calving & care of sick animals	2.49	98	14	88
		(49)	(7)	(44)
Cleaning shed and dung collection	2.49	27	138	35
		(13.5)	(69)	(17.5)
Dung cake preparation	2.48	10	182	8
		(5)	(91)	(4)
Carrying dung or head	2.51	10	154	38
		(5)	(77)	(18)

\* means particular activity is not followed by all the farm families

### Operation wise workload perceived as heavy by the respondents in household activities

In household activities (table 5) heavy activities as perceived by the respondents were fetching water (48%), fetching fuel wood (63%) & cleaning and sanitation of house (64.5%).

**Table 5. Operation wise workload perceived as heavy the respondents in household activities**

Activities	Perception regarding workload			
	H	M	L	WM
Fetching Water	96	66	48	<b>2.34</b>
	(48)	(33)	(24)	
Fetching fuel wood	126	62	12	<b>2.57</b>
	(63)	(31)	(6)	
Cleaning & sanitation	129	53	18	2.56
	(64.5)	(26.5)	(9)	

**Gender wise distribution of male and female farmers in performing heavy Household activities**

In household activities as far as contribution of male and female farmers is concerned all the heavy activities were performed mainly by female farmers (Table 6). As fetching of water (79%) fetching of fuel wood (68%) and cleaning and sanitation of house (80%) were found mainly as women's job.

**Table6. Gender wise distribution of male and female farmers in performing heavy Household activities**

Heavy	WM	M	F	B
Fetching water	2.34	17	158	25
		(8.5)	(79)	(12.5)
Fetching fuel wood	2.57	54	136	10
		(27)	(68)	(5)
Cleaning & sanitation	2.56	16	160	24
		(8)	(80)	(12)

**2. Occurrence of health hazards under different operations**

**Operation wise status of health hazards and gender participation patterns**

Operation wise status of health hazards was assessed in terms of their numbers in each operation. Data in table 7 shows the status of health hazards and gender participation in performing the activities having different extent of hazards. Out of all harvesting, weeding and digging of ground nut were found to have maximum number of health hazards i.e. five. As far as the participation pattern is concerned, the percentage of women farmers were found higher as majority of farm women were doing harvesting (59%), digging of groundnut (78%) and weeding operations (51%). Threshing and sowing manual were found as 2<sup>nd</sup> most hazardous operations as they cause four types of health hazards and showed the participation of both male and female farmers jointly in higher percentage i.e. 15 and 25 per cent, respectively..

**Table7. Distribution of respondents in the Operations having different extent of Health Hazards**

Operations	Rank	No of Health hazards	Participation		
			M	F	B
Harvesting	1	5	24	118	56
			(12)	(59)	(28)
Digging	1	5	20	156	24
			(10)	(78)	(12)
Weeding	1	5	40	102	58
			(20)	(51)	(29)
Threshing Manual*	2	4	10	4	30
			(5)	(2)	(15)
Sowing (Manual)*	2	4	4	0	52
			(2)	-	(26)

\*Means particular operation is not practiced by all the farmers

### 3. Time duration involved in different activities

**Activities perceived as long duration by the respondents in Food, feed and fodder production**

In case of production of food feed and fodder, the activities considered as long duration (Table8) by the respondents were manual sowing (66%), harvesting (72%), groundnut digging (58%), manual threshing (54%) and intercultural operations (52.50%).

**Table8. Activities perceived as long duration by the respondents in Food, feed and fodder production**

Activities /Operations	Long Durations	Avg. Durations	Short Durations	Wt. Mean
Manual sowing	132	47	21	2.56
	(66)	(23.5)	(10.5)	
Harvesting	144	45	11	2.67
	(72)	(22.5)	(5.5)	
Digging of groundnut	116	58	26	2.45
	(58)	(29)	(13)	
Threshing Manual	108	59	33	2.38
	(54)	(29.5)	(16.5)	
Intercultural operations	105	62	33	
	(52.5)	(31)	(16.5)	2.36

**Gender wise distribution of male and female farmers in performing long duration activities of food, feed and fodder production**

Data in table 9 indicates that in case of food, feed and fodder production, out of total five long term activities, women were found to be performing three activities i.e. harvesting(59%), digging of ground nut (78%) and intercultural operations (51%). Rest of the two long duration activities were found to be done mainly by both male and female i.e. manual sowing (59%), and manual threshing (51%).

**Table 9 Gender wise distributions of male and female farmers in performing long duration activities of food, feed and fodder production**

Activities /Operations	WM	M	F	B
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Manual sowing	2.56	37	5	70
		(18.5)	(2.5)	(35)
Harvesting	2.67	24	118	56
		(12)	(59)	(28)
Digging of ground nut	2.45	20	156	24
		(10)	(78)	(12)
Threshing manual	2.38	10	9	30
		(5)	(4.5)	(15)
Intercultural	2.36	40	102	58
		(20)	(51)	(29)

#### **Activities perceived as long duration by the respondents in Animal husbandry**

In animal husbandry the activities perceived as long duration (table10) were bringing fodder (67%), grazing (61%), dung cake preparation (49%), milk production (52.50%), care of animal at home (50%) and care at calving time (56%) .

#### **Table10. Activities perceived as long duration by the respondents in Animal husbandry**

<b>Activities /Operations</b>	<b>Long Durations</b>	<b>Avg. Durations</b>	<b>Short Durations</b>	<b>W. Mean</b>
Brining fodder	134	52	14	2.60
	(67)	(26)	(7)	
Grazing	122	52	26	2.48
	(61)	(26)	(13)	
Dung cake preparation	98	67	25	2.27
	(49)	(33.5)	(12.5)	
Milk Product preparation	92	86	22	2.35
	(6)	(43)	(11)	
Marketing of Milk & milk products	105	68	27	2.4
	(52.5)	(34)	(13.5)	
Care at home	100	70	30	2.35
	(50)	(35)	(15)	
Care at the calving time	92	76	32	2.30
	(46)	(38)	(16)	

## Gender wise distribution of male and female farmers in performing long duration activities in Animal husbandry

In long duration activities related to animal husbandry, women farmers were mainly contributing for four out seven activities (Table 11) like bringing of fodder(46%), dung cake preparation(91%), milk product preparation(89%) and care of animals at home(50%) whereas male farmers were mainly used to take animals for grazing (76.5%), marketing of milk and milk products(72.5%). Care of animals at the time of calving and care of sick animals (49%) was done by both male and female farmers

**Table11. Gender wise distribution of male and female farmers in performing long duration activities in Animal husbandry**

Activities /Operations	WM	M	F	B
Bringing fodder	2.60	38	92	70
		(19)	(46)	(35)
Grazing	2.48	153	25	22
		(76.5)	(12.5)	(11)
Dung cake preparation	2.27	10	182	8
		(5)	(91)	(4)
Milk product preparation	2.35	18	178	4
		(9)	(89)	(2)
Marketing of milk & milk products	2.9	145	18	95
		(72.5)	(9)	(47.5)
Care of animals at home	2.35	28	100	72
		(14)	(50)	(36)
Care at the time of calving & care of sick animal	2.3	88	14	98
		(44)	(7)	(49)

### Activities perceived as long duration by the respondents in household aspects

In case of household activities four were perceived as long duration (table12) like fetching water (62.50%), fetching fuel wood (61%), cleaning & sanitation (59%) and taking meal to farm (62%) and marketing of food, clothing, medicine etc. (55.5).

**Table 12. Activities perceived as long duration by the respondents in Household aspects**

<b>Activities /Operations</b>	<b>Long Durations</b>	<b>Avg. Durations</b>	<b>Short Durations</b>	<b>W. Mean</b>
Fatching water	125	59	16	2.54
	(62.5)	(29.5)	(8)	
Fatching fuel wood	122	53	25	2.49
	(61)	(26.5)	(12.5)	
Cleaning sanitation of house	118	60	22	2.39
	(59)	(30)	(11)	
Taking meal to farm	124	46	30	2.57
	(62)	(23)	(15)	
Marketing of food, clothing household & Luxury items	111	57	52	2.44
	(55.5)	(27.5)	(25.5)	

**Gender wise distribution of male and female farmers in performing long duration activities in Household Aspect**

In case of household activities almost all the long, average and short duration activities were performed by women farmers (Table 13).

**Table13. Gender wise distribution of male and female farmers in performing long duration activities in Household Aspect**

<b>Activities /Operations</b>	<b>WM</b>	<b>M</b>	<b>F</b>	<b>B</b>
Fatching water	2.54	17	158	25
		(8.5)	(79)	(12.5)
Fatching fuel wood	2.49	54	136	10
		(27)	(68)	(5)
Cleaning sanitation of house	2.39	16	160	24
		(8)	(80)	(12)
Taking meal to farm	2.57	41	135	24
		(20.5)	(67.5)	(12)
Purchasing of food, clothing household & Luxury items	2.44	104	42	54
		(52)	(21)	(27)

## Technological Framework for Reducing Drudgeries

For reducing the workload, health hazards and time in performing various activities and increasing the productivity of performers various technologies reported in table 14 may be selected for research, training and extension purpose as per the needs of male and female farmers separately to make it more appropriate and gender specific.

**Table14. Technological Framework for Reducing Drudgeries**

<b>Job</b>	<b>Type of Drudgery involved</b>	<b>Technologies Proposed</b>	<b>Type of Drudgery removed</b>
Sowing Planting	Sun stroke Body aches Physical tiredness Heavy work load Long Duration	Seed cum fertilizer drill Mannual dibblers Tyne cultivators & Multi row funnel Planters Animal/Tractor/Power operated post hole diggers	Removes the drudgery of walking with body in body in bending purpose Reducing the drudgery of walking to half compared to traditional system Remove the labour requirement as women can be made free for other tasks
Inter culture operation & weeding	Heavy workload Long duration Cuts,wounds, injuries Swollen & sore Hands and feet Sunstroke Body ache Bites problem	Mannual wheel hoe weeders Peg type weeders cum Mulcher Use of herbicides	Avoids the drudgery of working in squatting posture and moving forward. Eliminate the weeding operation completely
Harvesting & digging of Ground nut	Cuts, wounds, injuries Swollen & sore hands and feet	Serrated sickle Power tillers/tractor/harvesters	10-12% more efficient long life cutting edge More out put & labor

	<p>Sun stroke</p> <p>Body ache</p> <p>Bites</p> <p>Heavy workload</p> <p>Long duration</p>	<p>Tractor/Bullock operated diggers</p> <p>Hand operated telescopic gadgets</p>	<p>can be utilized in gathering of crop</p>
Threshing	<p>Skin irritation &amp; allergy</p> <p>Heavy workload</p> <p>Congestion &amp; breathing problem</p> <p>Body ache</p> <p>Long duration</p>	<p>Tractor/mechanical power /pedal operated threshers</p>	<p>Work output is high and operational time reduces by half in case of manually operated machine</p> <p>Faster output &amp; helpful in planning next crop</p>
Winnowing & grain cleaning	<p>Skin irritation &amp; allergies</p> <p>Congestion &amp; breathing</p> <p>Moderate workload</p>	<p>Pedal/power operated winnowers</p> <p>Hand/pedal/power operated grain cleaners and graders</p>	<p>Reduces workload</p> <p>Saves time due to more efficiency than manual</p> <p>Relief from congestion &amp; breathing</p>
Shelling decortications & de-husking	<p>Cuts, wounds &amp; injuries</p> <p>Heavy workload</p> <p>Body ache</p> <p>Long duration</p>	<p>Manual/ power operated dehullers</p> <p>Decorticators</p> <p>Hand shellers</p>	<p>More efficient than manual</p> <p>Relief from cut wounds &amp; injuries</p> <p>Reduces workload &amp; body ache</p> <p>Saves time</p>
Spraying, dusting and seed treatment	<p>Poisoning</p> <p>Skin irritation &amp; allergies</p>	<p>Timely sowing</p> <p>Solid application of pesticides</p> <p>Dusting in place of spraying</p> <p>Hand/foot operated spraying</p> <p>Biological pesticides</p> <p>Light wt. ultra volume sprayer</p> <p>Safety kit for pesticides</p>	<p>Farm worker do not come in direct contact of the pesticide</p> <p>Saves from poisoning &amp; allergies</p>

		application Manually operated seed treatment drum	
Chaffing	Cut, wounds injuries	Animal/power/hand operated chaff cutters	More efficient Reduces time & workload, cuts, wound & injuries.
Milk & milk product processing	Body ache	Milking machine Khoa machine Power operated churns	Makes the quality products very easily
Fodder collection	Physical tiredness Long duration Heavy workload	Hand trolley, tricycle, bicycle, bullock cart Watershed management By planting multi-cut suitable fodder crops, grasses and suitable trees	Makes the transportation & carrying easy Makes plenty of fodder available
Cooking	Eye irritation by smoke of chullha	Solar cookers Biogas plants Improved cook stoves Biomass charcoal briquettes	Cleans environment as do not produce smoke Save dung for making fertilizer
Household work	Physical tiredness	By changing motion of hands By changing the place By changing production method By changing Sequence of work By changing type of material	Helps in braking monotony Provide a rhythm to work Makes the work easy and interesting

Source: Alam, Anwar & Singh, Gyanendra. 2001.

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