

# Inter gender sharing of drudgery by male and female farmers in agricultural activities- an assessment among plain tribe of Lakhimpur district of Assam

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■ **ABSTRACT** : Assessment of inter gender sharing of drudgery in performing various agriculture activities by male and female farmers specially in paddy cultivation was carried out among plain tribes of Lakhimpur district of Assam. Multi-stage purposive cum random sampling method was adopted for selecting the representative sample in order to fulfil the objective of the investigation. A total of 120 tribal households from five villages (purposive cum randomly) were selected for the study. As the study focused on inter gender sharing of drudgery in agricultural activities, both male and female farmer were selected for the study. Thus total sample size of the study was 240 numbers comprising 120 male and 120 female farmers. Findings revealed that male farmers spent highest time in transplanting of grain to the home (128.56 mean hr/year) as well as felt very difficult among different activities during paddy cultivation, whereas women spent highest time in cutting crops (179.37 mean hr/year) and majority of women felt very difficult to perform activities like hoeing and uprooting of seedling. Drudgery index in case of male farmers was highest in transportation of grain from the field to home (55.33), followed by hoeing (53.33) and weeding (52.66). In case of female farmers the activity which had high drudgery index was transplanting (56.13) followed by cutting of crops (55.00) and hoeing (53.31).

■ **KEY WORDS**: Farmer, Inter gender, Drudgery, Agriculture operation

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In India, man and women play a significant and crucial role in various agricultural operations but their nature and extent of involvement in it vary from region to region, farming system, caste, classes, socio-economic status of the family etc. In spite of modernization in agriculture operation, rural folk of India are still sticking

to their traditional methods and practices *i.e.* using hand, foot or head or by using traditional tools in most of agricultural activities, which are tedious as well as time consuming and caused considerable fatigue and drudgery. Moreover, during performing various activities they adapt unnatural body posture due to which their

physiological workload increases and also they faces many types of musculo-skeletal problems and as a result the efficiency of workers decreases to a great extent. Though wide range of agricultural technologies and implements had already developed, many believe that these new technologies are mostly for male farmers and very expensive. According to an International Labour Organization (1964) estimation, women, perform one third of the world's counted labour. While, performing various activities in agriculture by farm women labour, they experienced the physical strain and fatigue. In other words they have to face drudgery involved in various activities in farm operations.

Drudgery is generally conceived as a physical and mental strain, monotony hardship experienced by human being. The causative factor of drudgery is unnatural posture, repetitiveness force required to carry out the activities and duration of involvement. In paddy cultivation of Assam, man and women both engaged in different activities with high postural load due to constraints of work method and working condition. Therefore, to understand work related hazards of man and women in terms of physical stress and their effect, present study was designed to find out the drudgery perceived by man and women in performing agriculture activities specially paddy cultivation.

## ■ RESEARCH METHODS

Lakhimpur development block under North Lakhimpur subdivision of Lakhimpur district was selected purposively for the study. Five tribal villages namely- Khundu, Kulamon Miri, Charapkhati, Borbil gaon and Chaboti under Lakhimpur development block were selected purposive cum randomly. A total of 120 tribal households from selected villages were again selected purposive cum randomly with proportionate allocation of sampling unit. Care has been taken to select the households where both husband and wife were involved in one or other agricultural operation, having own agricultural land and both the farmers were within productive age group. Moreover, pregnant women and farmers having serious health hazards were also not selected for the study. Thus total sample size of 240 numbers comprising 120 male and 120 female farmers were selected. Data were collected by following interview cum observation method. A structured schedule, especially designed for the study was used. Recall

method was adopted to collect major portion of data. Frequencies, percentage, mean and drudgery index were calculated to assess the findings. Drudgery index of farm activities was calculated on the basis of time spent (hrs/year) performance frequency score and difficulty index was calculated by following the formula (Jain and Verma, 1992):

$$\text{Drudgery index} = \frac{X + Y + Z}{3} \times 100$$

where,

- X is co efficient for time (hrs/year) = Time in min/day x Total number of days performs in a year
- Y is co-efficient for frequency performance was calculated on the basis of frequency of performance *i.e.* daily (5) alternatively (4) weekly (3) fortnightly (2) and rarely (1) the total score thus obtain is divided by total performers for each activity.
- Z is co-efficient for difficulty score. Difficulty score was calculated on the basis of very difficult (5) difficult (4) normal (3) easy (2) and very easy (1).

## ■ RESEARCH FINDINGS AND DISCUSSION

The results obtained from the present investigation as well as relevant discussion have been summarized under following heads :

### Demographic characteristics of the farmers:

Demographic characteristics of the farmers in Table 1 revealed that highest percentage of male and female farmer are in age group of 26-35 years, (*i.e.* 33.33% male and 32.52% female) followed by in the category of age group 36-45 years. Farmers above 55 years of age group found lowest both in male and female category. In case of education qualification majority of male farmers found in the category of studied upto high school level (33.33%) on the other hand highest percentage of female farmers (26.67%) found in the category of studied upto middle school level. Education qualification of farmers in the category of graduate and above found lowest both in male and female in study area. Regarding size of operational land holding of the families it was found that 73.33 per cent of household in the category of having 1-3 ha of land and highest percentage of household (48.33%) having 5-8 family members *i.e.* medium family size.

**Table 1 : Distribution of farmers according to their demographic characteristics**

Characteristics	Male		Female	
	N	%	N	%
<b>Age</b>				
18-25 years	17	14.17	22	18.33
26-35 years	40	33.33	39	32.50
36- 45 years	35	29.12	28	23.33
46-55 years	20	16.70	21	17.50
Above 55 years	8	6.67	10	8.33
<b>Education qualification of farmers</b>				
Illiterate	4	3.33	10	8.33
Can read and write	10	8.33	19	15.83
Primary level	14	11.67	16	13.33
Middle school level	25	20.83	32	26.67
High School level	40	33.33	30	25.00
Higher sec. level	24	20.00	12	10.00
Graduate and above	3	2.50	1	0.83
		N		%
<b>Size of operation land holding</b>				
Below 1 hac	24		20.00	
1-3 hac	88		73.33	
Above 3 hac	8		6.67	
<b>Type of family</b>				
Nuclear	23		19.17	
Joint	50		41.67	
Extended	47		39.17	
<b>Size of the family (i.e. number of members)</b>				
Small (upto 4 )	9		7.50	
Medium (upto 5-8 )	58		48.33	
Large (9 and above)	53		44.17	

**Drudgery perceived by male and female farmers in paddy cultivation:**

The activity wise drudgery perceived by male and female tribal farmers in paddy cultivation were ascertained by the researcher on following point such as, average time spend on farm activities frequency of performance of farm activities, and degree of difficulty for doing farm activities. Findings of the Table 2 revealed that male farmers spent highest time in transplanting of grain from field to the home (i.e. 128.56 mean hr/year) followed by grubbing or crushing (73.55 mean hr/year). In case of women, spent highest time in cutting crops (i.e. 179.37 mean hr/year) followed by transplanting (136.54 mean hr/year) and weeding (129.80 mean hr/year).

The extent of involvement which can be defined as

man’s and women’s participation in various activities to the extent of daily, alternative day, weekly, fortnightly and rarely and were scored 5, 4, 3, 2, 1, respectively. Regarding extent of involvement Table 2 revealed that majority of male farmer daily engaged in bunding of crops, transportation of grain to the home from main field and heaping during season. Most rarely performed activities by male farmers are transportation of manure, mixing and spreading of manure (i.e. 8.3%). On the other hand majority of tribal female farmer were found to be engaged daily in transplanting and uprooting of crops but not a single women found to be involved in ploughing, grubbing or crushing and harrowing. This was supported by Mishra *et al.* (1997), reported in a study that tribal Kharwar women actively participated in all agricultural activities except ploughing. Kapoor (1988) also reported that the tribal women’s contribution was less in tillage operations i.e. ploughing and levelling operation.

**Drudgery index level of tribal man and female farmer in different activities of paddy cultivation:**

Table 2 revealed that the drudgery index in case of male respondents was highest in transportation of grain from the field to home (55.33), followed by hoeing (53.33) and weeding (52.66). In case of female respondents the activity which had high drudgery index was transplanting (56.13) followed by cutting of crops (55.00) and hoeing (53.31). The involvement of male respondents in various paddy cultivation activities was found to be more in the present study as compared to female respondents. however female respondents had high drudgery index than male regardless of their extent of involvement in various activities. This is due to the fact that the activities performed by the female respondents were more tedious, time consuming and requires lots of energy. If we categorised drudgery index on the basis of equal interval method (i.e. low range upto 33.33, medium range 33.34 to 66.66 and high range above 66.66) the respondents faced moderate drudgery in most of the activities of paddy cultivation. Diagrammatic representation of comparative drudgery index of male and female in different activities of paddy cultivation is presented in Fig. 1.

**Conclusion:**

The results obtain from this research work shows that both male and female farmers were highly engaged in different activities of paddy cultivation and perceived

**Table 2 : Distribution of respondents according to their involvement in different activities and perception of drudgery in different activities**

Activities	Sex	Mean time (hrs/yr)	Extent of involvement					Level of difficulties					Drudgery Index
			Daily	Alternately	Weekly	Fortnightly	Rarely	V easy	Easy	Normal	Difficult	V difficult	
Removing stalks and stubbles	M(120)	45.50	70(58.33)	40(33.33)	10(8.33)	-	-	-	-	40(33.33)	80(66.70)	-	41.17
	F(77)	43.95	60(50.00)	12(10.00)	5(4.17)	-	-	-	-	17(14.17)	50(41.70)	-	27.03
Ploughing	M(120)	59.66	88(73.33)	28(23.33)	4(3.33)	-	-	-	120(100.00)	-	-	-	29.00
Grubbing/cold crushing	M(120)	73.55	70(58.33)	45(37.50)	5(4.17)	-	-	-	30 (25.00)	90(75.00)	-	-	23.15
Harrowing	M(120)	12.57	72(60.00)	48(40.00)	-	-	-	-	33 (27.50)	87(72.50)	-	-	16.71
Transportation / mixing/ spreading of manure	M(10)	0.6	-	-	-	-	10(8.30)	-	-	10(8.30)	-	-	16.57
Hoeing	M(120)	22.09	60(50.00)	50(41.70)	10(8.30)	-	-	-	-	-	35(29.17)	85(70.83)	53.33
	F(48)	15.31	8(6.70)	8(6.70)	7(5.80)	10(8.30)	15(12.50)	-	-	-	-	48(40.00)	53.31
Compartment bunding	M(120)	17.77	80(66.67)	40(33.33)	-	-	-	-	-	31	89(74.17)	-	44.63
	F(8)	47.53	-	8(6.70)	-	-	-	-	-	-	25(20.83)	33(27.50)	43.98
Seed preparation	M (55)	10.87	-	-	35(29.17)	10 (8.30)	10 (8.30)	-	-	35(29.17)	20(16.70)	-	21.00
	F(118)	33.31	80(66.70)	38(31.70)	-	-	-	-	-	33(27.50)	85(70.83)	-	46.00
Sowing	M(115)	5.16	57(47.50)	46(38.33)	12(10.00)	-	-	115(95.93)	-	-	-	-	16.57
	F (25)	2.06	5(4.17)	8 (6.70)	3 (2.50)	5 (4.17)	7 (5.80)	25(20.83)	-	-	-	-	13.63
Uprooting of seedling	M (9)	9.81	-	-	2 (1.70)	-	7 (5.80)	-	-	-	9(7.50)	7 (5.80)	49.17
	F (120)	57.57	80(66.67)	20(16.70)	20(16.70)	-	-	-	-	-	20(16.70)	100(83.33)	52.67
Bundling of seedling	M(120)	6.67	40(33.33)	60(50.00)	20(16.70)	-	-	-	50 (41.71)	70(58.33)	-	-	31.05
	F (22)	2.76	-	-	10 (8.30)	12(10.00)	-	-	12 (8.30)	10(8.30)	-	-	32.17
Transportation of seedling to main field	M(120)	12.49	60(50.00)	35(29.17)	25(20.83)	-	-	-	-	-	100(83.33)	20 (16.70)	50.00
	F (20)	4.69	-	-	10 (8.30)	5 (4.17)	5 (4.17)	-	-	-	5(4.17)	15 (12.50)	47.00
Transplanting	M (8)	13.19	-	-	-	3 (2.50)	5 (4.17)	-	-	-	3(2.50)	5 (4.17)	42.94
	F (120)	136.54	112(93.33)	8 (6.67)	-	-	-	-	-	-	1(0.83)	119(99.17)	56.13
Weeding	M (40)	6.58	-	-	5 (4.17)	10 (8.30)	25(20.83)	-	-	-	10(8.30)	30(25.00)	52.66
	F (117)	129.80	87(72.50)	30(25.00)	-	-	-	-	-	-	17(14.20)	100(83.33)	52.67
Cutting of crops	M (7)	28.92	-	-	2 (1.70)	1(0.83)	4 (3.33)	-	-	-	2(1.70)	5(4.17)	42.09
	F (120)	179.37	112(93.33)	8(6.70)	-	-	-	-	-	-	1(0.83)	119(99.17)	48.13
Bundling of crop	M(120)	17.11	115	5(4.17)	-	-	-	-	-	30(25.00)	80(66.70)	10(8.30)	34.44
	F (34)	4.42	-	10(8.30)	14(11.70)	8 (6.67)	2 (1.70)	-	-	-	27(22.50)	7(5.80)	35.00
Transportation of matured crop to home	M(120)	128.56	115(95.93)	5(4.17)	-	-	-	-	-	-	3(2.50)	117(97.50)	55.33
	F (55)	6.60	9 (7.50)	10(8.30)	9 (7.50)	12(10.00)	15(12.50)	-	-	-	-	55 (45.80)	44.43
Heaping	M(120)	10.41	115(95.93)	5(4.17)	-	-	-	-	-	88(73.30)	32(26.70)	-	33.06
	F (55)	3.64	9 (7.50)	10(8.30)	9 (7.50)	12(10.00)	15(12.50)	-	-	10(8.30)	45(37.50)	-	33.94
Watching	M(105)	2.08	-	-	-	-	-	-	-	-	-	-	19.00
	F (120)	18.80	-	-	-	-	-	-	-	-	-	-	17.92

moderate drudgery in almost all the activities this mainly because of adoption of bad working posture, traditional practices, working long time in same posture etc. It is certain, that if appropriate drudgery reducing farmstead implements are made available to the rural areas, these would contribute to reduction in drudgery, increase capability, productivity and consequently the greater

workload thereby improved efficiency. So, as to reduce drudgery, on the strength of findings it is desirable that paddy cultivation activities should be carried out with the help of improved farming tools and need to create awareness about correct postures in performing different activities among farming community because causative factor of drudgery is postural stress.

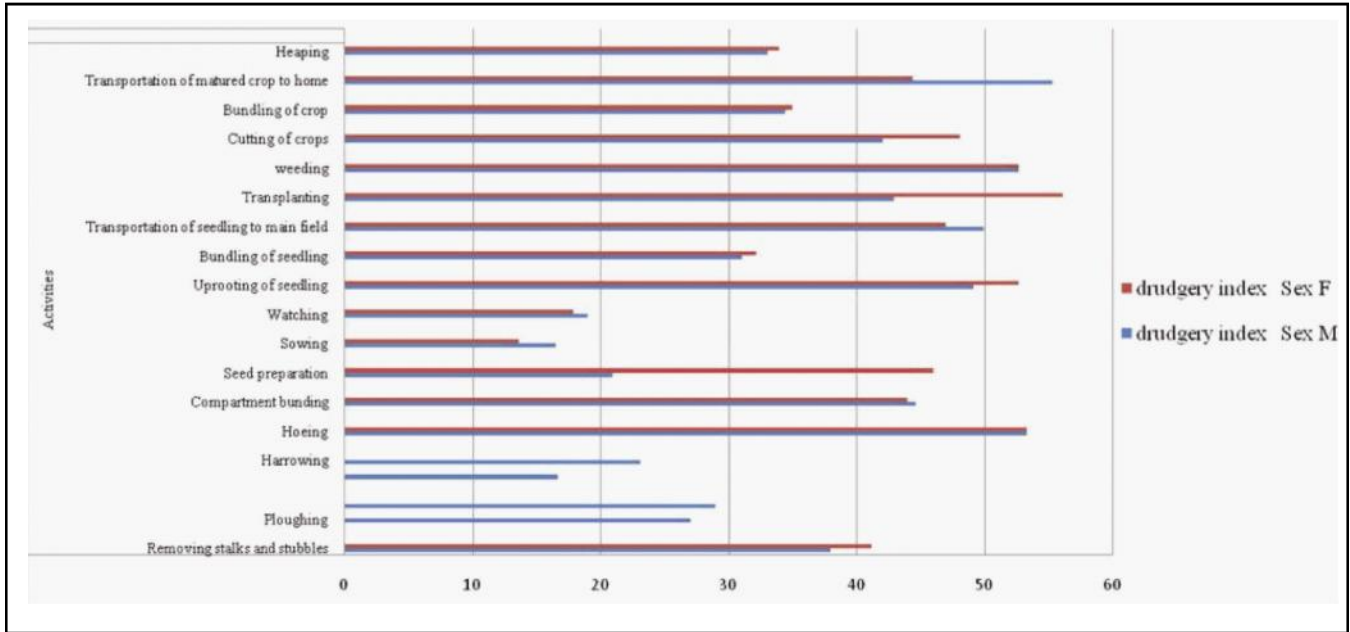


Fig. 1 : Comparative Inter gender drudgery index in different activities

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