

## **IDENTIFYING DRUDGERY PRONE FARM ACTIVITIES PERFORMED BY WOMEN**

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### **ABSTRACT**

A study was conducted in upper Brahmaputra Valley Zone of Assam on a sample of 500 farm women to identify drudgery prone farm activities performed by woman. The findings revealed that sundrying of grains, storage and winnowing were the higher drudgery prone activities in landless, marginal, medium and large landholding categories respectively. Body mass Index (BMI) of respondents indicated that maximum percentage of women (55%) had normal weight indicating relatively good health of the respondents.

### **INTRODUCTION**

Rural women constitute about 80% of the total female population of the country. Besides, family responsibilities, rural women play a productive role in family farming system. The long hours of work, much effort and labour spent in repetitive farm operations result in fatigue and drudgery. The energy spent by them is more than it is physically feasible for them. Drudgery is generally conceived as physical and mental strain, agony, fatigue and monotony experienced by human beings. A physically fit person with normal physical characteristics influence the person's capacity to do work and may experience less drudgery for same amount of work than physically unfit person. In order to develop optimal working conditions for women and suggest appropriate technologies for drudgery reduction, the present study was planned to assess drudgery index of farm activities in term of frequency of performance of farm activities by rural women, time spent in farm activities, degree of difficulty perceived in performance and to find out the physical fitness of selected female population engaged in the farm activities.

### **MATERIALS AND METHODS**

The study was carried out in Upper Brahmaputra Valley Zone of Assam which was selected purposively. Six villages were selected randomly from this zone. The sample for the study comprised of 500 farm women and were drawn proportionately from these six villages by stratified random sampling method from four land holding categories i.e. landless, small and marginal, medium and large. A descriptive research design was used to conduct the study. Survey method was adopted for collection of data. An interview schedule was used for elicit

information from the women who were actively engaged in farm activities. Frequency and percentage were computed for analyzing the data.

Drudgery Index (DI) was calculated with the following formula,

$$\text{Drudgery Index} = [(x+y+z) / 3] \times 100$$

x = Co - efficient pertaining to difficulty felt.

y = Co - efficient pertaining time spent in particular farm activity.

z = Co - efficient pertaining to frequency of performance.

The Body Mass Index (BMI) by Garrow (1985) was used to assess the physical fitness. The equation used for BMI is given as under ;

$$\text{BMI (kg / m}^2\text{)} = \frac{\text{Weight (kg)}}{\text{Height (m}^2\text{)}}$$

BMI classification by Garrow is ;

BMI classes	Presumption diagnosis
<16.0	*CED grade III (severe)
16.0 - 17.0	*CED grade II (Moderate)
17.0 - 18.5	*CED grade I (Middle)
18.5 - 20.0	Low weight normal
20.0 - 25.0	Normal
25.0 - 30.0	Obese grade I
> 30.0	Obese grade II

\*Chronic energy deficit

## RESULTS AND DISCUSSION

Findings pertaining to personal and demographic characteristics of rural women revealed that majority of respondents belonged to younger age group (55%) between 20 - 30 years and were found to be literate (78%). Seventy per cent respondents belonged to nuclear families. Nearly 35% respondents were from upper caste which was followed by Other Backward Castes (26%). The main occupation of the majority of the head of the family was found to be farming (44%). This was followed by service (25%). The subsidiary occupation of most of the households was also farming (40%). It was found that a sizeable percentage of the respondents (62%) were from middle income groups.

### Frequency of performance of farm activities

Data pertaining to frequency of performance was elicited in a five point scale viz. daily (5), alternate day (4), weekly (3), fortnightly (2), seasonal (1). It was found that most of the farm activities were seasonal and performed both by male and females. The farm activities in which females were extensively involved were uprooting of seedling, transplanting, soaking

of seeds, weeding and harvesting and were seasonally performed in this region. However, winnowing, sieving, cleaning of grains were performed weekly or monthly by majority of respondents depending on their requirements.

#### Time spent in farm activities

Perusal of data on time spent (Table 1) revealed that maximum time was spent in transplanting by females of landless (537.32 minutes/day) and marginal (476.15 minutes/day) while respondents from medium land holding categories and large landholding categories spent maximum time in harvesting (456.55 minutes/day and 472minutes/day respectively). It was found that on the whole farm women spent considerable time in uprooting of seedlings (394.80 minutes/day), weeding (268.3 minutes/day), threshing (141.7 minutes/day), winnowing (130.70 minutes/day) and sundrying of grains (120.5 minutes/day). Data further reveal that on an average, women from landless categories spent more time in transplanting, uprooting of seedlings and harvesting because landless labourers were hired by medium and large landholding families for performing these activities in the field from 8 A. M. to 4 P.M.. This finding is in conformity to the findings of Gulati (1984) and Reddy (1988) who stated that in Kerala and Tamil Nadu, women from landless categories and low castes were hired to carry out transplanting of harvesting in the fields.

**Table 1. Time spent (minutes/day) in farm activities by female respondents**

Activities	Landless N = 81	Small and marginal N = 339	Medium N = 64	Large N = 16=	Total N = 500
	Mean time/min	Mean time/min	Mean time/min	Mean time/min	Mean time/min
Uprooting of seedling	460.0	422.7	372.7	324.0	394.8
Transplanting	537.32	476.10	439.0	348.0	450.00
Weeding	240.0	291.60	276.92	265.70	268.3
Harvesting	469.2	448.0	454.5	440.0	452.8
Threshing	91.6	105.7	164.6	205.0	141.7
Sundrying of grains	109.8	120.0	113.0	140.0	120.5
Storage	112.5	68.1	59.3	48.9	72.2
Winnowing	162.5	131.4	127.0	102.0	130.7

#### Difficulty felt in farm activities

The perceived difficulty felt in performance of farm activities was assessed in a five point scale i.e.very easy (1), easy (2), neutral (3), difficult (4) and very difficult (5). It was observed that as the farm activities required more time and energy of the workers, majority

of the respondents perceived farm activities either difficult or 'very difficult'. A sizeable percentage of women found uprooting of seedling (75%), transplanting (71%), sundrying of grains (70%) and storage (50%) as the most difficult farm activities. A less percentage of women perceived cutting (50%), winnowing (37%), sieving (50%) soaking and preparing seed for sowing (42%) and weeding (25%) as difficult farm activities. While preparing threshing yard (31%) and cleaning grains (68%) were easy farm activities for respondents from all the land holding categories.

#### **Drudgery index of the farm activities**

Womens' involvement in farm activities is a source of drudgery Drudgery Index was determined by calculating the time co-efficient, frequency of performance co-efficient, and difficulty co-efficient. Thereafter, three major drudgery prone farm activities prepared by women were selected based on Drudgery Index (DI). It is evident from Table 2 that sundrying of grains was the maximum drudgery prone activity in landless (DI = 40.5) and marginal landholding categories (DI =40.2), uprooting of seedling ranked second in both landless (DI = 39.5) and marginal categories (DI = 39.3) while transplanting ranked third in these two categories.

**Table 2. Drudgery index for farm activities**

Farm activities	Frequency Coeff	Difficulty Coeff	Average time spent Coeff	Drudgery Index
<b><u>Landless</u></b>				
Sun - drying of grains	.22	.98	.014	40.5
Uprooting of seedlings	.21	.91	.062	39.5
Transplanting	.20	.89	.072	38.86
<b><u>Marginal and Small</u></b>				
Sun - drying of grains	.21	.98	.016	40.2
Uprooting of seedlings	.20	.92	.057	39.30
Transplanting	.20	.90	.064	38.90
<b><u>Medium</u></b>				
Storage	.37	.91	.008	42.93
Winnowing	.40	.81	.016	40.9
Uprooting of seedling	.20	.94	.05	37.76
<b><u>Large</u></b>				
Winnowing	.55	.93	.013	49.8
Storage	.55	.93	.006	49.53
Sieving	.55	.80	.006	45.20

In medium landholding categories, storage (DI = 42.93) and winnowing (DI = 40.90) ranked first and second drudgery prone activities respectively while in large landholding categories, winnowing (DI = 49.8) was found to be maximum drudgery prone activity followed by storage (DI = 49.5) and sieving (DI = 45.2). In contrary to this findings, Singh and Verma (1988) reported that in rural Haryana, pesticides dusting was the highest drudgery prone activity followed by harvesting and carrying load on head.

#### **Physical fitness of farm women**

The Body Mass Index (BMI) was used to assess the physical fitness of women. BMI is said to be the important indicator of energy adequacy which influences the persons capacity to do work. People who weigh less or more have low work capacity than normal and ideal weight people. The Normal BMI value ranged between 18.5 - 25.0. The BMI was calculated for 100 homemakers from all land holding categories. It is encouraging to note that maximum respondents (40%) were found to be in normal health, 15% were low weight but normal and 24% women were found to be mild energy deficient (Table 3). Only 16% women were suffering from severe or moderate energy deficiency and these women belonged to landless categories. A meager percentage i.e. 5% women were in obese grade.

**Table 3. Body mass index (BMI) of farm women**

Category	Percentage
*CED grade III	7
*CED grade II	9
*CED grade I	24
Low weight - normal	15
Normal	40
Obese grade I	4
Obese grade II	1

The findings of the study reveal that rural women performed various farm activities involving lot of drudgery. Hence, appropriate technology should be devised which are culturally acceptable to the women for minimizing drudgery and to improve the quality of lives.

#### **ACKNOWLEDGEMENT**

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