Female Farmer’s Views to Leave Farming - A Study of Rural Area of Sikkim in North- Eastern India

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ABSTRACT

The present study has analyzed the existing information about female farmer’s views to leave farming in the rural area of Sikkim in North- Eastern India and made an endeavor to find out the reason behind that feeling. The paper has been concluded with some points of suggestion so that food security can be increased by making the farming sector more income generating with the aim to retain female farmers. It will also help in improving the stakeholder’s efficiency in discharging their activities. In the region despite majority of the population is dependent on agriculture sector, still it is in the evolving shape and poses a variety of challenges. The contribution of women in this noble sector is although enormous yet invisible and does not get counted for much. Social science research in the state of Sikkim is inadequate despite several incentives provided by the state government. Nowadays, with voluminous amount of public expenditure on women empowerment schemes, we cannot ignore this issue thus making it unavoidable to empower them also with the intention to fully utilize their caliber in this field. Keeping this in mind, data was collected from 230 female farmers through interviews using a pre-designed schedule from 24 circles from all the four districts of Sikkim State. Based on their subjective judgments, female farmer’s views have been measured and analyzed using the Statistical Package for the Social Science (SPSS). Some descriptive statistics, such as percentage, mean, standard deviation as well as one sample t-test of inferential statistics is used to interpret the data. The findings of the study revealed that significantly more number of sample female farmers on an average feel proud of their contribution in farming but hold the view of leaving farming. Results pertaining to these findings have been discussed in this paper.

KEYWORDS: Female Farmers, Views to Leave Farming, Rural Area, Sikkim.

INTRODUCTION

Women play a distinctive role in shaping the rural economic activities and earning a livelihood. India is agriculture dominated country and most of manual operations like sowing, weeding, transplanting, harvesting, threshing and winnowing and even marketing of agricultural produce are being done by women. Their contribution to the rural economy is enormous. In rural India, agriculture and allied industrial sectors employ as much as 89.5% of the total female labour (Asia's women,2006). In overall farm production, women's average contribution is estimated at 55% to 66% of the total labour. According to a 1991 World Bank report, women accounted for 94% of total employment in dairy production in India. Women constitute 51% of the total employed in forest-based small-scale enterprises (Asia's women, 2006).

Actually, the social, economic and cultural conditions of the area determine women’s participation in home and farm activities. The nature and extent of women’s involvement in agriculture, no doubt, varies greatly from region to region and within a region, their involvement varies among different farming systems, castes, classes and socio-economic status. But regardless of these variations, there is hardly any activity in agricultural production, except ploughing in which women are not actively involved (Swaminathan, 1985). In some of the farm activities like processing and storage, women predominate so strongly that men workers are numerically insignificant.

However, the Indian Himalayan region (IHR) displays a different picture in land use pattern and its dependency on agricultural land. The Himalayan people have traditionally practiced integrated agriculture, balancing cultivation, agro-forestry, animal husbandry and forestry. The dependency on its limited arable land is marginally higher in the IHR as cultivators and agricultural labourers together comprise about 59% of total workforce in the region (Nandy and Samal, 2005).

Agriculture not only in India, but world over especially in developing countries, depends on monsoon because in these countries irrigation facilities are not fully developed. For the sake of industrialization and urbanization, more and more trees have been cut, leading to global warming and causing imbalance in climatic conditions thereby making farming occupation even harder. Himalayan glaciers are also receding at the fastest rates in the world due to global warming, threatening water shortage for millions of people particularly in India, China and Nepal. Indian agriculture is prone to all possible hazards which often end up in disasters thereby making rural life miserable and forcing people (especially male population) to shift to the urban areas in search of earning a livelihood thereby leaving female population behind. India's population is currently in excess of 1.1 billion people and predictions state that by 2050, the population will have grown by another 500 million (UN 2008). This increase in population will undoubtedly lead to increase in demand for food and also put further strain on resources which are already overstrained, especially when coupled with the impacts of climate change. The widespread affect that climate change is expected to have on agriculture and rural livelihoods will lead to even greater migration from rural areas to urban, further straining resources in these urban centres also (Liggins 2008).
Climate change will lead to increased hardship for India’s poorest women. Women in India, especially in rural areas, are often responsible for providing daily essentials such as food and water. When climate change related disasters strike, researches have shown that the workload of women and girls increases, thus leading to their exclusion from opportunities like education and a diminishment in their equal participation in development. For example, deforestation increases the time women need to spend looking for fuel. Researches have also shown that women have fewer means to adapt and prepare for extreme weather conditions. Many poor women are also actively engaged in agricultural activities, including paddy cultivation and fishing, that will be affected by changing weather patterns in India; loss of livelihood will increase their vulnerability and marginalization (UNDP 2007/8).

Resources are the key considerations for rural livelihoods. Rural households negotiate their livelihoods by obtaining access to land, labour, capital, knowledge and market, which leads to enhanced family well-being and sustainable use of resources (Valdivia and Gilles, 2001).

But, in most developing countries, there is a patriarchal system of social setting. In this tradition, men hold the sovereign power to control households and society as a whole while women are ascribed to a lower hierarchy compared to men (Balk, 1997). The historical deprivation of women socially, legally, politically and technologically aggravates their positions and they are subordinated as a production unit for bearing and rearing children (Ahmad, 2001). Here, lower hierarchy is seen as inequality & practices adopted against them in their rights as compared to men. It is very important to remove them from the society to get the complete result of the policies & also to make all the members of the society to contribute equally in the development process. Tamale (2004) argues that the non-recognition of women’s labour for domestic chores is reinforced by the unequal allocation of resources. Thus, the lack of access to and control over productive resources is the main factor limiting women’s equal participation in economic activities, thereby hampering the human development process (Acharya, 2003).

Generally, the access of women to productive resources and education is very low in developing countries as properties are owned by men. Babangida (1986) noted that, a nation cannot truly develop if her women remain illiterate, unskilled and unable to harness resources in their environment and actually operating below their potential. It is the ability to harness the resources in the environment and improve on such environment that is the hallmark of development and most women cannot contribute effectively to development with the limited or basic education they acquire. Of course, high-powered education is available for the women but in poor families a very few of them have access to it. The resultant effect is what has been called “genderization of poverty” (Suara, 1996). It hinders their contributions in the dimensions required for sustainable development. Researches have shown that when women are supported and empowered, it helps in improving the health of their families, improving the education of the children, increasing the agricultural productivity and ultimately increasing their income. In short, communities become more resilient.

Torado (1981) is of the opinion that, development should be comprehended as multidimensional that would involve institutional, social and attitudinal change. In view of these perceptions of development, to be able to make a significant impact, the women must understand the dynamics of the existing structures and appreciate the need for change and the direction and special technical skills that are necessary tools of action.

Some historians believe that it was woman who first domesticated crop plants and thereby initiated the art and science of farming. While men went out hunting in search of food, women started gathering seeds from the native flora and began cultivating those of interest from the point of view of food, feed, fodder, fiber and fuel (Prasad and Singh 1992). Women have protected the health of the soil through organic recycling and promoted crop security through the maintenance of varietal diversity and genetic resistance. Therefore, without the total intellectual and physical participation of women, it will not be possible to popularize alternative systems of land management to shifting cultivation, arrest gene and soil erosion, and promote the care of the soil and the health of economic plants and farm animals.

- Social science research in the state of Sikkim is inadequate

The place researcher selected for study is particularly important because social science research in the state of Sikkim is inadequate despite several incentives provided by the state. There are many reasons for this - including the fact that English education started off late and there are no secondary and senior secondary boards in Sikkim and the State is fully dependent on Central Boards. Very few scholars from North Bengal University and other universities have undertaken research on the socio-political and economic aspects of Sikkimese women. Published materials available in the market are based on visits to Gangtok but are not based on field-work analysis. This study will help in filling this gap.

FARMING STRATEGIES ADOPTED BY THE AGRICULTURE DEPARTMENT IN THE STATE

The state has a target of converting it into a fully organic state by 2015. In this regard, the Department has started a lot of measures to replace the chemical fertilizers by using bio fertilizers and organic manures. Effective Microorganism (EM) technology in production of compost and bokashi and bio-pesticide is being propagated among the farmers in technical collaboration with MAPLE ORTECH, Dehradun to give boost to organic farming in Sikkim. Integrated Pest Management (IPM) technology is being practiced to control the pests. Predators are produced in Sikkim State IPM Lab and are released in the farmers’ field as and when required. The Government has set up a livelihood school also on organic farming at Tadong, Gangtok. This is first of its type in the country. Participants will be given 3 months training on organic farming processes. Trained youths will go to villages and assist farmers at village level. Popularization of HYV seeds,
production of quality seeds, mixed cropping, pest management through Farmers Field Schools (FFS), recycling of farm waste for compost production, soil reclamation by liming, seed treatment campaign and integrated farming through watershed approach are some of the strategies adopted by the Department in the state.

Mechanization has varied connotations. While in the developed world it tends to be synonymous to automation but in developing countries, like India especially in hilly areas, mechanization means any improved tool, implement, machinery or structure that assists in enhancement of workers’ output, multiplies the human effort, supplements or substitutes human labour, avoids drudgery or stresses that adversely affect human mental activities leading to errors, imprecision and hazards and eventually loss of efficiency. It also means automation and controls that assure quality, hygiene. Agricultural mechanization in a limited sense relates to production agriculture.

Farming with machinery in Sikkim is almost nonexistent. However Power operated Thresher, Hand Winower, Hand Maize Sheller, Iron Plough and other gender friendly machineries have been introduced on experimental basis. Sprinkler and drip irrigation has been taken up on demonstration basis. Agriculture in the state is mainly rain fed. Farm mechanization here in Sikkim is meant for increasing the production and productivity, comfort and safety, return and profitability to farmer.

DEMOGRAPHIC FEATURES

According to (Census 2011), Sikkim has a total population of 607,688 persons (which is 0.05 percent of total population of India) of which 321,661 are males and 286,027 are females. From the year 1991-01 to 2001-11, decadal population variation recorded was 33.07 to 12.36 percent, while India’s figure for the same is 17.64. In 2011 rural population consists of 480,981 people while urban population consists of 59,870 people. Sex ratio (females per 1000 males) also known as Gender Ratio, in the same decade has shown a little improvement i.e. from 875 to 889 but still lags behind India’s, which is 940. Though population density per sq. km. has increased in the same decade from 76 to 86 but is much less than national population density per sq. km. which is equal to 382. Literacy rate in 2001 was 68.81 which rose to 82.20 in 2011 which is above national average of 74.04 percent. This decade has seen an increase in male literacy rate from 76.04 to 82.20 and female literacy rate also shows increased figures i.e. from 60.41 to 76.43 as against all India’s rate of 65.46.

Workers Profile

According to (Census 2001), there are 37,936 cultivators (About 26,000 of them are small/medium farmers) out of which 19,725 are males and 18,211 are females in East district. Of them 37,889 live in rural and only 47 live in urban area. In rural area 19,701 are males and 18,188 are females. Total no. of agricultural labourers 8,143 out of which 4,076 are males and 4,067 are females. Of them 8,110 live in rural and only 33 live in urban area. In rural area 4,056 are males and 4,054 are females.

There are 35,764 cultivators (About 16,000 of them are small/medium farmers) out of which 20,634 are males and 15,130 are females in West district. Of them 35,762 live in rural and only 02 live in urban area. In rural area 20,632 are males and 15,130 are females. Total no. of agricultural labourers in the district are 4,112 out of which 2,389 are males and 1,723 are females. Of them 4,110 live in rural and only 02 live in urban area. In rural area 2,389 are males and 1,721 are females.

There are 9,180 cultivators (About 6,000 of them are small/medium farmers) out of which 4,831are males and 4,349 are females in North district. Of them 9,173 live in rural and only 07 live in urban area. In rural area 4,824 are males and 4,349 are females. Total no. of agricultural labourers in the district are 2,051out of which 1,045 are males and 1,006 are females. Of them 2,038 live in rural and only 13 live in urban area. In rural area 1,033 are males and 1,005 are females.

There are 48,378 cultivators (About 20,000 of them are small/medium farmers) out of which 24,917are males and 23,461 are females in South district. Of them 48,377 live in rural and only 01 live in urban area. In rural area 24,917 are males and 23,460 are females. Total no. of agricultural labourers in the district are 2,694 out of which 1,252 are males and 1,442 are females. All of them live in rural and no one live in urban area. In rural area 1,252 are males and 1,442 are females.

The above data of workers profile for Census 2001 shows that in all the districts more than half of the cultivators are small/medium farmers. It has also been observed that almost all of them live in rural areas and equal number of female participants has been noticed as that of men. Data of workers profile for Census 2011 is not yet available.

RESEARCH METHODOLOGY

Universe or population

The universe or population for the study consisted of total number of married females in rural areas who are employed in farming in the state of Sikkim. This formed the pivotal point of the present research.

Sampling method for selected area of study

Multi-stage stratified random sampling technique of probability method is used to distribute the population into circles, revenue blocks and villages, then a combination of Judgment and Convenience sampling techniques of non-
probability methods is decided upon for this study. Non-probability methods are of three types, namely Judgment sampling, Convenience sampling and Quota sampling. The state has only four districts; so, all of them have been taken for the study. Initially, under the multistage stratified random sampling technique - a selection of a tentative list of circles and revenue blocks from all the four districts was made followed by a selection of villages to be visited at the second and a selection of respondents at the final stage. A final list of the respondents from different farm households was prepared based on convenience and their accessibility to the researcher by stratified random sampling.

Sample size
Rural areas from all 4 districts of Sikkim were selected. As is clear from the table 1 below, though North district contains maximum area of the State i.e. almost 60%, but it holds only 7-8% of the population. On the contrary East district contains only 13% area of the State, but it holds maximum i.e. 45% of the population. So, for this study, maximum no. of females for data collection is from East & minimum are from North. Here, the size of the sampling female farmers from each district is neither proportional to the minimum size of the sampling female farmers of the district nor in the same ratio as is the percentage ratio of each district to the total population of the state. But the sample size of each district is just an indicative of the reason of taking maximum/minimum sampling units from that area.

A data collected from a total of 24 circles from all the four districts in Sikkim has been analyzed. The district wise i.e. (East, West, North & South) distribution of circles selected is 6, 6, 4 & 8 respectively. A total of 80 females of farming community from East, 30 from North and 60 each from West & South districts have been interviewed. Data for 115 samples (50% of 230), was collected by the researcher herself, while for rest of 115 samples (40, 30, 15 & 30 from East, West, North & South respectively), was collected with the active help and participation of all the village heads. Data thus collected from 230 married females in rural areas in the state of Sikkim, employed in farming sector has become the basis of the Primary Data analysis in this Study. Data collection and analysis
In order to collect qualitative data, three group discussion sessions were arranged separately in three villages (Syari, Sichey and Rawtey rumtek); each group contained 10 participants. During these group sessions, several open-ended questions were asked from the respondents in order to collect deeper information about their accessibility to resources and their participation in different farms and the related activities along with many hidden facts and factors. Based on this information, the research instrument i.e. questionnaire containing dichotomous, multiple choice and open end questions was designed and a pre-test was conducted with 18 respondents for its necessary modification. It was then translated into Nepali also for the convenience of the farm population. Primary data was collected by researcher by visiting the farming females of rural area in Sikkim, using questionnaires. The primary data was collected between March to September 2011 from all districts of Sikkim.

Books, journals, reports and internet documents were used as secondary sources of data supporting or supplementing the empirical findings of the study.

Data analysis
Data has been analyzed using the Statistical Package for the Social Science (SPSS) and some descriptive statistics, such as percentage, mean, standard deviation (SD) were used to interpret the data. There is only one sample in the study. Ordinal and nominal level data can be analyzed using parametric statistics; therefore One-Sample t-test for inferential interpretation of the data has been run to understand the nature of relation between the variables. For the inferences of the hypotheses, Information from literature survey is taken to support some assumptions. Below are given the few hypotheses.

For feeling about their contribution in farming
Hypothesis Statement – More farming females of rural area feel proud of their contribution in farming.
Ho – no more number of sample female farmers feel proud of their contribution in farming.
Ha – more number of sample female farmers feel proud of their contribution in farming.

For views for moving towards urban area
Hypothesis Statement – More farming females of rural area would like to move towards urban area.
Ho – no more number of sample female farmers would like to move towards urban area.
Ha - more number of sample female farmers would like to move towards urban area.

For views regarding accompanying their husbands in case they move towards urban area
Hypothesis Statement – More farming females of rural area would like to accompany their husbands in case they move towards urban area.
Ho – no more number of sample female farmers would like to accompany their husbands in case they move towards urban area.
Ha - more number of sample female farmers would like to accompany their husbands in case they move towards urban area.

For the feeling to leave farming
Hypothesis Statement – More farming females of rural area would feel happy leaving farming.
Ho – no more number of sample female farmers will feel happy leaving farming.
Ha – more number of sample female farmers will feel happy leaving farming.

To test these hypotheses, one-sample t-test has been conducted. The t column displays the observed t statistic for each sample, calculated as the ratio of the mean difference divided by the standard error of the sample mean. The column labeled Sig. (2-tailed) displays a probability from the t distribution with 229 degrees of freedom df, calculated as
(n-1). The value listed is the probability of obtaining an absolute value greater than or equal to the observed t statistic, if the difference between the sample mean and the test value is purely random. The Mean Difference is obtained by subtracting the test value, from each sample mean.

The 95% Confidence Interval of the Difference provides an estimate of the boundaries between which the true mean difference lies in 95% of all possible random samples of 230 females. At this level if value of ‘t’ is less than 1.96 and is also negative, then our null hypothesis is accepted else alternate hypothesis is accepted.

RESULTS AND DISCUSSION
Assessment of female farmer’s views:
Representation for the Parameter:
A, B, C, D in the table represents - Feeling for their contribution in farming (A), Views for moving towards urban area (B), Views regarding accompanying their husbands in case they move towards urban area (C) and Feeling for leaving farming (D). Degree of answers for A, B, C and D in tables-IV, V, VII and IX below, ranges from 1 to 10. 1 indicates strongly negative and 10 indicate strongly positive feeling. Whereas, degree level 5 indicates moderate feeling for the question. More than 5 means their views are more inclined towards positive side and less than 5 means, their views are more inclined towards negative side.

One sample’s ‘t’-test is conducted to test our hypothesis

FEELING FOR THEIR CONTRIBUTION IN FARMING
- Parameter Details:
Statistics for Feeling for their contribution in farming (A), of Females Farmers is shown in the Table-II above. From the table we find that there are 230 valid scores and value of mean for it is 7.16. Standard deviation is 2.465 and standard error of mean is 0.163.

- Extent of proud feeling for their contribution in farming Tables- IV shows that 03% of the respondents strongly feel negative for proud feeling for their contribution in farming. About 13% of them rated 5 for their view and 06% rated it 4. 09% rated their view for this question as 6. 22% of them strongly feel positive about proud feeling for their contribution in farming. Since only 28% of the respondents rated their view for this question up to 5. This shows the inclination of the view towards positive side. So, we can say that most of the female farmers feel proud for their contribution in farming.

VIEWS FOR MOVING TOWARDS URBAN AREA
- Parameter Details:
Statistics for Views for moving towards urban area (B), of Females Farmers is shown in the Table- II above. From the table we find that there are 230 valid scores and value of mean for it is 4.07. Standard deviation is 2.137 and standard error of mean is 0.141.
- Extent of views for moving towards urban area (B) Tables- V shows that 20% of the respondents strongly feel negative for moving towards urban area. About 20% of them rated 5 for their view and 22% rated it 4. 09% rated their view for this question as 6. 22% of them strongly feel positive for moving towards urban area. Since 77% of the respondents rated their view for this question up to 5. This shows the inclination of the view towards negative side. So, we can say that most of the female farmers do not feel for moving towards urban area.

### Table I: One-Sample Statistics

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<th>N</th>
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<th>Std. deviation</th>
<th>Std. Error Mean</th>
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<td>2.465</td>
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<td>Q(C)</td>
<td>230</td>
<td>4.91</td>
<td>3.121</td>
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<td>Q(D)</td>
<td>230</td>
<td>7.63</td>
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### Table II: One-Sample Test

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<tr>
<td>Q(B)</td>
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<tr>
<td>Q(C)</td>
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<tr>
<td>Q(D)</td>
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### Table IV: DEGREE OF ANSWER FOR VIEWS FOR MOVING TOWARDS URBAN AREA (B)

<table>
<thead>
<tr>
<th>Category</th>
<th>Frequency</th>
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<th>Valid Percent</th>
<th>Cumulative Percent</th>
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</thead>
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<tr>
<td>Strong Negative 1</td>
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<td></td>
<td></td>
</tr>
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<td>17</td>
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<td>16</td>
<td>7.0</td>
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<td>4.8</td>
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### Table V: DEGREE OF ANSWER FOR THEIR FEELING ABOUT CONTRIBUTING IN FARMING (A)

<table>
<thead>
<tr>
<th>Category</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
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<td>Strong Negative 1</td>
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<td>21</td>
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<td>9.1</td>
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<td>22</td>
<td>9.1</td>
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<tr>
<td>9</td>
<td>22</td>
<td>9.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strong positive 10</td>
<td>51</td>
<td>22.2</td>
<td>100.0</td>
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</table>
Inferential analysis for the view From the table III we find that value of ‘t’ for views about moving towards urban area is -6.633, which is negative and also less than 1.96. This is further confirmed by confidence intervals, both limits of which lie entirely below 0.0 for it. Mean difference column for it also shows negative values. Thus there are valid reasons for null hypothesis to be accepted for it, which says that no more number of sample female farmers would like to move towards urban area. Further, we conclude it by saying that no more number of sample female farmers on an average would like to move towards urban area.

Table VI shows that frequency of sample female farmers for the views of female farmers regarding accompanying the husbands in case they move towards urban area. 67% of them reported that they will not accompany and 33% reported for accompanying the husbands in case they move towards urban area.

Table VII shows that 20% of the respondents strongly feel negative for accompanying the husbands in case they move towards urban area. About 12% of them rated 5 for their view and 10% rated it 4. 10% rated their view for this question as 6. 14% of them strongly feel positive for accompanying the husbands in case they move towards urban area. Since 61% of the respondents rated their view for this question up to 5. This shows the inclination of the view towards negative side. So, we can say that most of the female farmers do not feel for accompanying the husbands in case they move towards urban area.

Inferential analysis for the activity From the table III we find that confidence intervals do not lie entirely either above or below 0.0. Its value is positive for one limit and negative for the other limit. For this view, value of ‘t’ is -0.444, which is lower than 1.96 but significance level is 0.658. But then again if we look at the mean difference, it is negative. The upper limit of the confidence interval lies entirely above 0 but then again the magnitude of lower limit (negative value) is more than the magnitude of the upper limit (positive value). Since their views are more inclined towards negative side, consequently, we can safely conclude that null hypothesis for it to be accepted, which says that no more number of sample female farmers would like to accompany their husbands in case they move towards urban area.

Table VIII shows the frequency of sample female farmers for the feeling (C) of Female Farmers is shown in the Table-II above. From the table we find that there are 230 valid scores and value of mean for it is 4.91. Standard deviation is 3.121 and standard error of mean is 0.206. Table -VI shows the frequency of sample female farmers for the views of female farmers regarding accompanying the husbands in case they move towards urban area. About 12% of them strongly feel negative for accompanying the husbands in case they move towards urban area. About 14% of them strongly feel positive for accompanying the husbands in case they move towards urban area. Since 61% of the respondents rated their view for this question up to 5. This shows the inclination of the view towards negative side. So, we can say that most of the female farmers do not feel for accompanying the husbands in case they move towards urban area.

Table IX shows that 13% of the respondents strongly feel negative for Feeling for leaving farming. About 14% of them rated 5 for their view and 99% rated it 4. 06% rated their view for this question as 6. 13% of them strongly feel positive for Feeling for leaving farming. Since 50% of the respondents rated their view for this question up to 5. This shows equal inclination of the view towards positive as well as negative side. So, we can say that for feeling of the female farmers for
leaving farming is equally divided towards positive as well as negative side.

| Table: FREQUENCY DISTRIBUTION OF DEGREE OF ANSWER FOR LEAVING FARMING- (D) |
|-------------------------------|---------|
| Valid | Frequency | Percent | Valid Percent | Cumulative Percent |
| Strong Negative | 30 | 13.0 | 13.0 | 13.0 |
| 2 | 19 | 8.3 | 8.3 | 21.3 |
| 3 | 14 | 6.1 | 6.1 | 27.4 |
| 4 | 20 | 8.7 | 8.7 | 36.1 |
| 5 | 33 | 14.3 | 14.3 | 50.4 |
| 6 | 14 | 6.1 | 6.1 | 56.5 |
| 7 | 20 | 8.7 | 8.7 | 65.2 |
| 8 | 35 | 15.2 | 15.2 | 80.4 |
| 9 | 15 | 6.5 | 6.5 | 87.0 |
| Strong positive | 10 | 30 | 13.0 | 13.0 |
| Total | 230 | 100.0 | 100.0 | |

 Inferential analysis for the activity

From the table III we find that confidence intervals lie entirely above 0.0 and also it is positive. The value of ‘t’ for the Females Farmers view about thinking of leaving farming is 3.185 which is higher than 1.96, mean difference column for it also shows positive values. This is further confirmed by significance levels which are 0.00 and also by confidence intervals, both limits of which lie entirely above 0.0 for it. We can safely say that null hypothesis for this view is rejected and thus alternate hypothesis for it is accepted, which says that more number of sample female farmers would feel happy leaving farming. Further, we conclude it by saying that significantly more number of sample female farmers on an average are interested in and hold the view of leaving farming.

CONCLUSION, DISCUSSION AND RECOMMENDATIONS

Data in section 3.1 about workers profile reveals that a majority of women in Sikkim are small/medium farmers. Owing to this, the sample female farmers reported that subsistence farming is prevalent here and production is mainly done for consumption purpose. In the absence of good marketing facility the farmers grow a little bit of everything that they require. Low scale of operation does not generate much surplus to be taken to the market. In spite of the State being declared an Organic one, yet, the females have complained about not getting timely and in sufficient quantity the inputs like organic seeds/saplings. This forces farmers to use HYV seeds which are not organic. There is scarcity of good post harvesting processing and storage facilities. However, most of them reported have been selling vegetables in local vicinity. Post-harvest activity like storage etc. has not been recorded much in the area and confined mainly to household level.

Multiple factors have contributed to women’s impoverishment; however, a major impediment to the advancement of women has been the discriminatory laws and traditions prohibiting women’s land ownership and inheritance rights—leaving women without adequate collateral to obtain credit to support either on- or off-farm income-generating activities. In spite of the fact that population density in the State is not very high yet, the size of the land holdings are extremely small for everyone (males and females), with most of the farmers are having up to 2 hectares. Since operational holdings in the area are very small and also the terrain is steep, mechanization of agriculture is still a distant reality. Due to this, agriculture practices require very high human energy inputs and are full of drudgery. Nonetheless, agriculture is the main economic activity of all the districts in the state, but, the initiation of off-farm income-generating activities is deemed an essential shift for rural folk for the reason that i) the small land holdings in the State does not generate much income ii) hardship faced by the people due to hilly terrain and iii) most importantly tertiary as well as the industrial sector is developing providing more gainful employment at these places facing less hardship than the farming sector. Future generation and the male population do not want to adopt the ancestral occupation of farming thus leaving behind the female population in the farming. Women, who are the mainstays of the agricultural food sector and labour force, are continually prone to various constraints like insufficient production inputs, credit and educational access which hinder the advancement of women. This scenario thwarts the income earning capacity of the stakeholders thereby making them feel dissatisfied with the income they earn from the farms. Hence, it causes the female farmers to have the feeling to leave farming in spite of feeling proud of their contribution in farming. Analysis of data of the study area depicts the very same thing. (Abiola and Omoabugan, 2001) studied this issue for Nigeria and hold the view that one of the major factors responsible for the declining agricultural productivity in Nigeria is the relegation to the background of the contributions of women in the issues of food crop production.

Besides, the some socio-economic condition of the female food crop farmers in the study area also demands attention which impedes the technical efficiency of the female farmers. (ERIE, 2011) is also in agreement with this view who carried out similar study in Edo State, which is one of the 36 States in Nigeria and it revealed the significant differences in the socioeconomic attributes of male and female food crop farmers, resulting in differences in their technical efficiencies in the study area.

At the same time, there is no denying the fact that women possess a strong innate quality of conservation. With a proper technical guidance and training this can be harnessed more efficiently. Deficiency of it causes many small farmers not to exploit fully this limited natural resource (land) because they lack the necessary small farm and livestock best-management practices/skills to successfully manage or operate it. In addition, these small owners are often unaware of available training and counseling support provided by agriculture extension organizations. As a result, many farmers fail to take advantage of resources that are designed to help them succeed. Researches have shown that participation in relevant and effective training can reduce the failure rate and help owners make better management decisions and avoid costly mistakes (Muske and Stanforth, 2000).

Douglas William Jerrold has very rightly said "If you tickle the earth with a hoe she laughs with a harvest."

Thus, by enabling the female farmers to have credit and education access will assist them in converting their role from passive recipients to active own managers and will also support them in efficiently fulfilling their responsibility...
towards home as well as in agriculture. It will lend a hand in making farming sector sustainable by making them understand the dynamics of the existing structures. Female farmer’s retention in farming eventually will help in refuting the food security crisis. Because many studies have proved that empowering women has helped them in improving their socio-economic condition. Ultimately it helps the communities in becoming more resilient. For example, in Zimbabwe, a major portion of GDP of which, comes from the agriculture sector, decision to allow women to sell produce directly to the Grain marketing Board, without the involvement of their husbands, has given them more control over their produce (Muchena 1994).

The time to act is now. Combinations of adaptive and preventive measures are urgently required to ensure sustainable agriculture development, so that food security does not suffer. Failure to respond to this growing crisis at both a national and global level will result in catastrophe consequences that will affect us all.

REFERENCES


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