



Studies on the effectiveness of kishan gosthi in imparting agricultural information for scaling up of livelihood of hill women

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ABSTRACT

Economic and social development of hill areas is solely dependent upon women. A study conducted in four villages viz.; Bhaluti, Kausani, Jeoli and Sariyatal of Nainital District of Uttarakhand to know the awareness about agriculture and animal husbandry. Questioner based study was conducted, which was focused on the socio-economic characteristics and problems of hill women. Result revealed that majority of respondents belonged to middle age group category (58 per cent) and all the respondents have television and mobile phone. Majority of farm women were involved in farming and dairy. Maximum (90 per cent) respondents take farming related information with input dealers. Maximum numbers of respondents were unaware about scientific packages and practices related to crop production, farm implements suitable for hills areas (98 per cent), high yielding varieties of crops/use of improved varieties (94 per cent), processing technique (96 per cent) and storage techniques (82 per cent). Majority of respondents (96 per cent) were unaware about SHGs followed by small enterprise (90 per cent). On the basis of needs of hill women a participatory need based Kishan Gosthi was organized to aware the hill women on many aspects.

Key words: Agriculture, Hill women, Kishan Gosthi, Socio-economic



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INTRODUCTION

Agricultural and economic activities are heavily depends upon women in hill. Agriculture and livestock are the main occupations and a major source of livelihood in hills of Uttarakhand. Due to the uneven topography and the prevalence of traditional methods of agriculture and animal husbandry, the occupation becomes labour intensive in nature. Agricultural production patterns affect the timing of peak labour demands and the nature of the tasks involved. Women are the molder and builder of any nation's destiny (Sharma and Singh, 2016).

According to Jethi and Chandra (2013), Uttarakhand is one of the few states in India where an overwhelming number of women have always been a part of the active work force due to their total involvement with agriculture, forest protection, cattle care, and dairying. The male population tends to migrate to the urban areas due to the lack of alternative sources of income and livelihood. Thus, the whole economy is totally dependent of hill women. Hill women of Uttarakhand engage themselves in activities like land preparation, adding manure, sowing, transplanting, weeding, hoeing, protecting crops from wild animals, harvesting, threshing, etc. We can say that the backbone of Hill economy of Uttarakhand is totally dependent on women. Hill women of Uttarakhand participate in all the agricultural operations and also trek longer hilly areas to fetch much needed fuel, fodder and water. But in hill areas women were unaware about many aspects. Government has initiated various project programme and policies to empower hill women. But still, majority of women are unaware about many

aspects related to farming, dairy and home management. Thus, a small need based initiative has been taken to empower hill women of Uttarakhand. The main objectives of present research investigation were: [1] To study the socio-economic characteristics of hill women. [2] To assess the needs of hill women. [3] To assess the effectiveness of participatory need based *Kishan Gosthi*.

According to Sharma and Kashyap (2014) need based community radio module can empower the rural women. Women in Uttarakhand state urgently need the formal system of information provision like the services of extension personal and agricultural information officers to assist them with updated information in the subareas of dairy farming and home management in order to boost and sustain their productivity (Sharma and Singh, 2016). Present research investigation is an attempt to identify the information needs of hill women and organize a need based *Kishan Gosthi* to empower the hill women in various aspects.

MATERIALS AND METHOD

This study was undertaken to explore the key problems of hill women related to agriculture and allied economic activities, dairy farming, home management in Nainital District of Uttarakhand. Uttarakhand comprised of 13 District. Four Villages viz; Bhaluti, Kausani, Jeoli and Sariyatal were selected for undertaking the study. Data was collected in month of October 2017. Total 50 women were selected through PPS sampling method. The study focused on the socio-economic characteristics and problems of hill women. On the basis of needs of hill women a participatory need based Kishan Gosthi was organized to aware the hill women on many aspects. Data was collected with pre-coded interview

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schedule containing information about Socio-economic, communication characteristics and Information needs. Focus Group Discussions (FGDs) technique has been adopted for getting information and perception of the hill women in a particular village. Hill women have also participated in Focused Group Discussion. Help of village panchayat, SHGs and other institutions were also taken to get village related data. This research employs a qualitative approach in analyzing the problems of hill women.

RESULTS AND DISCUSSIONS

Socio-economic characteristics of hill women

The results of the study on socio-personal and Communication characteristics of hill women are depicted in Table 1.

Age: Data pertaining to age of hill women are presented in Table 1. Results revealed that majority of respondents (58 per cent) belonged to middle age group category (20-30 year) followed by young age group category (26 per cent) and remaining 16 per cent population falls under old age group category.

Caste : Data presented in Table 1 revealed that majority of respondents (62 per cent) belonged to General caste followed by Other Backward Caste (30 per cent) and Schedule caste (8 per cent).

Education : Majority of respondents (34 per cent) were educated upto primary level followed by high school (26 per cent) and intermediate (22 per cent). Total 18 per cent respondents were illiterate (Table 1). This clearly shows that education level of hill women is very low. The total economy of Hill area is dependent on women. Due to lower level of education women do not know about new and modern technologies related to farm, dairy and other enterprises. The findings gain support from Sharma and Kahyap (2013).

Occupation : Result showed that majority of respondents (50 per cent) was involved in dairy and farming followed by only farming (30 per cent). Total 12 per cent respondents were involved in farming and bee keeping. Total 8 per cent respondents have shop and also busy in farming occupation. This clearly revealed that the majority of respondents totally dependent on farming and dairy as the major occupation. There is one Bee keeping and Mushroom Centre. With the help of this centre, some women have started Bee keeping. Thus, some women were engaged in dairy farming, farming and bee keeping. Some women have their own shops.

Land holding : Majority of respondents (40 per cent) have 1-5nali followed by 5-7nali (34 per cent) and >7 nali (16 per cent). Total 10 per cent respondents have less than 1 nali. Thus, we can say that respondents have small size of land holding. Their livelihood is totally dependent on farming and dairy but the size of land holding is very small (Table 1).

Type of Family : Majority of respondents (58 per cent) have nuclear family followed by joint family (42 per cent). This clearly showed that we have adopted the globalization and modernization. Before some year generally people have joint family but now majority of respondents belonged to nuclear family.

ICTs Ownership : Data in Table 1 revealed that all the farmers owned mobile phone and television (100 per cent). Total 14 per cent respondents read newspaper followed by computer (6 per cent). Today is an era of ICTs. Result clearly depicts that majority of respondents have modern ICTs tool. Extension workers can demonstrate the use of Mobile phone and apps for farming and dairy purposes.

Table 1: Socio-economic characteristics of hill women

Sl. No.	Statement	Respondents	Per cent
1.	Socio-Personal characteristics		
1.	Age		
a.	Young (20 -40)	13	26
b.	Middle (30-50)	29	58
c.	Old (Above 50)	8	16
2.	Caste		
a.	General	31	62
b.	Other Backward Caste	15	30
c.	Schedule Caste and Schedule Tribe	4	8
3.	Education		
a.	Illiterate	9	18
b.	Primary	17	34
c.	High School	13	26
d.	Intermediate	11	22
4.	Occupation		
a.	Farming	15	30
b.	Dairy and Farming	25	50
c.	Farming and Bee Keeper	6	12
d.	Shops and farming	4	8
5.	Land Holding		
a.	Marginal (> 1 Nali)	5	10
b.	Small (1-5 Nali)	20	40
c.	Medium (5-7 Nali)	17	34
d.	Large (>7 Nali)	8	16
4.	Type of Family		
a.	Joint	21	42
b.	Nuclear	29	58
5.	ICTs Ownership		
a.	Television	50	100
b.	Mobile phone	50	100
c.	Computer	3	6
d.	Newspaper	7	14

Communication Behaviour regarding Agriculture

Majority of respondents (90 per cent) take farming related information from Input Dealers followed by Key Informants/Elderly person (80 per cent). Total 78 per cent respondents were take information from Scientists of Bee Keeping Centre. Total 64 per cent respondents take farming related information from progressive Farmers and Scientists of Mushroom Centre. Total 38 per cent respondents take the information from Scientists of KVKs and Aaganwadi workers. Total 30 per cent respondents take the information from Friends and Relatives. Less than half per cent of the respondents (42 per cent) take the information from Block Development Functionaries/Pradhan. Data revealed that respondents take information from the input dealer rather

than scientists and other person. There is an urgent need to develop a participatory strategy to aware the rural people they should take the information to right person at the right time (Table 2). They generally go to the market and ask about the name of fertilizer, chemical and verities. They generally use this type of farming related methods. This communication behaviour showed that even this is a ICTs era but still people take information from the input dealers, key informants and many other people. The findings were in concurrence with(Sharma and Singh, 2016).

Table 2: Communication Behaviour regarding Agriculture of hill women

Sl. No.	Statement	Respondents	Per cent
a.	Input Dealers	45	90
b.	Friends and Relatives	15	30
c.	Progressive Farmers	32	64
d.	Key Informants/ Elderly person	40	80
e.	Scientists of KVKs	19	38
f.	Scientists of Bee Keeping Centre	39	78
g.	Scientists of Mushroom Centre	32	64
h.	Aaganwadi workers	19	38
I.	Block Development Functionaries / Pradhan	21	42

Information Sharing Behaviour:

Total 56 per cent of the respondents share the information to needy farmers followed by Neighbours (50 per cent) and Progressive farmers (46 per cent) and Friends and Relatives (38 per cent).Data revealed that majority of respondents share their information to neighbours, progressive farmers, friends as well as needy farmers (Table 3).

Table 3: Information Sharing Behaviour of hill women

Sl. No.	Statement	Respondents	Per cent
a.	Friends and Relatives	19	38
b.	Progressive farmers	23	46
c.	Neighbours	25	50
d.	Needy farmers	28	56

Information Needs of hill women regarding farming:

Pre-Sowing Phase: Pre sowing phase was divided into five major sub heads viz.; [1] Soil Improvement [2] Decision about crops to be grown [3] Area Allocation [4] High Yielding varieties of Crops/ Use of improved varieties [5] Land preparation methods [6] Farm implements suitable for Hills [7] Scientific packages and practices. Maximum respondents (70 per cent) were unaware about soil improvement while only 30 per cent respondents were aware about the same. Total 90 per cent respondents were aware about decision about crops to be grown while remaining 10 per cent respondents were unaware about the same. Total 78 per cent respondents were unaware about area allocation while 22 per cent respondents were aware about the same. Total 94 per cent

respondents were unaware about High Yielding varieties of Crop while 6 per cent respondents were aware about the same. More than half per cent of respondents (58 per cent) were unaware about land preparation methods while 42 per cent respondents were aware about the same. Maximum respondents (98 per cent) were unaware about the farm implements suitable for hills (Table 4). All the respondents were unaware about scientific packages and practices developed by scientists. Data clearly showed that in hill areas where women are totally dependent for their livelihood on the farming and animal husbandry but still women were unaware and untouched about many aspects related to pre sowing methods.

Sowing phase: This head comprised of three components which were [1] Right time of sowing [2] Sowing methods [3] Spacing [4] Use of farm implements. Total 60 per cent respondents were unaware about the Right time of sowing while 40 per cent respondents were aware about the same. More than half per cent of the respondents 62 per cent were unaware about the Sowing methods while 42 per cent respondents were aware about the same. Maximum (78 per cent) respondents were unaware about Spacing while 22 per cent respondents were aware about the same. Majority of respondents (92 per cent) were unaware about Use of farm implements while 8 per cent respondents were aware about the same. Data clearly showed that in hill areas where women are totally dependent for their livelihood on the farming and animal husbandry but still women were unaware and untouched about many aspects related to sowing methods (Table 4).

Post Sowing Phase : Under this head women were asked that they were aware about following aspects: [1]Seed Treatment [2] Weed Control [3] Water Requirement [4] Fertilizer Requirement [5] Disease Control [6] Irrigation Methods. Majority of respondents (76 per cent) were unaware about seed treatment while 24 per cent respondents were aware about the same. Majority of respondents (96 per cent) were unaware about weed control while 4 per cent were aware about the same. Total 46 per cent respondents were aware about the water requirement and irrigation methods while 54 per cent respondents were unaware about this issue. Total 64 per cent respondents were unaware about fertilizer requirement while remaining 36 per cent respondents were aware about the same. Majority of respondents (98 per cent) were unaware about Disease Control while 2 per cent respondents were aware about the same (Table 4).Data clearly showed that in hill areas where women were unaware about many aspects related to post sowing methods.

Harvesting Phase: This head comprised of two components which were [1] Time of Harvesting and [2] Methods of harvesting. Majority of respondents (94 per cent) were unaware about Time of Harvesting while remaining 6 per cent were aware about the same issue. Majority of respondents (98 per cent) were unaware about Methods of harvesting while 2 per cent respondents were aware about the same issue (Table 4).

Post Harvesting Phase: This head comprised of three component which were [1] Processing Technique [2] Storage. Maximum number of respondents (96 per cent) was unaware about processing technique while remaining 14 per cent respondents were aware about the same. Majority of respondents (82 per cent) were unaware about storage techniques while 18 per cent respondents were aware about the same (Table 4).

Others: This head comprised of three component which were [1] Natural Resource Conservation [2] Crop protection [3] Agriculture Diversification [4] Oyster Mushroom production [5] Fish Farming. Majority of respondents (98 per cent) were unaware about Natural Resource Conservation while 2 per cent respondents were aware about the same. More than half per cent of the respondents (68 per cent) were unaware about crop protection while 32 per cent respondents were aware about the same. Maximum numbers of respondents (84 per cent) were unaware about Agriculture Diversification issue

Table 4: Information needs of hill women regarding farming

Areas of information need	Aware	Unaware
Pre - Sowing Phase		
Soil Improvement	15 (30%)	35 (70%)
Decision about crops to be grown	45 (90%)	5 (10%)
Area Allocation	11 (22%)	39 (78%)
High Yielding varieties of Crops/ Use of improved varieties	3 (6%)	47 (94%)
Land preparation methods	21(42%)	29 (58%)
Farm implements suitable for Hills	1 (2%)	49 (98%)
Scientific packages and practices of agriculture	-	50 (100%)
Sowing Phase		
Right time of sowing	20 (40%)	30 (60%)
Sowing methods	21(42%)	31 (62%)
Spacing	11(22%)	39 (78%)
Use of farm implements	4 (8%)	46 (92%)
Post Sowing Phase		
Seed Treatment	12 (24%)	38 (76%)
Weed Control	2 (4%)	48 (96%)
Water Requirement	23 (46%)	27 (54%)
Fertilizer Requirement	18 (36%)	32 (64%)
Disease Control	1 (2%)	49 (98%)
Irrigation Methods	23 (46%)	27 (54%)
Harvesting Phase		
Time of Harvesting	3 (6%)	47 (94%)
Methods of harvesting	1 (2%)	49 (98%)
Post Harvesting Phase		
Processing Technique	7 (14%)	43 (96%)
Storage	9 (18%)	41 (82%)
Others		
Natural Resource Conservation	1 (2%)	49 (98%)
Crop protection	16 (32%)	34 (68%)
Agriculture Diversification	7 (14%)	42 (84%)
Oyster Mushroom production	18 (36%)	31 (62%)
Fish Farming	14 (28%)	36 (72%)

while 14 per cent respondents were aware about the same. Total numbers of respondents (62 per cent) were unaware about Oyster Mushroom production while 36 per cent respondents were aware about the same. Total 72 per cent respondents were unaware about Fish farming while 28 per cent respondents were aware about the same (Table 4). Data clearly revealed that hill women were not aware about many technologies and methods related to farming. The above observations were similar to the findings reported by (Sharma, 2016).

Information need of hill women regarding home management

Total 64 per cent respondents were aware about family planning while remaining 36 per cent respondents were unaware about this aspect. Majority of respondents 68 per cent were unaware about child care while 32 per cent respondents were aware about the same. Total 62 per cent respondents were unaware about preparation of handicraft while 38 per cent respondents were aware about this (Table 5). Total 58 per cent respondents were unaware about pickle and jam making while 42 per cent respondents were aware about it. Total 66 per cent respondents were unaware about Home Decoration while 24 per cent were aware about this. Half per cent of respondents (54 per cent) were unaware about Sewing/Machine Knitting while 46 per cent were aware about this. Maximum respondents (70 per cent) were unaware about Beauty Parlour while 30 per cent respondents were aware about the same.

Maximum number of respondents (90 per cent) was unaware about how to start a small enterprise while 10 per cent respondents were aware about the same. Majority of respondents (96 per cent) were unaware about Self Help Groups while 4 per cent respondents were aware about this (Table 5). Majority of respondents (84 per cent) were aware about Candle making while 16 per cent respondents were unaware about the same. Maximum number of respondents (80 per cent) was unaware about Tomato Squash while 20 per cent respondents were aware about the same.

Table 5: Information need of hill women regarding home management

Areas of information need	Aware	Unaware
Family Planning	32 (64%)	18 (36%)
Child Cares	16 (32%)	34 (68%)
Preparation of Handicraft	19 (38%)	31 (62%)
Pickle and Jam Making	21 (42%)	29 (58%)
Home Decoration	17 (24%)	33 (66%)
Sewing/ Machine Knitting	23 (46%)	27 (54%)
Beauty Parlour	15 (30%)	35 (70%)
Small enterprise	5 (10%)	45 (90%)
Self Help Group	2 (4%)	48 (96%)
Candle making	42 (84%)	8 (16%)
Tomato Squash	40 (80%)	10 (20%)

Data revealed that there is an urgent need to develop an extension strategy for the development of hill women. Hill women want the training on income generating activities as

they were not aware about many technologies and methods. It can be concluded that farm women are very keen to know about family planning, home decision and dairy technology. This finding supports the findings of Mudukuti and Miller (2002) and Ikoja-Odongo and Ocholla (2003).

Information need of Dairy Farming

Data pertaining in table 6 revealed dairy needs of hill women. Maximum number of respondents (78 per cent) was unaware about Treatment of Animal while 32 per cent respondents were aware about the same. More than half per cent of respondents (64 per cent) were unaware about controlling external and internal parasite while 36 per cent respondents were aware about the same. Majority of respondents (80 per cent) were unaware about Animal breeding while 20 per cent respondents were aware about the same. Maximum number of respondents (96 per cent) was unaware about Nutritious and low cost diet for animal while only 4 per cent respondents were aware about this. More than half per cent of respondents (66 per cent) were unaware about clean milk production while 38 per cent respondents were aware about this. Majority of respondents (72 per cent) were unaware about preparation ration while 28 per cent respondents were aware about the same. Total 78 per cent respondents were aware about marketing of milk while 22 per cent respondents were unaware about the same.

Majority of respondents (90 per cent) were unaware about improving dairy farming while 10 per cent respondents were aware about the same. Total 76 per cent respondents were aware about food and feeding while 24 per cent respondents were aware about the same. Half per cent of respondents (60 per cent) were unaware about concentrate producing while 40

Table 6: Information needs of Dairy Farming

Sl. No.	Areas of information need	Aware	Unaware
1	Treatment of Animal	16 (32%)	34 (78%)
2	Controlling External and Internal Parasite	18 (36%)	32 (64%)
3	Animal breeding	10 (20%)	40 (80%)
4	Nutritious and Low Cost Diet	2 (4%)	48 (96%)
5	Clean Milk production	19 (38%)	33 (66%)
6	Preparation Ration	14 (28%)	36 (72%)
7	Marketing of Milk	39 (78%)	11 (22%)
8	Improving dairy farming	5 (10%)	45 (90%)
9	Food and Feeding	38 (76%)	12 (24%)
10	Concentrate Producing	20 (40%)	30 (60%)
11	Saving Nutritious Material	38 (76%)	12 (24%)

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per cent were aware about the same. Total 76 per cent respondents were aware about saving nutritious material while 24 per cent respondents were unaware about the same. The above observations are similar to the findings reported by Rezvanfar and Mandape (2000). Data revealed that majority of respondents were unaware about many aspects related to dairy. Thus, there is an urgent need to develop a strategy to aware the hill women about many aspects related to dairy.

Relative Effectiveness of Kishan Gosthi

After assessing the needs of hill women regarding farming, home management and dairy, a need based participatory Kishan Gosthi was organized to aware, inform and educate hill women about some need based areas in which majority of respondents were unaware about many aspects (Table 7). A knowledge test was developed to assess the knowledge of hill women on need based areas. Data pertaining in table 7 revealed that rural women had poor initial knowledge about various aspects related to farming, dairy, home management as indicated by low score that is X_1 8.0 in pre test. Tremendous improvement in the knowledge of the respondent was evident due to their participation as their post-test score increased from 8.0 to 40.0. The gain in knowledge was 38.0. From the overall view, it can be concluded that respondents got higher knowledge scores after participation in kishan gosthi programme. This was found that kishan gosthi was effective in term of gain in knowledge.

Table 7: Mean Scores of Pre-test and post test

Pre test score	Pre test score	Gain
X_1	X_2	(X_2-X_1)
8.0	40.0	38.0

CONCLUSION

On the basis of above findings it can be concluded that majority of hill women belonged to middle age group category, general caste and they were educated upto primary level. Majority of respondents were engaged in dairy and farming as the major source of income. Most of the respondents take farming, dairy and home management related information from the input dealers and key informants/elderly person and they share information with the neighbours and needy farmers. Majority of respondents were unaware about modern agricultural practice, small enterprise, SHG, improving dairy farming. Kishan gosthi was effective in term of gain in knowledge, women were aware about many aspects after Kishan Gosthi.

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