IRA-International Journal of Management & Social Sciences
ISSN 2455-2267; Vol.04, Issue 01 (2016)
Institute of Research Advances
http://research-advances.org/index.php/RAJMSS

Preferential Pattern of Rural Women for Crop Diversification in the Villages of Hisar District

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DOI: http://dx.doi.org/10.21013/jmss.v4.n1.p25

How to cite this paper:
Dahiya, M., Kundu, P., & Yadav, B. (2016). Preferential Pattern of Rural Women for Crop Diversification in the Villages of Hisar District. *IRA-International Journal of Management & Social Sciences* (ISSN 2455-2267), 4(1). doi:http://dx.doi.org/10.21013/jmss.v4.n1.p25

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India is a country of about one billion people. More than 70 percent of India's population lives in rural areas where the main occupation is agriculture. Indian agriculture is characterized by small farm holdings. The average farm size is only 1.57 hectares. Around 93 percent of farmers have land holdings smaller than 4 ha and they cultivate nearly 55 percent of the arable land. Due to diverse agro-climatic conditions in the country, a large number of agricultural items are produced. Crop diversification is intended to give a wider choice in the production of a variety of crops in a given area so as to expand production related activities on various crops and also to lessen risk. Crop diversification in India is generally viewed as a shift from traditionally grown less remunerative crops. Crop diversification and also the growing of large number of crops are practised in rain fed lands to reduce the risk factor of crop failures due to drought and less rains. Diversification originated from the word 'Diverge' which means to move or extend in a different direction from a common point. Crop diversification is essential for an agricultural based economy like Haryana to meet the cash needs of the family as well as to combat risk associated with mono-cropping. Moreover the state is facing problems of decreasing size of farm holdings, decreasing cultivable area, increasing soil salinity as well as rising water tables, imbalanced use of fertilizers and micro-nutrient deficiency, harsh climate, low forest cover (3.52%), considerable area still under rain fed farming (19%), lack of required processing and value addition facilities, storage constraints and off late shortage of labour for farming operations. All these factors are adversely affecting productivity enhancement. Traditionally diversification was used more in the context of a subsistence kind of farming, wherein farmers grew many crops on their farm. The household level food security as also risk was in important consideration in diversification. The farmers with smaller (< 2.0 hac.) farms do practice diversified farming. On quite small holdings often fragmented farmers nation wide allocate their land among seasonal crops, fruits and vegetables ,dairy and perhaps poultry to maximise their household labour utilization and income but the role of women in diversification is still not visible. Keeping all this in view preferential pattern of rural women for crop diversification was studied. The experiment was carried in Bandaheri and Burak villages of Hisar II block of district Hisar, Haryana. Data were collected with the help of structured interview schedule.

Table 1: Socio-personal profile of respondents n==50

Sr. No.	Variables and category	Bandaheri (n= 25)	Burak (n=25)
1.	**Age**		
	20-30 years	5(40%)	8(32%)
	30-40 years	12(48%)	14(60%)
	40-50 years	8(32%)	1(8%)
2.	**Marital status**		
	Married	25(100%)	25(100%)
	Unmarried	-	-
	Widow	-	-
	Divorced	-	-
3.	**Family Type**		
	Nuclear	17(68%)	14(56%)
	Joint	8(32%)	11(44%)
	Extended	-	-
4.	**Education**		
	Illiterate	3(12%)	5(20%)
	Primary	12(48%)	10(40%)
	Secondary	6(24%)	8(32%)

	Graduate	3(12%)	2(8%)
	B.A. + B.Ed	1(4%)	-
	M.A.		
5.	**Family income**		
	Rs. 50,000-1,00,000	16(64%)	14(56%)
	Rs.1,00,000-2,00,000	9(36%)	11(44%)
	Above Rs. 2,00,000	-	-
6.	**Family size**		
	Small (upto 5 members)	18(72%)	20(80%)
	Medium (6 to 10 members)	7(28%)	5(20%)
	Large (11 and above)	-	-
7.	**Type of house**		
	Kutcha	-	-
	Mixed	7(28%)	11(44%)
	Pucca	18(72%)	14(56%)
8.	**Land holding**		
	Landless	-	-
	Small (upto 2.5 acres)	8(32%)	7(28%)
	Marginal (2.5-5.0 acres)	14(56%)	14(56%)
	Medium (5.0-10.0 acres)	3(13%)	4(16%)
	Big (above 10 acres)	-	-
9.	**Source of irrigation**		
	Tubewell		
	Rain water		
	Canal water		
10.	**Heard about crop diversification**		
	Yes	25(100%)	25(100%)
	No	25(100%)	25(100%)
11.	**Cropping pattern**		
	Kharif Crops Guar Moong Kapaas Bajra	**Rabi Crops** Wheat Sarson Channa	
12.	**Herd size**		
	Cow	6(24%)	4(16%)
	Buffalo	19(76%)	21(84%)
	Any others	-	-

Table 2. : Extension Contact, Social Participation and Mass Media Exposure of Respondents

Sr. No.	Variables and category	Bandaheri (n= 25)	Burak (n=25)
1.	**Extension contact**		
	Village level worker	8(32%)	5(20%)
	Health visitor	10(40%)	8(32%)
	Gram sevak/sevika	-	-
	ICDS supervisor	6(24%)	6(24%)
	ADO	-	2(8%)
	Govt. functionaries	-	4(16%)
	BDPO	-	-
	Bank/officials	1(4%)	-
2.	**Social participation**		
	Member of no organization	18(72%)	21(84%)
	Member of one organization	2(8%)	1(4%)
	Member of more than one organization	-	-
	Office bearer	4(16%)	3(12%)
	Public leader	1(4%)	-
	Any other	-	-
3.	**Mass media exposure**		
	Radio	10(40%)	8(32%)
	TV	12(48%)	14(56%)
	Magazine	2(8%)	2(8%)
	Newspaper	1(4%)	194%)

Majority of the respondents (60%) belonged to the middle age group followed by 32 per cent respondents belonged to 20-30 years of age and only 8 per cent respondents belonged to 40-50 years of age. Cent per cent respondents were married. Fifty six per cent respondents belonged to nuclear family followed by 44 per cent respondents who were from joint family. Regarding education 40 per cent respondents were educated up to primary followed by 32 per cent who were secondary, 20 per cent were illiterate and only 8 per cent respondents were graduates. Fifty six per cent respondents were earning between Rs. 50,000-1, 00,000 followed by 44 per cent who were earning between Rs. 1, 00,000-2, 00,000 per annum. Eighty per cent respondents had small family size followed by 20 per cent with medium family size. Fifty six per cent respondents had pucca houses and 44 per cent respondents had mixed houses. Fifty six per cent respondents are marginal farmers owning land between (2.5-5.0 acres) followed by 28 per cent

respondents who had land up to 2.5 acres and only 12 per cent respondents had medium land holding i.e. between 5.0 to 7.5 acres. Rain water was the major source of irrigation. Majority of the respondents 32 per cent had contacts with health visitor followed by 24 per cent who had contact with ICDS supervisors, 20 per cent with village level workers, 16 per cent with government functionaries and only 8 per cent respondents had contact with ADO's. Cent per cent respondents had heard about diversification. Cropping pattern followed in the village was wheat, sarson and channa as Rabi crops and guar, moong, kapaas and bajra as kharif crops. Eighty four per cent respondents had buffaloes as milch animals followed by 16 per cent who had cow. Regarding social participation 84 per cent respondents were not the members of any organization followed by 12 per cent who were office bearers in the form of Anganwadi worker and helper and only 4 per cent respondents were member of one organization. Fifty six per cent respondents had mass media exposure of TV followed by 32 per cent who had exposure through radio, 8 per cent had exposure through magazine and only 4 per cent through newspaper.

Preferential Choice Pattern of Rural Women for Crop Diversification

To know the choice pattern for diversification a list of diversified activities in agriculture was prepared and the choice pattern was taken from 50 rural women of Bandaheri and Burak villages of Hisar district along with the reasons for addition/replacement of crops. Responses of the respondents were collected on three points rating scale. Mean scores and ranks were calculated. Medicinal plants (MS-2.72, with rank-I) followed by Fruit and vegetable plantation(MS-2.64, rank-II), value addition of guar/moong/bajra (MS-2.44, rank-III), nursery raising (MS-2.34), rank-IV, fruit and vegetable processing (MS-2.28, rank-V), organic farming (WMS-2.26, rank-VI), any other (milk and milk processing (MS-2.16, rank-VII), vermin composting and bee keeping (MS-2.12, rank-VIII) and mushroom cultivation (MS-2.06, rank-X) were the preferred choice of rural women for crop diversification as also pointed by (Joshi , *et al*) that diversification can also involve "a shift of resources from one crop (or livestock) to a larger mix of crops and livestock, keeping in view the varying nature of risks and expected returns from each crop/livestock activity, and adjusting in such a way that it leads to optimum portfolio of income.

Table – 3 Rank wise preference of Rural women for diversified activities in Hisar II

(n=50)

Sr. No	Crop Diversification Areas		
		Mean score	**Rank**
1	Fruit & vegetable Processing	2.28	V
2	Mushroom Cultivation	2.06	IX
3	Nursery raising & floriculture	2.34	IV
4	Medicinal Plants	2.72	I
5	Value addition of moong/ bajra	2.44	III

6	Fruit & vegetable plantation	2.64	II
7	Bee Keeping	2.12	VIII
8	Vermin composting	2.12	VIII
9	Organic farming	2.26	VI
10	Any other (milk & milk processing)	2.16	VII

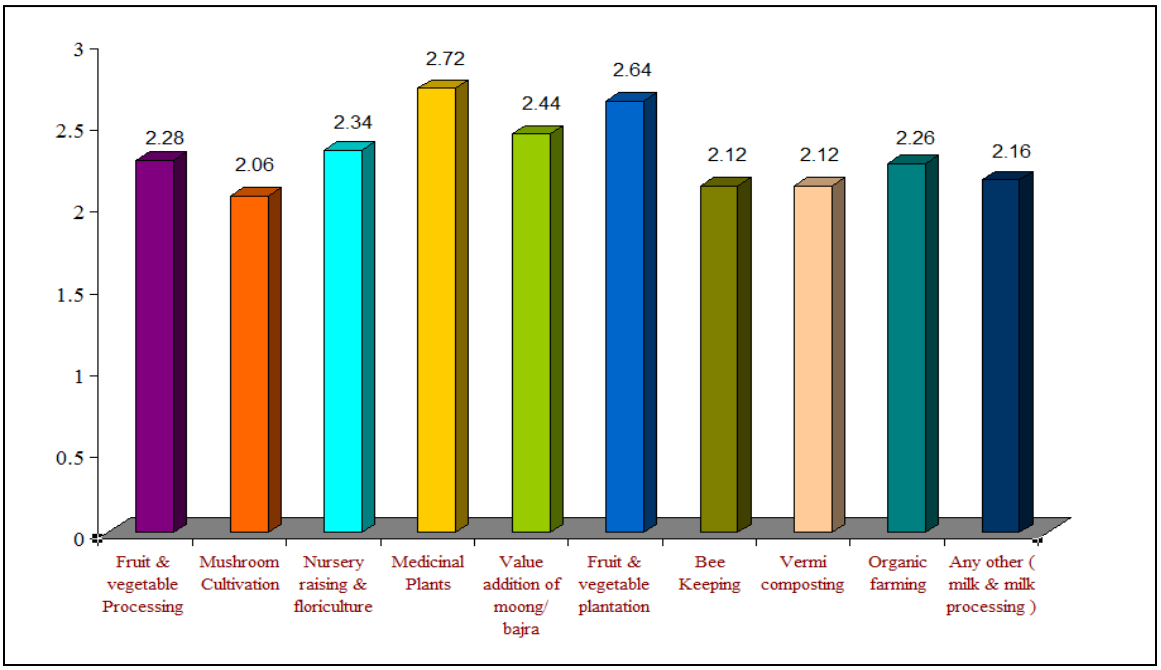
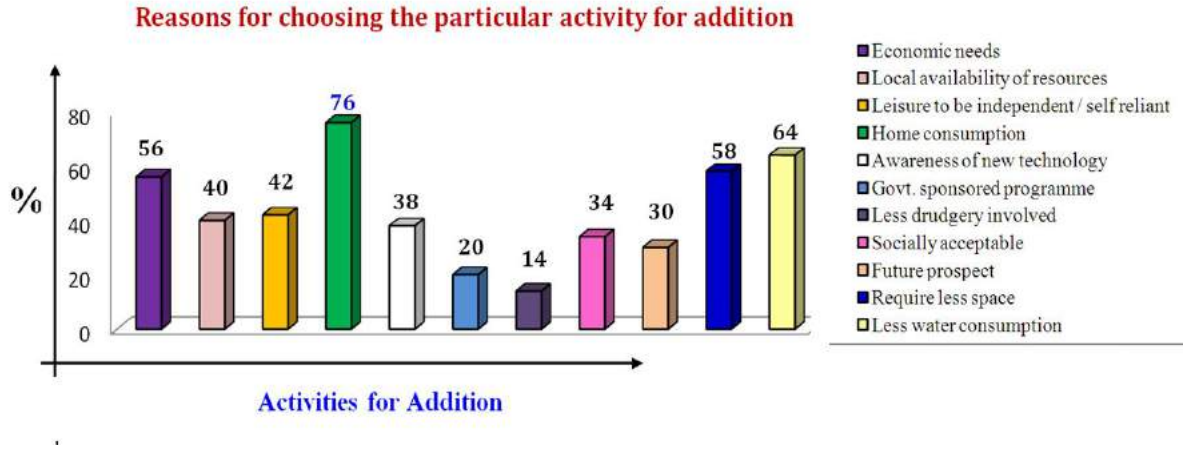


Table 4 : Reasons for choosing the particular activity for addition n=50

Reasons	Frequency	Percentages	Rank
Economic needs	28	56.00	IV
Local availability of resources	20	40.00	VI
Leisure to be independent / self reliant	21	42.00	V
Home consumption	38	76.00	I
Awareness of new technology	19	38.00	VII
Govt. sponsored programme	10	20.00	X
Less drudgery involved	7	14.00	XI
Socially acceptable	17	34.00	VIII
Future prospect	15	30.00	IX
Require less space	29	58.00	III
Less water consumption	32	64.00	II

Regarding the reason for addition of crop seventy six per cent preferred crop diversification for home consumption followed by (64%) less water consumption by crop, (58%) require less space, (56%) for economic needs, 42.0 per cent respondents revealed that its leisure to be independent and 40.0 percent revealed that resources needed for the crop are available locally . With regards to use of land and water use and quality, (Aradhana, 2009) suggested that Farm produce processing into value added products will offer employment scope in non-farm works as in distillation of active ingredients from medicinal and aromatic plants (herbal products), scope of industrialization in agriculture for sugar, paper board manufacturing, etc and also Farm enterprise diversification will generate more income opportunities and rural employment round the year

Regarding training facilities 88 per cent respondents revealed no idea about training facilities followed by 12 per cent who revealed that they had somewhat idea. 80 per cent respondents had not availed any training followed by 20 per cent who had availed somewhat training (by listening to the farmers and ADO's).



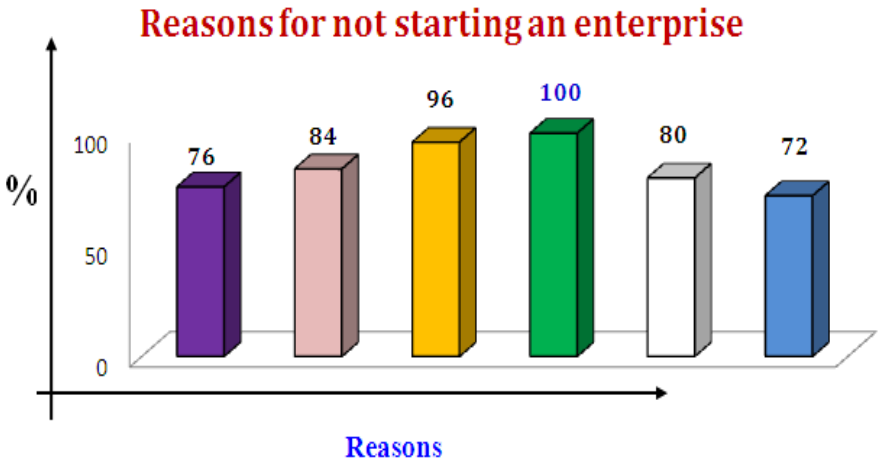
Reasons for not starting an enterprise **n=50**

Table 5: Reasons for not starting an enterprise **n=50**

Sr. No.	Reasons	Frequency	Percentage
1.	Lack of technical knowledge	38	76.00
2.	Lack of marketing services	42	84.00
3.	Heavy schedule	48	96.00
4.	Decision making by husband	50	100.00
5.	Non-availability of raw material	40	80.00
6.	Lack of transport facility	36	72.00

Cent per cent respondents do not want to start an enterprise because decision making was in hands of husbands followed by 96 per cent revealed of already having a heavy schedule, 84 per cent respondent's revealed lack of marketing services, as also revealed by (Saraswati Poudel Acharya**)** that crop diversification influences production and further suggested that the creation of basic infrastructural facilities like sustained supply of irrigation water, markets, fertilizer availability, proper roads and transportation is an essential pre-requisite for creating enabling conditions for fostering the process of

agricultural development and crop diversification, as most of these parameters are found to influence the nature and extent of crop diversification. 76 per cent lack of technical knowledge and 72 per cent lack of transport facility. Seventy six per cent respondents revealed that they don't had enough money to start an enterprise and 64 per cent respondents preferred to take loan from bank followed by 20 per cent from relatives/friends and 16 per cent from any finance company. No one preferred the loan from moneylender and cooperative society.



Conclusion:

The preferential choice of rural women for crop diversification was for cultivation of medicinal plants and fruit and vegetable cultivation. The major reasons for choosing an activity was for home consumption followed by less water consumption by crops and require less space. Cent per cent respondents do not want to start an enterprise because decision making was in hands of husbands and they are already having a heavy schedule and also the lack of marketing services. So, only for achieving food security, improved human nutrition at household level , to be self-reliant and for favourable impact on soil fertility and local availability of resources the women wanted to go for diversification.

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