

## CHAPTER – 7

### SOCIAL IMPACT ON FARMERS USING IRRIGATION TECHNIQUES

#### 7.1 Introduction

Economic situation of an individual has also made a distinct footprint on the social status. It can be work on both directions, either positive or negative. Improvement of economic status can also enhance the social capabilities of any individual. In the previous chapter the researcher has discussed about the economic status of the farmers and impact of irrigation on it. From the previous chapter it can be said that there has been positive change occurred in the economic status of all farmers, but the improvement is higher in the farmers of irrigated farm than poorly irrigated farm. In this chapter the researcher deals with the social aspect of the farmers and impact of irrigation on it. For this the researcher first present a social profile of the farmers and then try to establish that whether any impact of irrigation on the social status of the farmers or not and lastly presents the perception of the farmers on impact of irrigation of farmer's social status through the questionnaire based perception study. For the convenient of analysis of the social profile of the farmers the researcher again categorized the farmers into three groups according to the size of the agricultural land they hold (Census, 2011). These are i. Marginal Size (less than 1 hectare), ii. Small Size (1 to 2 hectares) and iii. Semi-medium Size (2 to 4 hectares).

#### 7.2 Social Profile of Farmers

The social characteristics of farmers includes family size, caste composition, literacy and sex composition occupational structure and migration etc. have been discussed below to understand the present social scenario of the farmers.

##### 7.2.1 Family Size

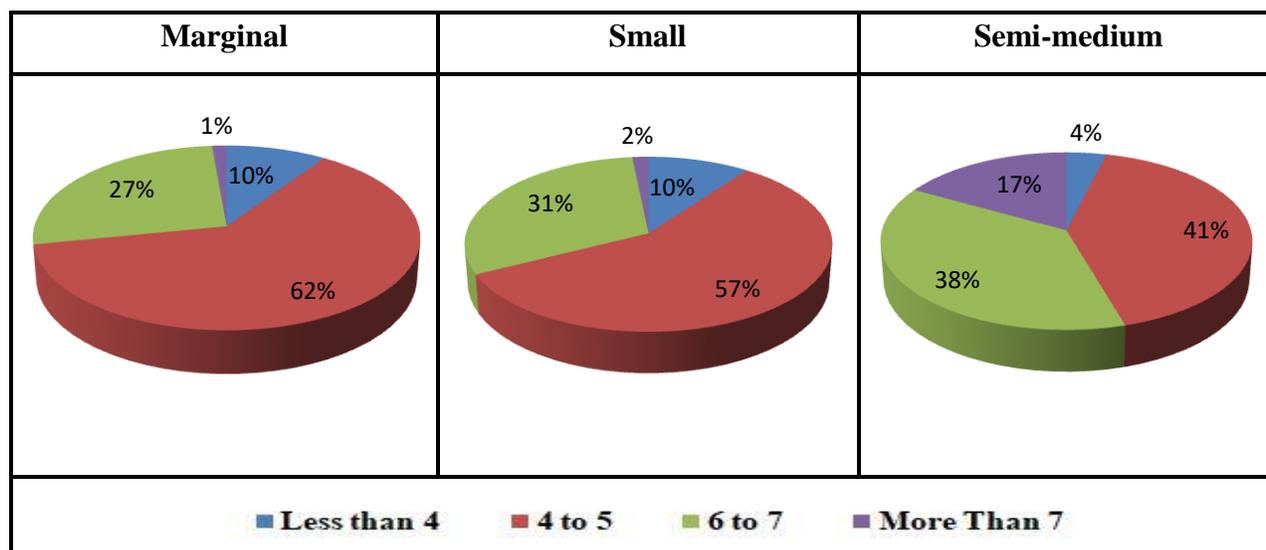
Size of family signifies the social as well as economic status. In normal case the agrarian society has greater family size, as because more people can work for the household income. It also decides the working capacity as well as family responsibility. The researcher has intensively collected information regarding size of family. Table 7.1 depicts the category wise family size. The researcher has categorized the family size into 4 groups, i.e. less than 4, 4 to 5, 6 to 7 and more than 7. Out of 295 Marginal farmers 28 (9.49%) of them has family size less than 4, 184 (62.37%) has 4 to 5, 79 (26.78%) has 6 to 7 and only 4(1.36%) family has more than 7 persons in their family. Again in case of Small

farmers, out of 188 farmers 19 (10.11%) have family of less than 4, 108 (57.45%) has 4 to 5, 58 (30.85%) has 6 to 7 and 3 (1.60%) has more than 7 persons in their respective families. The total number of Semi-medium farmers is 77. Out of 77 Semi-medium farmers, only 3 (3.90%) has less than 4 of family size, 32 (41.56%) has 4 to 5, 29 (37.66%) has 6 to 7 and 13 (16.88%) has more than 7 persons in their respective families. From the overall data it can be said that, as the size of land holding increases the number of families with greater number of persons in their families have been found.

**Table 7.1** Family size of Farmers.

Particulars	Farms Size						Total
	Marginal		Small		Semi-medium		
	No.	% of Farmers	No.	% of Farmers	No.	% of Farmers	
> 4	28	9.49	19	10.11	3	3.90	50
4 to 5	184	62.37	108	57.45	32	41.56	324
6 to 7	79	26.78	58	30.85	29	37.66	166
> 7	4	1.36	3	1.60	13	16.88	20
<b>Total</b>	<b>295</b>	<b>100</b>	<b>188</b>	<b>100</b>	<b>77</b>	<b>100</b>	<b>560</b>

Source: Field Survey.



**Figure 7.1** Family size of Farmers.

Source: Field Survey.

### 7.2.2 Caste Composition

In country like India caste plays a vital role in the social status of an individual. In the study area this is also an important social aspect. The researcher has classified the caste of the farmers into – General, Schedule Caste, Schedule Tribe, OBC-A, OBC-B. Table 7.2 reveals the caste compositions of the Farmers. Out of 295 Marginal farmers 45 (15.25%) belong to general

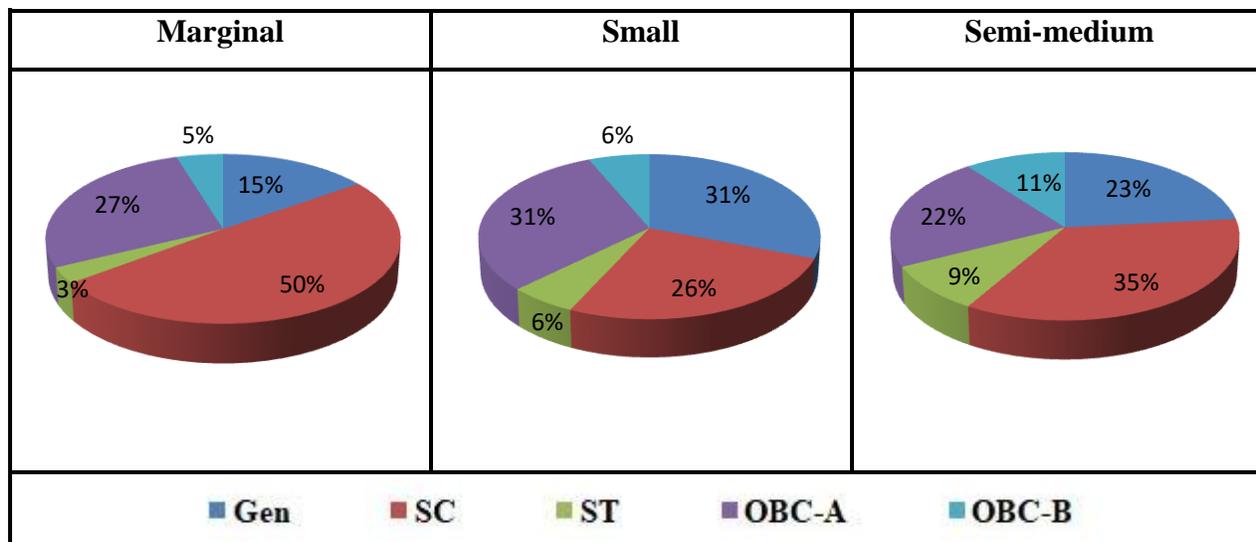
category, 146 (49.49%) in Schedule Caste, 9 (3.05%) in Schedule Tribe, 81 (27.46%) in OBC-A and 14 (4.75%) in OBC-B category. Out of 188 Small farmers 58 (30.9%) belong to General Category, 49 (26.1%) in SC category, 11 (5.9%) in ST Category, 58 (30.9%) in OBC-A category and 12 (6.4%) in OBC-B category.

**Table 7.2** Caste Composition of Farmers.

Particulars	Farms Size						Total
	Marginal		Small		Semi-medium		
	No.	% of Farmers	No.	% of Farmers	No.	% of Farmers	
Gen	45	15.25	58	30.9	18	23.38	121
SC	146	49.49	49	26.1	27	35.06	222
ST	9	3.05	11	5.9	7	9.09	27
OBC-A	81	27.46	58	30.9	17	22.08	156
OBC-B	14	4.75	12	6.4	8	10.39	34
<b>Total</b>	<b>295</b>	<b>100</b>	<b>188</b>	<b>100</b>	<b>77</b>	<b>100</b>	<b>560</b>

Source: Field Survey.

In case of Semi-medium farmers, 18 (23.38%) belong to general category, 27 (35.06%) in SC category, 7 (9.09%) in ST category, 17 (22.08%) in OBC-A category and 8 (10.39%) in OBC-B category. From overall analysis it can be said that in case of Marginal farmers the Semi-medium proportion belongs to Schedule caste category. In case of Small farmers General and OBC-A both stand 1<sup>st</sup> position. Again the schedule caste population dominated in Semi-medium farms segment.



**Figure 7.2** Caste Compositions of Farmers.

Source: Field Survey.

### 7.2.3 Educational Status

The level of literacy of an individual reflects his or her social status in the society. Normally it is believed that higher level of literacy in people of the society provides greater social status. To understand the literacy pattern, the researcher has categorized it into 5 groups. These are – Illiterate, Primary, Upper Primary, Secondary, Higher Secondary and Graduation. Table 7.3 reveals farm size wise level of literacy of the Farmers. Out of 295 Marginal farmers only 5 (1.69%) is illiterate. The highest proportion i.e. 141 (47.80%) of Marginal farmers have completed just primary level of education. 97 (32.88%) in Upper primary, 23 (7.80%) in secondary, 21 (7.12%) in higher secondary and only 8 (2.71%) Farmers completed graduation level of education. In case of Small farmers out of 188, only 3 farmers are illiterate, which is only 1.6% of total Small farmers. The highest proportion (39.4%) of Small farmers has completed upper primary level of education. Again nearly 29% of Small farmers have completed primary level education. In secondary level only 16 (8.5%) of Small farmers, in HS 17 (9.0 %) and in graduation 23 (12.2%) of Small farmers have completed.

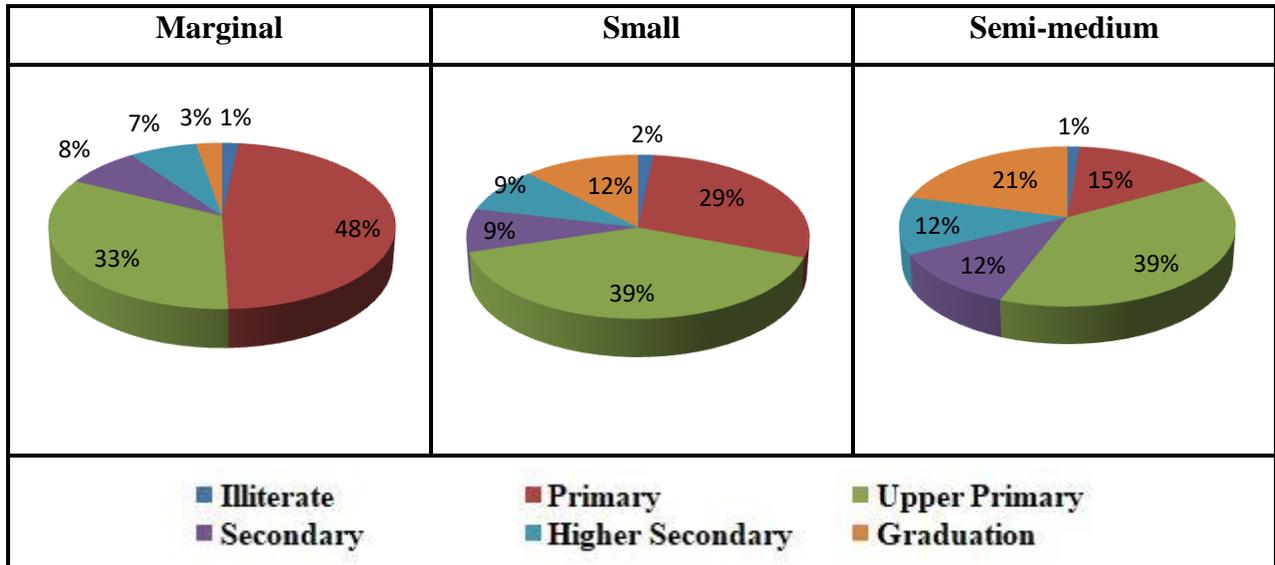
**Table 7.3** Educational Status of Farmers.

Particulars	Farms Size						Total
	Marginal		Small		Semi-medium		
	No.	% of Farmers	No.	% of Farmers	No.	% of Farmers	
Illiterate	5	1.69	3	1.6	1	1.30	9
Primary	141	47.80	55	29.3	12	15.58	208
Upper Primary	97	32.88	74	39.4	30	38.96	201
Secondary	23	7.80	16	8.5	9	11.69	48
HS	21	7.12	17	9.0	9	11.69	47
Graduation	8	2.71	23	12.2	16	20.78	47
<b>Total</b>	<b>295</b>	<b>100</b>	<b>188</b>	<b>100</b>	<b>77</b>	<b>100</b>	<b>560</b>

Source: Field Survey.

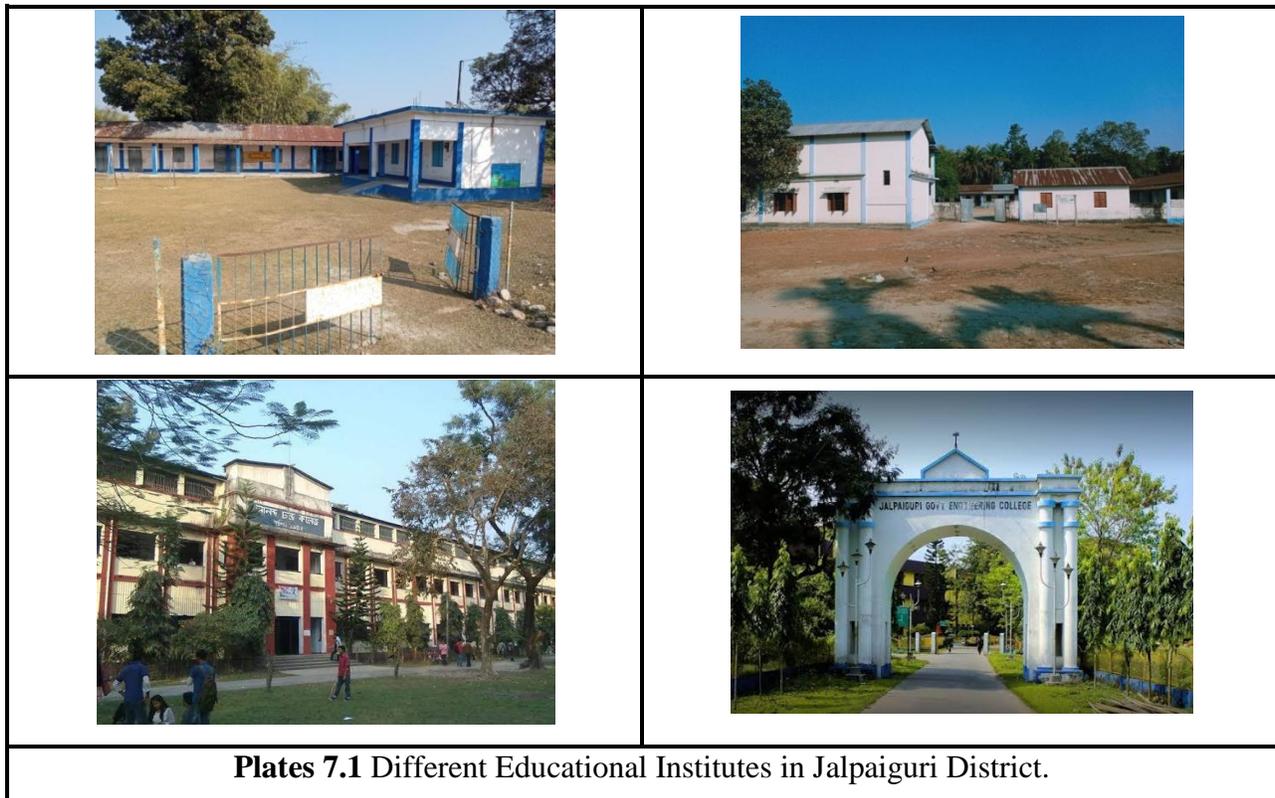
Again in case of Semi-medium farmers most of them (38.96%) have completed upper primary level of education. The second highest number of farmers i.e. 20.78% in the Semi-medium farm category has completed graduation level of education. Except these out of 77 Semi-medium farmers 12 (15.58%) has completed primary level of education, 9 (11.69%) of farmers completed each of secondary and higher secondary. And finally only 1 (1.30%) of Semi-medium farmers is illiterate. From the overall analysis it can be said that in Marginal

farming group most farmers have persuaded only primary level of education. In case of Small and Semi-medium farmers the maximum number found in upper primary category.



**Figure 7.3** Educational Qualification of Farmers.

Source: Field Survey.



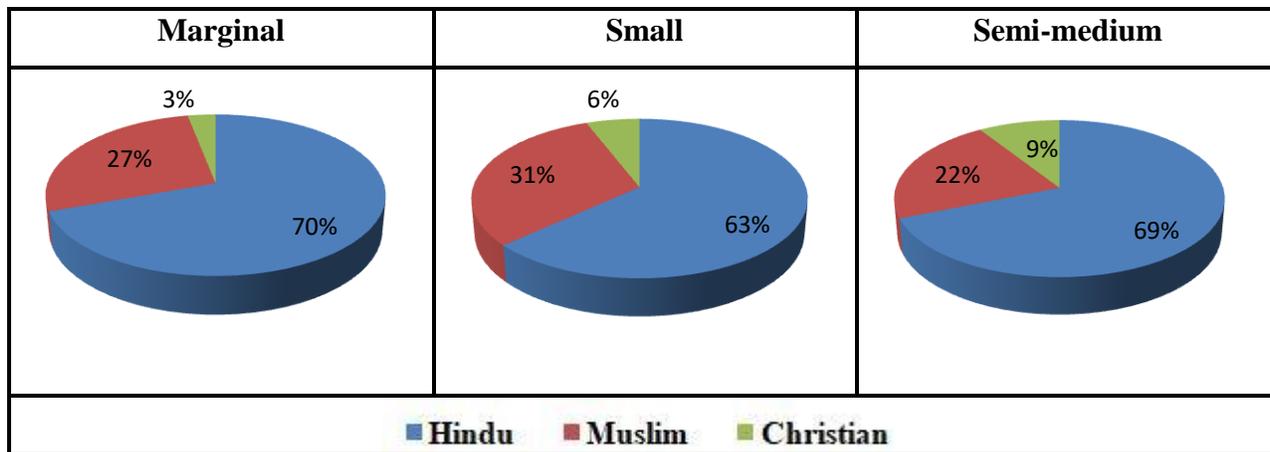
## 7.2.4 Religion

Religion can play a vital role in determining the social status of an individual. Especially in India it is used as a tool of social identity. To understand the social status of the farmers in the study area the researcher uses to collect information about the religion and faith of each individual farmer. Table 7.4 represents the religion status of the Farmers. Out of 295 Marginal farmers 69.49% belong to Hindu community, where as 27.46% belongs to Muslim and only 3.05% belong to the Christian community. More or less similar scenario has been found in both Small and Semi-medium farmers too. In case of Small farmers 63.3% belongs to Hindu community, where as 30.9% belongs to Muslim and only 5.9% of Farmers belong to Christian community. Again in Semi-medium farmers, out of 77 53 (68.83%) belongs to Hindu community. Secondly 22.08% of the Farmers belong to Muslim community and only 9.09% belongs to Christian community. Though the proportion of Hindu community in Farmers is the largest in all three categorized groups, but Marginal farmers have comparatively more percentage than Small and Semi-medium farmers. Though in absolute number of Muslim farmers is highest in Marginal farmers group. But in case of percentage Small farmers group has dominated in 1<sup>st</sup> place with 30.9%. And highest percentage of Christian population found in Semi-medium farmers group, where 9.09% of Semi-medium farmers belong to Christian community.

**Table 7.4** Religious composition of Farmers.

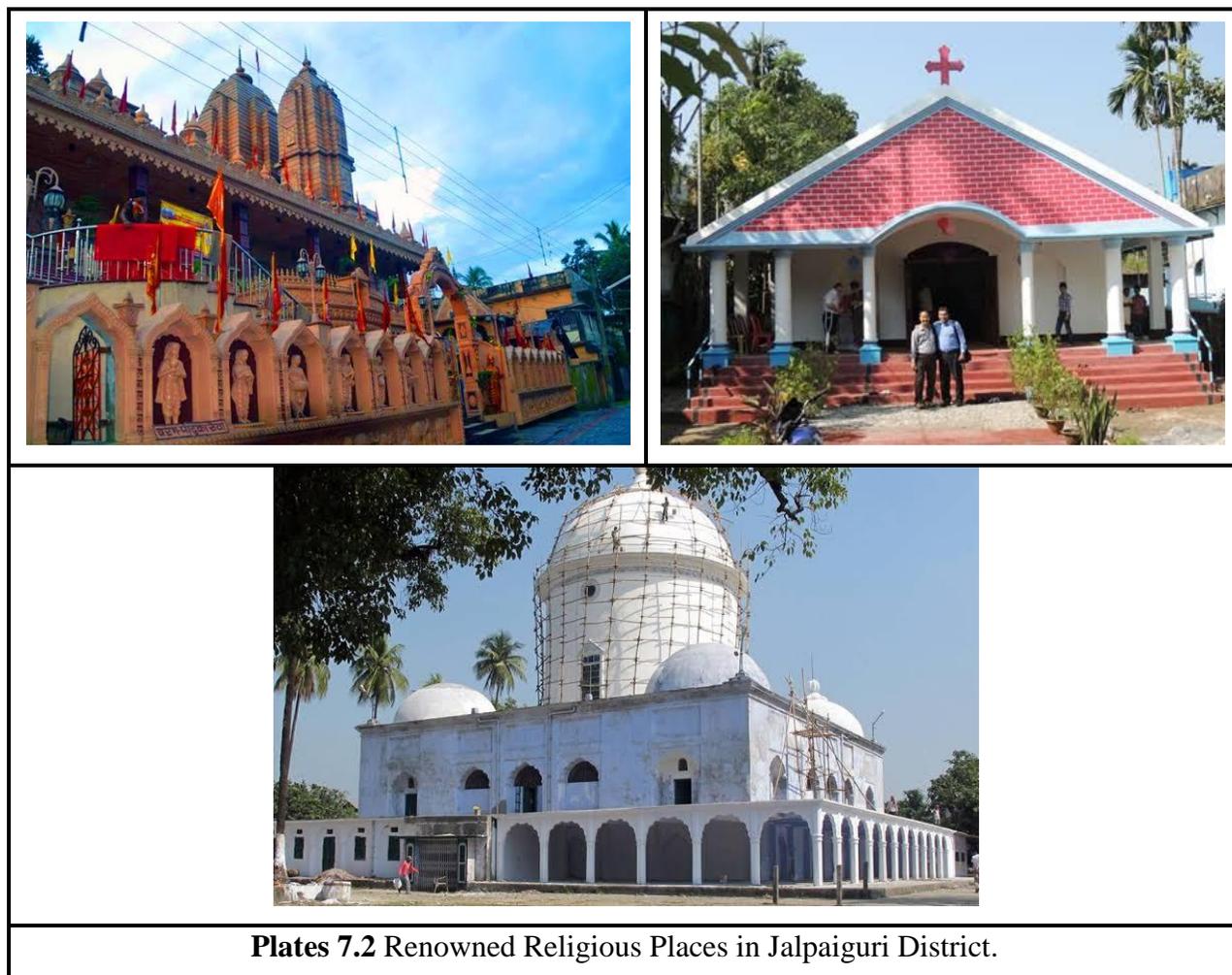
Particulars	Farms Size						Total
	Marginal		Small		Semi-medium		
	No.	% of Farmers	No.	% of Farmers	No.	% of Farmers	
Hindu	205	69.49	119	63.3	53	68.83	377
Muslim	81	27.46	58	30.9	17	22.08	156
Christian	9	3.05	11	5.9	7	9.09	27
<b>Total</b>	<b>295</b>	<b>100</b>	<b>188</b>	<b>100</b>	<b>77</b>	<b>100</b>	<b>560</b>

Source: Field Survey.



**Figure 7.4** Religion Composition of Farmers.

Source: Field Survey.



**Plates 7.2** Renowned Religious Places in Jalpaiguri District.

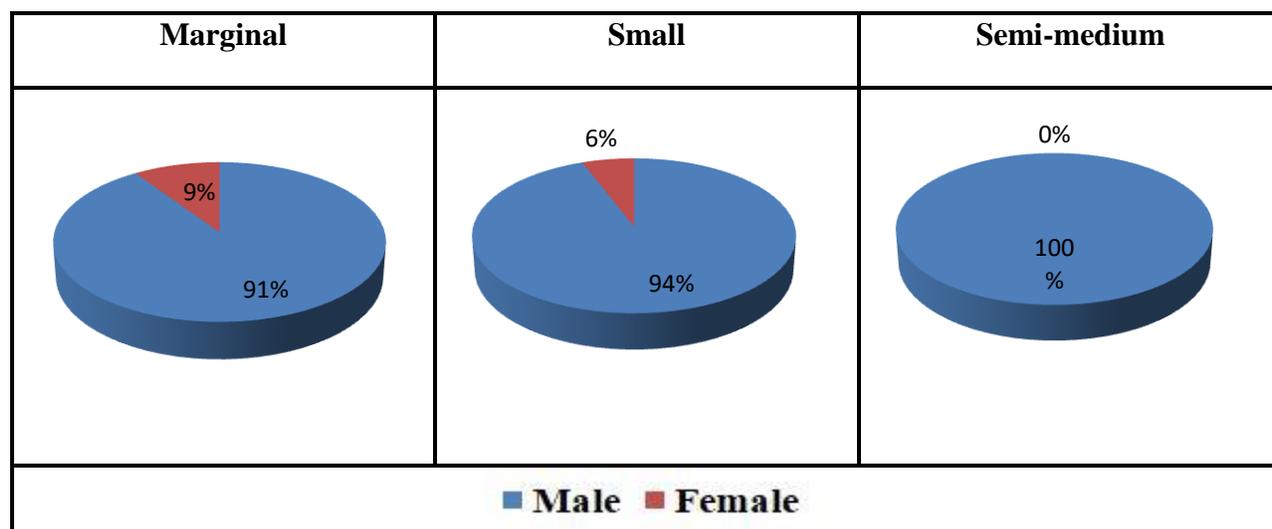
### 7.2.5 Sex Composition

Sex composition of any community reflects the women participations on various activities. The village economy largely depends on agriculture and the participation of women in agriculture gradually increasing. The researcher has presented the sex composition of the farmers on the given table 7.5, where it can be found that the number of female farmers is very less. In Marginal farming segments only 9.49% of farmers are females. Again in Small farming segments the percentage of female farmers is 5.9%. Interestingly in Semi-medium farming no female farmers have been found. The overall scenario reveals that the percentage of female farmers against male farmers is very less.

**Table 7.5** Sex Composition of Farmers.

Particulars	Farms Size						Total
	Marginal		Small		Semi-medium		
	No.	% of Farmers	No.	% of Farmers	No.	% of Farmers	
Male	267	90.51	177	94.1	77	100.00	521
Female	28	9.49	11	5.9	0	0.00	39
<b>Total</b>	<b>295</b>	<b>100</b>	<b>188</b>	<b>100</b>	<b>77</b>	<b>100</b>	<b>560</b>

Source: Field Survey.



**Figure 7.5** Sex Compositions of the Farmers.

Source: Field Survey.

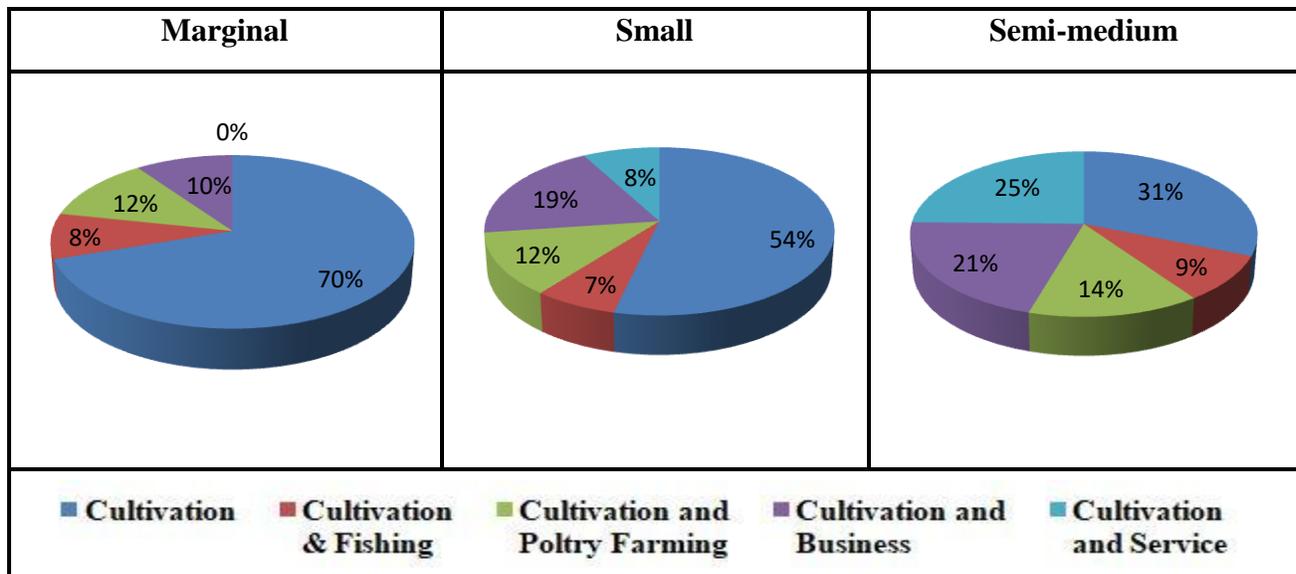
### 7.2.6 Occupation

Cultivation is the main occupation of the Farmers. The farmers also engaged in other activity as secondary occupation. The researcher has categorized the occupational structure of the Farmers into three major groups. These are – cultivation, cultivation & fishing, cultivation & poultry farming, cultivation & business and cultivation & service. In the Marginal farmers group most of the farmers (69.83%) only practices cultivation. 8.47% of them are engage in fishing with cultivation. Nearly 12% of Marginal farmers are engage in poultry farming along with cultivation and 10% of them are engage in business. No Marginal farmers have engaged in any kind of services (table 7.6).

**Table 7.6** Occupational Structure of Farmers.

Particulars	Farms Size						Total
	Marginal		Small		Semi-medium		
	No.	% of Farmers	No.	% of Farmers	No.	% of Farmers	
Cultivation	206	69.83	101	53.7	24	31.17	331
Cultivation & Fishing	25	8.47	13	6.9	7	9.09	45
Cultivation and Poultry Farming	35	11.86	23	12.2	11	14.29	69
Cultivation and Business	29	9.83	36	19.1	16	20.78	81
Cultivation and Service	0	0.00	15	8.0	19	24.68	34
<b>Total</b>	<b>295</b>	<b>100.00</b>	<b>188</b>	<b>100</b>	<b>77</b>	<b>100</b>	<b>560</b>

Source: Field Survey.



**Figure 7.6** Occupational Structure of Farmers.

Source: Field Survey.

In case of Small farmers, out of 188 farmers 101 (53.7%) have engaged in only farming. Nearly 19% of them are engage in business along with farming. Except these the Small farmers engaged - 7% in fishing, 12% in poultry farming and 8% in service. In case of Semi-medium farmers out of 77, 31.17% of them are engage solely in cultivation. Secondly 25% of Semi-medium farmers are engage in service along with cultivation. Except these, Semi-medium farmers are also engage in fishing (9.09%), poultry farming (14.29%) and business (20.78%) etc. along with the cultivation.

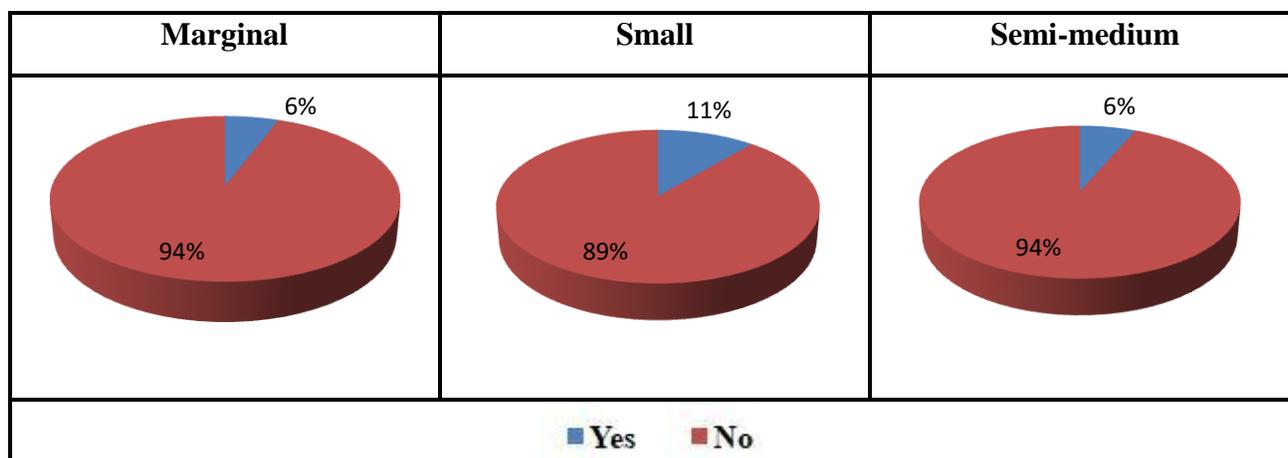
### 7.2.7 Migration

Migration is a tool of social mobility. There are various causes of migration and these can be positive or negative. Migration leads to the people to move for better options. As the study area belongs to rural sector and they largely depend on agriculture, the farmers often migrated. From the primary survey the researcher has found that(table 7.7)only 5.76% Marginal farmers have migrated from their native places. In case of Small farmers 11.2% of them have migrated. Lastly 6.49% of Semi-medium farmers have migrated. From the overall study it can be found that Small farmers have migrated more compared to other segments.

**Table 7.7**Migration Pattern of Farmers.

Particulars	Farms Size						Total
	Marginal		Small		Semi-medium		
	No.	% of Farmers	No.	% of Farmers	No.	% of Farmers	
Yes	17	5.76	21	11.2	5	6.49	43
No	278	94.24	167	88.8	72	93.51	517
<b>Total</b>	<b>295</b>	<b>100</b>	<b>188</b>	<b>100</b>	<b>77</b>	<b>100</b>	<b>560</b>

Source: Field Survey.



**Figure 7.7** Migration Status of Farmers.

Source: Field Survey.

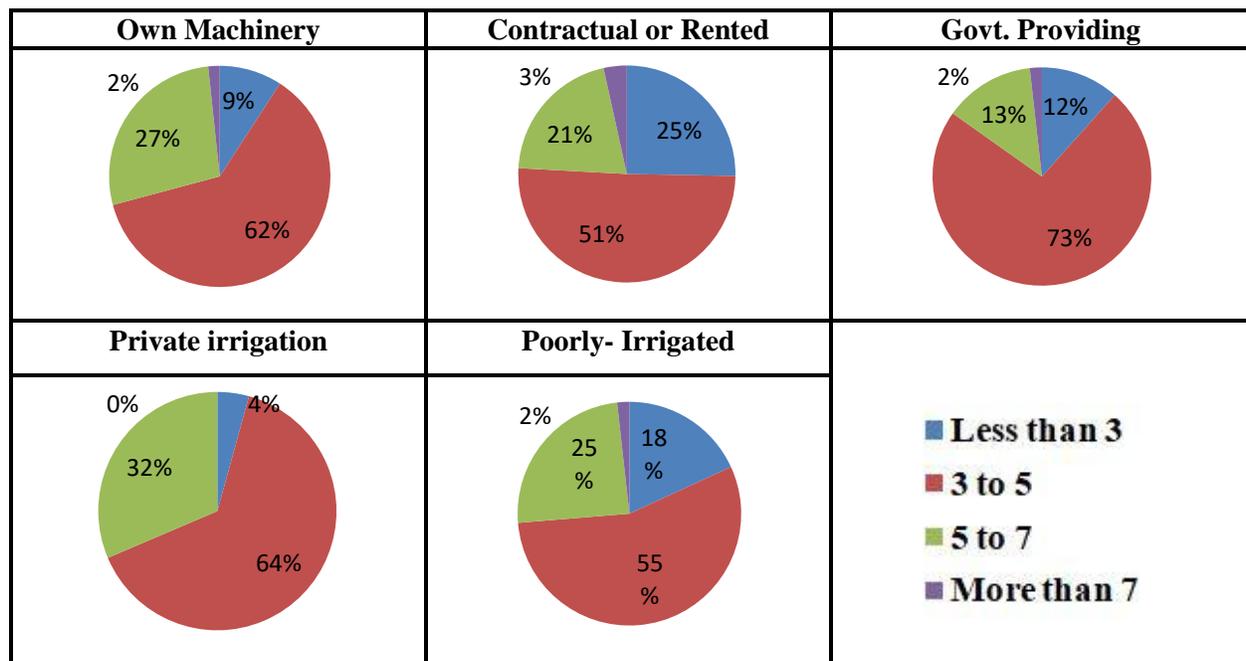
### 7.3 Irrigation and Social Status

Irrigation improves the economic situation of the farmers and also effects on their social status. There are different types of social parameters, which together make possible to know about the current social aspect. To understand the impact of irrigation on the social status of the Farmers, the researcher has categorized the farmers into two groups, i.e. i) those who have irrigated farm and ii) those who have poorly irrigated farm. The researcher has further divided the irrigated farm according to the source of irrigation water. These are own machinery, contractual or rented, government providing and poorly irrigated. In the previous portion the researcher has discussed about the social profile of the farmers. Now in this portion he analyzed the impact of irrigation on social status of the farmers. Total 120 famers have own machinery for irrigation and 87 farmers have collected the irrigation water by the contractual or rented machinery. 112 farmers totally rely on government for irrigation water and 70 farmers have insufficient supply of irrigation water. Out of 560 farmers 171farmers have poor condition in case of irrigation facilities.

#### 7.3.1 Irrigation and Family Size

As discussed before that family size is also an indicator of social status of a family. (Table 7.8) The families of the farmers have been categorized into four groups (less than 3, 3 to 5, 5 to 7 and more than 7). Out of 120 farmers who have own machinery for irrigation, 11 (9.17%) of them have family size of below 3 persons, 74 (61.67%) have family member of 3 to 5, 33 (27.50%)

have 5 to 7 family members and lastly only 2 families have more the 7 members. In case of those farmers (87) who have used rented or contracted machinery for irrigation, 22 (25.29%) of them have less than 3 members in their respective families. Again 44 (50.57%) farmers of this group have 3 to 5 family members, 18 (20.69%) have 5 to 7 family members and only 3 farmers have more than 7 members in their respective families. 112 farmers rely on government facilities. Out of this 13 (11.61%) have family size of less than 3. Again 82 (73.21%) farmers of this group have 3 to 5 family members, 15(13.39%) have 5 to 7 members and only 2 farmers have more than 7 members in their respective families. Some of the marginal farmers who have insufficient supply of irrigation water (private irrigation), out of 70 farmers only 3 have less than 3 family members. More than 64% of farmers of this category have 3 to 5 family members. Again 31% have 5 to 7 members and no farmers of this category have family member of more than 7. In case of poorly irrigated farm more than 55% of farmers have 3 to 5 family members and 24.56% have 5 to 7 family members. Out of 171 farmers 31 have less than 3 family members and only 3 farmers have more than 7 family members. As the calculated value of chi square i.e. 32.69 is more than the critical or tabulated i.e. 21.03 at 5% significance level and at 12 degree of freedom. Thus the null hypothesis (Ho) has to be rejected and conclude that two variables are dependent or associated. There is a positive relation between family size and irrigation facilities.

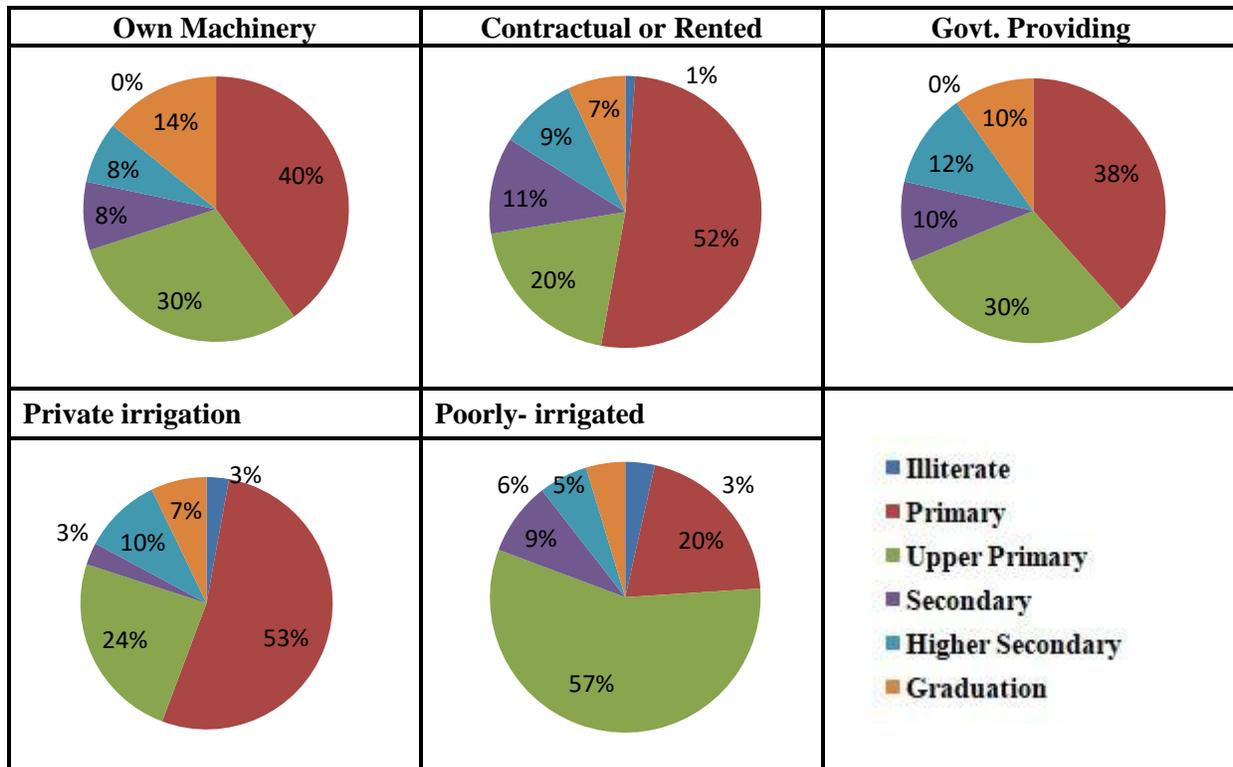


**Figure 7.8** Irrigation methods and Family size of Farmers.

Source: Field Survey.

### 7.3.2 Irrigation and Education Level of the Farmers

Theoretically improved irrigation facility leads to improve the educational status of the farmers as well. Overall 9 farmers are illiterate and only 3 of them belong to irrigated farm and 6 belong to poorly irrigated farm. From table 7.8) the researcher has categorized the education level into five divisions, i.e. primary, upper primary, secondary, higher secondary and graduation. In the own machinery 40% of farmers have only completed primary level of education. 36 (30%) have completed upper primary, 17 (14.17%) graduation, 10 (8.33%) secondary and 9 (7.5%) higher secondary level of education. Out of 87 farmers in the category of contractual or rented machinery, 51.72% just completed primary level of education.



**Figure 7.9** Irrigation methods and Education Level of Farmers.

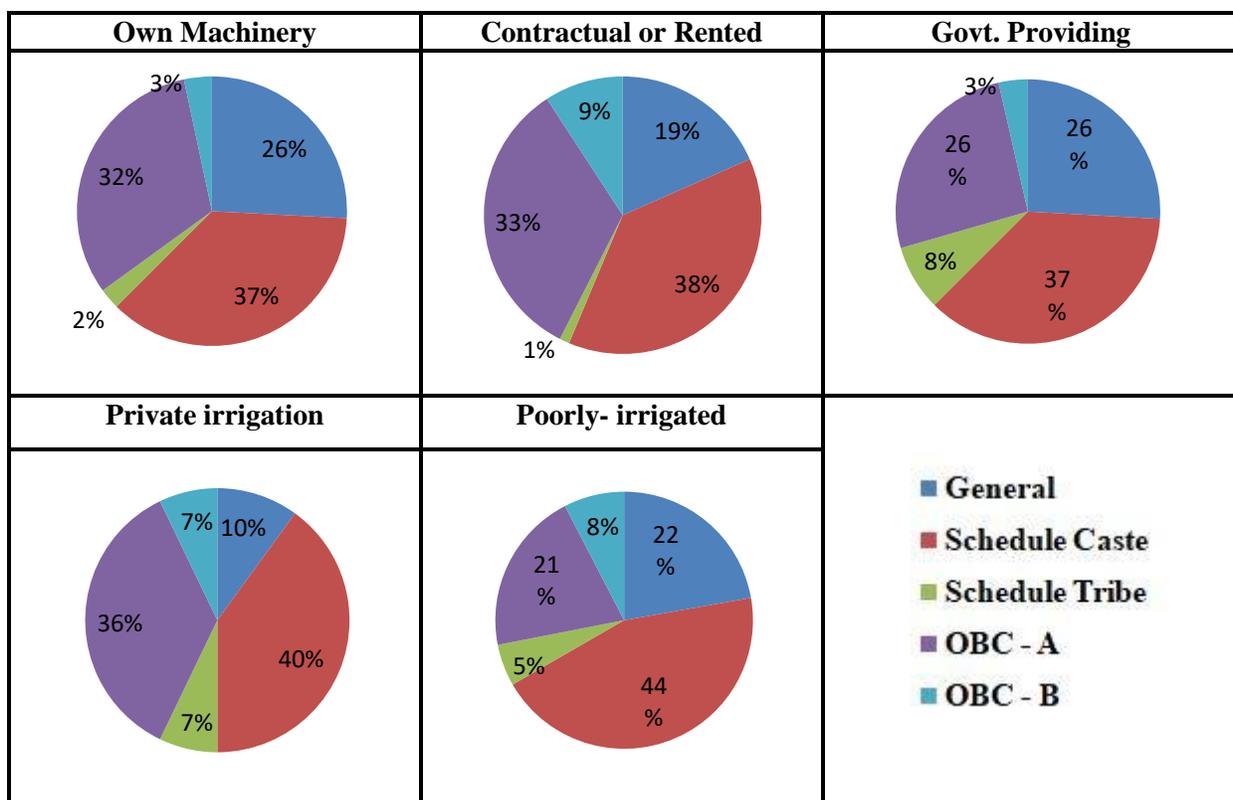
Source: Field Survey.

Except this 19.54% in upper primary, 11.49% in secondary, 9.20% in higher secondary and 6.90% in graduation have completed. In case of government providing category, out of 112 farmers nearly 39% of them have completed primary level of education. 30% of farmers in this category have acquired upper primary level of education. Except this the farmers in this category, 9.82% in secondary, 11.61% in higher secondary and 9.82% in graduation have

completed their education. The farmers belong to poorly irrigated category; most of them (more than 77%) have acquired just primary or upper primary level of education. Only 7.14%, 2.86% and 10% of farmers have acquired graduation, secondary and higher secondary education respectively. In case of the farmers of poorly irrigated farm majority (56.73%) has acquired just upper primary education. only 8 farmers (4.68%) have completed graduation. As the calculated value of chi square i.e. 78.08 is more than the critical or tabulated i.e. 31.41 at 5% significance level and at 20 degree of freedom. Thus the null hypothesis (Ho) has to be rejected and conclude that two variables are dependent or associated. There is a positive relation between level of education and irrigation facilities.

### **7.3.3 Irrigation and Caste Composition of the Farmers**

India is country of caste diversity and it plays a vital role in social status of an individuals. In the study area the researcher has categorized the farmers into five types, i.e. General, SC, ST, OBC-A and OBC-B. Out of 560 farmers 120 belongs to own machinery category and nearly 37% of this category belongs to schedule caste. Except this 38 (31.67%) farmer belongs to OBC-A, 31 (25.83%) in General, 4 (3.33%) in OBC-B and 3 (2.50%) in schedule tribe. In case of those farmers who are using contractual or rented irrigation, nearly 38% of them belong to schedule caste category. Second largest community of the farmers of this group is OBC-A with 33% (approx.). 18.39% of farmers belong to general category and 1.15% and 9.20% belong to ST and OBC-B category respectively. Where the government provides the irrigation facilities, out of 560 farmers, 112 have taken these facilities. Out of 112 farmers, 40% belong to schedule caste and 36% belong to OBC-A category. The rest farmers are divided into 3 categories i.e. General (26%), OBC-B (4%) and ST (8%). Out of 70 farmers who have insufficient water supply, Semi-medium proportion belongs to SC (40%) and OBC-A (36%) category (table 7.8). Only 10% belong to General, 7% in ST and 7% in OBC-B category. In case of farmers of the poorly irrigated farm, more than 44% belong to schedule caste and more than 22% belongs to general category. Except this OBC-A cover 20%, OBC-B cover 8% and ST cover 5% of the Farmers in this category. As the calculated value of chi square i.e. 26.82 is more than the critical or tabulated i.e. 26.30 at 5% significance level and at 16 degree of freedom. Thus the null hypothesis (Ho) has to be rejected and conclude that two variables are dependent or associated. There is a positive relation between caste compositions of farmers and irrigation facilities.

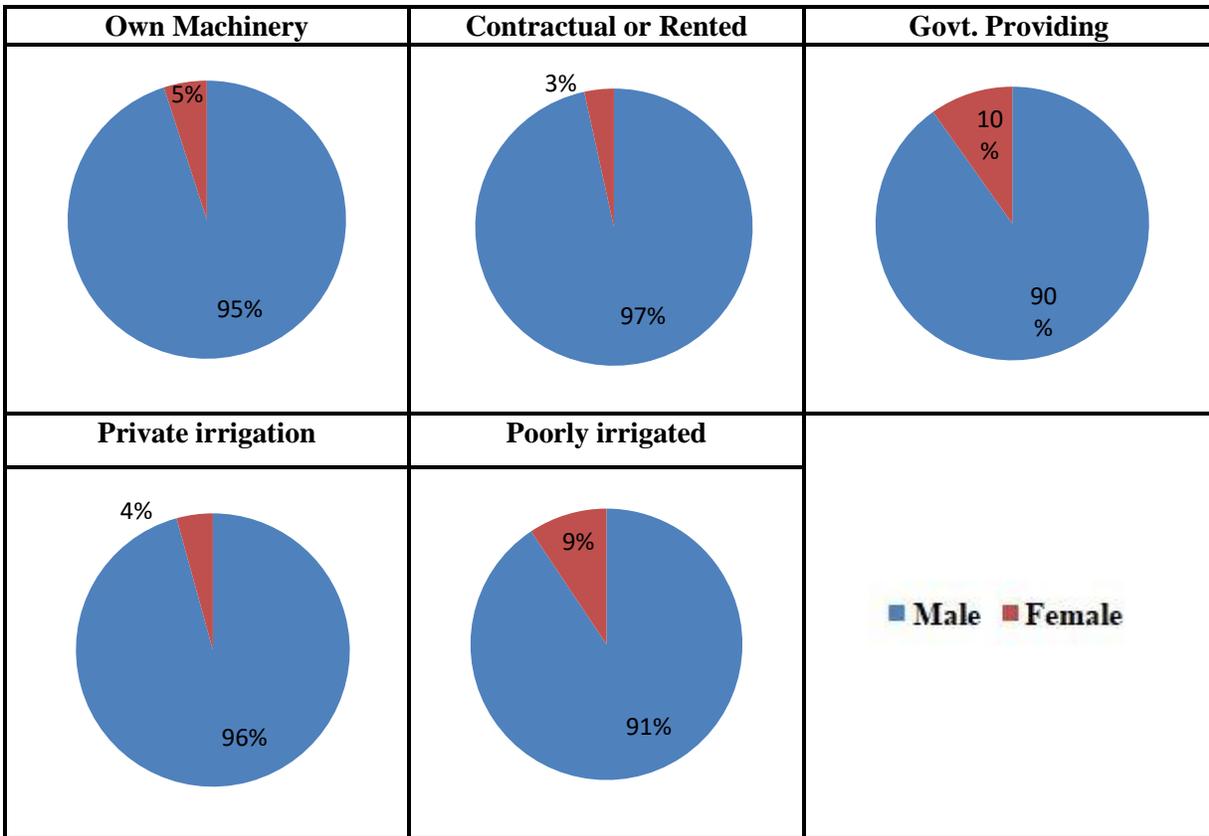


**Figure 7.10** Irrigation methods and Caste Composition of Farmers.

Source: Field Survey.

### 7.3.4 Irrigation and Sex Composition of the Farmers

Sex composition of human population is one of the basic socio-demographic characteristics, which is extremely vital for any meaningful demographic analysis (Census of India, 2011). In general, it has been known to all that irrigation plays positively in uplifting the socio-economic status of the farmers globally. As a consequence, the male dominance also declines gradually, which signify the female participation in farming activity. Country like India where the dominance of male has been easily recognizable, in this circumstances it is the responsibility of the researcher to know whether the irrigation plays any role to uplift the female participation on agricultural field in the study area or not. Normally women are engaged in agricultural activity as a labour. So from the sex composition of the farmers, it can be understood whether they (women) are also engaged in decision making in household and farming as well as From the table 7.8, it can be shown that the percentage of female in farming too little to recognize. In case of own machinery category only 5% famers are female.



**Figure 7.11** Irrigation methods and Sex Composition of Farmers.

Source: Field Survey.

Again in contractual or rented category the percentage of female farmers is not very satisfactory only 3.45%. In case government providing category the participation has little higher compare to before mentioned categories, which is 9.82%. Again in private irrigation category, only 4.29% of farmers are female. In the poorly irrigated farm 9.82% of farmers are female. The overall percentage is below 10%, which is not very satisfactory. As the calculated value of chi square i.e. 6.07 is less than the critical or tabulated i.e. 9.49 at 5% significance level and at 4 degree of freedom. Thus the null hypothesis (Ho) has to be accepted and conclude that two variables are independent or no association has been found.

### 7.3.5 Irrigation and Occupational Structure of the Farmers

The occupation of an individual refers to his trade or profession or type of work. The occupational structure of a community is the product of various socio-spatial and economic factors (Ramotra, 2008). The primary occupation of all the samples is farming. Besides this they also perform some other work as a secondary occupation. The researcher has classified the

occupation of the Farmers into five groups – i. Cultivation, ii. Cultivation and fishing, iii. Cultivation and poultry farming, iv. Cultivation and Business and v. Cultivation and service. Table 7.8 reveals that 61 (50.83%) farmers who have used own machinery only perform cultivation. Almost 13% of farmers of own machinery group perform cultivation and fishing. The same percentages of farmers have performed cultivation and business. Again 16 farmers of this group have performed cultivation and poultry farming and rest 11% perform cultivation and service. In case of those farmers who have used rented or contractual irrigation systems, almost 53% have performs only cultivation. 6% farmers perform cultivation & fishing and cultivation & service each. Again 18% of farmers of this group have performed cultivation and poultry farming and rest 17% perform cultivation and business. In case of those farmers who have subsidized by the government, almost 48% of farmers have performed only cultivation. 14% of farmers have performed cultivation and fishing, and 24% have performed cultivation & poultry farming. Again 6% of farmers of this group have performed cultivation and business and rest 7% have performed cultivation and service. In poorly irrigated group, more than 60% farmers have just performed cultivation. After that 24% have performed cultivation and business. Only 6% of Farmers of this group are under cultivation and fishing. Only 4% of farmers have performed cultivation & poultry farming and cultivation & service each. In case of those farmers who are under poorly irrigated group, more than 74% of farmers have performed only cultivation.

**Table 7.8** Comparisons of Different Social Parameters of Irrigated and Poorly Irrigated Area.

Types	Particulars	Irrigated								Poorly-irrigated		X <sup>2</sup>
		Own Machinery		Contractual or Rented		Govt. Providing		Private irrigation		No	%	
		No	%	No	%	No	%	No	%			
Family Size	<3	11	9.17	22	25.29	13	11.61	3	4.29	31	18.13	32.69*
	3 to 5	74	61.67	44	50.57	82	73.21	45	64.29	95	55.56	
	5 to 7	33	27.50	18	20.69	15	13.39	22	31.43	42	24.56	
	>7	2	1.67	3	3.45	2	1.79	0	0.00	3	1.75	
	<b>Total</b>	<b>120</b>	<b>100</b>	<b>87</b>	<b>100.00</b>	<b>112</b>	<b>100.0</b>	<b>70</b>	<b>100.00</b>	<b>171</b>	<b>100</b>	
Level of Education	Illiterate	0	0.00	1	1.15	0	0.00	2	2.86	6	3.51	78.08*
	Primary	48	40.00	45	51.72	43	38.39	37	52.86	35	20.47	
	UP	36	30.00	17	19.54	34	30.36	17	24.29	97	56.73	
	Secondary	10	8.33	10	11.49	11	9.82	2	2.86	15	8.77	
	H.S	9	7.50	8	9.20	13	11.61	7	10.00	10	5.85	
	Graduation	17	14.17	6	6.90	11	9.82	5	7.14	8	4.68	
	<b>Total</b>	<b>120</b>	<b>100</b>	<b>87</b>	<b>100.00</b>	<b>112</b>	<b>100</b>	<b>70</b>	<b>100.00</b>	<b>171</b>	<b>100</b>	
Caste	Gen	31	25.83	16	18.39	29	25.89	7	10.00	38	22.22	∞ · c

Composition	SC	44	36.67	33	37.93	41	36.61	28	40.00	76	44.44	
	ST	3	2.50	1	1.15	9	8.04	5	7.14	9	5.26	
	OBC - A	38	31.67	29	33.33	29	25.89	25	35.71	35	20.47	
	OBC - B	4	3.33	8	9.20	4	3.57	5	7.14	13	7.60	
	<b>Total</b>	<b>120</b>	<b>100</b>	<b>87</b>	<b>100.00</b>	<b>112</b>	<b>100</b>	<b>70</b>	<b>100.00</b>	<b>171</b>	<b>100</b>	
Sex	Male	114	95.00	84	96.55	101	90.18	67	95.71	155	90.64	6.07**
	Female	6	5.00	3	3.45	11	9.82	3	4.29	16	9.36	
	<b>Total</b>	<b>120</b>	<b>100</b>	<b>87</b>	<b>100.00</b>	<b>112</b>	<b>100</b>	<b>70</b>	<b>100.00</b>	<b>171</b>	<b>100</b>	
Occupation	Cultivation	61	50.83	46	52.87	54	48.21	43	61.43	127	74.27	73.03*
	Cultivation & Fishing	15	12.50	5	5.75	16	14.29	4	5.71	5	2.92	
	Cultivation and Poultry Farming	16	13.33	16	18.39	27	24.11	3	4.29	7	4.09	
	Cultivation and Business	15	12.50	15	17.24	7	6.25	17	24.29	27	15.79	
	Cultivation and Service	13	10.83	5	5.75	8	7.14	3	4.29	5	2.92	
	<b>Total</b>	<b>120</b>	<b>100</b>	<b>87</b>	<b>100</b>	<b>112</b>	<b>100</b>	<b>70</b>	<b>100</b>	<b>171</b>	<b>100</b>	
Migration	Yes	7	5.83	9	10.34	3	2.68	11	15.71	13	7.60	11.78
	No	113	94.17	78	89.66	109	97.32	59	84.29	158	92.40	
	<b>Total</b>	<b>120</b>	<b>100.00</b>	<b>87</b>	<b>100.00</b>	<b>112</b>	<b>100.00</b>	<b>70</b>	<b>100.00</b>	<b>171</b>	<b>100.00</b>	

Note: \* Significance at 5% significance level, \*\* Insignificant at 5% Significance level.

Source: Field Survey.

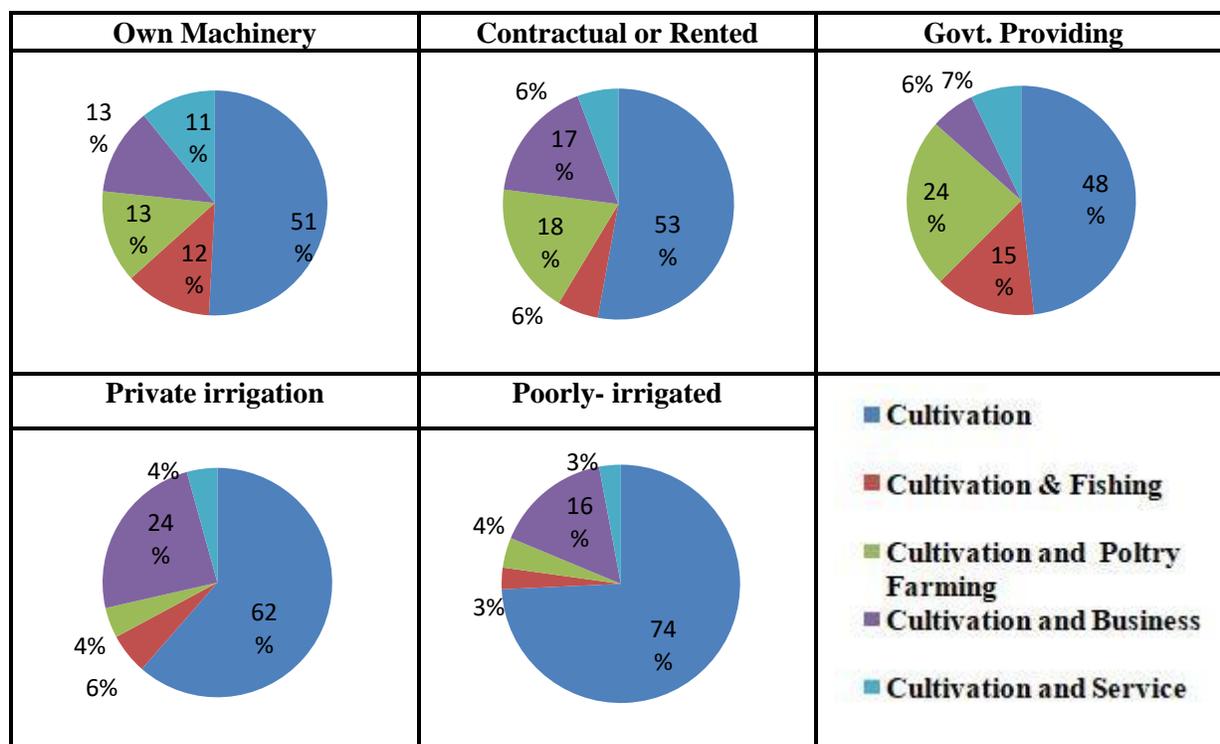


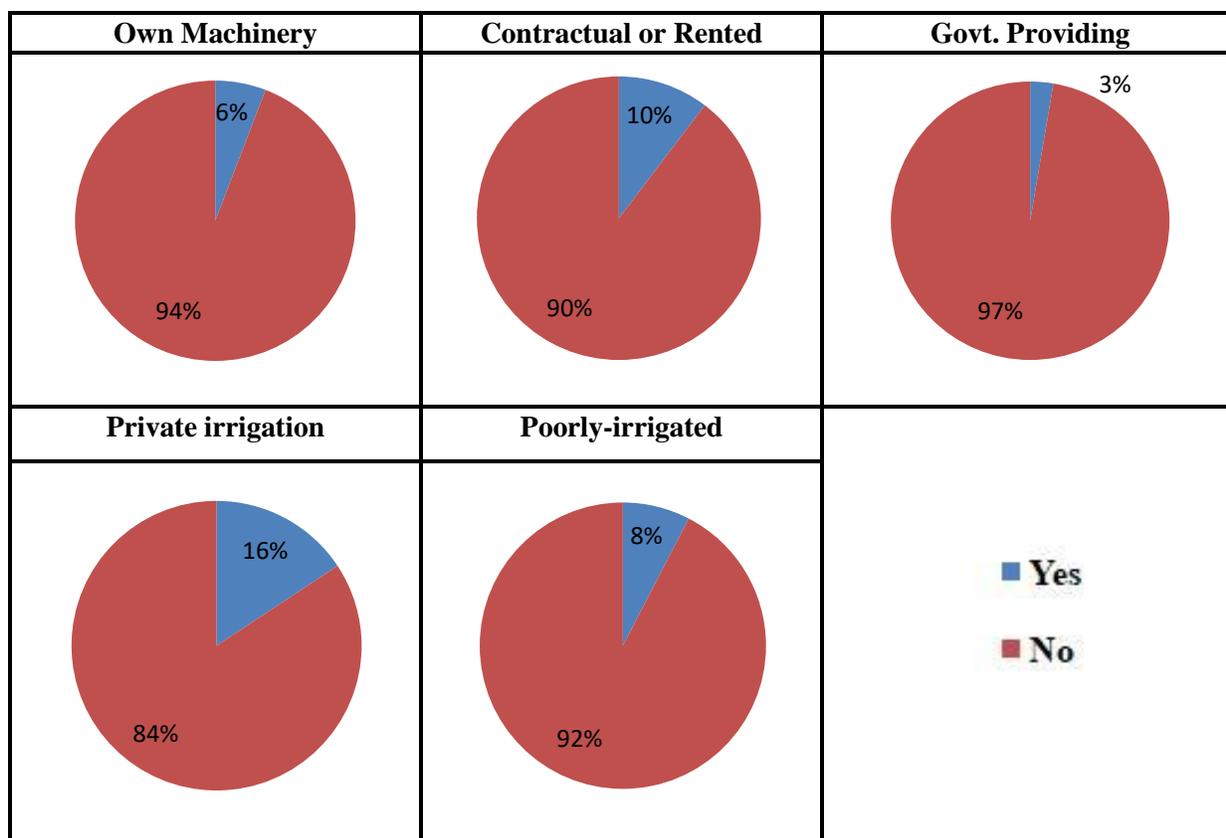
Figure 7.12 Irrigation methods and Occupational Structure of Farmers.

Source: Field Survey.

After that 16% of farmers have performed cultivation and business, and 4% in cultivation & poultry farming. Only 3% have performed cultivation & fishing and cultivation & service each. As the calculated value of chi square i.e. 73.03 is more than the critical or tabulated i.e. 26.30 at 5% significance level and at 16 degree of freedom. Thus the null hypothesis (Ho) has to be rejected and conclude that two variables are dependent or associated. There is a positive relation between occupational structure of farmers and irrigation facilities.

### **7.3.6 Irrigation and Migration Status of Farmers**

Migration refers to the movement of people from one place to another with the intentions of settling, permanently or temporarily at a new location. There are many causes behind the migration of people; it may be economical, social, political or even intentional. Generally, people of villages migrate in search of better employment opportunities. The study area belongs to vast agricultural activity region, which gave opportunity to the local people to sustain their life. So there are few incidents of migration found in the study area, especially in farmer's community. Again few people have come from another place to this region due to various socio-economic and political reasons. Table 7.8 reveals that there are few people who migrated in last 20 years. In case of own machinery group, out of 120 farmers only 7 (5.83%) have migrated here from another place. Again the farmers who have utilized rented or contractual irrigation system, only 9 (out of 87) migrated. Only 3 farmers those have taken government facilities, migrated. The highest percentage found in poorly irrigated farms, where 16% of farmers have migrated. In case of non-irrigated farm, only 8% farmers have migrated. As the calculated value of chi square i.e. 11.78 is more than the critical or tabulated i.e. 9.49 at 5% significance level and at 4 degree of freedom. Thus the null hypothesis (Ho) has to be rejected and conclude that two variables are dependent or associated. There is a positive relation between migration status of farmers and irrigation facilities.



**Figure 7.13** Irrigation methods and Migration Status of Farmers.

Source: Field Survey.

## 7.4 Conclusion

This chapter intends to discuss the social profile of the Farmers and the impact of irrigation on determining the social wellbeing of the farmers. Social features like family size, caste composition, religion, educational status, sex composition, occupation and migration have been presented to understand the present social status of the farmers. Then the researcher first tried to show the association between irrigation facilities and social status of the farmers with the help of chi-square test ( $\chi^2$ ). Most of the farmers belong to Marginal and Small farmers in respect to his farms size. From the overall analysis of social status of the farmers and its association with different types of irrigation facilities it can be found that almost in every parameter (except sex composition of the farmers) there has been a positive association between irrigation facilities and social status of the farmers, which indicates a positive impact of irrigation on the livelihood of the Farmers.

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