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PROFILE OF WASHI IRRIGATION PROJECT

(2.1) Washi Irrigation Project:

The Washi, Ladegaon, Jakraiwadi co-operative lift irrigation scheme has located in South of Walwa Taluka of Sangli District. Washi irrigation project was started from 1992 by common efforts of the Rajarambapu Patil Co-op Sugar Factory and farmers of Washi Ladegaon, Jakrawadi village. Under the supervision and guidance of RBP factory. At present 37 lift irrigation scheme are working for their development. These 37 schemes have command area 48476 acres cultivated land. Under these schemes it was 9811 acres in 2004-05 which increased to 10,875.28 acres in 2005-06 and further increased to 10,943 acre in 2006-07.

As mentioned earlier among these 37 schemes washi irrigation project has started through common efforts of respective villages and RBP sugar factory. This scheme is working on WARANA River and its working area is Washi, Ladegaon, Jakrawadi. Its command area is 2300 acre with 739 members of 3 villages. The main objective of this scheme is to supply perennial water for land in the command area. This command area is divided into food grain crops and Non-food grain crops. This scheme provides water for members and non member also. Water has been provided for various crops like sugarcane, wheat, paddy, fruits & vegetables, groundnut etc.

Generally, Washi, Ladegaon, Jakrawadi villages comes under moor and some rather fertile land. Due to this scheme farmers of three villages could solve the problem of unemployment. Moreover, scheme has implementing successfully Rajarambapu Vikas Abhiyan and got 2nd prize of Rupees 75000/- in Walwa Taluka.

Following section deals about general information of farmers as well as land use pattern in the command area. The general information of farmers includes caste wise distribution, education position, type of family, age wise distribution.

(2.2) General Information of Households:

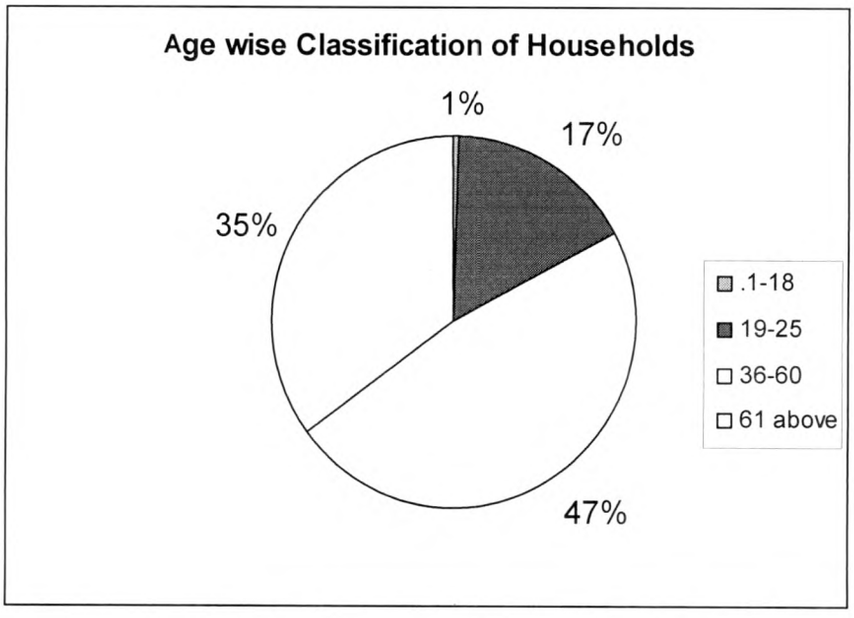
2.2.1) Age wise classification of farmers:

Age is the most important parameters which plays vital role in the occupation. Hence, the household were classified on the basis of age and presented in

Table No. 2.1 Age wise classification of households

Sr. No.	Age Group	No. of Families	Percentage
1	1 – 18	1	0.067
2	19 – 25	25	16.67
3	36 – 60	71	47.33
4	61 above	53	35.33
	Total	150	100.00

Source: Field work



It was observed that out of the total households, 0.67% households were in the age group of 1 – 18 years, 16.67% of households were in 19 – 35 years age group, 47.33% households were in 36 – 60 years age group, 47.33% households were in 36 – 60 years age group and lastly 35.33% households were in 60 -125 years age group. Thus among these age group it could be observed that 36-60 years age group is working group accounted for 47.33 share, followed by 60 & above age group.

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The age wise classification of the families shows that the majority of the families were concentrated in the age group of 36 – 60 years.

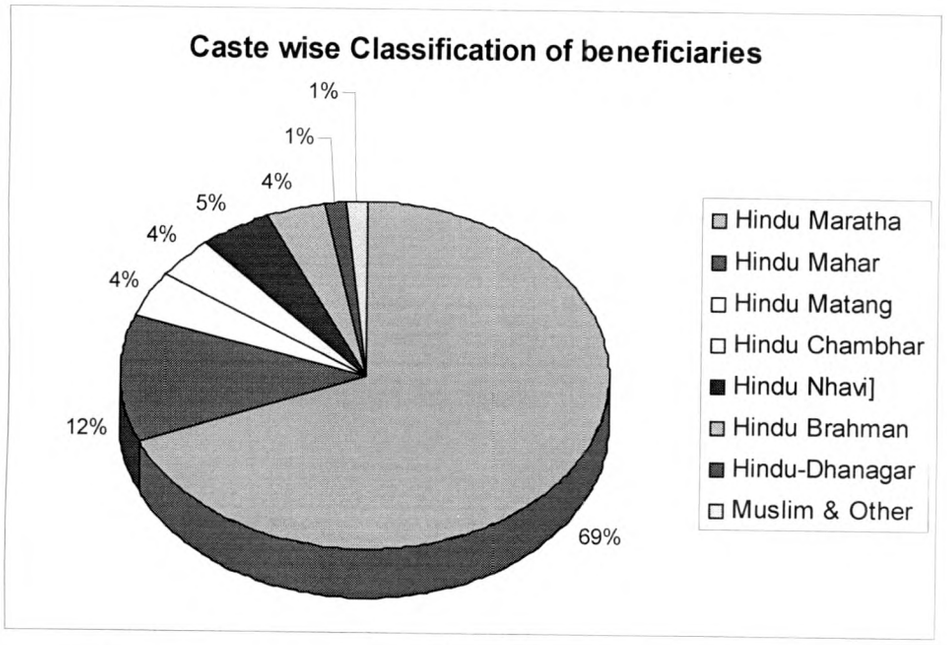
2.2.2) Caste-wise classification of sample farmers in the command area:

Country, state or region is diversified by various things such as caste, race religion etc. Table no. 2.2 shows that out of the total beneficiaries 68.7% beneficiaries were belonging Hindu-Maratha, community which was higher percentage in the command area. Out of total sample (150) they were 103 beneficiaries, followed by Mahar 18(12%), Matang 6(4%), Chambhar 6(4%) Brahman 6(4%), Nhavi 7(4.7%), Dhangar 2(1.3%) and Muslim 2 (1.3%).

Table No. 2.2 Caste wise classification of beneficiaries.

Sr. No.	Caste	No. of Families	Percentage
1	Maratha	103	68.7
2	Mahar	18	12.0
3	Matang	6	4.0
4	Chambhar	6	4.0
5	Nhavi	7	4.7
6	Brahman	6	4.0
7	Dhangar	2	1.3
8	Muslim	2	1.3
	Total	150	100.00

Source: Field work



Pie chart of caste wise classification of beneficiaries shows that the majority of farmers were Maratha followed by Mahar, Matang Chambhar, Nhavi, Brahmin, Dhangar, and Muslim.

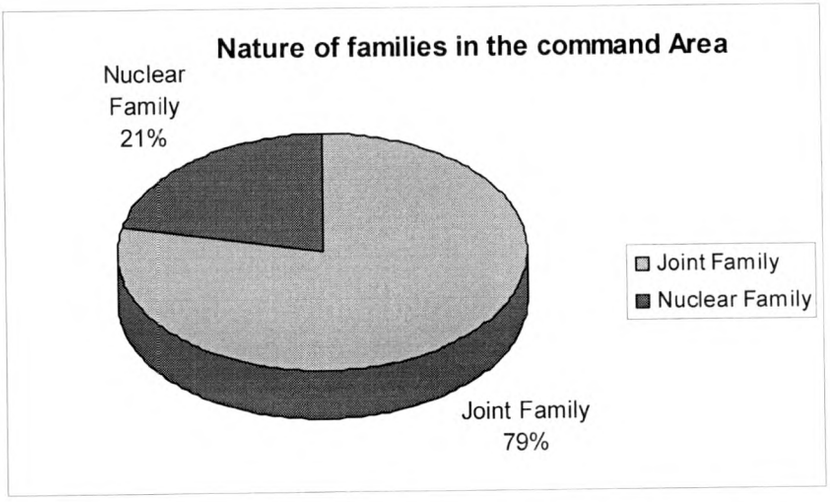
2.2.3) Nature of families in the Command Area

It showed that, Total sample families (150) are distributed into two categories one is joint family and second is nuclear family.

Table No. 2.3 Type of family.

Sr. No.	Type of family	No. of families	Percentage
1	Joint-family	118	78.7
2	Nuclear-family	32	21.3
	Total	**150**	**100**

Source : Field work



It shows that out of total families 78.7% of families were in the category of joint family and 21.3% of families were in the category of nuclear family. Thus majority of families were in favour of joint family rather than nuclear family. In rural areas they prefer joint family, because it is beneficial to compare to nuclear family. Thus, it reveals the fact in command is still joint families have not replacing in nuclear family.

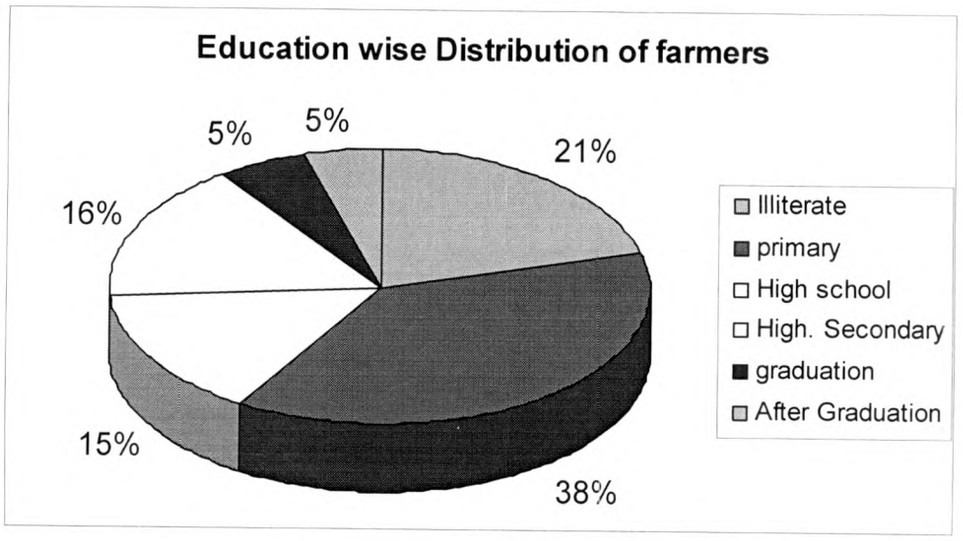
2.2.4) Education level

Education is most significant parameter in human life, which can change human beings life. The level of education is grouped in various categories like, 1) illiterate group, 2)1–7^{th} standard group (primary school) 3) high school (8 -10), 4) higher secondary school (11-12), 5) Graduation, and 6) Post graduation. The details are given as below.

Table No. 2.4 Education wise distribution of farmars.

Sr. No.	Particulars	No. of respondents	Percent
1	Illiterate	31	20.7
2	Primary	57	38.0
3	High school	23	15.3
4	Higher Secondary	24	16.0
5	Graduation	8	5.3
6	Post Graduation	7	4.7
	Total	**150**	**100**

Source : Field work



As above table shows that out of total sample, there were 31 respondents illiterate, 57 respondents were primary educated, 23 high-schools educated, 24 higher secondary educated, 8 graduated, and lastly 7 respondents post graduate. Thus majority of farmers had primary education, followed by high school and higher secondary education.

(2.3.1) Classification of households by owned land

Land resource is the most crucial natural wealth of the country and its proper utilization is a matter of utmost concern to the people. The utilization of the land according to its use capability ensures that this resource is utilized to

the best advantage. Its improper use leads to wastage and can lead to progressive deterioration and loss of productivity of these vital resources. It is the moral obligation of the present generation to pass this valuable resource on to future generation with out deteriorating quality.

Table No. 2.5 Area of own land:

Sr. No.	Particulars	Before scheme		After scheme		% change
		No. of farmers	%	No. of farmers	%	
1	-	0		0	0	
2	Marginal (0-1 acre)	42	28.0	42	28.00	0
3	Small (1-2)	37	24.67	37	24.00	0
4	Medium (2-4)	37	24.70	36	24.00	0
	Large (above 4)	34	22.63	35	23.00	2.77
	Total	150	100	150	100	2.94

Source: Field work

Above table 2.5 shows that frequencies of land owners in the command area. Sample members are divided into four groups as marginal farmer, small farmer, medium farmer and lastly big farmer.

Out of total farmer 42 farmers were marginal land owners in before scheme period and after scheme period. There were, 37 small farmers before scheme period and after scheme period. Medium land owner farmers were 37 before scheme and 36 were after period, but large land owner increased from 34 before scheme to 35 after scheme period. Intension was examine the land transaction that generally place. However, in the command area such transactions did not baring few cases.

2.3.2) Classification of households by Cultivated land

Table no. 2.6 shows the classification farmers by cultivated land. There were 49 farmers cultivating land in the category of marginal farmers before scheme, number reduced to after scheme. There were medium cultivating land upto four acres, which increased to 41 farmers, which showed some upward trend in land transaction. Similar trend was observed in case of medium farmers. In case of big farmers reverse trend was found, their number reduced to 29 after scheme.

Table No. 2.6 Classification of households by cultivated land

Sr. No.	Particulars	Before scheme		After scheme		% change
		No. of farmers	% Share	No. of farmers	% Share	
1	Marginal (0-1acre)	49	32.67	48	32.0	-2.04
2	Small (1-2)	31	20.70	32	21.30	3.22
3	Medium (2-4)	37	24.63	41	27.30	10.8
4	Large (above 4)	33	22.0	29	19.40	-12
	Total	**150**	**100**	**150**	**100**	

Source: Field work

Table No. 2.7 classification of households by size of irrigated land

Sr. No.	Particulars	Before scheme		After scheme		% change
		No. of farmers	%	No. of farmers	%	
1	Unirrigated land	142	94.7	3	2.0	- 97.88
2	Irrigated land	8	5.3	147	98.00	
	i) Marginal (0-1 acre	8	5.3	49	32.7	512.5
	ii) Small (1-2)	0	-	34	22.7	-
	iii) Medium (2-4)	0	-	44	29.3	-
	iv)Large (above 4)	0	-	20	13.3	-
	Total	**150**	**100**	**150**	**100**	

Source : Field work

Irrigation is the crucial factor in agricultural production process. Table no. 7 depicts distribution of households by size of irrigated land in command area. Out of 150 farmers' 142 farmers had unirrigated land were not under irrigation before scheme, which increased to 147 after scheme. Now large numbers of farmers are availing benefits of irrigation.

2.3.3) Classification of Households by Size of Non Irrigated Land

Table No. 2.8 Non-irrigated land in command area.

Sr. No.	Particulars	Before scheme		After scheme		% change
		No. of farmers	%	No. of farmers	%	
1	Zero land owner	0	0	0	0	- 60.78
2	Marginal (0-1 acre)	51	34.0	20	13.33	-80
3	Small (1-2)	30	20.0	6	4.00	-77
4	Medium (2-4)	36	24.0	8	5.33	-93.93
	Large (above 4)	33	22.0	2	1.38	
		150	**100**	**150**	**100**	

Source : Field work

Table 2.8 shows classification of households by size of non-irrigated land in command area. Out of 150 samples farmers 51 marginal farmers had land before scheme, which reduced to 20 after scheme. 30 small farmers had land in the range of 1-2 acres. There were 36 farmers in the medium category which reduced to 8 after the scheme. Thus it reveals the fact farmers belonging to all categories were benefited from irrigation and non irrigated land reduced after scheme under non-irrigated.

(2.4.1) Distribution of ownership holdings by size of holdings

Table no. 2.9 shows that 297.90 acres land were belonging to large farmers out of total 485.95 acres land followed by 103.25 acre land with medium farmers, 54.45 acre with small farmers and lowest 31.35 acres land with marginal farmers. Same order in possession of land was after scheme initiated. Out of total 504.45 acres land there were 380.40 acres of land cultivated by large farmers. In case of percentage, there was 61.18% before scheme and 61.14% was after scheme, followed by medium farmers who stood second larges number who possessed land 110.0 acres out of total 504.45 acres, small farmers had 55.90 acres land (11.08%) and marginal farmers had

30.15 (5.98%) acres of land out of total 504 land.

Table No. 2.9 Distribution of ownership holdings by size of holdings

(Figures in acre)

Sr. No.	Particulars	Before scheme		After scheme		% change
		Land	%	Land	%	
1	Marginal farmer	31.35	6.44	30.15	5.98	- 3.83
2	Small farmer	54.45	11.18	55.90	11.08	2.66
3	Medium farmer	103.25	21.20	110.0	21.81	6.54
4	Large farmer	297.90	61.18	308.40	61.14	3.52
		486.95	**100.00**	**504.45**	**100.00**	**3.59**

Source: Field work

2.4.2) Distribution of cultivated land by size of holdings

Table no. 2.10 gives details about the distribution of cultivated land before and after scheme period. Out of total 465.57 acres cultivated land 60.76%, 22.02%, 10.98%, and 6.24% land were with large farmers, medium farmers, small farmers and marginal farmers respectively. After scheme it was 59.26%, 23.07% 11.59% and 6.08% land were with large, medium, small and marginal farmers respectively. The percentage change was -2.07% for marginal farmers, 6.16% was for the small 5.37% and -1.94% was for the medium and large farmers. Thus it showed upward as well as downward trends before and after scheme initiated.

Table No. 2.10 Cultivated Land by size of holdings

(Figures in acre)

Sr. No.	Particulars	Before scheme		After scheme		% change
		Land	%	Land	%	
1	Marginal farmer	29.05	6.24	28.45	6.08	-2.07
2	Small farmer	51.125	10.98	54.275	11.59	6.16
3	Medium farmer	102.50	22.02	108.0	23.07	5.37
4	Large farmer	282.20	60.76	277.40	59.26	-1.94
		465.575	**100.00**	**468.125**	**100.00**	**0.55**

Source: Field work

2.4.3) Distribution of waste land by size of holdings

Table no. 2.11 shows waste land in command area out of 486.95 acre own land of farmers 21.37 acre land was waste land out of waste land 70.18% land were with large farmer. 3.51 with medium farmer, 15.56% land with small farmers and lastly 10.76% waste land were with marginal farmers. But in the after scheme period marginal farmers waste land decreased -26.09% small farmers land decreased -51.13% but medium and large farmers waste land increased 166.67% and 106.67% respectively.

The overall percentage change in waste was 69.94%. it was 21.37% acre waste land in before scheme and 36.32 acre land in after scheme. There was increased waste land about 69.94%.

Table No. 2.11 Waste land (Figures in acre)

Sr. No.	Particulars	Before scheme		After scheme		% change
		Land	%	Land	%	
1	Marginal farmer	2.3	10.76	1.7	4.68	-26.09
2	Small farmer	3.321	15.56	1.621	4.47	-51.13
3	Medium farmer	0.75	3.51	2.0	5.51	166.67
4	Large farmer	15.00	70.18	31.0	85.34	106.67
		21.375	**100.00**	**36.325**	**100.00**	**69.94**

Source : Field work

2.4.3) Distribution of Irrigated land by size of holdings

Table No. 2.12 Irrigated land

(Figures in acres)

Sr. No.	Particulars	Before scheme		After scheme		% change
		Land	%	Land	%	
1	Marginal farmer	0	0.00	28.15	6.98	0.00
2	Small farmer	0	0.00	50.721	12.58	0.00
3	Medium farmer	1.25	31.25	100.50	24.92	7940.00
4	Large farmer	2.75	68.75	223.871	55.52	8040.00
		4	**100.00**	**403.25**	**100.00**	**9981.25**

Source: Field work

Distribution of irrigated land is shown in table 2.12. In the before scheme there was merely 4 acres land under irrigated but in the after scheme period it was 403.25 acre. There was 9981.25% change in the irrigated land between both periods.

Marginal and small farmers had not irrigated land in before period. But out of total irrigated land in after period they had 28.15% 50.72% acre land respectively medium farmers had 1.25 acre land in before period. It was 24.92% acre land in after period.

2.4.5) Distribution of Non- Irrigated land by size of holdings

Table No. 2.13 Non-irrigated land (Figures in acre)

Sr. No.	Particulars	Before scheme		After scheme		% change
		Land	%	Land	%	
1	Marginal farmer	29.05	6.29	0.3	0.46	-98.97
2	Small farmer	51.121	11.08	3.55	5.47	-93.06
3	Medium farmer	101.25	21.94	7.50	11.56	-92.59
4	Large farmer	280.15	60.69	53.521	82.50	-80.89
		461.575	**100.00**	**64.875**	**100.00**	**-85.94**

Source: Field work

Table no. 2.13 shows the distribution of non irrigated land by size of holding in the command area for before and after scheme period. Before scheme period 461.57 acres of land was under non-irrigation. It increased upto 64.87 acres. Hence, it showed tremendous reduction in non irrigated land after scheme was initiated. Before scheme period, out of 461.57 acres of land 280.15 acre s land were with large farmers, 101.25, 51.25 and 29.05 acres were with medium, small and marginal farmers respectively. It was 53.35, 7.50, 3.55 and 0.30 acres of land in after scheme period scheme period was started.

Table No. 2.14 Percentage of cultivated land, waste land, irrigated land & Non-irrigated land

Sr. No.	Particulars	Before scheme					After scheme				
		Cultivated	Waste	Irrigated	Non-irrigated	Total	Cultivated	Waste	Irrigated	Non-irrigated	Total
1	Marginal farmers	29.05	2.30	0.00	29.05	31.35	28.45	1.70	28.15	0.30	30.15
		(92.66)	(7.34)	(0.00)	(92.66)	(100.00)	(94.36)	(5.64)	(93.37)	(1.00)	(100.00)
2	Small farmers	51.12	3.32	0	51.12	54.44	54.27	1.62	50.72	3.55	55.90
		(93.90)	(6.10)	(0.00)	(93.90)	(100.00)	(97.08)	(2.90)	(90.73)	(6.35)	(100.00)
3	Medium farmers	102.50	0.75	1.25	101.25	103.55	108.00	2.00	100.50	7.50	110.00
		(99.27)	(0.73)	(1.21)	(98.06)	(100.00)	(98.18)	(1.82)	(91.36)	(6.82)	(100.00)
4	Large farmers	282.90	15.00	2.75	280.15	297.90	277.40	31.00	223.87	53.52	308.40
		(94.96)	(5.04)	(0.92)	(94.04)	(100.00)	(89.95)	(10.05)	(72.59)	(17.35)	(100.00)
Total		465.57	21.37	4.00	461.57	486.94	468.12	36.32	403.24	64.87	504.45
% to total own land		(95.61)	(4.39)	(0.82)	(94.79)	(100.00)	(92.80)	(7.20)	(79.94)	(12.86)	(100.00)

Source : Field work

According to table no. 2.14 out of land of marginal farmers (31.25 acres), 92.66% land was cultivated and remained 7.34% was waste land. Out of cultivated total land entire land was unirrigated before scheme. Moreover, cultivated land increased upto 94.36 acres and waste land decreased upto 5.64% non-irrigated land was only 1% but in case of irrigated land 93.37% land was irrigated land. Out of total land of small farmers cultivate land was 93.90% which was unirrigated waste land was 6.10%, before scheme period was started. It was 97.08% cultivated land, 2.90% waste land was and 90.73% land was Irrigated land.

Cultivated lands of medium farmers were 99.27% in before scheme period it was 98.18% in after scheme period. Waste land was 0.73% in before scheme and 1.82% in after scheme period. There was only 1.21% land under irrigation. It was 91.36% in after scheme period. Non irrigated land was 98.06% in before scheme and it was 6.82% in after scheme period.

Medium farmers cultivated land decreased from 99.27% to 98.18% after scheme period. Waste land increased upto 1.82% from 0.73% irrigated land 1.21% to 91.36% and non-irrigated land decreased from 98.06% to 6.82% from before scheme to after scheme period.

Out of total land large farmers had 297.90 acres of land before scheme and 308.40 acres of land after scheme, 94.96% land was cultivated before period it was 89.95% in after period. Waste land was 5.04% in before and 10.05% after period. Irrigated land was 0.92% in before and it increased 72.29% after scheme period.

The overall data shows that out of total land 486.94 acres sample farmers cultivated 465.57 acres and its percentage was 95.61%. It was 468.12 acres after scheme and its percentage was 92.80%. it showed, it was decreased by 2.81%, waste land was increased from 4.39% to 7.20%. Irrigated land was only 4.0 acres before scheme and it was about 403.24 acres after scheme period, there was 79.12% increased irrigated land in the command area. Non-irrigated land was 461.57 acres before scheme. It was 64.67% acres after period. Moreover it revealed that irrigated land increased.