farmers with less than one ha of cultivated area to introduce STW because of their using loan of Agriculture Development Bank, profit ratio on area, decrease of benefited area due to scatter of cultivated land. Relatively rich farmers as medium, and large scale of farmers, therefore, might take advantage of this programme.

JADP provided a guidance and promoted to use pump-up water as a group to cope with the above mentioned problems.

d. Model of land consolidation area

Hasinapur out of IMF 5 was applied and carried out land consolidation programme exchange of land.

e. Practical training place for counter part and extension worker.

Extension office staffs and farmers were expected to use as a field training of irrigation, cultivation, extension and farm management.

3-1-4 General survey on IMF, STWP

Table-3 Understanding of IMF

Question	Yest Yes	No No	Not answered	Remarks
Do you know IMF?	98	—	9	
Land consolidation with exchange of land in Hasinapur	85	6	7	
Do you want consolidation programme?	71	7	20	Out of 98
Can you use Boring as a group?	29	14	55	
Do you use as group now?	3	99	—	
Do you sell water?	45	57	—	
Do you know IAP?	101	1	—	

Fig.-1 Information sources on introducing STWP

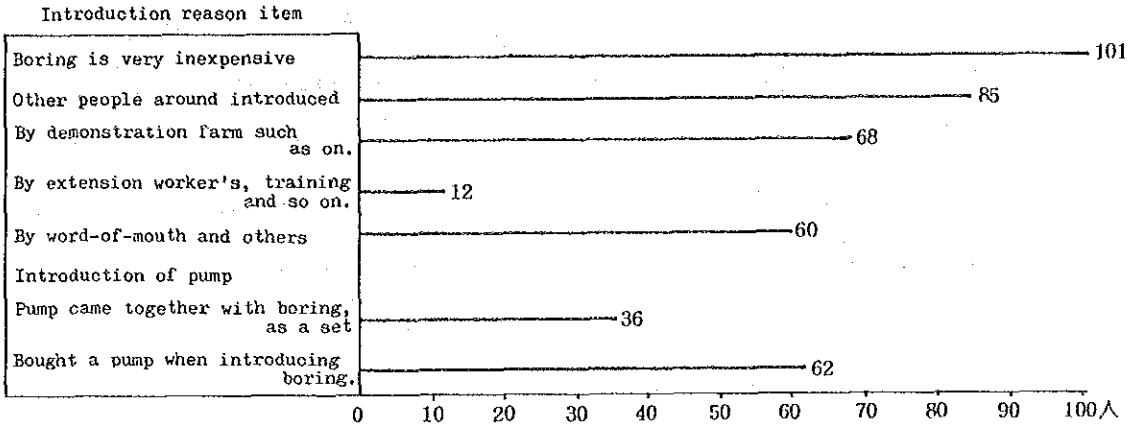


Table-4 How did IMF, STWP change for manage of farming?

Question	Increased Yes	Decreased No	No answered	Remarks
Cropping intensity	94	5	3	
Yield	94	4	4	
Contributed to farmer's economy	77	21	4	Overall
Increased net profit by STW	74	24	4	Profit per ha

We made follow-up survey, before and after introduction of 107 farmers introduced STWP, but, here, we wrote down how farmers introduced STWP concerning IMF think and cought.

About understanding of IMF, Table-3, 91% of 107 STWP introduced farmers knew the establishment of IMF, and 85% of them knew land consolidation with exchange of land programme.

72% out of 98 farmers who knew IMF were interested in land consolidation programme and expected to have this type of programme. As for group use of STWP, however, majority of them were negative although they knew group use in both Hasinapur and Saphi area, only 2% of farmers

used it. As for publicity effect of IMF, it plays the role of getting chance of introducing STWP as shown Fig-1, but it's difficult to say that early purpose of common use for bringing up small scale farmers was achieved. Also, as for how IMF, STWP influenced on farming (Table-4), 92% increase of cropping intensity, 92% increase of yield were found, but only 72% - 75% increased on farmer's economy, net profit. This means that difference of effective use of pumping-up water quantity, irrigated water would be found by each farmer, and production cost would be burden.

Fig.-2 Loan utility situation of Agriculture Development Bank

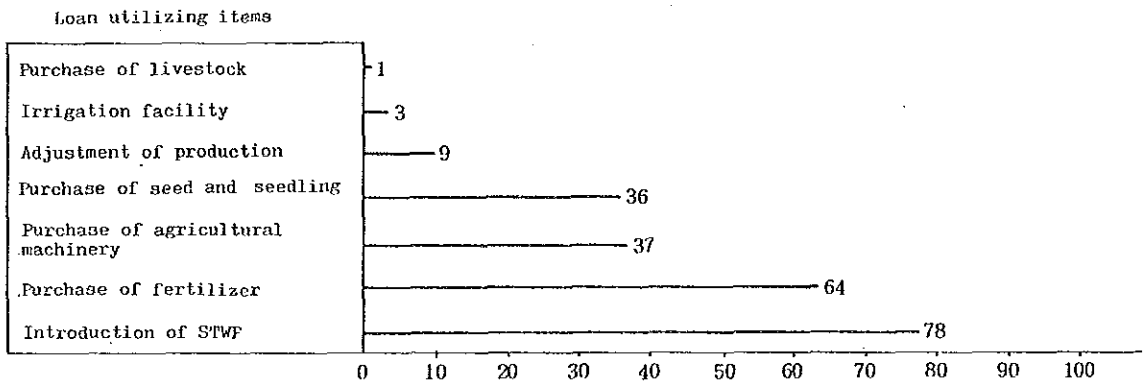


Table-5 Loan returing situation of STWP farmers

	Loan utilizion farmer	Number of payback			Reason of unable to payback	
		First	Second	Completed payback	Low income	High interest
Number of house	78	48	10	2	31	21

Fig-2, Table-5 show the survey of Agriculture Development Bank loan. Among STWP introduced farmers, 76% of them utilize Bank loan for boring and pump-set cost, fertilizer

purchase of 63% follows that and agricultural implements, seedl, seedling. As STWP introduced farmers are large scale to manage, ratio of Bank loan utility such as livestock purchase is extremely low.

As for loan payback situation, more than half of them return at the first payback, but at the second payback the number decreased as 10 out of 78.

The reasons being unable to return shows low income and high interest, but clear reason can not be found from the Table-5. They probably refrained themselves from selling produces because of doraught in 1982 to store them.

3-2 Cultivation results of IMF

3-2-1 Cropping imtensity and economic effect

If we assume before introduction of IMF (1980/'81) as 100% of cropping intensity (Table-6-a) an average increase in IMF five area shows 125.8%, first year after introduction (1981/1982), 124%, second year after introduction (1982/1983), and 65.5% of IMF farmer's non-irrigated area (1982/1983). Cropping intensity rate of IMF farmer's non-irrigated area shows an decrease in 35% comparing with before IMF. This resulted from the influence of big drought in the same year of rainy season. This shows that IMF had a beneficial effect at abnormal weather in rainy season. Actual average cropping intensity in IMF five area (Fig-4) was 187%, before introduction of IMF (1980 /1981), 235% at the first year of introduction, 216% at the second year, also non-irrigated area of IMF farmer showed 124%. If we assume net profit per ha before IMF introduction (1980/1981) as 100% (Table-6-b), average net profit increaserate in IMF five area showed 207% at the first year of introduction (1981/1982) and 289% at the second year (1982/1983), also 108% at IMF farmers' non-irrigated area (1982/1983). Especially high profit rate exceeding an increase of cropping intensity was found.

Cropping intensity at non- irrigated area land, compared with 1980/1981, showed a degrease with an increase of net profit. This means that increased production price formed a remarkable cause.

Table-6-a (%)

Item / Year / Name of IMF	Cropping intensity increase ratio ※ 1980/81	1981/82	1982/83	※※ 1982/83	Net profit increase ratio ※ 1980/81	1981/82	1982/83	※※ 1982/83	Remarks
Hasinapur	100 %	165 %	156 %	64 %	100 %	263 %	465 %	92 %	※ Before IMF introduction 1980/1981
Saphi	100	129	124	49	100	245	343	110	
Goushala	100	110	118	63	100	170	181	29	※※ Non-irriga-ted area of IMF farmers 1982-1983
Iswarpur	100	99	115	86	100	151	241	200	
IAP No.5	100	—	107	—	100	—	213	—	
Average	100	1258	124	65.5	100	207	289	107.8	

Table-6-b (%)

Fig.3 NET BENEFIT IN IMF (NRS/Ha/YEAR)
(1980–1984)

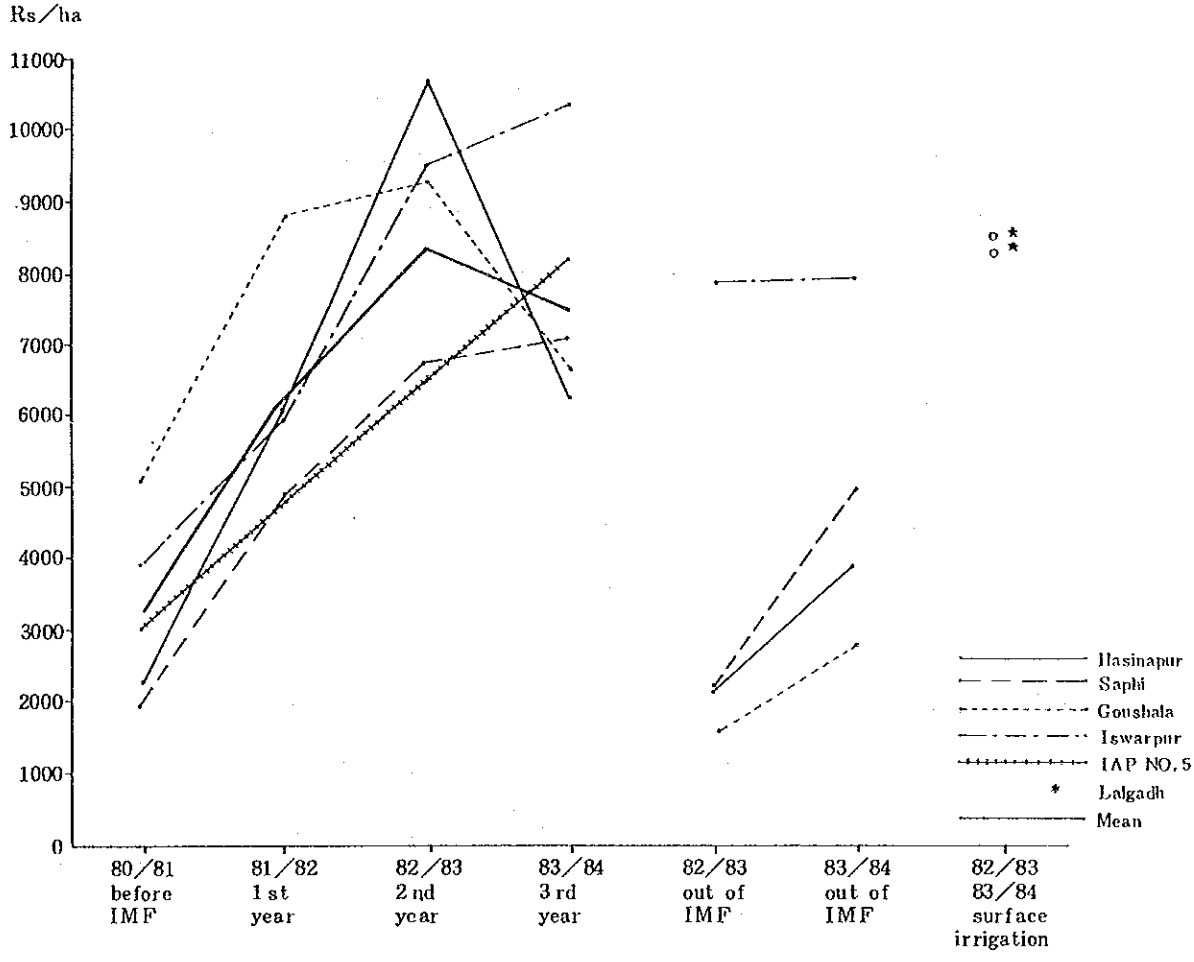
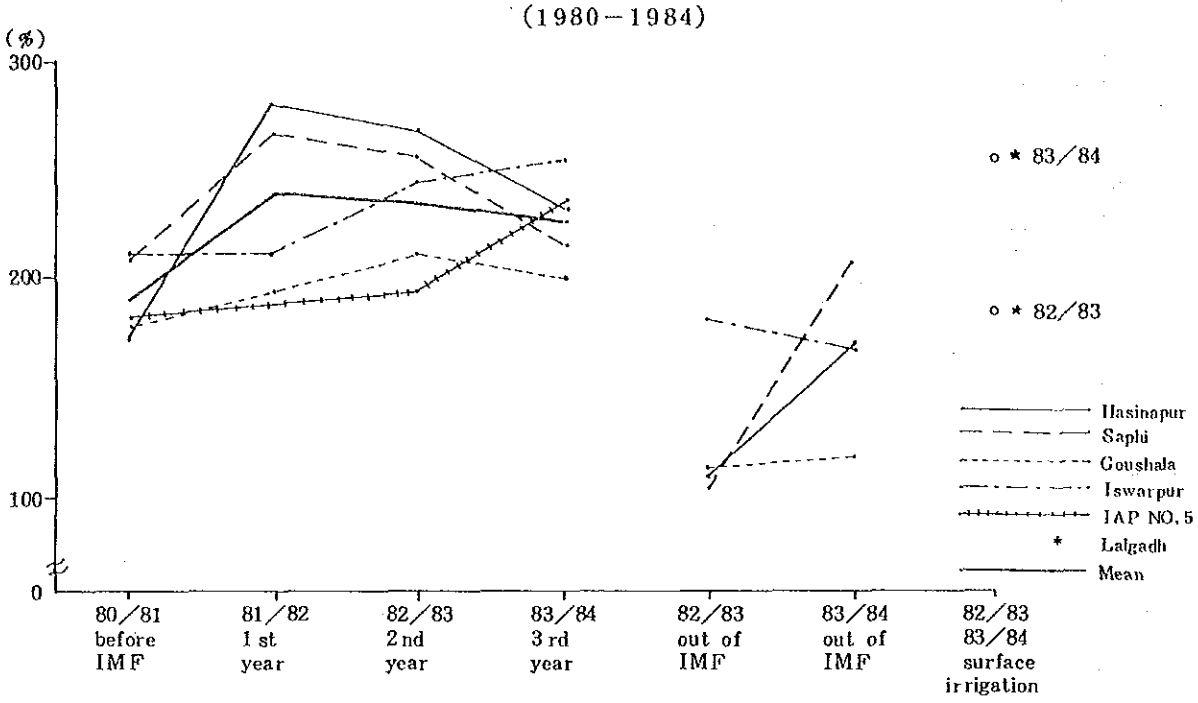
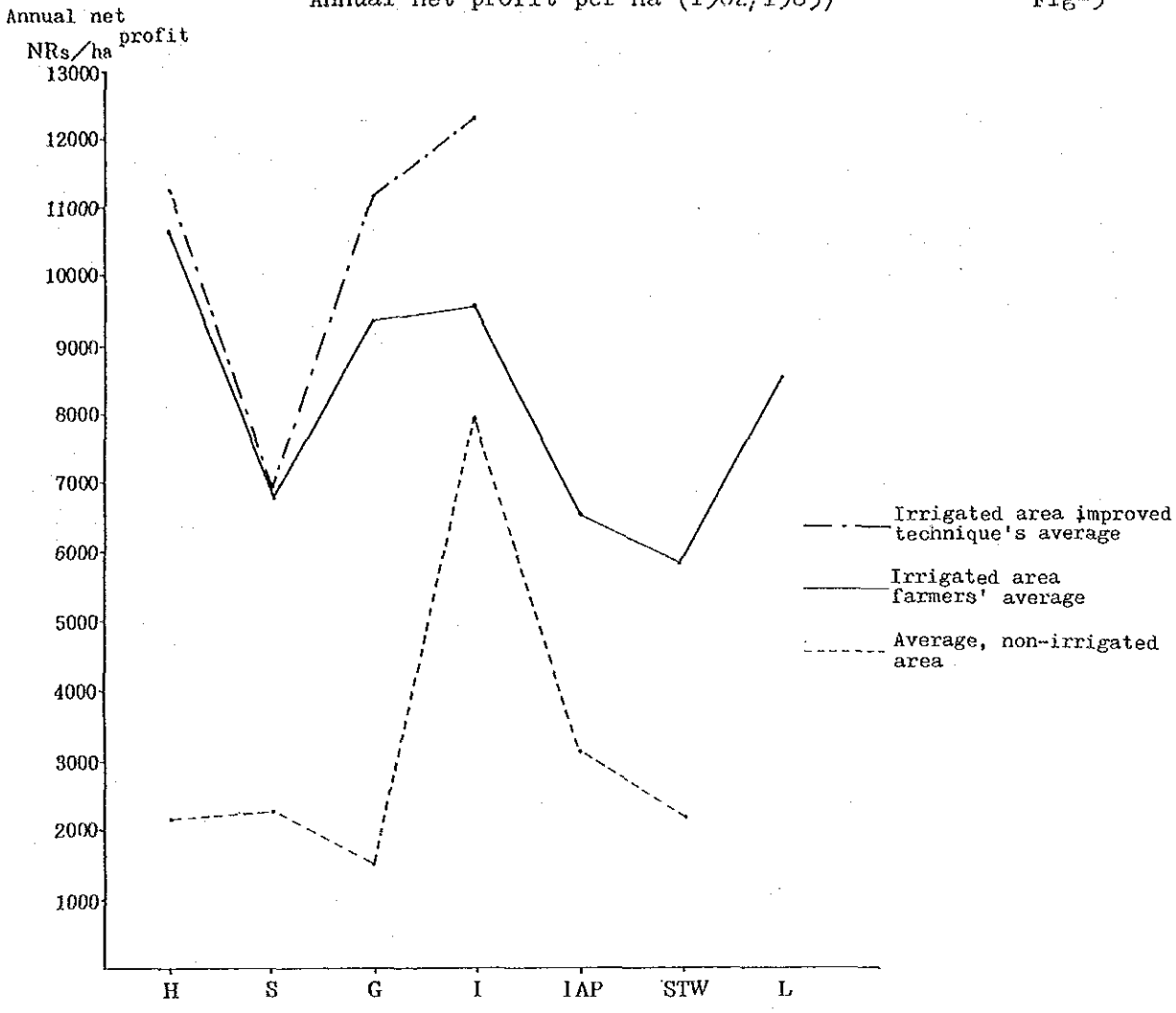


Fig.3 NET BENEFIT IN I M F (NRS/Ha/YEAR)
(1980－1984)



Average net profit per ha in IMF five area (Fig-3) showed NRs 3,299 before introduction of IMF (1980/1981), NRs 6,430 at the first year of introduction (1981/1982), NRs 8,563 at the second year of introduction (1982/1983) NRs 7,693 at the third year of introduction (1983/1984) NRs 3,447 in non-irrigated area (1982/1983). Fig-5 shows NRs 4.867 in non- irrigated area (1983/1984) economical comparison between improved technique, irrigated area and non-irrigated area.

Annual net profit per ha (1982/1983) Fig-5



※ H Hasinapur区 (IMF)
S Saphi区 (IMF)
G Goushala区 (IMF)
I Iswarpur区 (IMF)
IAP IAP NO.5
STW Shallow Tube Wellarea
L Lalgadh (Surface Irrigationarea)

3-2-2 Kind of planting ratio

Table - 7

Hasinapur (%)

Crops	Before introduction 1980/1981	After introduction 1981/1982	After introduction 1982/1983	Non-irrigated area 1982/1983
"Early" paddy	—	33	55	17
Normal paddy	100	99	97	57
Wheat	7	95	97	10
Maize	—	—	3	—
Tobacco	—	—	—	—
Others	63	52	13	25
Total	170 %	279 %	265 %	109 %

Table - 8

Saphi (%)

Crops	Before introduction 1980/1981	After introduction 1981/1982	After introduction 1982/1983	Non-irrigated area 1982/1983
"Early" paddy	—	—	55	6
Normal paddy	100	100	85	50
Wheat	12	83	97	22
Maize	—	—	—	—
Tobacco	—	—	—	—
Others (Pilses)	93	80	16	23
Total	205 %	263 %	253 %	101 %

Table - 9

Goushala (%)

Crops	Before introduction 1980/1981	After introduction 1981/1982	After introduction 1982/1983	Non-irrigated area 1982/1983
"Early" paddy		3	7	—
Normal paddy	100	100	100	38
Wheat	—	89	94	—
Maize	—	—	—	—
Tobacco	59	—	—	—
Others (Pulses)	16	—	6	73
Total	175 %	192 %	207 %	111 %

Table - 10

Iswarpur (%)

Crops	Before introduction 1980/1981	After introduction 1981/1982	After introduction 1982/1983	Non-irrigated area 1982/1983
"Early" paddy	9	2	36	—
Normal paddy	100	100	100	80
Wheat	18	28	29	—
Maize	71	68	16	20
Tobacco	—	—	—	80
Others (Pilses)	11	9	60	—
Total	209 %	207 %	241 %	180 %

Table - 11

IAP No. 5 Laigath

Crops	Rain-fed 1974/1975	Artesian well irrigation 1978/1979	Pump irrigation	Furface irrigation
"Early" paddy	9	23	28	9
Normal paddy	89	100	95	84
Wheat	14	27	41	54
Maize	—	9	—	28
Others	63	20	28	8
Total	175 %	179 %	192 %	183 %

Table - 12

Average IMF 5 (%)

Crops	Before introduction 1980/1981	First year of introduction (except IAP. No. 5)	Second year of introduction 1982/1983	Non-irrigated area (except IAP. No. 5) 1982/1983
"Early" paddy	4	10	36	6
Normal paddy	98	100	95	56
Wheat	10	74	72	8
Maize	14	17	4	5
Tobacco	12	—	—	20
Others	49	35	25	30
Total	187 %	236 %	232 %	125 %

So far we have looked at IMF cropping intensity and net-profit ratio, but another important change of IMF was the change of planting crops.

From the view of average IMF 5 districts (Table-12), winter pulses that were cultivated mostly as the second cropbefore the introduction (1980/1981) decreased about 50% in the second year after introduction, instead of that, cultivation of wheat increased as much as seven times.

In small scale of farmers' group such as Hasinapur and Saphi wheat cultivation ratio increased, on the other hand, large scale of farmers like Iswarpur still kept emphasis on normal paddy cultivation. Likewise, "Early" paddy cultivation was remarkably found in small scale of farmer's group area.

In IMF farmers' non-irrigated area, they cultivated mainly normal paddy as a single crop, and as winter crop they still remained old type of cultivation like relatively no irrigared-water required crops; tobacco, sugarcane, pilses and so on.

3-2-3 Cropping intensity of local variety and improved variety

Hasinapur, Saphi (small scale of farmers group-use Model farm) (%) Table-13

	Crops	Varieties	80 / 81	81 / 82	82 / 83	83 / 84
Irrigated area	"Early" paddy	Improved variety	–	31	40	0
		Local variety	–	69	60	0
	Normal paddy	Improved variety	38	95	100	75
		Local variety	62	5	0	25
	Wheat	R R – 21	–	65	48	28
		U P – 262	–	35	51	72
Non-irrigated area	"Early" paddy	Improved variety	–	–	14	0
		Local variety	–	–	86	0
	Normal paddy	Improved variety	–	–	32	35
		Local variety	–	–	68	65
	Wheat	R R – 21	–	–	42	–
		U P – 262	–	–	58	–

Goushala, Iswarpur (Large scale of farmers individual-use Model farm) (%) Table-14

	Crops	Varieties	80 / 81	81 / 82	82 / 83	83 / 84
Irrigated area	"Early" paddy	Improved variety	–	–	22	0
		Local variety	–	–	78	0
	Normal paddy	Improved variety	30	100	100	88
		Local variety	70	0	0	12
	Wheat	R R – 21	90	39	0	0
		U P – 262	–	61	100	85
Non-irrigated area	"Early" paddy	Improved variety	–	–	60	0
		Local variety	–	–	40	0
	Normal paddy	Improved variety	–	–	0	5
		Local variety	–	100	100	95
	Wheat	R R – 21	–	–	30	0
		U P – 262	–	–	70	100

IAP No. 5 (%) Table-15

	Crops	Varieties	80 / 81	81 / 82	82 / 83	83 / 84
Irrigated area	"Early" paddy	Improved variety	2	33	29	0
		Local variety	98	67	71	0
	Normal paddy	Improved variety	–	6	67	63
		Local variety	100	94	33	37
	Wheat	R R – 21	0	41	44	–
		U P – 262	0	38	52	–

We classified IMF five area into two areas of small scale of farmers' grou-use, two areas of large scale of farmers, and IAP No. 5 where irrigated agriculture has been carried out for nearly 10 years.

Cultivation ratio of local variety and improved variety is shown in Table-13-15. Before introduction of IMF, cultivation ratio of local varisty is high, but after introduction of IMF, improve variety of cultivation is carried out in most areas. However, in rainwater dependent agriculture like non-irrigated

area, local variety is mainly used to get relatively stable yield.

In addition, as RR-21 variety wheat caused a lot of lear rust recently, up-262 variety is being rapidly used.

Within these 2-3 years, about 50% increase of cultivation is found.

This same tendency is also found in shallow tube well irrigated area.

3-2-4 Yield and profit gained by local variety and improved variety (t/ha) (NRs/ha) ("Early", Normal paddy)

Hasinapur

Table-16

	Crops	Varieties	Yield t/ha 80/81	Profit grained NRs/ha 80/81	Yield t/ha 81/82	Profit grained NRs/ha 81/82	Yield t/ha 82/83	Profit grained NRs/ha 82/83	Yield t/ha 83/84	Profit grained NRs/ha 83/84
Irrigated area	"Early paddy	Improved	—	—	1.85	2,335	3.25	4,283	0	0
		Local	—	—	1.19	1,221	2.26	3,135	0	0
	Normal paddy	Improved	—	—	2.77	3,601	3.14	5,252	2.69	4,805
		Local	1.60	2,033	—	—	—	—	2.02	3,638
Non-irrigated area	"Early paddy	Improved	—	—	—	—	—	—	0	0
		Local	—	—	—	—	2.22	3,222	0	0
	Normal paddy	Improved	—	—	—	—	1.25	963	—	—
		Local	—	—	—	—	1.63	1,849	2.02	2,832

Saphi

Table-17

	Crops	Varieties	Yield t/ha 80/81	Profit grained NRs/ha 80/81	Yield t/ha. 81/82	Profit grained NRs/ha 81/82	Yield t/ha 82/83	Profit grained NRs/ha 82/83	Yield t/ha 83/84	Profit grained NRs/ha 83/84
Irrigated area	"Early paddy	Improved	—	—	—	—	2.26	2,696	0	0
		Local	—	—	—	—	—	—	0	0
	Normal paddy	Improved	—	—	2.84	3,882	2.44	3,708	3.32	5,258
		Local	1.50	1,846	—	—	—	—	2.94	5,100
Non-irrgated area	"Early paddy	Improved	—	—	—	—	1.27	749	0	0
		Local	—	—	—	—	—	—	0	0
	Normal paddy	Improved	—	—	—	—	1.97	2,448	2.40	4,545
		Local	—	—	—	—	2.03	2,683	2.03	3,555

I A P No 5

Table-18

	Crops	Varieties	Yield t/ha 74/78	Profit grained NRs/ha 78/79	Yield t/ha 82/83	Profit grained NRs/ha 82/83
Irrigated area	"Early paddy	Improved	2.50	3.30	2.25	2,802
		Local	1.30	1.88	2.00	2,687
	Normal paddy	Improved	—	2.60	2.64	4,358
		Local	1.90	2.00	2.42	4,131

Goushala

Table-19

	Crops	Varieties	Yield t/ha 80/81	Profit grained NRs/ha 80/81	Yield t/ha 81/82	Profit grained NRs/ha 81/82	Yield t/ha 82/83	Profit grained NRs/ha 82/83	Yield t/ha 83/84	Profit grained NRs/ha 83/84
Irrigated area	"Early paddy	Improved	—	—	2.40	1,138	2.75	4,609	0	0
		Local	—	—	—	—	—	—	0	0
	Normal paddy	Improved	—	—	3.62	4,840	2.05	2,624	2.40	3,450
		Local	1.50	1,800	—	—	—	—	2.40	4,574
Non-irrgated area	"Early paddy	Improved	—	—	—	—	—	—	0	0
		Local	—	—	—	—	—	—	0	0
	Normal paddy	Improved	—	—	—	—	—	—	—	—
		Local	1.50	1,800	—	—	0.80	−476	1.20	706

Iswarpur

Table-20

	Crops	Varieties	Yield t/ha 80/81	Profit grained NRs/ha 80/81	Yield t/ha 81/82	Profit grained NRs/ha 81/82	Yield t/ha 82/83	Profit grained NRs/ha 82/83	Yield t/ha 83/84	Profit grained NRs/ha 83/84
Irrigated area	"Early paddy	Improved	—	—	2.40	−922	2.40	3,395	0	0
		Local	2.40	3,259	—	—	3.00	4,400	0	0
	Normal paddy	Improved	—	—	3.73	5,106	3.16	5,369	3.60	7,883
		Local	2.30	3,184	—	—	—	—	3.00	6,303
Non-irrigated area	"Early paddy	Improved	—	—	—	—	—	—	0	0
		Local	—	—	—	—	—	—	0	0
	Normal paddy	Improved	—	—	—	—	2.40	3,618	—	—
		Local	2.30	3,184	—	—	2.30	3,184	2.40	5,536

With introduction of IMF, cultivation ratio of improved variety is getting higher.

Table 16 20 shows their yield and profit gained.

It is easy to compare the yield by each year, but difficult to compare the profit gained because of fluctuating produce of production cost and production price by each year.

Therefore, here we made a rough comparison.

Paddy between local and improved variety in irrigated area of Hasinapur shows that an increase of 0.66t/ha by improved variety and also an increase of 90% of profit were obtained.

Even normal paddy in irrigated area (1983/1984) made an increase of yield, 0.67t/ha and an increase of profit gained, about 32%.

On the other hand, however, local variety of normal paddy in non-irrigated area made an increase of yield, 0.38t/ha and also an increase of profit gained, 92%. This tendency is also found in normal paddy 91982/1983) of non-irrigated area in Saphi.

Goushala, Iswarpur, in irrigated area shows not high profit tendensy by improved variety. Iswarpur (1981/1982), as we have

seen in "Early" paddy, water discharge, 5 /sec brings losing profit. In some area where they have experuence in irrigated agriculture such as IAP No. 5, improved variety had an advantage in both amount of yield and profit gained. Under these results, new cultivation technology getting out of cultivation from of local variety is being seeked when introducing improved variety.

3-2-5 Shift and yield of amount of fertilizer applied of main cereal crops

(A) Normal paddy

When looking at amount of fertilizer applied amount of N.P. for three years after introduction of IMF, average first year amount of fertilizer applied of four area except IAP No. 5 was 47 kgN/ha, in the second year came to nearly 30% decrease, 35 kgN/ha, abd the third year showed almost the same quantity of fertilizer applied.

Average N.P. amount of fertilizer application and yield in irrigated area in past three years

Table - 21

Name of IMF	IMF irrigated area			Non-irrigated area of IMF farmers		
	N. kg/ha	P. kg/ha	Yield t/ha	N. kg/ha	P. kg/ha	Yield t/ha
Hasinapur	30	10	2.80	5	2	1.74
Saphi	32	7	2.76	6	5	1.84
Goushala	32	3	2.69	0	0	1.20
Iswarpur	50	8	3.30	6	0	2.33
IAP No 5	32	8	2.53	16	5	2.08
Lalgadh	10	3	2.96	3	—	—

Average amount of N applied in three years in IMF five area was 35 kg N/ha; that was just 50% of 70 kg N/ha JADP's recommended fertilizer application amount.

Lalgadh, where surface irrigation is held, applied average 2.78t/ha of compost because of availability of wood for cooking fuel. Chemical fertilizer was refrained for that amount, instead. Amount of N. applied in non-irrigated area was 7 kg N/ha, 20% of irrigation area, and average yield was 60%, 1.84t/ha of that area.

(b) Wheat

When looking at amount of N. per application in three years after IMF introduction, like we did in paddy's fertilizer application quantity, average amount of fertilizer apply of IMF five area in the first year was N. 45 kg/ha, p. 21 kg/ha, in the second year N. 51 kg/ha, P. 25 kg/ha, in the third year N. 25 kg/ha, P. 12 kg/ha. Amount of fertilizer applied the third year decreased as about 50% of the first and second year. In the third year after introduction in 1983/1984, supply of chemical fertilizer for top dressing was quite delayed, which resulted in a decrease of fertilizing. Average amount of fertilizer applied in IMF five area in last three years (Table-22) was N 40kg/ha and P. 20 kg/ha. Farmers understand well about fertilization effect of wheat. But their amount of fertilizer applied to even wheat was just 50% of N.P 80 - 40 kg/ha which was shown by JADD's recommended fertilizer application standard.

Average amount of N.P. applied and yield in irrigated area last three years

Table-22

Name of IMF	IMF irrigated area			Non-irrigated ar ea of IMF farmers		
	N.kg/ha	P.kg/ha	Yield t/ha	N.kg/ha	P.kg/ha	Yield t/ha
Hasinapur	35	21	1.96	20	11	1.34
Saphi	41	18	1.74	29	12	1.29
Goushala	41	26	3.02	14	0	1.80
Iswarpur	49	19	3.14	–	–	–
IAP #5	34	17	1.63	–	–	–
Lalgadh	47	23	2.11	–	–	–

Amount of fertilizer applied in Hasinapur, Saphi and IAP No. 5, where small scale farmers take adventage of group use, was N 42 kg/ha and P. 26 kg/ha, which quantity was 25% lower than that of Goushala, Ismarpur, 56 kg N/ha (except 1983/1984, when fertilizer was not supplied). Likewise, average yield per unit of small scale of farmers' group-use was 1.85 t/ha in last three years.

Average yield of large scale of farmers in two area was 3.08 t/ha, which was 66% of increase yield per unit area compared with the group-use. In addition, average yield including irrigated area by surface (Lalgadh) was 2.27 t/ha in last three years.

Amount of fertilizer applied in non-irrigated area was N 21 kg/ha, P 8 kg/ha, which was 50% of irrigated area, and the yield was 1.48t/ha, which was 35% decrease of that of irrigated area.

3-2-6 Utility conditions of pump-irrigating water

a Main cereal crops

Required amount of irrigation water with pump-up of 10 /sec,

we judged, is as follows. Pump-working hour is 77 hr/ha for normal paddy in 2000m /ha, 92 hr/ha for wheat in 2400m and 115 hr/ha for maize (winter crop) in 3,000 m . Attached Table-3-10 and 141 hr/ha for Early paddy in 3,670m .

The crop which is used the most amount of water with 20 /sec in Hasinapur is "Early" paddy, 42 hours/ha in 337 m . Other area show almost the same tendency.

Especially on "Early" paddy of Iswarpur in the first year (water discharge 5 /sec), its net profit shows deficit.

In IMF 4 area, difference of water dischrge such as 20, 18, 15, 12, 5 /sec., as a matter of course, brings some changes for utility of irrigation water.

Pump operating hour and average amount of irrigating water utility in last 3 years

Table - 23

Name of IMF	Crops	Water discharge ℓ/sec	Pump/ operating hour, hr/ha	Amount of irrigating water m^3/ha	Irrigation cost Rs/ha	Ratio (%), on total input cost %
Hasinapur	"Early" paddy	20	30	2,550	310	14
	Normal paddy	〃	10	640	80	4
	Wheat	〃	15	970	120	6
Saphi	"Early" paddy	18	40	1,860	320	11
	Normal paddy	〃	18	880	143	7
	Wheat	〃	16	750	134	6
Iswarpur	"Early" paddy	15	30	1,170	240	8
	Normal paddy	〃	10	390	80	4
	Wheat	〃	28	1,090	224	8
	Maize	〃	27	1,050	216	9
Goushala	"Early" paddy	12	143	4,450	1,140	38
	Normal paddy	〃	33	1,030	264	10
	Wheat	〃	44	1,370	350	14
Iswarpur	"Early" paddy	5	480	2,590	3,840	67
	Normal paddy	〃	30	390	240	11
	Wheat	〃	127	1,650	1,020	38

Table - 22 shows pump operating hour and average amount of irrigating water utility by each crop in last three years. Average pump operating hour to "Early" paddy in more than 12 /hr well, where stable supply of water is available, is 60 hr/ha, 18 hr/ha for normal paddy and 26 hr/ha for wheat. Ratio of irrigation cost on whole input cost to the same crops is 18% for "Early" paddy, 6% for normal paddy and 9% for wheat. Total pump operating hour in the 1st tear of Iswarpur area (5 /sec for wheat in the following year, too), however, is 480 hr/ha for "Early" paddy, 30hr/ha for normal paddy, 127 hr/ha for wheat and ratio of irrigation cost on whole input cost is 67% for "Early" paddy, 11% for normal paddy and 38% for wheat. All of them except normal paddy for rainy season show very high ratio.

Pump irrigation for normal paddy is used to just make up for the shortage of water, but the number of pump irrigation is 2.2 times for "Early paddy, 1.6 times for wheat in Hasinapur, 1.6 times for "Early" paddy, 1.4 times for wheat in Saphi, 1.5 times for "Early" paddy, 3 times for wheat in Uswarpur and 3.5 times for middle paddy, 1.75 times for wheat in Goushala. (1982/1983)

Cultivation for both wheat and "Early" paddy depends greatly on rainfall of the year, and farmers rhemselves actually try to save water for cultuvation.

3-2-7 Effect of IMF and brief of conclusion

As shown in 3-1-4 and Attached table 3-9, we had a remarkable effect on Model farm of shallow tube well programme.

We have not discussed in detail about development of improved technology and its demonstration in our position of evaluation effect. From the point of economical effect, however, irrigation

cultivation by the introduction of IMF provided adequate demonstration effect.

We have not discussed a lot about bringing-up small scale of farmers and water management. Compared with 2 areas of small scale farmers using group cooperation water management and 2 areas of large scale farmers managing individually, the latter exceeds in profit-gained ratio.

Therefore, substantial organization of water management will be an important.

We could not obtain any correlation between irrigation water and net profit gained from the view of conditions of pump-irrigation. But utility if irrigation water has come to cause some changes such as fertilization amount, diffusion ratio of improved variety, cropping intensity and so on. Consequently we judge that farmers' desire on agricultural management is improving.

Attached Tables

1-1 Family Situations

I. A. P — 1972

Ratio of schoolability = $\frac{\text{Graduates - School attendants}}{\text{Persons}} \times 100$

	Per farmer							Householder			Wife			Children (M)							" (F)							Others						
	Number of family	Ratio of Schola-bility	Ratio of literacy	Occupation				Average age	Ratio of School-ability	Ratio of literacy	Average age	Ratio of School-ability	Ratio of literacy	Number per farmer	Ratio of School-ability	Ratio of literacy	Occupation				Number per farmer	Ratio of School-ability	Ratio of literacy	Occupation				Number per farmer	Ratio of School-ability	Ratio of literacy	Occupation			
				Farming	Other than farming	Students	Pre-school-able										Farming	Other than farming	Students	Pre-school-able				Farming	Other than farming	Students	Pre-school-able				Farming	Other than farming	Students	Pre-school-able
0 1	5.4	2	2	70	3	2	25	40	0	0	31	0	0	1.5	6	6	42	10	6	42	0.6	0	0	38	0	0	62	1.3	0	0	69	0	0	31
1 2	5.6	4	4	72	3	4	21	37	0	0	30	0	0	1.7	16	16	40	7	16	37	0.8	0	0	48	0	0	52	1.1	0	0	76	5	0	19
2 3	7.2	7	7	60	1	7	32	43	0	0	36	0	0	2.1	15	15	41	2	15	42	1.3	4	4	48	0	4	48	1.8	9	9	46	3	9	42
3 4	6.3	12	12	60	0	12	28	40	0	0	32	0	0	1.2	18	18	45	0	18	37	1.7	13	13	38	0	13	49	1.4	23	23	46	0	23	31
4 5	6.2	3	3	66	3	3	28	48	0	0	42	0	0	1.2	0	0	83	0	0	17	1.8	0	0	33	0	0	67	1.4	14	14	43	14	14	29
5 10	9.6	0	0	66	2	0	32	45	0	0	25	0	0	2.0	0	0	25	25	0	50	1.0	0	0	33	0	0	67	4.6	14	14	57	0	14	29
	%	%	%	%	%	%	%		%	%		%	%		%	%	%	%	%	%		%	%	%	%	%	%		%	%	%	%	%	%
Whole	6.0	5	5	66	2	5	27	42	0	0	33	0	0	1.5	11	11	43	6	11	40	0.95	3	3	42	0	3	55	1.5	6	6	61	3	6	30

I. A. P — 1983

	Per farmer							Householder			Wife			Children (M)							" (F)							Others						
	Number of family	Ratio of School-ability	Ratio of literacy	Occupation				Average age	Ratio of School-ability	Ratio of literacy	Average age	Ratio of School-ability	Ratio of literacy	Number per farmer	Ratio of School-ability	Ratio of literacy	Occupation				Number per farmer	Ratio of School-ability	Ratio of literacy	Occupation				Number per farmer	Ratio of School-ability	Ratio of literacy	Occupation			
				Farming	Other than farming	Students	Pre-school-able										Farming	Other than farming	Students	Pre-school-able				Farming	Other than farming	Students	Pre-school-able				Farming	Other than farming	Students	Pre-school-able
0 1	6.1	5	12	66	2	3	29	45	5	12	36	0	0	1.7	18	37	40	7	11	42	0.6	0	0	45	0	0	55	1.8	0	0	58	0	0	42
1 2	6.6	12	18	51	1	9	39	42	4	35	34	0	0	1.3	48	69	21	3	34	42	1.1	4	4	12	0	4	84	2.2	4	4	43	2	4	51
2 3	7.6	22	30	56	2	21	21	48	4	39	40	0	0	2.2	47	59	29	2	45	24	0.8	33	33	28	0	33	39	2.6	12	14	54	3	12	31
3 4	7.6	14	21	57	0	14	29	45	0	17	36	0	8	1.3	50	56	6	0	56	38	1.0	25	25	17	0	8	75	3.3	5	5	67	0	5	28
4 5	10.0	30	36	48	0	28	24	53	0	100	50	20	20	3.0	80	80	7	0	80	13	1.8	22	22	33	0	22	45	3.2	0	0	63	0	0	37
5 10	12.5	19	30	62	2	19	17	50	0	50	52	0	0	2.7	38	75	50	12	38	0	0.8	33	33	33	0	33	34	7.0	18	18	57	0	18	25
		%	%	%	%	%	%		%	%		%	%		%	%	%	%	%	%		%	%	%	%	45	%		%	%	%	%	%	%
Whole	7.1	14	22	58	1	13	28	47	3	33	41	1	2	1.7	40	56	28	4	36	32	0.9	15	15	25	0	14	61	2.5	6	7	56	1	6	41

1-1 Family Situations

S T W P - 1983

Ratio of schoolabiliy = $\frac{\text{Graduates + School attendants}}{\text{Persons}} \times 100$

	Per farmer							Householder			Wife			Children (M)							" (F)							Others						
				Occupation													Occupation							Occupation							Occupation			
	Number of family	Ratio of School-ability	Ratio of literacy	Farming	Other than farming	Students	Pre-school-able	Average age	Ratio of School-ability	Ratio of literacy	Average age	Ratio of School-ability	Ratio of literacy	Number per farmer	Ratio of School-ability	Ratio of literacy	Farming	Other than farming	Students	Pre-school-able	Number per farmer	Ratio of School-ability	Ratio of literacy	Farming	Other than farming	Students	Pre-school-able	Number per farmer	Ratio of School-ability	Ratio of literacy	Farming	Other than farming	Students	Pre-school-able
0 1	4.0	50	50	75	0	25	0	31	100	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.0	33	33	67	0	33	0
1 2	6.3	48	52	52	0	32	16	36	75	100	32	0	0	2.5	70	70	0	0	70	30	1.0	50	50	50	0	25	25	0.8	0	0	100	0	0	0
2 3	7.5	27	31	58	0	22	20	45	17	50	36	0	0	1.8	18	18	73	0	9	18	0.8	20	20	20	0	20	60	2.8	47	47	29	0	47	24
3 4	8.1	38	46	52	3	29	16	42	38	88	37	0	13	2.1	88	88	6	12	70	12	1.5	42	42	33	0	42	25	2.5	10	10	65	0	10	25
4 5	9.2	33	41	55	0	24	21	43	23	77	39	0	8	2.5	75	81	31	0	53	16	1.5	42	42	21	0	37	42	3.2	10	10	62	0	10	28
5 10	8.1	53	60	49	4	34	13	43	53	87	38	5	8	2.1	95	96	18	15	57	10	1.4	72	72	17	2	58	23	2.6	29	36	51	0	29	20
10 15	9.8	49	58	50	3	35	12	44	60	90	39	15	30	2.2	84	84	23	11	55	11	1.4	82	82	0	0	82	18	4.2	25	36	58	1	25	16
15 20	13.6	48	61	50	2	41	7	42	75	100	35	25	25	1.8	100	100	0	0	100	0	1.5	100	100	0	0	100	0	8.3	27	45	58	3	27	12
20	13.5	43	67	59	1	32	8	52	29	86	48	14	14	2.4	100	100	39	5	56	0	0.4	100	100	0	0	100	0	8.7	28	59	58	0	28	14
		%	%	%	%	%	%		%	%		%	%		%	%	%	%	%	%		%	%	%	%	%	%		%	%	%	%	%	%
Whole	9.0	46	55	52	3	32	13	42	48	85	38	7	13	2.2	85	86	23	9	56	12	1.3	66	66	15	1	59	25	3.6	25	37	56	1	25	18

	Per farmer							Householder			Wife			Children (M)							" (F)							Others						
				Occupation													Occupation							Occupation							Occupation			
	Number of family	Ratio of School-ability	Ratio of literacy	Farming	Other than farming	Students	Pre-school-able	Average age	Ratio of School-ability	Ratio of literacy	Average age	Ratio of School-ability	Ratio of literacy	Number per farmer	Ratio of School-ability	Ratio of literacy	Farming	Other than farming	Students	Pre-school-able	Number per farmer	Ratio of School-ability	Ratio of literacy	Farming	Other than farming	Students	Pre-school-able	Number per farmer	Ratio of School-ability	Ratio of literacy	Farming	Other than farming	Students	Pre-school-able
0 1	5.5	25	36	69	0	12	19	42	0	39	37	0	0	1.8	60	67	55	0	21	24	0.7	0	0	44	0	0	56	1.0	27	36	50	0	27	23
1 2	6.8	22	26	60	3	19	18	54	11	37	45	0	4	1.4	49	54	43	8	41	8	0.9	33	33	46	0	33	21	2.5	18	26	41	3	18	38
2 3	8.1	25	33	56	3	20	21	43	19	54	39	0	12	2.5	61	63	28	6	52	14	1.3	9	9	44	0	9	47	2.3	10	17	53	5	10	32
3 4	10.1	32	43	48	5	26	21	49	25	75	40	0	0	3.0	75	83	13	17	63	7	0.5	0	25	50	0	0	50	4.6	16	21	47	0	16	37
4 5	8.6	27	35	52	3	25	20	52	0	57	49	0	0	2.4	47	53	47	0	41	12	0.6	0	0	25	0	0	75	3.6	32	32	32	8	32	28
5 10	7.5	36	41	51	2	26	21	45	47	65	38	12	6	2.2	76	84	22	3	68	7	0.2	21	21	14	0	21	65	3.1	15	19	49	4	15	32
10 15	11.0	55	59	32	5	41	22	49	100	100	40	50	50	1.5	100	100	0	0	100	0	2.5	60	60	0	0	60	40	5.0	30	40	30	10	30	30
		%	%	%	%	%	%		%	%		%	%		%	%	%	%	%	%		%	%	%	%	%	%		%	%	%	%	%	%
Whole	7.5	28	35	56	3	21	20	48	18	51	41	3	5	2.0	62	67	34	5	48	13	0.9	17	18	38	0	17	45	2.5	18	24	45	4	18	33

1-2 Number of farming implements, livestock and furniture and household goods owned per farmer.

I. A. P.

I A P – 1972

	Farming implements								Livestock				Furniture and household foods		
	Plow (local)	Plow (improved)	Hoe	Sickle	Planting trowel	Oxcart	Pump	Tractor	Cattle	Buffalos	Goats	Fowls	Bicycle	Watch	Radio
0 1	0.56	0	1.09	1.15	0.91	0.03	0	0	1.53	0.15	0.38	0	0	0	0
1 2	1.00	0	1.09	1.67	1.61	0.52	0	0	2.61	0.45	0.70	0	0.18	0.21	0
2 3	1.10	0	1.10	1.55	1.40	0.85	0	0	3.60	0.85	1.20	0	0.15	0.05	0
3 4	1.22	0	1.11	1.78	1.33	0.56	0	0	5.56	1.22	0.78	0	0	0	0
4 5	1.80	0	2.00	2.60	2.40	0.60	0	0	5.00	0.80	1.40	0	0.40	0.40	0
5 10	2.75	0	2.75	4.25	3.75	1.50	0	0	7.00	1.75	1.50	0	0	0	0
Whole	1.00	0	1.22	1.63	1.44	0.47	0	0	3.18	0.56	0.76	0	0.10	0.10	0

I A P – 1983

0 1	0.56	0	1.29	2.65	2.24	0.03	0	0	1.59	0.09	0.76	0	0.15	0.18	0.06
1 2	1.00	0.04	1.04	2.04	2.09	0.39	0	0	3.35	0.43	1.22	0	0.13	0.13	0.04
2 3	1.13	0	1.17	2.09	1.96	0.87	0	0	4.00	1.26	1.13	0.04	0.39	0.61	0.22
3 4	1.42	0	1.50	1.92	2.25	0.92	0	0	5.42	1.58	2.08	0	0.67	0.67	0.08
4 5	1.80	0	1.60	3.00	2.60	1.00	0.20	0	5.80	2.40	1.00	2.40	0.40	0.40	0.40
5 10	1.75	0	2.00	2.75	2.75	1.00	0.25	0	5.00	1.00	0.75	0	0.25	1.00	1.00
Whole	1.00	0.01	1.28	2.32	2.18	0.47	0.02	0	3.34	0.76	1.12	0.13	0.28	0.37	0.15

S. T. W. P.

S T W P – 1981

	Farming implements								Livestock				Furniture and household foods		
	Plow (local)	Plow (improved)	Hoe	Sickle	Planting trowel	Oxcart	Pump	Tractor	Cattle	Buffalos	Goats	Fowls	Bicycle	Watch	Radio
0 1	0	0	1.00	Short of data	5.00	0	0	0	3.00	2.00	2.00	Short of data	Short of data		
1 2	0.80	0	0.80		0.20	0.80	0	0	3.60	1.60	2.00				
2 3	1.00	0	1.00		1.25	0.50	0.50	0	3.00	1.75	4.25				
3 4	1.33	0	1.67		2.00	1.67	0	0	3.00	0.67	2.33				
4 5	1.71	0.07	2.79		1.57	1.00	0.07	0	5.93	1.29	3.00				
5 10	2.00	0.10	3.26		2.36	1.26	0.15	0.03	8.41	1.59	3.74				
10 15	3.09	0.10	4.83		4.83	1.30	0.30	0.17	9.91	1.70	2.87				
15 20	3.14	0	4.71		3.57	1.20	0.43	0.29	10.14	2.71	1.29				
20	5.78	0.50	6.44		9.00	1.78	0.33	0.44	21.89	3.44	4.78				
Whole	2.47	0.16	3.64		3.14	1.21	0.21	0.10	9.04	1.84	3.26				

S T W P – 1983

0 1	1.00	0	1.00	2.00	2.00	1.00	1.00	0	2.00	2.00	3.00	0	0	0	2.00
1 2	1.25	0	1.00	1.50	1.75	0.50	0.80	0	2.75	1.50	2.75	5.00	0.25	0.50	0.50
2 3	1.17	0.17	1.33	2.33	2.50	1.00	0.80	0	2.33	1.17	2.67	1.00	0.50	0.83	0.50
3 4	1.75	0.25	1.50	3.00	3.38	1.00	0.80	0	7.88	1.13	1.00	2.00	0.50	0.88	0.13
4 5	1.62	0.15	2.23	3.15	3.08	1.00	1.10	0	6.38	2.08	3.46	0.15	0.23	1.00	0.38
5 10	2.76	0.08	3.21	3.50	4.53	1.16	1.20	0.03	10.32	2.05	3.76	3.03	0.47	1.39	0.74
10 15	3.50	0.10	3.85	5.15	5.95	1.30	1.20	0.20	10.75	3.80	3.00	1.75	0.50	2.55	0.90
15 20	6.00	0	7.00	3.75	4.00	1.25	1.00	0.50	26.00	2.50	5.7	2.50	0.75	5.25	0.25
20	5.67	0.50	6.17	10.47	7.33	2.67	1.70	0.50	25.50	4.00	4.0	9.67	0.83	2.67	1.33
	2.81	0.13	3.05	3.99	4.42	1.21	1.20	0.10	10.37	2.39	3.33	2.62	0.47	1.68	0.68

1-2 Number of farming implements, livestock and furniture and household goods owned per farmer.

A A

	Farming implements								Livestock				Furniture and household goods		
	Plow (local)	Plow (improved)	Hoe	Sickle	Planting trowel	Oxcart	Pump	Tractor	Cattle	Buffalos	Goats	Fowls	Bicycle	Watch	Radio
76 77	1.35	0.26	1.62	4.03	4.00	0.76	0.12	0	5.44	1.24	1.62	0.56	0.50	0.82	0.29
77 78	1.57	0.61	2.09	3.96	3.48	0.78	0.09	0	5.87	1.65	1.65	3.48	0.61	1.13	0.70
78 79	1.55	0.55	2.18	7.45	4.18	0.64	0	0	6.18	2.09	1.36	1.64	0.73	0.91	0.73
79 80	1.00	0	2.00	3.75	3.75	0.75	0	0	4.75	0.25	1.75	0	0.75	1.75	0.75
80 81	1.71	0.07	2.14	5.21	4.14	0.71	0	0	5.00	2.00	3.21	2.86	0.71	0.86	0.43
81 82	1.50	0.50	2.00	4.00	4.50	1.50	0.50	0	8.00	2.50	0	0	0.50	1.50	0.50
82 83	1.25	0.13	1.63	3.63	2.88	0.63	0	0	5.75	1.38	2.00	0.63	0.75	1.50	0.75
Whole	1.46	0.33	1.90	4.53	3.82	0.75	0.07	0	5.61	1.54	1.83	1.69	0.61	1.02	0.52

Non-project area

	Farming implements								Livestock				Furniture and household goods		
	Plow (local)	Plow (improved)	Hoe	Sickle	Planting trowel	Oxcart	Pump	Tractor	Cattle	Buffalos	Goats	Fowls	Bicycle	Watch	Radio
0 1	0.48	0	0.96	2.04	1.65	0.04	0	0	1.00	0.30	0.83	0	0.09	0.22	0.04
1 2	0.93	0	1.07	2.15	2.22	0.26	0	0	2.37	0.37	0.96	0	0.26	0.67	0.22
2 3	1.00	0	1.04	1.88	2.00	0.65	0	0	2.08	0.81	0.81	0	0.73	0.88	0.42
3 4	1.38	0	1.13	2.50	2.50	0.75	0.13	0	3.25	1.38	3.88	0.25	0.63	1.25	0.50
4 5	1.29	0	1.29	2.43	2.57	0.86	0.29	0	3.14	0.86	1.29	0	0.71	1.86	0.71
5 10	1.94	0	1.94	2.41	2.71	1.00	0.71	0	5.00	1.35	1.12	0	0.94	1.65	0.82
10 15	2.50	0	2.00	2.50	1.00	1.00	1.00	0	16.50	3.00	2.00	0	1.00	1.50	1.00
Whole	1.09	0	1.19	2.15	2.15	0.51	0.15	0	2.79	0.76	1.15	0.02	0.51	0.91	0.39

1-3 Kind of house/building

(Ratio against number of farmer)

		0 1	1 2	2 3	3 4	4 5	5 10	10 15	15 20	20	Whole
IAP	Miscanthus - thatched roof	% 74	% 33	% 28	% 11	% 0	% 0				% 40
	Tiled roof	26	64	72	89	100	80				58
1973	Brick house	0	3	0	0	0	20				2
IAP	Miscanthus - thatched roof	56	26	4	0	0	0				26
	Tiled roof	44	70	92	83	80	75				68
1983	Brick house	0	4	4	17	20	25				6
STWP	Miscanthus - thatched roof	0	0	0	25	8	3	5	0		5
	Tiled roof	100	100	67	75	77	66	55	34		64
1983	Brick house	0	0	33	0	15	31	40	66		31
Non-project	Miscanthus - thatched roof	83	59	4	38	0	0	0			35
	Tiled roof	17	37	88	62	86	41	50			51
	Brick house	0	4	8	0	14	59	50			14

1-4 Number of farmer by operating area and Social rank

( ) = %

	0 1ha	1 2	2 3	3 4	4 5	5 10	10 15	15 20	20	Number of farmer surveyed.
IAP-1972	34 (32)	33 (31)	20 (19)	9 (9)	5 (5)	4 (4)	-	-	-	105 (100)
IAP-1983	34 (33)	23 (23)	23 (23)	12 (12)	5 (5)	4 (4)	-	-	-	101 (100)
STWP-1983	1 (1)	4 (4)	6 (6)	8 (8)	13 (13)	38 (37)	20 (20)	4 (4)	7 (7)	101 (100)
AA	3 (3)	14 (15)	38 (39)	15 (16)	11 (11)	12 (13)	2 (2)	1 (1)	-	96 (100)
Non-project area	23 (21)	27 (25)	26 (24)	8 (7)	7 (6)	17 (15)	2 (2)	-	-	110 (100)

1-5 Number of Land-owned farmer by operating type and its ratio.

I A P – 1972

	Owned	Owned + Tenanted	Owned + Contract-ed	Owned + Tenanted + Contract-ed	Tenanted + Contract-ed
0 1	25 houses (74)	4 (12)	5 (14)	0 (0)	0 (0)
1 2	22 (67)	6 (18)	5 (15)	0 (0)	0 (0)
2 3	15 (75)	3 (15)	2 (10)	0 (0)	0 (0)
3 4	7 (78)	1 (11)	1 (11)	0 (0)	0 (0)
4 5	5 (100)	0 (0)	0 (0)	0 (0)	0 (0)
5 10	4 (100)	0 (0)	0 (0)	0 (0)	0 (0)
Whole	78 (74)	14 (13)	13 (13)	0 (0)	0 (0)

I A P – 1983

	Owned	Owned + Tenanted	Owned + Contract-ed	Owned + Tenanted + Contract-ed	Tenanted + Contract-ed
0 1	27 (79)	0 (0)	6 (18)	1 (3)	0 (0)
1 2	15 (65)	5 (22)	1 (4)	2 (9)	0 (0)
2 3	15 (65)	5 (22)	2 (9)	1 (4)	0 (0)
3 4	9 (75)	2 (17)	1 (8)	0 (0)	0 (0)
4 5	3 (60)	0 (0)	2 (40)	0 (0)	0 (0)
5 10	3 (75)	1 (25)	(0)	(0)	(0)
Whole	72 (71)	13 (13)	12 (12)	4 (4)	0 (0)

S T W P – 1983 ( )=%

	Owned	Owned + Tenanted	Owned + Contract-ed	Owned + Tenanted + Contract-ed	Tenanted + Contract-ed
0 1	1 (100)%	0 (0)	0 (0)	0 (0)	0 (0)
1 2	4 (100)	0 (0)	0 (0)	0 (0)	0 (0)
2 3	5 (80)	1 (20)	0 (0)	0 (0)	0 (00)
3 4	7 (88)	1 (12)	0 (0)	0 (0)	0 (0)
4 5	11 (85)	2 (15)	0 (0)	0 (0)	0 (0)
5 10	31 (82)	5 (13)	2 (5)	0 (0)	0 (0)
10 15	16 (80)	4 (20)	0 (0)	0 (0)	0 (0)
15 20	4 (100)	0 (0)	0 (0)	0 (0)	0 (0)
20	5 (80)	1 (20)	0 (0)	0 (0)	0 (0)
Whole	84 (84)	14 (14)	2 (2)	0 (0)	0 (0)

A. A

	Owned	Owned + Tenanted	Owned + Contract-ed	Owned + Tenanted + Contract-ed	Tenanted + Contract-ed
76 77	21 (62)	3 (9)	7 (20)	3 (9)	0 (0)
77 78	17 (74)	0 (0)	3 (13)	3 (13)	0 (0)
78 79	6 (55)	2 (18)	3 (27)	0 (0)	0 (0)
79 80	0 (0)	1 (25)	3 (75)	0 (0)	0 (0)
80 81	9 (64)	0 (0)	4 (29)	1 (7)	0 (0)
81 82	2 (100)	0 (0)	0 (0)	0 (0)	0 (0)
82 83	5 (63)	1 (13)	2 (24)	0 (0)	0 (0)
Whole	60 (63)	7 (7)	22 (23)	7 (7)	0 (0)

Contrast area

	Owned	Owned + Tenanted	Owned + Contract-ed	Owned + Tenanted + Contract-ed	Tenanted + Contract-ed
0 1	19 (83)	4 (17)	0 (0)	0 (0)	0 (0)
1 2	25 (94)	1 (3)	1 (3)	0 (0)	0 (0)
2 3	23 (88)	2 (8)	1 (4)	0 (0)	0 (0)
3 4	6 (74)	1 (13)	1 (13)	0 (0)	0 (0)
4 5	6 (86)	0 (0)	1 (14)	0 (0)	0 (0)
5 10	10 (59)	1 (6)	6 (35)	0 (0)	0 (0)
10 15	2 (100)	0 (0)	0 (0)	0 (0)	0 (0)
Whole	91 (83)	9 (8)	10 (9)	0 (0)	0 (0)

1-6 Land area per farmer and its ratio

Unit = Ha
( ) = %

	IAP-1972			IAP-1983								STWP-1983								
	IN IAP	OUT OF IAP	Total	IN IAP				OUT OF IAP				Total	IN STWP				OUT OF STWP				Total
				Owned	Tenanted	Contract-ed	Sub-total	Owned	Tenanted	Contract-ed	Sub-total		Owned	Tenanted	Contract-ed	Sub-total	Owned	Tenanted	Contract-ed	Sub-total	
0 1	0.328 (61.2)	0.208 (38.8)	0.536 (100)	0.279 (52.5)	0.012 (2.3)	0.032 (6.0)	0.323 (60.9)	0.180 (34.0)	0.000 (0.0)	0.027 (5.1)	0.207 (39.1)	0.530 (100)	0.850 (100)	0.000 (0.0)	0.000 (0.0)	0.850 (100)	0.000 (0.0)	0.000 (0.0)	0.000 (0.0)	0.000 (0.0)	0.85 (100)
1 2	0.939 (64.2)	0.524 (35.8)	1.463 (100)	0.648 (48.0)	0.103 (7.6)	0.020 (1.5)	0.771 (57.1)	0.545 (40.4)	0.010 (0.7)	0.023 (1.8)	0.578 (42.9)	1.349 (100)	0.760 (54.8)	0.000 (0.0)	0.000 (0.0)	0.760 (54.8)	0.627 (45.2)	0.000 (0.0)	0.000 (0.0)	0.627 (45.2)	1.387 (100)
2 3	1.378 (54.3)	1.158 (45.7)	2.536 (100)	1.260 (52.2)	0.209 (8.6)	0.097 (4.0)	1.566 (64.8)	0.754 (31.2)	0.090 (3.7)	0.007 (0.3)	0.851 (35.2)	2.417 (100)	1.448 (53.5)	0.000 (0.0)	0.000 (0.0)	1.448 (53.5)	1.160 (42.8)	0.100 (3.7)	0.000 (0.0)	1.260 (46.5)	2.708 (100)
3 4	2.050 (61.7)	1.270 (38.3)	3.320 (100)	1.840 (54.5)	0.125 (3.7)	0.139 (4.1)	2.104 (62.3)	1.256 (37.1)	0.019 (0.6)	0.000 (0.0)	1.275 (37.7)	3.379 (100)	2.250 (67.2)	0.000 (0.0)	0.000 (0.0)	2.250 (67.2)	0.935 (27.9)	0.165 (4.9)	0.000 (0.0)	1.100 (32.8)	3.350 (100)
4 5	2.470 (56.0)	1.940 (44.0)	4.410 (100)	2.720 (62.9)	0.400 (9.2)	0.130 (3.0)	3.250 (75.1)	1.076 (24.9)	0.000 (0.0)	0.000 (0.0)	1.076 (24.9)	4.326 (100)	2.750 (63.3)	0.000 (0.0)	0.000 (0.0)	2.750 (63.3)	1.466 (33.7)	0.130 (3.0)	0.000 (0.0)	1.596 (36.7)	4.346 (100)
5 10	3.835 (55.3)	3.097 (44.7)	6.932 (100)	2.990 (55.5)	0.250 (4.6)	0.000 (0.0)	3.240 (60.1)	2.000 (37.0)	0.000 (0.0)	0.150 (2.9)	2.150 (39.9)	5.390 (100)	4.560 (62.4)	0.116 (1.6)	0.000 (0.0)	4.676 (64.0)	2.483 (34.0)	0.063 (0.9)	0.081 (1.1)	2.627 (36.0)	7.303 (100)
10 15													5.911 (53.0)	0.068 (0.6)	0.000 (0.0)	5.979 (53.6)	5.130 (46.0)	0.520 (0.4)	0.000 (0.0)	5.182 (46.4)	11.161 (100)
15 20													6.630 (37.5)	0.000 (0.0)	0.000 (0.0)	6.630 (37.5)	11.05 (62.5)	0.000 (0.0)	0.000 (0.0)	11.05 (62.5)	17.680 (100)
20													10.080 (39.4)	2.270 (8.8)	0.000 (0.0)	12.350 (48.2)	13.26 (51.8)	0.000 (0.0)	0.000 (0.0)	13.26 (51.8)	25.61 (100)
Whole	1.103 (58.8)	0.772 (41.2)	1.875 (100)	0.996 (53.7)	0.120 (6.5)	0.063 (3.4)	1.179 (63.6)	0.639 (34.5)	0.024 (1.3)	0.011 (0.6)	0.674 (36.4)	1.853 (100)	4.407 (53.5)	0.192 (2.3)	0.000 (0.0)	4.599 (55.8)	3.533 (42.9)	0.070 (0.9)	0.030 (0.4)	3.633 (44.2)	8.232 (100)

1-6 Land area per farmer and its ratio

( ) = % Unit = Ha

	A. A								
	Irrigated land			Sub-total	Non-irrigated land			Sub-total	Total
	Owned	Tenanted	Contracted		Owned	Tenanted	Contracted		
76 77	1.194 (41.6)	0.049 (1.7)	0.051 (1.8)	1.294 (45.1)	1.338 (46.6)	0.039 (1.4)	0.199 (6.9)	1.576 (54.9)	2.870 (100)
77 78	2.130 (58.2)	0.029 (0.8)	0.061 (1.7)	2.220 (60.7)	1.281 (35.0)	0.054 (1.5)	0.103 (2.8)	1.438 (39.3)	3.658 (100)
78 79	2.424 (55.2)	0.185 (4.2)	0.184 (4.2)	2.793 (63.6)	1.220 (27.8)	0.124 (2.8)	0.255 (5.8)	1.599 (36.4)	4.392 (100)
79 80	1.018 (36.1)	0.170 (6.0)	0.595 (21.1)	1.783 (63.2)	0.953 (33.9)	0.000 (0.0)	0.083 (2.9)	1.036 (36.8)	2.819 (100)
80 81	1.371 (38.8)	0.079 (2.3)	0.093 (2.6)	1.543 (43.7)	1.889 (53.5)	0.072 (2.0)	0.029 (0.8)	1.990 (56.3)	3.533 (100)
81 82	0.940 (22.9)	0.000 (0.0)	0.000 (0.0)	0.940 (22.9)	3.165 (77.1)	0.000 (0.0)	0.000 (0.0)	3.165 (77.1)	4.105 (100)
82 83	1.650 (47.7)	0.209 (6.0)	0.000 (0.0)	1.859 (53.7)	1.438 (41.5)	0.084 (2.4)	0.084 (2.4)	1.606 (46.3)	3.465 (100)
Whole	1.610 (47.3)	0.082 (2.4)	0.092 (2.7)	1.784 (52.4)	1.421 (41.8)	0.059 (1.7)	0.139 (4.1)	1.619 (47.6)	3.403 (100)

	Non-project area								
	Irrigated land			Sub-total	Non-irrigated land			Sub-total	Total
	Owned	Tenanted	Contracted		Owned	Tenanted	Contracted		
0 ＼ 1	0.116 (23.4)	0.041 (8.3)	0.000 (0.0)	0.157 (31.7)	0.335 (67.7)	0.003 (0.6)	0.000 (0.0)	0.338 (68.3)	0.495 (100)
1 ＼ 2	0.655 (46.5)	0.006 (0.4)	0.000 (0.0)	0.661 (46.9)	0.584 (41.5)	0.150 (10.7)	0.013 (0.9)	0.747 (53.1)	1.408 (100)
2 ＼ 3	0.725 (32.3)	0.000 (0.0)	0.000 (0.0)	0.725 (32.3)	1.463 (65.2)	0.046 (2.1)	0.009 (0.4)	1.518 (67.7)	2.243 (100)
3 ＼ 4	1.175 (31.2)	0.043 (1.1)	0.000 (0.0)	1.218 (32.3)	2.137 (56.8)	0.000 (0.0)	0.412 (10.9)	2.549 (67.7)	3.767 (100)
4 ＼ 5	0.633 (149)	0.000 (0.0)	0.000 (0.0)	0.633 (14.9)	3.427 (80.6)	0.000 (0.0)	0.190 (4.5)	3.617 (85.1)	4.250 (100)
5 ＼ 10	2.139 (30.1)	0.000 (0.0)	0.000 (0.0)	2.139 (30.1)	4.566 (64.3)	0.000 (0.0)	0.398 (5.6)	4.964 (69.9)	7.103 (100)
10 ＼ 15	4.930 (43.9)	0.000 (0.0)	0.000 (0.0)	4.930 (43.9)	6.290 (56.1)	0.000 (0.0)	0.000 (0.0)	6.290 (56.1)	11.220 (100)
全体	0.902 (32.2)	0.013 (0.5)	0.000 (0.0)	0.915 (32.7)	1.753 (62.6)	0.049 (1.8)	0.082 (2.9)	1.884 (67.3)	2.799 (100)

1-7 Cultivation area per farmer and its ratio

Unit = Ha

Paddy
I. A. P.

( ) = Each cultivation area / Total cultivation area × 100

	IN I.A.P.- 1972					OUT OF I.A.P.- 1972					Total cultivation area
	Local variety, "Early"	Improved variety, "Early"	Local variety, "Normal"	Improved variety, "Rainy"	Sub-total	Local variety, "Early"	Improved variety, "Early"	Local variety, "Normal"	Improved variety, "Rainy"	Sub-total	
0 / 1	0.040 (6.1)	0.010 (1.6)	0.290 (45.0)	0.010 (1.6)	0.350 (54.3)	0.096 (14.9)	0.000 (0.0)	0.198 (30.8)	0.000 (0.0)	0.294 (45.7)	0.644 (100)
1 / 2	0.110 (7.3)	0.050 (3.3)	0.740 (48.8)	0.000 (0.0)	0.900 (59.4)	0.145 (9.6)	0.003 (0.2)	0.466 (30.8)	0.000 (0.0)	0.614 (40.6)	1.514 (100)
2 / 3	0.040 (2.3)	0.000 (0.0)	1.040 (59.3)	0.000 (0.0)	1.080 (61.6)	0.106 (6.0)	0.062 (3.6)	0.505 (28.8)	0.000 (0.0)	0.673 (38.4)	1.753 (100)
3 / 4	0.280 (11.0)	0.000 (0.0)	1.500 (59.0)	0.040 (1.6)	1.820 (71.6)	0.232 (9.1)	0.000 (0.0)	0.490 (19.3)	0.000 (0.0)	0.722 (28.4)	2.542 (100)
4 / 5	0.060 (1.5)	0.000 (0.0)	2.400 (60.2)	0.000 (0.0)	2.460 (61.7)	0.690 (17.2)	0.110 (2.8)	0.730 (18.3)	0.000 (0.0)	1.530 (38.3)	3.990 (100)
5 / 10	0.170 (3.6)	0.250 (5.2)	3.050 (63.9)	0.000 (0.0)	3.470 (72.7)	0.300 (6.3)	0.000 (0.0)	1.000 (21.0)	0.000 (0.0)	1.300 (27.3)	4.770 (100)
Whole	0.089 (4.4)	0.027 (1.3)	1.029 (51.2)	0.006 (0.4)	1.151 (57.3)	0.173 (8.6)	0.018 (0.9)	0.666 (33.2)	0.000 (0.0)	0.857 (42.7)	2.008 (100)

1-7 Cultivation area per farmer and its ratio

Paddy

I.A.P.

Unit = Ha

$$(\quad) = \frac{\text{Each cultivation area}}{\text{Total cultivation area}} \times 100$$

A Farmer scale	IN IAP - 1983					OUT OF IAP - 1983					Total cultivation area
	Local variety, "Early"	Improved variety, "Early"	Local variety, "Normal"	Improved variety, "Rainy"	Sub-total	Local variety, "Early"	Improved variety, "Early"	Local variety, "Normal"	Improved variety, "Rainy"	Sub-total	
0 \ 1	0.053 (8.0)	0.050 (7.6)	0.234 (35.4)	0.084 (12.7)	0.421 (63.7)	0.024 (3.6)	0.006 (0.9)	0.181 (27.4)	0.029 (4.4)	0.240 (36.3)	0.661 (100)
1 \ 2	0.073 (4.6)	0.060 (3.8)	0.610 (38.9)	0.140 (8.9)	0.883 (56.2)	0.117 (7.5)	0.013 (0.8)	0.496 (31.6)	0.061 (3.9)	0.687 (43.8)	1.570 (100)
2 \ 3	0.106 (3.6)	0.216 (7.4)	1.150 (39.3)	0.409 (14.0)	1.881 (64.3)	0.099 (3.4)	0.096 (3.3)	0.681 (23.2)	0.170 (5.8)	1.046 (35.7)	2.927 (100)
3 \ 4	0.042 (1.2)	0.263 (7.3)	1.440 (40.2)	0.665 (18.6)	2.410 (67.3)	0.149 (4.2)	0.138 (3.9)	0.726 (20.2)	0.158 (4.4)	1.171 (32.7)	3.581 (100)
4 \ 5	0.046 (1.0)	0.654 (14.1)	2.020 (43.5)	1.230 (26.6)	3.950 (85.2)	0.000 (0.0)	0.086 (1.9)	0.500 (10.7)	0.146 (3.2)	0.732 (15.8)	4.628 (100)
5 \ 10	0.033 (0.7)	0.290 (6.4)	1.540 (33.9)	1.355 (29.8)	3.218 (70.8)	0.083 (1.8)	0.198 (4.4)	0.338 (7.4)	0.707 (15.6)	1.326 (29.2)	4.544 (100)
Whole	0.085 (3.9)	0.159 (7.3)	0.842 (38.8)	0.347 (16.0)	1.433 (66.0)	0.078 (3.4)	0.055 (2.5)	0.496 (22.8)	0.116 (5.3)	0.738 (34.0)	2.171 (100)

1-7 Cultivation area per farmer and its ratio

Paddy

S.T.W.P

Unit=Ha

( ) = Each cultivation area / Total cultivation area × 100

	S.T.W.P−1981					IN S.T.W.P−1983					OUT OF STWP−1983					Total cultivation area
	Local variety "Early"	Improved variety "Early"	Local variety "Normal"	Improved variety "Rainy"	Sub-total	Local variety "Early"	Improved variety "Early"	Local variety "Normal"	Improved variety "Rainy"	Sub-total	Local variety "Early"	Improved variety "Early"	Local variety "Normal"	Improved variety "Rainy"	Sub-total	
0〜1	0.410 (100)	0.000 (0.0)	0.000 (0.0)	0.000 (0.0)	0.41 (100)	0.34 (28.6)	0.000 (0.0)	0.000 (0.0)	0.850 (71.4)	1.190 (100)	0.000 (0.0)	0.000 (0.0)	0.000 (0.0)	0.000 (0.0)	0.000 (0.0)	1.190 (100)
1〜2	0.100 (9.4)	0.000 (0.0)	0.782 (73.5)	0.182 (17.1)	1.064 (100)	0.517 (24.7)	0.135 (6.4)	0.517 (24.7)	0.245 (11.7)	1.414 (67.5)	0.330 (15.8)	0.000 (0.0)	0.350 (16.7)	0.000 (0.0)	0.680 (32.5)	2.094 (100)
2〜3	1.457 (56.7)	0.000 (0.0)	0.862 (33.5)	0.252 (9.8)	2.571 (100)	0.595 (24.2)	0.000 (0.0)	0.825 (33.6)	0.340 (13.8)	1.760 (71.6)	0.170 (6.9)	0.000 (0.0)	0.527 (21.5)	0.000 (0.0)	0.697 (28.4)	2.457 (100)
3〜4	0.480 (14.8)	0.000 (0.0)	2.250 (69.4)	0.510 (15.8)	3.240 (100)	1.308 (40.5)	0.085 (2.6)	1.087 (33.6)	0.076 (2.4)	2.556 (79.1)	0.229 (7.1)	0.000 (0.0)	0.446 (13.8)	0.000 (0.0)	0.675 (20.9)	3.231 (100)
4〜5	1.082 (30.6)	0.060 (1.7)	1.830 (51.8)	0.560 (15.9)	3.532 (100)	1.170 (26.2)	0.200 (4.5)	1.149 (25.7)	0.607 (13.6)	3.126 (70.0)	0.366 (8.2)	0.000 (0.0)	0.814 (18.2)	0.157 (3.6)	1.337 (30.0)	4.463 (100)
5〜10	1.655 (27.0)	0.000 (0.0)	3.709 (60.5)	0.764 (12.5)	6.128 (100)	1.710 (23.6)	0.027 (0.4)	2.286 (31.5)	0.968 (13.3)	4.991 (68.8)	0.311 (4.3)	0.036 (0.5)	1.790 (24.7)	0.125 (1.7)	2.262 (31.2)	7.253 (100)
10〜15	2.500 (28.2)	0.150 (1.7)	4.860 (54.9)	1.344 (15.2)	8.854 (100)	2.640 (24.6)	0.306 (2.8)	2.067 (19.2)	1.099 (10.2)	6.112 (56.8)	1.173 (10.9)	0.068 (0.6)	3.110 (28.9)	0.289 (2.8)	4.640 (43.2)	10.752 (100)
15〜20	3.420 (21.7)	0.000 (0.0)	11.200 (71.0)	1.158 (7.3)	15.778 (100)	2.570 (14.9)	0.000 (0.0)	4.610 (26.8)	0.170 (1.0)	7.350 (42.7)	4.590 (26.7)	0.000 (0.0)	5.270 (30.6)	0.000 (0.0)	9.860 (57.3)	17.210 (100)
20〜	4.880 (23.3)	0.000 (0.0)	13.280 (63.5)	2.740 (13.2)	20.900 (100)	5.100 (25.1)	0.000 (0.0)	3.970 (19.5)	1.640 (8.1)	10.710 (52.7)	1.130 (5.6)	0.000 (0.0)	7.710 (37.9)	0.790 (3.8)	9.630 (47.3)	20.340 (100)
Whole	1.901 (25.5)	0.041 (0.6)	4.521 (60.6)	0.998 (13.4)	7.461 (100)	1.927 (24.3)	0.110 (1.4)	2.031 (25.6)	0.809 (10.3)	4.877 (61.6)	0.696 (8.8)	0.027 (0.3)	2.151 (27.1)	0.172 (2.2)	3.046 (38.4)	7.923 (100)

1-7 Cultivation area per farmer and its ratio

Paddy

A. A

Unit = Ha

( ) = $\frac{\text{Each cultivation area}}{\text{Total cultivation area}} \times 100$

	BEFORE TRAINING				
	Local variety, "Early"	Improved variety, "Early"	Local variety, "Normal"	Improved variety, "Rainy"	Total cultivation area
76 \ 77	0.673 (29.0)	0.050 (2.2)	1.584 (68.4)	0.01 (0.4)	2.317 (100)
77 \ 78	0.820 (28.6)	0.106 (3.7)	1.703 (59.4)	0.236 (8.3)	2.865 (100)
78 \ 79	1.204 (39.7)	0.135 (4.5)	1.356 (44.7)	0.336 (11.1)	3.031 (100)
79 \ 80	0.550 (28.1)	0.030 (1.5)	1.037 (53.0)	0.340 (17.4)	1.957 (100)
80 \ 81	0.547 (24.2)	0.097 (4.3)	1.415 (62.7)	0.198 (8.8)	2.257 (100)
81 \ 82	0.555 (24.8)	0.170 (7.6)	0.680 (30.4)	0.830 (37.2)	2.235 (100)
82 \ 83	0.526 (33.2)	0.000 (0.0)	1.037 (65.5)	0.021 (1.3)	1.584 (100)
Whole	0.748 (29.4)	0.124 (4.9)	1.475 (58.0)	0.194 (7.7)	2.541 (100)

	AFTER TRAINING				
	Local variety, "Early"	Improved variety, "Early"	Local variety, "Normal"	Improved variety, "Rainy"	Total cultivation area
76 \ 77	0.589 (21.3)	0.405 (14.6)	1.268 (45.8)	0.505 (18.3)	2.767 (100)
77 \ 78	0.767 (22.2)	0.690 (20.0)	1.058 (30.6)	0.940 (27.2)	3.455 (100)
78 \ 79	0.818 (15.2)	0.877 (16.3)	1.860 (34.6)	1.815 (33.8)	5.370 (100)
79 \ 80	0.465 (14.8)	0.145 (4.6)	1.080 (34.3)	1.462 (46.4)	3.152 (100)
80 \ 81	0.699 (17.3)	0.349 (8.7)	2.080 (51.4)	0.915 (22.6)	4.043 (100)
81 \ 82	1.270 (27.4)	0.170 (3.7)	0.748 (16.2)	2.440 (52.7)	4.628 (100)
82 \ 83	0.366 (13.4)	0.205 (7.5)	1.963 (71.8)	0.199 (7.3)	2.733 (100)
Whole	0.664 (21.3)	0.487 (15.6)	1.245 (40.0)	0.718 (23.1)	3.114 (100)

1-7 Cultivation area per farmer and its ratio

Unit = Ha

Paddy

Non-project area

( ) = $\frac{\text{Each cultivation area}}{\text{Total cultivation area}} \times 100$

	Irrigated land					Non-irrigated land					Total cultivation area
	Local variety, "Early"	Improved variety, "Early"	Local variety, "Normal"	Improved variety, "Rainy"	Sub-total	Local variety, "Early"	Improved variety, "Early"	Local variety, "Normal"	Improved variety, "Rainy"	Sub-total	
0 1	0.069 (14.4)	0.000 (0.0)	0.105 (21.9)	0.000 (0.0)	0.174 (36.3)	0.067 (14.0)	0.000 (0.0)	0.234 (48.9)	0.004 (0.8)	0.305 (63.7)	0.479 (100)
1 2	0.287 (20.4)	0.000 (0.0)	0.463 (32.9)	0.004 (0.0)	0.754 (53.5)	0.093 (6.6)	0.000 (0.0)	0.562 (39.9)	0.000 (0.0)	0.655 (46.5)	1.409 (100)
2 3	0.163 (7.8)	0.000 (0.0)	0.401 (19.1)	0.062 (3.0)	0.626 (29.9)	0.096 (4.6)	0.000 (0.0)	1.360 (64.9)	0.013 (0.6)	1.469 (70.1)	2.095 (100)
3 4	0.189 (5.6)	0.000 (0.0)	0.875 (25.7)	0.237 (7.0)	1.301 (38.3)	0.317 (9.3)	0.000 (0.0)	1.612 (47.5)	0.166 (4.9)	2.095 (61.7)	3.396 (100)
4 5	0.243 (5.4)	0.000 (0.0)	0.252 (5.7)	0.190 (4.2)	0.685 (15.3)	0.266 (5.9)	0.000 (0.0)	2.960 (66.1)	0.570 (12.7)	3.796 (84.7)	4.481 (100)
5 10	0.456 (6.6)	0.080 (1.2)	1.518 (22.0)	0.048 (0.7)	2.102 (30.5)	0.413 (6.0)	0.006 (0.1)	4.370 (63.4)	0.000 (0.0)	4.789 (69.5)	6.891 (100)
10 15	1.190 (10.4)	0.000 (0.0)	3.930 (34.5)	0.000 (0.0)	5.120 (44.9)	0.340 (3.0)	0.000 (0.0)	5.940 (52.1)	0.000 (0.0)	6.280 (55.1)	11.400 (100)
Whole	0.434 (14.0)	0.012 (0.4)	0.778 (25.0)	0.059 (1.9)	1.283 (41.3)	0.170 (5.5)	0.001 (0.03)	1.598 (51.5)	0.052 (1.7)	1.821 (58.7)	3.104 (100)

1-7 Cultivation area per farmer and its ratio

Unit = Ha

( ) = (Each cultivation area / Total cultivation area) × 100

Wheat

I. A. P.

	IN IAP 1972	OUT OF IAP 1972	Total cultivation area
0 \ 1	0.030 (22.2)	0.105 (77.8)	0.135 (100)
1 \ 2	0.080 (55.2)	0.065 (44.8)	0.145 (100)
2 \ 3	0.030 (9.9)	0.273 (90.1)	0.303 (100)
3 \ 4	0.020 (12.7)	0.138 (87.3)	0.158 (100)
4 \ 5	0.140 (25.4)	0.412 (74.6)	0.552 (100)
5 \ 10	0.220 (15.4)	1.210 (84.6)	1.430 (100)
Whole	0.072 (26.2)	0.203 (73.8)	0.275 (100)

	IN IAP 1983	OUT OF IAP 1983	Total cultivation area
0 \ 1	0.096 (57.5)	0.071 (42.5)	0.167 (100)
1 \ 2	0.280 (71.8)	0.110 (28.2)	0.390 (100)
2 \ 3	0.417 (64.5)	0.230 (35.5)	0.647 (100)
3 \ 4	0.644 (76.1)	0.202 (23.9)	0.846 (100)
4 \ 5	1.114 (80.7)	0.266 (19.3)	1.380 (100)
5 \ 10	0.680 (67.9)	0.322 (32.1)	1.002 (100)
Whole	0.343 (69.4)	0.151 (30.6)	0.494 (100)

S. T. W. P

	STWP 1981
0 \ 1	0.170
1 \ 2	0.446
2 \ 3	0.340
3 \ 4	0.440
4 \ 5	0.727
5 \ 10	0.758
10 \ 15	1.43
15 \ 20	1.010
20 \	2.510
Whole	1.063

	IN STWP 1983	OUT OF STWP 1983	Total cultivation area
0 \ 1	0.740 (100)	0.000 (0.0)	0.74 (100
1 \ 2	0.423 (62.4)	0.255 (37.6)	0.678 (100)
2 \ 3	0.510 (68.4)	0.236 (31.6)	0.746 (100)
3 \ 4	0.653 (96.3)	0.025 (3.7)	0.678 (100)
4 \ 5	0.852 (74.8)	0.287 (25.2)	1.139 (100)
5 \ 10	1.465 (88.8)	0.184 (11.2)	1.649 (100)
10 \ 15	2.388 (83.0)	0.490 (17.0)	2.878 (100)
15 \ 20	1.870 (55.0)	1.530 (45.0)	3.400 (100)
20 \	3.296 (78.4)	0.907 (21.6)	4.203 (100)
Whole	1.510 (81.4)	0.344 (18.6)	1.854 (100)

A A

	BEFORE TRAINING	AFTER TRAINING
76 \ 77	0.381	0.780
77 \ 78	0.329	0.970
78 \ 79	0.587	0.830
79 \ 80	0.127	1.073
80 \ 81	0.293	0.852
81 \ 82	0.995	0.865
82 \ 83	0.363	0.835
Whole	0.395	0.851

Non-project area

	Irrigated land	Non-irrigated land	Total cultivation area
0 \ 1	0.077 (67.5)	0.037 (32.5)	0.114 (100)
1 \ 2	0.170 (75.6)	0.055 (24.4)	0.225 (100)
2 \ 3	0.317 (71.6)	0.126 (28.4)	0.443 (100)
3 \ 4	0.422 (68.3)	0.196 (31.7)	0.618 (100)
4 \ 5	0.158 (48.8)	0.166 (51.2)	0.324 (100)
5 \ 10	0.893 (97.9)	0.019 (2.1)	0.912 (100)
10 \ 15	2.600 (100)	0.000 (0.0)	2.6 (100)
Whole	0.396 (83.4)	0.079 (16.6)	0.475 (100)

1-7 Cultivation area per farmer and its ratio

Unit=Ha

( ) = Each cultivation area / Total cultivation area × 100

Vegetable, fruit tree, tobacco and others Maize

I. A. P

	IN IAP 1972	OUT OF IAP 1972	Total cultivation area
0 \ 1	0.070 (40.2)	0.104 (59.8)	0.174 (100)
1 \ 2	0.270 (56.8)	0.205 (43.2)	0.475 (100)
2 \ 3	0.320 (37.0)	0.546 (63.1)	0.866 (100)
3 \ 4	0.320 (35.3)	0.587 (64.7)	0.907 (100)
4 \ 5	0.230 (63.2)	0.134 (36.8)	0.364 (100)
5 \ 10	0.200 (48.2)	0.215 (51.8)	0.415 (100)
Whole	0.273 (67.2)	0.133 (32.8)	0.406 (100)

	IN IAP 1983	OUT OF IAP 1983	Total cultivation area
0 \ 1	0.066 (42.3)	0.090 (57.7)	0.156 (100)
1 \ 2	0.344 (66.8)	0.171 (33.2)	0.515 (100)
2 \ 3	0.562 (55.2)	0.456 (44.8)	1.018 (100)
3 \ 4	0.608 (70.6)	0.253 (29.4)	0.861 (100)
4 \ 5	0.332 (54.6)	0.276 (45.4)	0.608 (100)
5 \ 10	0.330 (47.8)	0.360 (52.2)	0.690 (100)
Whole	0.205 (51.5)	0.193 (48.5)	0.398 (100)

S. T. W. P

	STWP 1981
0 \ 1	0.410
1 \ 2	0.200
2 \ 3	0.370
3 \ 4	0.937
4 \ 5	1.485
5 \ 10	1.844
10 \ 15	2.635
15 \ 20	0.435
20 \	4.206
Whole	2.078

	IN STWP 1983	OUT OF STWP 1983	Total cultivation area
0 \ 1	0.190 (100)	0.000 (0.0)	0.190 (100)
1 \ 2	0.000 (0.0)	0.363 (100)	0.363 (100)
2 \ 3	0.087 (9.9)	0.796 (90.1)	0.883 (100)
3 \ 4	0.240 (35.5)	0.436 (64.5)	0.676 (100)
4 \ 5	0.747 (65.4)	0.396 (34.6)	1.143 (100)
5 \ 10	1.134 (49.9)	1.139 (50.1)	2.273 (100)
10 \ 15	1.454 (54.1)	1.234 (45.9)	2.688 (100)
15 \ 20	0.530 (20.6)	2.039 (79.4)	2.569 (100)
20 \	2.553 (41.9)	3.547 (58.1)	6.100 (100)
Whole	1.050 (48.6)	1.112 (51.4)	2.162 (100)

A. A

	BEFORE TRAINING	AFTER TRAINING
76 \ 77	0.906	0.842
77 \ 78	0.816	0.858
78 \ 79	0.630	0.755
79 \ 80	0.712	0.714
80 \ 81	1.933	1.108
81 \ 82	1.045	0.760
82 \ 83	0.395	0.260
Whole	0.955	0.819

Non-project area

	Irrigated land	Non-irrigated land	Total cultivation area
0 \ 1	0.027 (23.1)	0.090 (76.9)	0.117 (100)
1 \ 2	0.101 (28.6)	0.252 (71.4)	0.353 (100)
2 \ 3	0.149 (24.8)	0.451 (75.2)	0.600 (100)
3 \ 4	0.171 (17.7)	0.795 (82.3)	0.966 (100)
4 \ 5	0.107 (11.8)	0.797 (88.2)	0.904 (100)
5 \ 10	0.201 (13.7)	1.271 (86.3)	1.472 (100)
10 \ 15	0.065 (8.8)	0.675 (91.2)	0.740 (100)
Whole	0.099 (16.8)	0.490 (83.2)	0.589 (100)

1-7 Cultivation area per farmer and its ratio

Unit=Ha

$$(\quad) = \frac{\text{Each cultivation area}}{\text{Total cultivation area}} \times 100$$

Maize

I. A. P

	IN IAP 1972	OUT OF IAP 1972	Total cultivation area
0 / 1	A Not cultivated		
1 / 2			
2 / 3			
3 / 4			
4 / 5			
5 / 10			
Whole			

	IN IAP 1983	OUT OF IAP 1983	Total cultivation area
0 / 1	A Not cultivated		
1 / 2			
2 / 3			
3 / 4			
4 / 5			
5 / 10			
Whole			

S. T. W. P

	STWP 1981
0 / 1	0.41
1 / 2	0.182
2 / 3	0.295
3 / 4	0.510
4 / 5	0.627
5 / 10	0.746
10 / 15	1.654
15 / 20	2.076
20 /	3.097
Whole	1.180

	IN STWP 1983	OUT OF STWP 1983	Total cultivation area
0 / 1	0.510 (100)	0.000	0.51 (100)
1 / 2	0.000	0.000	0.000 (0.0)
2 / 3	0.300 (56.9)	0.227 (43.1)	0.527 (100)
3 / 4	0.618 (87.9)	0.085 (12.1)	0.703 (100)
4 / 5	0.407 (89.1)	0.050 (10.9)	0.457 (100)
5 / 10	0.792 (91.2)	0.076 (8.8)	0.868 (100)
10 / 15	1.037 (93.8)	0.068 (6.2)	1.105 (100)
15 / 20	1.020 (60.0)	0.68 (40.0)	1.700 (100)
20 /	1.133 (50.0)	1.133 (50.0)	2.266 (100)
Whole	0.735 (80.5)	0.178 (19.5)	0.913 (100)

A. A

	BEFORE TRAI-NING	AFTER TRAI-NING
76 / 77	0.178	0.286
77 / 78	0.230	0.375
78 / 79	0.957	0.756
79 / 80	0.000	0.187
80 / 81	0.455	0.553
81 / 82	0.740	0.385
82 / 83	0.100	0.440
Whole	0.318	0.432

Non-project area

	Irrigated land	Non-irrigated land	Total cultivation area
0 / 1	A Not cultivated		
1 / 2			
2 / 3			
3 / 4			
4 / 5			
5 / 10			
10 / 15			
Whole			

1-8 Cropping intensity

IAP－1972

	IN IAP	OUT OF IAP
0 1	137	163
1 2	133	132
2 3	104	124
3 4	114	103
4 5	115	109
5 10	101	88
Whole	135	154

IAP－1983

	IN IAP	OUT OF IAP
0 1	186	193
1 2	195	169
2 3	183	131
3 4	174	127
4 5	166	118
5 10	130	93
Whole	168	161

STWP－1981

	STWP 1981
0 1	167
1 2	154
2 3	141
3 4	148
4 5	147
5 10	121
10 15	116
15 20	109
20	95
Whole	143

STWP－1983

	IN STWP	OUT OF STWP
0 1	309	－
1 2	242	207
2 3	183	155
3 4	181	111
4 5	187	129
5 10	179	139
10 15	183	124
15 20	162	128
20	143	114
Whole	178	124

A. A

	Before training	After training
76 77	132	163
77 78	116	155
78 79	119	176
79 80	99	182
80 81	140	186
81 82	122	192
82 83	71	123
Whole	123	164

Non-project area

	Irrigated land	Non-irrigated land
0 1	176	127
1 2	155	129
2 3	152	135
3 4	155	121
4 5	150	132
5 10	150	122
10 15	158	111
Whole	154	126

1-9 Yield per ha

Paddy

I A P

Unit = Mt

Averages = Total production / Total planting area

	IN IAP-1972					OUT OF IAP-1972					Averages
	Local variety "Early"	Improved variety "Early"	Local variety "Normal"	Improved variety "Normal"	Averages	Local variety "Early"	Improved variety "Early"	Local variety "Normal"	Improved variety "Normal"	Averages	
0 1	1.436	0.410	1.740	0.000	1.684	1.573	0.000	1.887	0.000	1.796	1.742
1 2	1.285	1.503	1.129	1.692	1.162	1.672	1.600	1.498	0.000	1.539	1.289
2 3	1.375	0.000	1.619	0.918	1.610	1.990	1.828	1.653	0.000	1.759	1.689
3 4	1.152	0.000	1.648	0.000	1.644	1.808	0.000	1.792	0.000	1.797	1.684
4 5	1.142	0.000	1.733	0.000	1.720	1.977	1.898	1.825	0.000	1.898	1.788
5 10	1.388	0.840	1.319	0.000	1.239	1.809	0.000	1.526	0.000	1.594	1.336
Whole	1.165	1.206	1.462	1.238	1.442	1.791	1.837	1.583	0.000	1.630	1.522

	IN IAP-1983					OUT OF IAP-1983					Averages
	Local variety "Early"	Improved variety "Early"	Local variety "Normal"	Improved variety "Normal"	Averages	Local variety "Early"	Improved variety "Early"	Local variety "Normal"	Improved variety "Normal"	Averages	
0 1	2.544	2.807	2.017	2.309	2.236	1.783	2.105	1.717	2.268	1.799	2.078
1 2	2.318	2.781	2.058	2.636	2.237	2.007	2.483	1.863	1.900	1.902	2.099
2 3	2.444	2.702	2.202	2.489	2.336	1.859	2.273	1.600	2.435	1.821	2.152
3 4	2.400	2.546	1.888	2.476	2.132	1.765	2.409	1.713	2.400	1.894	2.054
4 5	2.130	2.513	2.061	2.500	2.274	0.000	1.767	1.373	2.356	1.517	2.094
5 10	2.000	2.448	1.944	2.312	2.165	1.818	2.430	1.507	2.417	1.988	2.102
Whole	2.396	2.618	1.984	2.467	2.244	1.878	2.302	1.666	2.342	1.840	2.104

1-9 Yield per ha

Paddy

STWP

Unit = Mt

Averages = Total production / Total planting area

	STWP-1981				
	Local variety "Early"	Improved variety "Early"	Local variety "Normal"	Improved variety "Normal"	Average
0 1	1.315	0.000	0.000	0.000	1.315
1 2	1.440	0.000	1.368	1.275	1.359
2 3	1.427	0.000	1.198	2.274	1.371
3 4	1.426	0.000	1.522	2.350	1.638
4 5	1.433	2.530	1.175	2.190	1.438
5 10	1.276	2.590	1.383	2.297	1.470
10 15	1.219	0.000	1.482	1.920	1.493
15 20	1.306	0.000	1.392	2.235	1.470
20	1.379	0.000	1.497	1.783	1.515
Whole	1.298	2.578	1.429	2.041	1.497

	IN STWP-1983					OUT OF STWP-1983					Averages
	Local variety "Early"	Improved variety "Early"	Local variety "Normal"	Improved variety "Normal"	Averages	Local variety "Early"	Improved variety "Early"	Local variety "Normal"	Improved variety "Normal"	Average	
0 1	1.764	0.000	0.000	3.765	3.193	0.000	0.000	0.000	0.000	0.000	3.193
1 2	1.662	3.704	1.643	3.265	2.127	1.177	0.000	1.557	0.000	1.367	1.794
2 3	1.636	0.000	2.820	2.353	2.030	1.569	0.000	1.722	0.000	1.684	1.932
3 4	1.665	3.529	1.522	2.164	1.681	1.180	0.000	1.485	0.000	1.381	1.619
4 5	1.653	1.554	1.299	2.324	1.647	1.714	0.000	1.505	1.863	1.604	1.634
5 10	1.999	1.372	2.030	2.839	2.172	1.677	0.823	1.502	1.487	1.514	1.967
10 15	1.673	2.196	2.139	2.188	1.949	1.373	0.823	1.684	1.280	1.568	1.785
15 20	1.849	0.000	2.282	2.353	2.090	1.220	0.000	1.177	0.000	1.197	1.645
20	1.999	0.000	2.386	2.771	2.098	1.000	0.000	0.926	1.345	1.002	1.452
Whole	1.854	2.105	1.986	2.582	2.036	1.363	0.823	1.265	1.423	1.264	1.721

1-9 Yield per ha

Paddy

A. A

Non-project area Averages = Total production / Total planting area Unit = Mt

	BEFORE TRAINING				
	Local variety "Early"	Improved variety "Early"	Local variety "Normal"	Improved variety "Normal"	Average
76 77	1.885	1.823	1.891	2.353	1.890
77 78	1.518	1.973	1.697	2.537	1.730
78 79	1.434	2.085	1.863	2.454	1.796
79 80	1.818	1.846	1.484	2.353	1.735
80 81	1.666	1.765	1.909	2.360	1.884
81 82	1.624	2.125	1.824	1.975	1.851
82 83	1.767	0.000	1.855	2.117	1.830
Whole	1.663	1.971	1.822	2.327	1.821

	AFTER TRAINING				
	Local variety "Early"	Improved variety "Early"	Local variety "Normal"	Improved variety "Normal"	Average
76 77	2.872	3.012	2.387	3.262	2.747
77 78	2.326	3.326	2.472	3.069	2.772
78 79	2.653	3.202	2.473	3.300	2.998
79 80	3.054	2.657	2.500	3.070	2.751
80 81	2.241	2.912	2.263	3.263	2.546
81 82	2.205	2.701	2.273	3.436	2.883
82 83	2.649	2.744	2.252	2.868	2.464
Whole	2.561	3.149	2.404	3.204	2.738

	Irrigated land					Non-irrigated land					Average
	Local variety "Early"	Improved variety "Early"	Local variety "Normal"	Improved variety "Normal"	Average	Local variety "Early"	Improved variety "Early"	Local variety "Normal"	Improved variety "Normal"	Averages	
0 1	2.075	0.000	1.416	0.000	1.619	1.683	0.000	1.327	1.420	1.427	1.059
1 2	1.928	0.000	1.634	2.000	1.735	1.904	0.000	1.416	0.000	1.486	1.627
2 3	2.227	0.000	1.535	1.425	1.773	1.418	0.000	1.582	1.764	1.572	1.658
3 4	1.393	0.000	1.309	2.103	1.480	1.354	0.000	1.379	1.503	1.386	1.431
4 5	1.987	0.000	1.570	1.985	1.868	1.548	0.000	1.015	1.600	1.140	1.279
5 10	1.834	1.177	1.099	2.100	1.366	1.331	1.400	1.137	0.000	1.154	1.238
10 15	2.261	0.000	1.744	0.000	1.844	1.470	0.000	1.145	0.000	1.162	1.499
Whole	1.915	1.177	1.388	1.920	1.604	1.479	1.400	1.260	1.604	1.291	1.414

1-9 Yield per ha

Wheat

Unit=Mt

Averages = Total production / Total planting area

IAP				IAP				STWP				STWP				AA			Non-project area			
	IN IAP 1972	OUT OF IAP 1972	Averages		IN IAP 1983	OUT OF IAP 1983	Averages		STWP 1981		IN STWP 1983	OUT OF STWP 1983	Averages		BEFORE TRAI-NING	AFTER TRAI-NING		Irrigated land	Non-irrigated land	Averages
0 1	1.061	0.676	0.761	0 1	1.704	1.074	1.436	0 1	3.120	0 1	4.324	0.000	4.324	76 77	1.468	2.580	0 1	1.163	1.302	1.209
1 2	0.568	0.651	0.605	1 2	1.683	1.071	1.512	1 2	1.127	1 2	2.604	1.255	2.095	77 78	1.035	2.543	1 2	1.070	1.054	1.067
2 3	0.438	0.585	0.572	2 3	1.696	1.142	1.499	2 3	1.256	2 3	2.242	1.549	2.022	78 79	1.367	2.336	2 3	1.401	1.094	1.314
3 4	1.000	0.516	0.803	3 4	1.535	1.152	1.440	3. 4	1.523	3 4	2.054	1.600	2.037	79 80	0.902	2.256	3 4	1.396	1.324	1.374
4 5	0.971	0.854	0.884	4 5	1.532	1.090	1.476	4 5	1.205	4 5	1.751	1.497	1.687	80 81	1.572	2.468	4 5	1.761	1.208	1.586
5 10	0.460	0.904	0.837	5 10	1.583	1.142	1.471	5 10	1.308	5 10	1.836	1.617	1.811	81 82	1.180	2.368	5 10	1.283	1.212	1.281
								10 15	1.551	10 15	1.657	1.630	1.653	82 83	1.540	2.239	10 15	1.200	0.000	1.200
								15 20	1.008	15 20	1.754	0.556	1.214							
								20	1.230	20	2.065	1.470	1.911							
Whole	0.752	0.722	0.730	Whole	1.648	1.121	1.476	Whole	1.386	Whole	1.831	1.385	1.748	Whole	1.348	2.485	Whole	1.291	1.169	1.271

1-9 Yield per ha

Maize

Averages = Total production / Total planting area (Unit=Mt)

	I. A. P			S. T. W. P.				A. A			Non-project area			
	IN INP 1972	OUT OF IAP 1972	Average		IN IAP 1983	OUT OF IAP 1983	Average		STWP 1981		IN STWP 1983	OUT OF STWP 1983	Average		BEFORE TRAI-NING	AFTER TRAI-NING		Irrigated land	Non-irrigated land	Average
0 1	Not produced			0 1	Not produced			0 1	1.500	0 1	3.529	0.000	3.529	76 77	2.607	3.105	0 1	Not produced		
1 2				1 2				1 2	1.025	1 2	0.000	0.000	0.000	77 78	1.984	2.801	1 2			
2 3				2 3				2 3	0.420	2 3	2.289	1.764	2.063	78 79	2.108	2.740	2 3			
3 4				3 4				3 4	2.300	3 4	1.939	1.470	1.883	79 80	0.000	2.941	3 4			
4 5				4 5				4 5	1.775	4 5	2.322	0.588	2.124	80 81	2.267	2.596	4 5			
5 10				5 10				5 10	1.153	5 10	2.237	1.041	2.084	81 82	2.378	3.177	5 10			
								10 15	1.575	10 15	2.293	1.470	2.022	82 83	2.350	2.750	10 15			
								15 20	1.155	15 20	2.353	1.041	2.088							
								20	1.200	20	2.682	1.549	2.235							
Whole				Whole				Whole	1.357	Whole	2.315	1.432	2.142	Whole	2.238	2.323	Whole			

1-9 Yield per ha

Millet

Averages = $\frac{\text{Total production}}{\text{Total planting area}}$ Unit = Mt

I. A. P

	IN IAP 1972	OUT OF IAP 1972	Average
0 1	0.571	0.673	0.624
1 2	0.933	0.464	0.539
2 3	0.252	0.219	0.223
3 4	0.100	0.396	0.282
4 5	0.000	0.000	0.000
5 10	0.000	0.343	0.343
Whole	0.353	0.571	0.508

	IN IAP 1983	OUT OF IAP 1983	Average
0 1	0.400	1.079	0.986
1 2	0.528	0.916	0.804
2 3	0.561	1.025	0.880
3 4	0.556	1.187	1.008
4 5	0.000	1.178	1.178
5 10	0.000	1.215	1.215
Whole	0.541	1.054	0.923

S. T. W. P

	STWP 1981
0 1	0.000
1 2	0.000
2 3	0.000
3 4	0.700
4 5	0.866
5 10	0.911
10 15	0.621
15 20	0.877
20	0.740
Whole	0.52

	IN STWP 1973	OUT OF STWP 1983	Average
0 1	0.000	0.000	0.000
1 2	0.000	0.615	0.615
2 3	0.412	0.609	0.491
3 4	0.765	0.000	0.765
4 5	0.980	0.691	0.852
5 10	0.828	0.706	0.807
10 15	0.887	0.605	0.788
15 20	0.000	0.882	0.882
20	0.882	0.588	0.622
Whole	0.844	0.656	0.782

A. A

	BEFORE TRAI-NING	AFTER TRAI-NING
76 77	1.059	1.399
77 78	1.168	1.154
78 79	1.212	1.091
79 80	1.078	1.177
80 81	1.286	1.374
81 82	0.000	0.000
82 83	1.177	1.177
Whole	1.130	1.280

Non-project area

	Irrigated land	Non-irrigated land	Average
0 1	1.167	0.857	0.950
1 2	0.000	1.044	1.044
2 3	0.629	0.983	0.875
3 4	0.941	0.909	0.920
4 5	0.000	0.940	0.940
5 10	0.594	0.612	0.607
6 15	0.000	0.615	0.615
Whole	0.662	0.781	0.756

1-9 Yield per ha

Oil crops and beans

Unit=MT

Averages = Total production / Total planting area

I. A. P

	IN IAP 1972	OUT OF IAP 1972	Average
0 1	0.382	0.274	0.333
1 2	0.237	0.150	0.213
2 3	0.560	0.132	0.388
3 4	0.616	0.000	0.616
4 5	0.595	0.000	0.595
5 10	0.525	0.000	0.525
Whole	0.458	0.168	0.384

	IN IAP 1983	OUT OF IAP 1983	Average
0 1	0.274	0.282	0.277
1 2	0.482	0.279	0.392
2 3	0.380	0.586	0.477
3 4	0.287	0.504	0.323
4 5	0.398	0.379	0.388
5 10	0.301	0.234	0.276
Whole	0.344	0.413	0.370

S. T. W. P

	STWP 1981
0 1	0.000
1 2	0.000
2 3	0.485
3 4	0.380
4 5	0.430
5 10	0.480
10 15	0.494
15 20	0.300
20	0.445
Whole	0.440

	IN STWP 1983	OUT OF STWP 1983	Average
0 1	0.000	0.000	0.000
1 2	0.000	0.428	0.428
2 3	0.000	0.472	0.472
3 4	0.588	0.370	0.383
4 5	0.259	0.621	0.449
5 10	0.565	0.354	0.401
10 15	0.420	0.401	0.409
15 20	0.334	0.235	0.292
20	0.529	0.251	0.315
Whole	0.435	0.374	0.392

A. A

	BEFORE TRAI-NING	AFTER TRAI-NING
76 77	0.763	0.852
77 78	0.477	0.651
78 79	0.495	0.720
79 80	0.495	0.793
80 81	0.654	0.897
81 82	0.304	0.888
82 83	0.686	0.779
Whole	0.701	0.796

Non-project area

	Irrigated land	Non-irrigated land	Average
0 1	0.288	0.420	0.385
1 2	0.375	0.136	0.202
2 3	0.400	0.517	0.514
3 4	0.309	0.177	0.225
4 5	0.000	0.434	0.434
5 10	0.372	0.394	0.392
10 15	0.000	0.392	0.392
Whole	0.352	0.364	0.363

1-9 Yield per ha

Fruit tree and vegetable

Averages = Total production / Total planting area (Unit=Mt)

	I. A. P				I. A. P				S. T. W. P				S. T. W. P				A. A				Non-project area			
	IN IAP 1972	OUT OF IAP 1972	Average		IN IAP 1983	OUT OF IAP 1983	Average		STWP 1981		IN STWP 1983	OUT OF STWP 1983	Average		BEFORE TRAI-NING	AFTER TRAI-NING		Irrigated land	Non-irrigated land	Average
0 1	Not produced	Short of Data		0 1	2.891	3.659	3.621	0 1	0.000	0 1	5.333	0.000	5.333	76 77	4.406	6.609	0 1	2.909	3.513	3.621
1 2				1 2	4.383	3.963	4.009	1 2	1.880	1 2	0.000	2.133	2.133	77 78	4.650	7.816	1 2	5.917	2.710	3.621
2 3				2 3	4.112	3.711	3.902	2 3	0.000	2 3	5.333	1.891	3.018	78 79	3.946	4.864	2 3	5.705	3.726	4.727
3 4				3 4	5.085	3.318	4.028	3 4	6.700	3 4	6.714	1.177	5.424	79 80	4.831	6.060	3 4	3.800	3.304	3.486
4 5				4 5	0.000	2.419	2.419	4 5	6.585	4 5	3.012	3.419	3.071	80 81	3.695	5.674	4 5	5.000	3.310	3.515
5 10				5 10	0.000	3.318	3.318	5 10	3.495	5 10	6.347	1.387	4.140	81 82	4.443	5.769	5 10	4.412	4.954	4.883
								10 15	2.005	10 15	4.731	2.895	4.083	82 83	4.056	4.977	10 15	4.615	2.816	3.095
								15 20	0.000	15 20	0.000	3.353	3.353							
								20	2.370	20	6.054	1.277	3.975							
Whole				Whole	4.510	3.473	3.748	Whole	3.359	Whole	5.502	2.286	4.161	Whole	3.927	6.481	Whole	5.059	4.017	4.269

1-10 Production per farmer and its ratio

Unit=Mt

( ) = $\frac{\text{Each production}}{\text{Total production}} \times 100$

Paddy

I. A. P.

	IN IAP-1972					OUT OF IAP-1972					Total production
	Local variety "Early"	Improved variety "Early"	Local variety "Normal"	Improved variety "Normal"	Sub-total	Local variety "Early"	Improved variety "Early"	Local variety "Normal"	Improved variety "Normal"	Sub-total	
0 1	0.060 (6.7)	0.002 (0.2)	0.508 (41.6)	0.000 (0.0)	0.570 (46.7)	0.163 (13.4)	0.000 (0.0)	0.487 (39.9)	0.000 (0.0)	0.650 (53.3)	1.220 (100)
1 2	0.146 (6.1)	0.075 (3.2)	1.173 (49.9)	0.013 (0.6)	1.407 (59.8)	0.242 (10.3)	0.005 (0.2)	0.698 (29.7)	0.000 (0.0)	0.945 (40.2)	2.352 (100)
2 3	0.056 (1.4)	0.000 (0.0)	1.689 (43.4)	0.000 (0.0)	1.745 (44.8)	0.310 (8.0)	0.114 (2.9)	1.726 (44.3)	0.000 (0.0)	2.150 (55.2)	3.895 (100)
3 4	0.319 (6.7)	0.000 (0.0)	3.096 (65.1)	0.038 (0.8)	3.453 (72.6)	0.420 (8.9)	0.000 (0.0)	0.880 (18.5)	0.000 (0.0)	1.300 (27.4)	4.753 (100)
4 5	0.064 (0.9)	0.000 (0.0)	4.206 (58.4)	0.000 (0.0)	4.270 (59.3)	1.368 (19.0)	0.224 (3.1)	1.336 (18.6)	0.000 (0.0)	2.928 (40.7)	7.198 (100)
5 10	0.232 (2.9)	0.210 (2.7)	4.828 (61.1)	0.000 (0.0)	5.270 (66.7)	1.100 (13.9)	0.000 (0.0)	1.530 (33.3)	0.000 (0.0)	2.630 (33.3)	7.900 (100)
Whole	0.115 (3.7)	0.032 (1.0)	1.505 (48.0)	0.007 (0.3)	1.659 (53.0)	0.386 (12.3)	0.034 (1.1)	1.054 (33.6)	0.000 (0.0)	1.474 (47.0)	3.133 (100)

	IN IAP-1983					OUT OF IAP-1983					Total production
	Local variety "Early"	Improved variety "Early"	Local variety "Normal"	Improved variety "Normal"	Sub-total	Local variety "Early"	Improved variety "Early"	Local variety "Normal"	Improved variety "Normal"	Sub-total	
0 1	0.135 (9.8)	0.140 (10.2)	0.472 (34.4)	0.194 (14.1)	0.941 (68.8)	0.44 (3.2)	0.012 (0.9)	0.311 (22.7)	0.065 (4.7)	0.432 (31.5)	1.373 (100)
1 2	0.169 (5.2)	0.167 (5.2)	1.225 (37.8)	0.369 (11.3)	1.921 (59.5)	0.235 (7.3)	0.031 (1.0)	0.924 (28.6)	0.116 (3.5)	1.306 (40.5)	3.227 (100)
2 3	0.259 (4.1)	0.584 (9.6)	2.532 (40.2)	1.014 (16.1)	4.389 (69.7)	0.184 (2.9)	0.217 (3.4)	1.090 (17.3)	0.414 (6.7)	1.905 (30.3)	6.294 (100)
3 4	0.101 (1.4)	0.670 (9.0)	2.719 (37.0)	1.647 (22.4)	5.137 (69.8)	0.263 (3.6)	0.333 (4.5)	1.243 (16.9)	0.380 (5.2)	2.219 (30.2)	7.356 (100)
4 5	0.098 (0.8)	1.644 (15.1)	4.163 (38.4)	3.075 (28.4)	8.980 (82.7)	0.000 (0.0)	0.152 (1.4)	1.376 (12.7)	0.344 (3.2)	1.872 (17.3)	10.852 (100)
5 10	0.066 (0.7)	0.710 (8.0)	2.994 (33.7)	3.133 (35.3)	6.903 (77.7)	0.150 (1.7)	0.480 (5.4)	1.180 (13.3)	0.171 (1.9)	1.981 (22.3)	8.884 (100)
Whole	0.204 (4.5)	0.416 (9.2)	1.671 (37.0)	0.856 (18.9)	3.147 (69.6)	0.147 (3.3)	0.127 (2.8)	0.826 (18.3)	0.272 (6.0)	1.372 (30.4)	4519 (100)

1-10 Production per farmer and its ratio

Paddy

S. T. W. P

Unit= Ha

( ) = Each production / Total production × 100

	STWP-1981					IN STWP-1983					OUT OF STWP-1983					Total production
	Local variety "Early"	Improved variety "Early"	Local variety "Normal"	Improved variety "Normal"	Sub-total	Local variety "Early"	Improved variety "Early"	Local variety "Normal"	Improved variety "Normal"	Sub-total	Local variety "Early"	Improved variety "Early"	Local variety "Normal"	Improved variety "Normal"	Sub-total	
0 1	0.550 (100)	0.000 (0.0)	0.000 (0.0)	0.000 (0.0)	0.55 (100)	0.600 (15.8)	0.000 (0.0)	0.000 (0.0)	3.200 (84.2)	3.800 (100)	0.000 (0.0)	0.000 (0.0)	0.000 (0.0)	0.000 (0.0)	0.000 (0.0)	3.800 (0.0)
1 2	0.144 (10.0)	0.000 (0.0)	1.070 (34.0)	0.232 (16.0)	1.446 (100)	0.860 (19.0)	0.500 (11.1)	0.850 (18.8)	0.800 (17.7)	3.010 (66.6)	0.650 (14.4)	0.000 (0.0)	0.860 (19.0)	0.000 (0.0)	1.510 (33.4)	4.520 (100)
2 3	1.919 (54.4)	0.000 (0.0)	1.033 (29.3)	0.574 (16.3)	3.526 (100)	0.973 (20.5)	0.000 (0.0)	1.800 (37.9)	0.800 (16.9)	3.573 (75.3)	0.267 (5.6)	0.000 (0.0)	0.907 (19.1)	0.000 (0.0)	1.174 (24.7)	4.747 (100)
3 4	0.684 (12.9)	0.000 (0.0)	3.430 (64.6)	1.198 (22.5)	5.312 (100)	2.179 (41.6)	0.300 (5.7)	1.655 (31.6)	0.165 (3.3)	4.299 (82.2)	0.270 (5.2)	0.000 (0.0)	0.663 (12.6)	0.000 (0.0)	0.933 (17.8)	5.232 (100)
4 5	1.550 (30.5)	0.152 (3.0)	2.154 (42.3)	1.231 (24.2)	5.087 (100)	1.938 (26.5)	0.317 (4.3)	1.492 (20.4)	1.412 (19.4)	5.159 (70.6)	0.628 (8.6)	0.000 (0.0)	1.225 (16.8)	0.292 (4.0)	2.145 (29.4)	7.304 (100)
5 10	2.112 (23.5)	0.000 (0.0)	5.132 (57.0)	1.756 (19.5)	9.000 (100)	3.422 (24.0)	0.037 (0.3)	4.641 (32.5)	2.747 (19.2)	10.847 (76.0)	0.521 (3.6)	0.029 (0.2)	2.694 (18.9)	0.186 (1.3)	3.430 (24.0)	14.277 (100)
10 15	3.064 (23.1)	0.389 (2.9)	7.210 (54.5)	2.582 (19.5)	13.245 (100)	4.420 (23.0)	0.672 (3.5)	4.420 (23.0)	2.406 (12.6)	11.918 (62.1)	1.610 (8.4)	0.056 (0.3)	5.240 (27.3)	0.370 (1.9)	7.276 (37.9)	19.194 (100)
15 20	1.859 (11.5)	0.000 (0.0)	11.692 (72.5)	2.589 (16.0)	16.140 (100)	6.600 (20.9)	0.000 (0.0)	12.800 (40.5)	0.400 (1.3)	19.800 (62.7)	5.600 (17.7)	0.000 (0.0)	6.200 (19.6)	0.000 (0.0)	11.800 (37.3)	31.600 (100)
20	6.747 (21.3)	0.000 (0.0)	20.093 (63.4)	4.851 (15.3)	31.691 (100)	10.533 (37.5)	0.000 (0.0)	7.600 (27.0)	2.8 9 (10.3)	21.022 (74.8)	1.133 (4.0)	0.000 (0.0)	4.867 (17.3)	1.067 (3.9)	7.067 (25.2)	28.089 (100)
Whole	2.469 (22.3)	0.105 (0.9)	6.463 (58.4)	2.037 (18.4)	11.074 (100)	3.570 (25.7)	0.231 (1.7)	4.034 (29.0)	2.089 (15.1)	9.924 (71.5)	0.948 (6.8)	0.022 (0.2)	2.748 (19.7)	0.247 (1.8)	3.965 (28.5)	13.889 (100)

1-10 Production per farmer and its ratio

Unit=Mt

Paddy

$$(\quad) = \frac{\text{Each production}}{\text{Total production}} \times 100$$

A. A

Non-project area

	BEFORE TRAINING				
	Local variety "Early"	Improved variety "Early"	Local variety "Normal"	Improved variety "Normal"	Total production
76 77	1.269 (29.0)	0.091 (2.1)	2.996 (68.4)	0.024 (0.5)	4.380 (100)
77 78	1.247 (24.7)	0.311 (6.2)	2.892 (57.3)	0.600 (11.8)	5.050 (100)
78 79	1.727 (28.9)	0.895 (15.0)	2.527 (42.3)	0.825 (13.8)	5.974 (100)
79 80	1.000 (29.4)	0.060 (1.8)	1.540 (45.3)	0.800 (25.5)	3.400 (100)
80 81	0.913 (21.5)	0.171 (4.0)	2.703 (63.5)	0.469 (11.0)	4.256 (100)
81 82	2.200 (25.6)	0.340 (4.0)	1.240 (14.5)	4.800 (55.9)	8.580 (100)
82 83	0.930 (32.1)	0.000 (0.0)	1.925 (66.4)	0.045 (1.5)	2.900
Whole	1.244 (26.9)	0.244 (5.3)	2.688 (58.1)	0.452 (9.7)	4.628 (100)

	AFTER TRAINING				
	Local variety "Early"	Improved variety "Early"	Local variety "Normal"	Improved variety "Normal"	Total production
76 77	1.694 (22.3)	1.238 (16.3)	3.027 (39.8)	1.647 (21.6)	7.606 (100)
77 78	1.783 (18.6)	2.295 (23.9)	2.617 (27.3)	2.888 (30.2)	9.583 (100)
78 79	2.164 (21.4)	2.809 (27.8)	2.445 (24.2)	2.691 (26.6)	10.109 (100)
79 80	1.420 (24.0)	0.380 (6.4)	2.700 (45.6)	1.420 (24.0)	5.920 (100)
80 81	1.566 (15.2)	1.035 (10.1)	4.700 (45.7)	2.986 (29.0)	10.287 (100)
81 82	2.800 (21.0)	0.460 (3.4)	1.700 (12.7)	8.400 (62.9)	13.360 (100)
82 83	0.970 (22.7)	0.563 (13.2)	2.170 (50.8)	0.570 (13.3)	4.273 (100)
Whole	1.701 (19.9)	1.533 (18.0)	2.993 (35.1)	2.301 (27.0)	8.528 (100)

	Irrigated land					Non-irrigated land					Total production
	Local variety "Early"	Improved variety "Early"	Local variety "Normal"	Improved variety "Normal"	Sub-total	Local variety "Early"	Improved variety "Early"	Local variety "Normal"	Improved variety "Normal"	Sub-total	
0 1	0.143 (18.1)	0.000 (0.0)	0.219 (27.7)	0.000 (0.0)	0.362 (45.8)	0.113 (14.2)	0.000 (0.0)	0.310 (39.2)	0.006 (0.8)	0.429 (54.2)	0.791 (100)
1 2	0.554 (22.6)	0.000 (0.0)	0.920 (37.4)	0.007 (0.3)	1.481 (60.3)	0.178 (7.3)	0.000 (0.0)	0.796 (32.4)	0.000 (0.0)	0.974 (39.7)	2.455 (100)
2 3	0.809 (16.4)	0.000 (0.0)	0.922 (18.8)	0.880 (17.9)	2.611 (53.1)	0.137 (2.8)	0.000 (0.0)	2.150 (43.6)	0.023 (0.5)	2.310 (46.9)	4.921 (100)
3 4	0.960 (16.8)	0.000 (0.0)	1.145 (20.0)	0.710 (12.4)	2.815 (49.2)	0.430 (7.5)	0.000 (0.0)	2.225 (38.9)	0.250 (4.4)	2.905 (50.8)	5.720 (100)
4 5	0.880 (14.7)	0.000 (0.0)	0.397 (6.6)	0.377 (6.3)	1.654 (27.6)	0.411 (6.9)	0.000 (0.0)	3.011 (50.2)	0.914 (15.3)	4.336 (72.4)	5.990 (100)
5 10	1.936 (24.6)	0.094 (1.2)	0.211 (2.7)	0.099 (1.2)	2.340 (29.7)	0.551 (7.0)	0.008 (0.1)	4.972 (63.2)	0.000 (0.0)	5.531 (70.3)	7.871 (100)
10 15	26.900 (14.4)	0.000 (0.0)	8.600 (26.3)	0.000 (0.0)	11.290 (60.7)	0.500 (2.9)	0.000 (0.0)	6.800 (36.4)	0.000 (0.0)	7.300 (39.3)	18.59 (100)
Whole	0.831 (24.4)	0.000 (0.0)	0.108 (3.2)	0.113 (3.3)	1.052 (30.9)	0.251 (7.4)	0.001 (0.03)	2.014 (59.2)	0.083 (2.5)	2.349 (69.1)	3.401 (100)

1-10 Production per farmer and its ratio

Unit= Mt

( ) = Each production / Total production × 100

Wheat

I. A. P.

	IN IAP 1972	OUT OF IAP 1972	Total production
0 1	0.031 (30.4)	0.071 (69.6)	0.102 (100)
1 2	0.045 (51.7)	0.042 (48.3)	0.087 (100)
2 3	0.012 (7.0)	0.160 (93.0)	0.172 (100)
3 4	0.200 (73.8)	0.071 (26.2)	0.271 (100)
4 5	0.136 (27.9)	0.352 (72.1)	0.488 (100)
5 10	0.200 (64.5)	0.110 (35.5)	0.310 (100)
Whole	0.054 (26.9)	0.147 (73.1)	0.201 (100)

	IN IAP 1983	OUT OF IAP 1983	Total production
0 1	0.115	0.076	0.191
1 2	0.341	0.118	0.459
2 3	0.533	0.263	0.794
3 4	0.860	0.233	1.093
4 5	1.440	0.290	1.730
5 10	0.900	0.385	1.285
Whole	0.447 (72.4)	0.170 (27.6)	0.617 (100)

S. T. W. P

	STWP 1981
0 1	0.530
1 2	0.503
2 3	0.427
3 4	0.671
4 5	0.876
5 10	0.992
10 15	2.217
15 20	1.022
20	3.201
Whole	1.378

	IN STWP 1983	OUT OF STWP 1983	Total production
0 1	3.200 (100)	0.000 (0.0)	3.200 (100)
1 2	1.100 (77.5)	0.320 (22.5)	1.420 (100)
2 3	1.143 (75.7)	0.367 (24.3)	1.510 (100)
3 4	1.340 (97.1)	0.040 (2.9)	1.380 (100)
4 5	1.492 (77.6)	0.431 (22.4)	1.923 (100)
5 10	2.691 (90.1)	0.297 (9.9)	2.988 (100)
10 15	3.958 (83.2)	0.800 (16.8)	4.758 (100)
15 20	3.280 (79.4)	0.850 (20.6)	4.130 (100)
20	6.700 (83.4)	1.333 (16.6)	8.033 (100)
Whole	2.793 (85.3)	0.481 (14.7)	3.274 (100)

A. A

	BEFORE TRAINING	AFTER TRAINING
76 77	0.560	2.015
77 78	0.341	2.470
78 79	0.796	1.949
79 80	0.115	2.420
80 81	0.461	2.103
81 82	0.105	5.600
82 83	0.560	0.750
Whole	0.532	2.115

Non-project area

	Irrigated land	Non-irrigated land	Total production
0 1	0.090 (64.7)	0.049 (35.3)	0.139 (100)
1 2	0.289 (83.3)	0.058 (16.7)	0.347 (100)
2 3	0.445 (76.3)	0.138 (23.7)	0.583 (100)
3 4	0.590 (69.4)	0.260 (30.6)	0.850 (100)
4 5	0.631 (75.9)	0.200 (24.1)	0.831 (100)
5 10	1.146 (97.9)	0.024 (2.1)	1.170 (100)
10 15	3.120 (100)	0.000 (0.0)	3.120 (100)
Whole	0.586 (84.7)	0.106 (15.3)	0.692 (100)

1-10 Production per farmer and its ratio

Unit = Mt

( ) = $\frac{\text{Each production}}{\text{Total production}} \times 100$

Maize

I. A. P

	IN IAP 1972 1972	OUT OF IAP 1972	Total production
0 1	Not produced		
1 2			
2 3			
3 4			
4 5			
5 10			
Whole			

	IN IAP 1983	OUT OF IAP 1983	Total production
0 1	Not produced		
1 2			
2 3			
3 4			
4 5			
5 10			
Whole			

S. T. W. P

	STWP 1981
0 1	0.615
1 2	0.186
2 3	0.124
3 4	2.381
4 5	1.113
5 10	0.860
10 15	2.606
15 20	2.397
20	3.669
Whole	1.601

	IN STWP 1983	OUT OF STWP 1983	Total production
0 1	1.800 (100)	0.000 (0.0)	1.800 (100)
1 2	0.000 (0.0)	0.000 (0.0)	0.000 (0.0)
2 3	0.687 (63.2)	0.400 (36.8)	1.087 (100)
3 4	1.200 (90.6)	0.125 (9.4)	1.325 (100)
4 5	0.945 (96.8)	0.031 (3.2)	0.976 (100)
5 10	1.772 (93.6)	0.121 (6.4)	1.893 (100)
10 15	2.378 (96.0)	0.100 (0.4)	2.478 (100)
15 20	2.400 (67.6)	1.150 (32.4)	3.550 (100)
20	3.267 (64.5)	1.800 (35.5)	5.068 (100)
Whole	1.719 (87.0)	0.258 (13.0)	1.977 (100)

A. A

	BEFORE TRAI-NING	AFTER TRAI-NING
76 77	0.465	0.891
77 78	0.460	1.049
78 79	0.634	2.073
79 80	0.000	0.550
80 81	1.031	1.437
81 82	1.760	4.400
82 83	0.235	1.210
Whole	0.713	1.003

Non-project area

	Irrigated land	Non-irrigated land	Total production
0 1	Not produced		
1 2			
2 3			
3 4			
4 5			
5 10			
1015			
Whole			

1-10 Production per farmer and its ratio

Vegetable, fruit tree, tobacco and others

Unit = Mt

( ) = Each production / Total production × 100

I. A. P

	IN IAP 1972	OUT OF IAP 1972	Total production
0 1	0.029 (42.7)	0.039 (57.3)	0.068 (100)
1 2	0.071 (65.7)	0.037 (34.3)	0.108 (100)
2 3	0.164 (69.8)	0.071 (30.2)	0.235 (100)
3 4	0.573 (93.2)	0.042 (6.8)	0.615 (100)
4 5	0.138 (100)	0.000 (0.0)	0.138 (100)
5 10	0.140 (77.8)	0.040 (22.2)	0.180 (100)
Whole	0.123 (74.1)	0.043 (25.9)	0.166 (100)

	IN IAP 1983	OUT OF IAP 1983	Total production
0 1	0.025 (16.8)	0.124 (83.2)	0.149 (100)
1 2	0.080 (30.8)	0.181 (69.6)	0.260 (100)
2 3	0.169 (40.1)	0.252 (59.9)	0.421 (100)
3 4	0.418 (52.4)	0.380 (47.6)	0.798 (100)
4 5	0.132 (25.8)	0.380 (74.2)	0.512 (100)
5 10	0.100 (22.4)	0.346 (77.6)	0.446 (100)
Whole	0.125 (36.6)	0.217 (63.4)	0.342 (100)

S. T. W. P

	STWP 1981
0 1	0298
1 2	0.113
2 3	0.140
3 4	1.797
4 5	2.757
5 10	1.811
10 15	4.150
15 20	0.186
20	1.693
Whole	1.822

	IN STWP 1983	OUT OF STWP 1983	Total production
0 1	0.420 (100)	0.000 (0.0)	0.420 (100)
1 2	0.000 (0.0)	0.285 (100)	0.285 (100)
2 3	0.183 (23.4)	0.598 (76.6)	0.781 (100)
3 4	0.556 (72.3)	0.213 (27.7)	0.769 (100)
4 5	0.980 (72.9)	0.365 (27.1)	1.345 (100)
5 10	1.381 (71.0)	0.565 (29.0)	1.946 (100)
10 15	1.635 (66.0)	0.841 (34.0)	2.476 (100)
15 20	0.620 (21.3)	2.295 (78.7)	2.915 (100)
20	1.933 (54.2)	1.637 (45.8)	3.570 (100)
Whole	1.243 (64.5)	0.684 (35.5)	1.927 (100)

A. A

	BEFORE TRAI-NING	AFTER TRAI-NING
76 77	1.016	1.567
77 78	0.864	1.393
78 79	0.678	1.113
79 80	0.781	0.869
80 81	0.470	1.490
81 82	1.849	1.090
82 83	0.748	0.324
Whole	1.464	1.320

Non-project area

	Irrigated land	Non-irrigated land	Total production
0 1	0.022 (13.6)	0.140 (86.4)	0.162 (100)
1 2	0.136 (46.4)	0.157 (53.6)	0.293 (100)
2 3	0.323 (44.4)	0.405 (55.6)	0.728 (100)
3 4	0.269 (36.1)	0.476 (63.9)	0.745 (100)
4 5	0.086 (9.6)	0.811 (90.4)	0.897 (100)
5 10	0.265 (13.1)	1.762 (86.1)	2.027 (100)
10 15	0.300 (20.8)	1.140 (79.2)	1.440 (100)
Whole	0.176 (24.8)	0.534 (75.2)	0.710 (100)

1-11 Number of producer by crops and its ratio

IN IAP - 1972

	Local variety "Early"	Improved variety "Early"	Local variety "Normal"	Improved variety "Normal	Wheat	Maize	Millet	Oil crops and pulses	Fruit tree, vegetable and others
0 1	9 (26)	1 (3)	32 (94)	0 (0)	9 (26)	Not produced	3 (9)	13 (38)	Not produced
1 2	14 (42)	6 (18)	32 (97)	1 (3)	11 (33)		2 (6)	15 (45)	
2 3	2 (10)	0 (0)	19 (95)	0 ((0)	3 (15)		2 (10)	8 (40)	
3 4	3 (33)	0 (0)	8 (89)	1 (11)	3 (33)		1 (11)	8 (89)	
4 5	1 (20)	0 (0)	5 (100)	0 (0)	1 (20)		0 (0)	2 (40)	
5 10	1 (25)	1 (25)	4 (100)	0 (0)	1 (25)		0 (0)	1 (25)	
Whole	30 (29)	8 (8)	100 (95)	2 (2)	28 (27)		8 (8)	47 (45)	

OUT OF IAP - 1972

	Local variety "Early"	Improved variety "Early"	Local variety "Normal"	Improved variety "Normal	Wheat	Maize	Millet	Oil crops and pulses	Fruit tree, vegetable and others
0 1	14 (41)	0 (0)	22 (65)	0 (0)	15 (44)	Not produced	8 (24)	7 (21)	9 (26)
1 2	15 (45)	1 (3)	21 (64)	0 (0)	10 (30)		7 (21)	7 (21)	13 (39)
2 3	7 (35)	2 (10)	17 (85)	0 (0)	9 (45)		4 (20)	3 (15)	9 (45)
3 4	7 (78)	0 (0)	7 (78)	0 (0)	4 (44)		3 (33)	0 (0)	5 (56)
4 5	3 (60)	2 (40)	2 (40)	0 (0)	3 (60)		0 (0)	0 (0)	3 (60)
5 10	3 (75)	1 (25)	2 (50)	0 (0)	4 (100)		1 (25)	0 (0)	3 (75)
Whole	49 (47)	6 (6)	71 (68)	0 (0)	45 (43)		23 (22)	17 (16)	42 (40)

IN IAP - 1983

	Local variety "Early"	Improved variety "Early"	Local variety "Normal"	Improved variety "Normal	Wheat	Maize	Millet	Oil crops and pulses	Fruit tree, vegetable and others
0 1	13 (38)	8 (24)	29 (85)	13 (38)	17 (50)	Not produced	1 (3)	8 (24)	2 (6)
1 2	15 (65)	10 (43)	20 (87)	10 (43)	19 (83)		4 (17)	10 (43)	4 (17)
2 3	5 (22)	5 (22)	22 (96)	20 (87)	21 (91)		5 (22)	10 (43)	4 (17)
3 4	1 (8)	7 (58)	12 (100)	10 (83)	11 (92)		2 (17)	6 (50)	3 (25)
4 5	1 (20)	5 (100)	5 (100)	4 (80)	5 (100)		0 (0)	4 (80)	0 (0)
5 10	1 (25)	2 (50)	3 (75)	4 (100)	3 (75)		0 (0)	1 (25)	0 (0)
whole	36 (36)	37 (37)	91 (90)	61 (60)	76 (75)		12 (12)	39 (39)	13 (13)

OUT OF IAP - 1983

	Local variety "Early"	Improved variety "Early"	Local variety "Normal"	Improved variety "Normal	Wheat	Maize	Millet	Oil crops and pulses	Fruit tree, vegetable and others
0 1	6 (18)	3 (9)	22 (65)	7 (21)	11 (32)	Not produced	6 (18)	11 (32)	11 (32)
1 2	9 (39)	2 (9)	19 (83)	5 (22)	8 (35)		8 (35)	8 (35)	13 (57)
2 3	10 (43)	8 (35)	19 (83)	11 (48)	15 (65)		10 (43)	9 (39)	14 (61)
3 4	4 (33)	2 (17)	8 (67)	5 (42)	7 (58)		5 (42)	4 (33)	6 (50)
4 5	0 (0)	2 (40)	5 (100)	2 (40)	2 (40)		1 (20)	3 (60)	3 (60)
5 10	1 (25)	2 (50)	3 (75)	3 (75)	3 (75)		2 (50)	3 (75)	3 (75)
Whole	30 (30)	19 (19)	76 (75)	33 (33)	46 (46)		32 (32)	38 (38)	50 (50)

1-11 Number of producer by crops and its ratio

STWP - 1981

	Local variety "Early"	Improved variety "Early"	Local variety "Normal"	Improved variety "Normal	Wheat	Maize	Millet	Oil crops and pulses	Fruit tree, vegetable and others
0 1	1 (100)	0 (0)	0 (0)	0 (0)	1 (100)	1 (100)	0 (0)	0 (0)	1 (0)
1 2	1 (20)	0 (0)	5 (100)	2 (40)	4 (80)	2 (20)	0 (0)	0 (0)	1 (20)
2 3	3 (75)	0 (0)	2 (50)	1 (25)	3 (75)	1 (25)	0 (0)	1 (25)	2 (50)
3 4	3 (100)	0 (0)	3 (100)	3 (100)	2 (67)	2 (67)	1 (33)	3 (100)	1 (33)
4 5	12 (86)	1 (7)	11 (79)	7 (50)	12 (86)	7 (50)	5 (36)	6 (43)	8 (57)
5 10	25 (64)	0 (0)	37 (95)	8 (21)	35 (90)	22 (56)	9 (23)	13 (33)	23 (59)
10 15	19 (83)	2 (9)	21 (91)	7 (30)	18 (78)	19 (83)	4 (17)	10 (43)	14 (61)
15 20	4 (57)	0 (0)	7 (100)	0 (0)	6 (86)	4 (57)	1 (14)	3 (43)	3 (43)
20	8 (89)	0 (0)	9 (100)	0 (0)	9 (100)	8 (89)	0 (0)	4 (44)	6 (67)
Whole	76 (72)	3 (3)	95 (90)	28 (27)	90 (86)	66 (67)	20 (19)	40 (38)	(59) (56)

IN STWP - 1983

	Local variety "Early"	Improved variety "Early"	Local variety "Normal"	Improved variety "Normal	Wheat	Maize	Millet	Oil crops and pulses	Fruit tree, vegetable and others
0 1	1 (100)	0 (0)	0 (0)	1 (100)	1 (100)	1 (100)	0 (0)	0 (0)	1 (100)
1 2	3 (75)	1 (25)	2 (50)	2 (50)	3 (75)	0 (0)	0 (0)	0 (0)	0 (0)
2 3	5 (83)	0 (0)	5 (83)	1 (17)	4 (67)	2 (33)	1 (17)	0 (0)	2 (33)
3 4	6 (75)	1 (13)	6 (75)	2 (25)	7 (88)	5 (63)	1 (13)	1 (13)	5 (63)
4 5	12 (92)	3 (23)	8 (62)	7 (54)	12 (92)	7 (54)	2 (15)	5 (38)	8 (62)
5 10	36 (95)	2 (5)	29 (76)	16 (42)	36 (95)	20 (53)	9 (24)	9 (24)	17 (45)
10 15	18 (90)	4 (20)	14 (70)	12 (60)	18 (90)	10 (50)	5 (25)	7 (35)	9 (45)
15 20	3 (75)	0 (0)	4 (100)	1 (25)	3 (75)	2 (50)	0 (0)	2 (50)	0 (0)
20	6 (86)	0 (0)	4 (57)	2 (29)	7 (100)	4 (57)	1 (14)	1 (14)	2 (29)
Whole	90 (89)	11 (10)	72 (71)	44 (44)	91 (90)	51 (50)	19 (19)	25 (25)	44 (44)

OUT OF STWP - 1983

Local variety "Early"	Improved variety "Early"	Local variety "Normal"	Improved variety "Normal	Wheat	Maize	Millet	Oil crops and pulses	Fruit tree, vegetable and others
0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
2 (50)	0 (0)	3 (75)	0 (0)	2 (50)	0 (0)	1 (25)	2 (50)	2 (50)
1 (17)	0 (0)	3 (50)	0 (0)	2 (33)	2 (33)	1 (17)	4 (67)	3 (50)
1 (13)	0 (0)	3 (38)	0 (0)	1 (13)	1 (13)	0 (0)	5 (63)	2 (25)
4 (31)	0 (0)	7 (54)	1 (8)	3 (23)	1 (8)	2 (15)	7 (54)	3 (23)
11 (29)	1 (3)	26 (68)	3 (8)	7 (18)	3 (8)	5 (13)	21 (55)	12 (32)
8 (40)	1 (5)	14 (70)	3 (15)	4 (20)	1 (5)	3 (15)	9 (45)	5 (25)
2 (50)	0 (0)	2 (50)	0 (0)	1 (25)	1 (25)	1 (25)	1 (25)	3 (75)
2 (29)	0 (0)	4 (57)	2 (29)	2 (29)	2 (29)	1 (14)	3 (43)	3 (43)
31 (31)	2 (2)	62 (61)	9 (9)	22 (22)	11 (11)	14 (14)	52 (51)	33 (33)

1-11 Number of producer by crops and its ratio

A. A

BEFORE TRAINING

	Local variety "Early"	Improved variety "Early"	Local variety "Normal"	Improved variety "Normal	Wheat	Maize	Millet	Oil crops and pulses	Fruit tree, vegetable and others
76 77	31 (91)	3 (9)	32 (94)	1 (3)	31 (91)	4 (12)	19 (56)	26 (76)	19 (56)
77 78	20 (87)	4 (17)	22 (96)	3 (13)	18 (78)	8 (35)	8 (35)	19 (83)	15 (65)
78 79	10 (91)	3 (27)	8 (73)	3 (27)	8 (73)	6 (55)	2 (18)	8 (73)	8 (73)
79 80	3 (75)	1 (25)	3 (75)	1 (25)	4 (100)	0 (0)	2 (50)	3 (75)	1 (25)
80 81	11 (79)	1 (7)	10 (71)	1 (7)	10 (71)	6 (43)	5 (36)	12 (86)	8 (57)
81 82	2 (100)	1 (50)	1 (50)	1 (50)	2 (100)	2 (100)	0 (0)	2 (100)	2 (100)
82 83	7 (88)	0 (0)	7 (88)	1 (13)	6 (75)	3 (38)	2 (25)	6 (75)	5 (63)
Whole	84 (88)	13 (44)	83 (86)	11 (11)	79 (82)	29 (30)	38 (40)	76 (79)	58 (60)

AFTER TRAINING

Local variety "Early"	Improved variety "Early"	Local variety "Normal"	Improved variety "Normal	Wheat	Maize	Millet	Oil crops and pulses	Fruit tree, vegetable and others
25 (74)	27 (79)	31 (91)	26 (76)	32 (94)	14 (41)	17 (50)	30 (88)	25 (74)
18 (78)	17 (74)	20 (87)	17 (74)	22 (96)	15 (65)	8 (35)	20 (87)	13 (57)
6 (55)	8 (73)	6 (55)	5 (45)	10 (91)	6 (55)	2 (18)	9 (82)	8 (73)
3 (75)	2 (50)	3 (75)	2 (50)	4 (100)	2 (50)	2 (50)	3 (75)	2 (50)
12 (86)	9 (64)	8 (57)	10 (71)	12 (86)	9 (64)	6 (43)	14 (100)	11 (79)
2 (100)	1 (50)	1 (50)	1 (50)	2 (100)	2 (100)	0 (0)	2 (100)	1 (50)
6 (75)	4 (50)	7 (88)	5 (63)	5 (63)	4 (50)	2 (25)	5 (50)	2 (25)
72 (75)	68 (71)	76 (79)	66 (69)	87 (91)	52 (54)	37 (39)	83 (86)	62 (65)

Non-project area

Irrigated land

	Local variety "Early"	Improved variety "Early"	Local variety "Normal"	Improved variety "Normal	Wheat	Maize	Millet	Oil crops and pulses	Fruit tree, vegetable and others
0 1	11 (48)	0 (0)	13 (57)	0 (0)	11 (48)	Not produced	2 (9)	3 (13)	2 (9)
1 2	20 (74)	0 (0)	20 (74)	1 (4)	19 (70)		0 (0)	4 (15)	11 (41)
2 3	23 (88)	0 (0)	22 (85)	3 (12)	21 (81)		3 (12)	2 (8)	13 (50)
3 4	8 (100)	0 (0)	6 (75)	2 (25)	6 (75)		1 (13)	4 (50)	5 (63)
4 5	6 (86)	0 (0)	4 (57)	3 (43)	6 (86)		0 (0)	0 (0)	2 (29)
5 10	15 (88)	1 (6)	16 (94)	2 (12)	17 (100)		2 (12)	4 (24)	5 (29)
10 15	2 (100)	0 (0)	2 (100)	0 (0)	2 (100)		0 (0)	0 (0)	1 (50)
Whole	85 (77)	1 (1)	83 (75)	11 (10)	82 (75)		8 (7)	17 (15)	39 (35)

Non-irrigated land

Local variety "Early"	Improved variety "Early"	Local variety "Normal"	Improved variety "Normal	Wheat	Maize	Millet	Oil crops and pulses	Fruit tree, vegetable and others
10 (43)	0 (0)	12 (52)	1 (4)	5 (22)	Not produced	2 (9)	5 (22)	9 (39)
9 (33)	0 (0)	17 (63)	0 (0)	7 (26)		2 (7)	9 (33)	10 (37)
6 (23)	0 (0)	24 (92)	1 (4)	9 (35)		5 (19)	18 (69)	12 (46)
4 (50)	0 (0)	6 (75)	1 (13)	3 (38)		1 (13)	5 (63)	3 (38)
4 (57)	0 (0)	6 (86)	1 (14)	3 (43)		4 (57)	5 (71)	5 (71)
2 (12)	1 (6)	16 (94)	0 (0)	1 (6)		10 (59)	16 (94)	14 (82)
1 (50)	0 (0)	2 (100)	0 (0)	0 (0)		1 (50)	1 (50)	1 (50)
36 (33)	1 (1)	83 (75)	4 (4)	28 (25)		25 (23)	59 (54)	54 (49)

1-12 Number of farmer utilizing agricultural materials and its ratio

IN IAP - 1983

( ) = Number of farmer utilizing / Number of farmer × 100

	COMPOST			Chemical fertilizer			Area			Agricultural chemicals			Tractor			Irrigating & pump		
	Paddy	Wheat	Maize	Paddy	Wheat	Maize	Paddy	Wheat	Maize	Paddy	Wheat	Maize	Paddy	Wheat	Maize	Paddy	Wheat	Maize
0 1	21 (64)	4 (12)	Not produced	20 (61)	20 (61)	Not produced	21 (64)	20 (61)	Not produced	6 (18)	4 (12)	Not produced	1 (3)	1 (3)	Not produced	0 (0)	0 (0)	Not produced
1 2	16 (70)	10 (43)		15 (65)	17 (74)		21 (91)	19 (83)		13 (57)	6 (26)		0 (0)	1 (4)		0 (0)	0 (0)	
2 3	9 (39)	7 (30)		19 (83)	21 (91)		22 (96)	20 (87)		14 (61)	3 (13)		3 (13)	8 (35)		0 (0)	0 (0)	
3 4	4 (33)	2 (17)		8 (67)	11 (92)		12 (100)	12 (100)		8 (67)	2 (17)		0 (0)	3 (25)		0 (0)	0 (0)	
4 5	5 (100)	2 (40)		3 (60)	5 (100)		5 (100)	4 (80)		4 (80)	0 (0)		0 (0)	3 (60)		0 (0)	0 (0)	
5 10	3 (75)	1 (25)		3 (75)	4 (100)		4 (100)	3 (75)		1 (25)	0 (0)		0 (0)	2 (50)		0 (0)	0 (0)	
Whole	58 (57)	26 (26)		68 (67)	78 (77)		85 (84)	78 (77)		46 (46)	15 (15)		4 (4)	18 (18)		0 (0)	0 (0)	

OUT OF IAP - 1983

	COMPOST			Chemical fertilizer			Area			Agricultural chemicals			Tractor			Irrigating & pump		
	Paddy	Wheat	Maize	Paddy	Wheat	Maize	Paddy	Wheat	Maize	Paddy	Wheat	Maize	Paddy	Wheat	Maize	Paddy	Wheat	Maize
0 1	21 (62)	2 (4)	Not produced	7 (21)	8 (24)	Not produced	10 (29)	8 (24)	Not produced	3 (9)	1 (3)	Not produced	0 (0)	0 (0)	Not produced	0 (0)	0 (0)	Not produced
1 2	13 (57)	10 (43)		11 (48)	12 (52)		13 (57)	12 (52)		6 (26)	4 (17)		2 (9)	1 (4)		2 (9)	2 (9)	
2 3	8 (35)	8 (35)		17 (74)	18 (78)		20 (87)	19 (83)		10 (43)	4 (17)		2 (9)	5 (22)		4 (17)	6 (26)	
3 4	3 (25)	0		4 (33)	7 (58)		10 (83)	6 (50)		5 (42)	2 (17)		0 (0)	1 (8)		2 (17)	6 (50)	
4 5	3 (60)	1 (20)		0 (0)	2 (40)		3 (60)	2 (40)		3 (60)	0 (0)		0 (0)	1 (20)		0 (0)	1 (20)	
5 10	2 (50)	0 (0)		2 (50)	2 (50)		2 (50)	2 (50)		1 (25)	0 (0)		0 (0)	1 (25)		3 (75)	2 (50)	
Whole	50 (50)	21 (21)		41 (41)	49 (49)		58 (57)	49 (49)		28 (28)	11 (11)		4 (4)	9 (9)		11 (11)	17 (17)	

1-12 Number of farmer utilizing agricultural materials and its ratio

( ) = $\frac{\text{Number of farmer utilizing}}{\text{Number of farmer}} \times 100$

STWP - 1981

	COMPOST			Chemical fertilizer			Area			Agricultural chemicals			Tractor			Irrigating & pump		
	Paddy	Wheat	Maize	Paddy	Wheat	Maize	Paddy	Wheat	Maize	Paddy	Wheat	Maize	Paddy	Wheat	Maize	Paddy	Wheat	Maize
0 1				0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)									
1 2				0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)									
2 3				0 (0)	1 (25)	0 (0)	0 (0)	0 (0)	0 (0)									
3 4				0 (0)	1 (33)	0 (0)	2 (67)	2 (67)	0 (0)									
4 5	Not produced			0 (0)	2 (14)	1 (7)	3 (21)	4 (29)	2 (14)	Not produced			Not produced			Not produced		
5 10				1 (3)	3 (8)	2 (5)	10 (26)	14 (36)	4 (10)									
10 15				2 (9)	8 (35)	3 (13)	3 (13)	13 (57)	7 (30)									
15 20				0 (0)	2 (29)	1 (14)	0 (0)	2 (29)	1 (14)									
20				1 (11)	5 (56)	0 (0)	1 (11)	5 (56)	0 (0)									
Whole				4 (4)	22 (21)	7 (7)	19 (18)	40 (38)	14 (13)									

IN STWP -- 1983

	COMPOST			Chemical fertilizer			Area			Agricultural chemicals			Tractor			Irrigating & pump		
	Paddy	Wheat	Maize	Paddy	Wheat	Maize	Paddy	Wheat	Maize	Paddy	Wheat	Maize	Paddy	Wheat	Maize	Paddy	Wheat	Maize
0 1	1 (100)	1 (100)	1 (100)	1 (100)	1 (100)	1 (100)	1 (100)	1 (100)	1 (100)	1 (100)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (100)	1 (100)	1 (100)
1 2	2 (50)	2 (50)	0 (0)	2 (50)	4 (100)	0 (0)	3 (75)	4 (100)	0 (0)	3 (75)	0 (0)	0 (0)	3 (75)	3 (75)	0 (0)	4 (100)	4 (100)	0 (0)
2 3	5 (83)	4 (67)	1 (17)	3 (50)	3 (50)	1 (17)	3 (50)	4 (67)	2 (33)	3 (50)	1 (17)	1 (17)	1 (17)	0 (0)	0 (0)	6 (100)	4 (67)	2 (33)
3 4	6 (75)	5 (63)	1 (13)	1 (13)	7 (88)	3 (38)	4 (50)	7 (88)	3 (38)	4 (50)	1 (13)	1 (13)	0 (0)	1 (13)	1 (13)	6 (75)	7 (88)	3 (38)
4 5	10 (77)	8 (62)	5 (38)	6 (46)	11 (85)	7 (54)	9 (69)	11 (85)	7 (54)	7 (54)	0 (0)	2 (15)	4 (31)	4 (31)	2 (15)	9 (69)	12 (92)	9 (69)
5 10	28 (74)	26 (68)	21 (55)	24 (63)	36 (95)	22 (58)	32 (84)	35 (92)	20 (53)	18 (47)	2 (5)	4 (11)	6 (16)	7 (18)	2 (5)	37 (97)	36 (95)	19 (50)
10 15	12 (60)	7 (35)	4 (20)	16 (80)	19 (95)	6 (30)	15 (75)	18 (90)	7 (35)	12 (60)	2 (10)	4 (20)	7 (35)	12 (60)	5 (25)	17 (85)	16 (80)	4 (20)
15 20	4 (100)	2 (50)	3 (75)	3 (75)	4 (100)	3 (75)	2 (50)	4 (100)	3 (75)	1 (25)	0 (0)	0 (0)	2 (50)	1 (25)	2 (50)	3 (75)	3 (75)	3 (75)
20	6 (86)	4 (57)	4 (57)	6 (86)	6 (86)	3 (43)	4 (57)	5 (71)	4 (57)	4 (57)	1 (14)	1 (14)	4 (57)	3 (43)	0 (0)	6 (86)	5 (71)	4 (57)
Whole	74 (73)	59 (58)	40 (40)	61 (60)	91 (90)	46 (46)	73 (73)	89 (88)	49 (49)	53 (52)	7 (7)	13 (13)	27 (27)	31 (31)	12 (12)	89 (88)	88 (87)	45 (45)

OUT OF STWP - 1983

	COMPOST			Chemical fertilizer			Area			Agricultural chemicals			Tractor			Irrigating & pump		
	Paddy	Wheat	Maize	Paddy	Wheat	Maize	Paddy	Wheat	Maize	Paddy	Wheat	Maize	Paddy	Wheat	Maize	Paddy	Wheat	Maize
0 1	0 (0)	0 (0)	0 (0)	0 (0)	0 0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
1 2	1 (25)	1 (25)	0 (0)	1 (25)	1 (25)	0 (0)	2 (50)	1 (25)	0 (0)	2 (50)	0 (0)	0 (0)	2 (50)	1 (25)	0 (0)	2 (50)	1 (25)	0 (0)
2 3	3 (50)	1 (17)	1 (17)	1 (17)	2 (33)	3 (50)	1 (17)	2 (33)	3 (50)	2 (33)	0 (0)	0 (0)	0 (17)	1 (17)	1 (17)	0 (0)	1 (17)	1 (17)
3 4	1 (13)	1 (13)	0 (0)	1 (13)	1 (13)	0 (0)	2 (25)	1 (13)	0 (0)	1 (13)	0 (0)	0 (0)	0 (0)	0 (0)	1 (13)	0 (0)	0 (0)	0 (0)
4 5	5 (38)	1 (8)	1 (8)	3 (23)	3 (23)	1 (8)	5 (38)	2 (15)	0 (0)	2 (15)	0 (0)	0 (0)	2 (15)	0 (0)	0 (0)	0 (0)	3 (23)	1 (8)
5 10	11 (29)	2 (5)	0 (0)	8 (21)	6 (16)	0 (0)	14 (37)	6 (16)	0 (0)	8 (21)	1 (3)	0 (0)	5 (13)	5 (13)	1 (3)	14 (37)	2 (5)	0 (0)
10 15	2 (10)	1 (5)	0 (0)	3 (15)	3 (15)	0 (0)	6 (30)	3 (15)	0 (0)	4 (20)	1 (5)	0 (0)	1 (5)	3 (15)	0 (0)	3 (15)	3 (15)	0 (0)
15 20	1 (25)	0 (0)	0 (0)	0 (0)	1 (25)	0 (0)	1 (25)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (25)	1 (25)	0 (0)	1 (25)	1 (25)	0 (0)
20	2 (29)	0 (0)	0 (0)	2 (29)	1 (14)	0 (0)	2 (29)	0 (0)	0 (0)	3 (43)	0 (0)	0 (0)	4 (57)	2 (29)	0 (0)	2 (29)	0 (0)	0 (0)
Whole	26 (26)	7 (7)	2 (2)	19 (19)	18 (18)	4 (4)	33 (33)	15 (15)	3 (3)	22 (22)	2 (2)	0 (0)	16 (16)	13 (13)	3 (3)	22 (22)	11 (11)	2 (2)

1-12 Number of farmer utilizing agricultural materials and its ratio

A. A

BEFORE TRAINING

( ) = Number of farmer utilizing / Number of farmer × 100

	COMPOST			Chemical fertilizer			Area			Agricultural chemicals			Tractor			Irrigating & pump		
	Paddy	Wheat	Maize	Paddy	Wheat	Maize	Paddy	Wheat	Maize	Paddy	Wheat	Maize	Paddy	Wheat	Maize	Paddy	Wheat	Maize
76 77	24 (71)	19 (56)	5 (15)	4 (12)	3 (9)	5 (15)	8 (24)	8 (24)	1 (3)	1 (3)	1 (3)	1 (3)	0 (0)	0 (0)	0 (0)	1 (3)	3 (9)	3 (9)
77 78	13 (57)	11 (48)	6 (26)	6 (26)	5 (22)	5 (22)	6 (26)	7 (30)	5 (22)	0 (0)	0 (0)	0 (0)	1 (4)	2 (9)	1 (4)	1 (4)	0 (0)	1 (4)
78 79	10 (91)	5 (45)	4 (36)	2 (18)	4 (36)	3 (27)	2 (18)	1 (9)	2 (18)	2 (18)	2 (18)	2 (18)	0 (0)	1 (9)	0 (0)	0 (0)	2 (18)	0 (0)
79 80	3 (75)	3 (75)	1 (25)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (25)	1 (25)	0 (0)
80 81	8 (57)	9 (64)	7 (50)	1 (7)	4 (29)	2 (14)	2 (14)	4 (29)	2 (14)	2 (14)	2 (14)	0 (0)	0 (0)	0 (0)	0 (0)	2 (14)	2 (14)	1 (7)
81 82	1 (50)	1 (50)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (50)	0 (0)	2 (100)
82 83	1 (13)	4 (50)	1 (13)	2 (25)	2 (25)	1 (13)	1 (13)	2 (25)	1 (13)	2 (25)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (13)	0 (0)
Whole	60 (63)	52 (54)	24 (25)	15 (16)	18 (19)	16 (17)	19 (20)	22 (23)	11 (11)	7 (7)	5 (5)	3 (3)	1 (1)	3 (3)	1 (1)	6 (6)	9 (9)	7 (7)

AFTER TRAINING

	COMPOST			Chemical fertilizer			Area			Agricultural chemicals			Tractor			Irrigating & pump		
	Paddy	Wheat	Maize	Paddy	Wheat	Maize	Paddy	Wheat	Maize	Paddy	Wheat	Maize	Paddy	Wheat	Maize	Paddy	Wheat	Maize
76 77	25 (74)	22 (65)	6 (18)	30 (88)	32 (94)	20 (59)	30 (88)	33 (97)	12 (35)	32 (94)	22 (65)	13 (38)	3 (9)	8 (24)	3 (9)	7 (21)	14 (41)	9 (26)
77 78	19 (83)	15 (65)	10 (43)	20 (87)	22 (96)	19 (83)	21 (91)	22 (96)	15 (65)	21 (91)	14 (61)	15 (65)	2 (9)	3 (13)	2 (9)	8 (35)	12 (52)	13 (57)
78 79	7 (64)	9 (82)	5 (45)	8 (73)	9 (82)	7 (64)	10 (91)	6 (55)	7 (64)	10 (91)	7 (64)	7 (64)	1 (9)	3 (27)	4 (36)	3 (27)	4 (36)	5 (45)
79 80	4 (100)	3 (75)	2 (50)	4 (100)	4 (100)	2 (50)	3 (75)	3 (75)	1 (25)	4 (100)	2 (50)	1 (25)	1 (25)	2 (50)	1 (25)	2 (50)	2 (50)	0 (0)
80 81	11 (79)	10 (71)	7 (50)	11 (79)	13 (93)	3 (21)	12 (86)	13 (93)	8 (57)	14 (100)	8 (57)	4 (29)	0 (0)	1 (14)	0 (0)	5 (36)	3 (21)	3 (21)
81 82	1 (50)	1 (50)	0 (0)	1 (50)	2 (100)	1 (50)	1 (50)	1 (50)	1 (50)	2 (100)	1 (50)	2 (100)	0 (0)	0 (0)	0 (0)	2 (100)	1 (50)	0 (0)
82 83	4 (50)	4 (50)	2 (25)	7 (88)	7 (88)	4 (50)	8 (100)	7 (88)	3 (38)	6 (75)	4 (50)	2 (25)	1 (13)	0 (0)	0 (0)	1 (13)	2 (25)	2 (25)
Whole	71 (74)	64 (67)	32 (33)	81 (84)	89 (93)	56 (58)	85 (89)	85 (89)	47 (49)	89 (93)	58 (60)	44 (46)	8 (8)	17 (18)	10 (10)	28 (29)	38 (40)	32 (33)

1-12 Number of farmer utilizing agricultural materials and its ratio

Non-project area

Irrigated land

( ) = Number of farmer utilizing / Number of farmer × 100

	COMPOST			Chemical fertilizer			Area			Agricultural chemicals			Tractor			Irrigating & pump		
	Paddy	Wheat	Maize	Paddy	Wheat	Maize	Paddy	Wheat	Maize	Paddy	Wheat	Maize	Paddy	Wheat	Maize	Paddy	Wheat	Maize
0 1	12 (52)	7 (30)	Not produced	10 (43)	8 (35)	Not produced	11 (48)	9 (39)	Not produced	2 (9)	0 (0)	Not produced	0 (0)	1 (4)	Not produced	8 (35)	5 (22)	Not produced
1 2	17 (74)	11 (48)		11 (48)	16 (70)		15 (65)	16 (70)		0 (0)	0 (0)		0 (0)	2 (9)		11 (43)	13 (57)	
2 3	17 (65)	9 (35)		10 (38)	23 (88)		16 (62)	22 (85)		5 (19)	1 (4)		0 (0)	2 (8)		15 (58)	18 (69)	
3 4	5 (63)	6 (75)		4 (50)	7 (88)		4 (50)	7 (88)		1 (13)	0 (0)		0 (0)	1 (13)		5 (63)	5 (63)	
4 5	4 (57)	2 (29)		2 (29)	6 (86)		6 (86)	6 (86)		0 (0)	0 (0)		0 (0)	0 (0)		4 (57)	6 (86)	
5 10	17 (100)	5 (29)		9 (53)	15 (88)		13 (76)	16 (94)		3 (18)	3 (18)		0 (0)	3 (18)		15 (88)	16 (94)	
10 15	2 (100)	1 (50)		2 (100)	2 (100)		2 (100)	2 (100)		0 (0)	0 (0)		0 (0)	1 (50)		2 (100)	2 (100)	
Whole	74 (67)	41 (37)		48 (44)	77 (70)		67 (61)	78 (71)		11 (10)	4 (4)		0 (0)	10 (9)		60 (55)	65 (59)	

Non-irrigated land

	COMPOST			Chemical fertilizer			Area			Agricultural chemicals			Tractor			Irrigating & pump		
	Paddy	Wheat	Maize	Paddy	Wheat	Maize	Paddy	Wheat	Maize	Paddy	Wheat	Maize	Paddy	Wheat	Maize	Paddy	Wheat	Maize
0 1	9 (39)	4 (17)	Not produced	6 (26)	5 (22)	Not produced	7 (30)	5 (22)	Not produced	1 (4)	1 (4)	Not produced	0 (0)	0 (0)	Not produced	1 (4)	0 (0)	Not produced
1 2	12 (44)	4 (15)		6 (22)	5 (19)		12 (44)	5 (19)		0 (0)	0 (0)		0 (0)	0 (0)		2 (7)	2 (7)	
2 3	8 (31)	3 (12)		5 (19)	8 (31)		12 (46)	8 (31)		3 (12)	0 (0)		0 (0)	2 (8)		1 (4)	3 (12)	
3 4	5 (63)	2 (25)		4 (50)	3 (38)		2 (25)	2 (25)		1 (13)	0 (0)		0 (0)	1 (13)		1 (13)	2 (25)	
4 5	4 (57)	1 (14)		1 (14)	2 (29)		5 (71)	2 (29)		0 (0)	0 (0)		0 (0)	0 (0)		1 (14)	3 (43)	
5 10	13 (76)	1 (6)		7 (41)	1 (6)		9 (53)	0 (0)		2 (12)	0 (0)		0 (0)	2 (12)		2 (12)	0 (0)	
10 15	1 (50)	0 (0)		2 (100)	0 (0)		2 (100)	0 (0)		0 (0)	0 (0)		0 (0)	1 (50)		0 (0)	0 (0)	
Whole	52 (47)	15 (14)		31 (28)	24 (22)		49 (45)	22 (20)		7 (6)	1 (1)		0 (0)	6 (5)		8 (7)	10 (9)	

1-13 Amount of Fertilizer applied per ha

Unit=kg/Ha

IN IAP-1983

	N : P : K		
	Paddy N : P : K	Wheat N : P : K	Maize N : P : K
0 1	36:14:0	47:20:0	Not produced
1 2	40:17:0	42:17:0	
2 3	37:14:0	44:18:0	
3 4	39:15:0	40:19:0	
4 5	34:13:0	47:20:0	
5 10	39:14:0	37:12:0	
Whole	38:14:0	43:18:0	

OUT OF IAP-1983

	N : P : K		
	Paddy N : P : K	Wheat N : P : K	Maize N : P : K
0 1	39:11:0	39:13:0	Not produced
1 2	36:14:0	40:16:0	
2 3	36:14:0	43:18:0	
3 4	32:12:0	35:15:0	
4 5	20: 0 :0	47:21:0	
5 10	36:13:0	35:13:0	
Whole	33:11:0	40:16:0	

STWP-1981

	N : P : K		
	Paddy N : P : K	Wheat N : P : K	Maize N : P : K
0 1	0 : 0 :0	0 : 0 :0	0 : 0 :0
1 2	0 : 0 :0	0 : 0 :0	0 : 0 :0
2 3	0 : 0 :0	0 : 0 :0	0 : 0 :0
3 4	0 : 0 :0	43:17:0	0 : 0 :0
4 5	36: 0 :0	32:13:0	21:20:0
5 10	30: 8 :0	48:19:0	33:20:0
10 15	35:14:0	47:13:0	45:21:0
15 20	0 : 0 :0	45:21:0	29:15:0
20	38:15:0	39:23:0	0 : 0 :0
Whole	20: 4 :0	28:12:0	14: 8 :0

IN STWP-1983

	N : P : K		
	Paddy N : P : K	Wheat N : P : K	Maize N : P : K
0 1	66:24:0	60:18:0	60:18:0
1 2	50:18:0	48:17:0	0 : 0 :0
2 3	43:18:0	46:22:0	39:18:0
3 4	33: 6 :0	46:18:0	56:19:0
4 5	38:15:0	49:25:0	45:17:0
5 10	34:14:0	44:19:0	43:19:0
10 15	47:23:0	59:27:0	59:23:0
15 20	39:19:0	51:27:0	64:27:0
20	35:14:0	45:18:0	33:11:0
Whole	43:17:0	50:21:0	41:16:0

OUT OF STWP-1983

	N : P : K		
	Paddy N : P : K	Wheat N : P : K	Maize N : P : K
0 1	0 : 0 :0	0 : 0 :0	0 : 0 :0
1 2	46:18:0	60:18:0	0 : 0 :0
2 3	39:12:0	46:18:0	55:18:0
3 4	23: 6 :0	33:12:0	0 : 0 :0
4 5	30:12:0	43:16:0	30:30:0
5 10	29:11:0	30:12:0	0 : 0 :0
10 15	45:22:0	43:20:0	0 : 0 :0
15 20	28: 0 :0	20:20:0	0 : 0 :0
20	35:11:0	20:20:0	0 : 0 :0
Whole	31:10:0	33:15:0	9 : 5 :0

1-13 Amount of Fertilizer applied per ha

Unit = kg / Ha

A. A

BEFORE TRAINING

	N : P : K		
	Paddy N : P : K	Wheat N : P : K	Maize N : P : K
7677	31 : 9 : 0	37 : 17 : 0	37 : 17 : 0
7778	25 : 10 : 0	32 : 12 : 0	35 : 14 : 0
7879	23 : 10 : 0	27 : 14 : 0	37 : 17 : 0
7980	0 : 0 : 0	0 : 0 : 0	0 : 0 : 0
8081	33 : 12 : 0	37 : 16 : 0	56 : 26 : 0
8182	0 : 0 : 0	0 : 0 : 0	0 : 0 : 0
8283	37 : 17 : 0	43 : 20 : 0	37 : 17 : 0
Whole	21 : 8 : 0	25 : 11 : 0	28 : 13 : 0

AFTER TRAINING

	N : P : K		
	Paddy N : P : K	Wheat N : P : K	Maize N : P : K
7677	42 : 16 : 0	60 : 24 : 0	59 : 26 : 0
7778	58 : 20 : 0	64 : 25 : 0	65 : 25 : 0
7879	45 : 18 : 0	57 : 23 : 0	59 : 24 : 0
7980	31 : 15 : 0	50 : 20 : 0	18 : 12 : 0
8081	53 : 21 : 0	68 : 26 : 0	55 : 19 : 0
8182	44 : 17 : 0	61 : 20 : 0	60 : 29 : 0
8283	45 : 17 : 0	51 : 26 : 0	47 : 22 : 0
Whole	45 : 17 : 0	59 : 23 : 0	52 : 22 : 0

Non-project area

Irrigated land

	N : P : K		
	Paddy N : P : K	Wheat N : P : K	Maize N : P : K
0 1	30 : 11 : 0	40 : 15 : 0	Not produced
1 2	34 : 12 : 0	43 : 17 : 0	
2 3	39 : 14 : 0	43 : 17 : 0	
3 4	25 : 10 : 0	46 : 22 : 0	
4 5	41 : 14 : 0	49 : 20 : 0	
5 10	39 : 14 : 0	54 : 23 : 0	
1015	43 : 15 : 0	63 : 28 : 0	
Whole	36 : 13 : 0	48 : 20 : 0	

Non-irrigated land

	N : P : K		
	Paddy N : P : K	Wheat N : P : K	Maize N : P : K
0 1	33 : 13 : 0	38 : 9 : 0	Not produced
1 2	30 : 10 : 0	37 : 11 : 0	
2 3	36 : 12 : 0	40 : 12 : 0	
3 4	32 : 11 : 0	34 : 12 : 0	
4 5	33 : 12 : 0	44 : 15 : 0	
5 10	28 : 10 : 0	13 : 13 : 0	
1015	32 : 11 : 0	0 : 0 : 0	
Whole	32 : 11 : 0	29 : 10 : 0	

1-14 Agricultural income per farmer and its ratio

IAP－1983

Unit=Rs.( )=$\frac{\text{Each income}}{\text{Total income}} \times 100$

	Rice (Unhulled)	Wheat	Maize	Millet	Oil crops and pulses	Fruit tree, vegetable and others	Total
0 1	236 (50)	89 (19)	0	3 (1)	6 (1)	135 (29)	469 (100)
1 2	880 (77)	109 (10)	0	19 (2)	35 (3)	102 (8)	1,145 (100)
2 3	2,058 (60)	541 (16)	0	254 (7)	99 (3)	458 (14)	3,410 (100)
3 4	3,163 (83)	427 (11)	0	0	43 (1)	185 (5)	3,818 (100)
4 5	5,015 (92)	416 (8)	0	0	0	0	5,431 (100)
5 10	5,562 (87)	836 (13)	0	0	0	0	6,398 (100)
Whole	1,405 (71)	284 (14)	0	64 (3)	38 (2)	196 (10)	1,987 (100)

STWP－1983

	Rice (Unhulled)	Wheat	Maize	Millet	Oil crops and pulses	Fruit tree, vegetable and others	Total
0 1	3,000 (54)	1,500 (27)	800 (14)	0	0	300 (5)	5,600 (100)
1 2	2,430 (65)	1,200 (32)	0	0	125 (3)	0	3,755 (100)
2 3	1,167 (29)	918 (23)	0	50 (1)	0	1,945 (47)	4,080 (100)
3 4	1,710 (36)	845 (18)	250 (5)	0	0	1,925 (41)	4,730 (100)
4 5	2,371 (32)	2,024 (28)	246 (3)	0	129 (2)	2,545 (35)	7,315 (100)
5 10	7,134 (35)	2,746 (13)	465 (2)	23 (0.1)	240 (1)	9,979 (49)	20,587 (100)
10 15	8,786 (34)	6,643 (26)	1,764 (7)	0	0	8,312 (33)	25,505 (100)
15 20	13,750 (43)	4,185 (13)	2,000 (6)	0	0	11,750 (38)	31,685 (100)
20	11,337 (20)	10,208 (18)	4,194 (7)	0	0	31,143 (55)	56,882 (100)
Whole	6,390 (32)	3,666 (19)	954 (5)	12 (0.06)	112 (1)	8,623 (43)	19,757 (100)

1-14 Agricultural income per farmer and its ratio

A A

Unit = Rs.( ) = $\frac{\text{Each income}}{\text{Total income}} \times 100$

	Rice (Unhulled)	Wheat	Maize	Millet	Oil crops and pulses	Fruit tree, vegetable and others	Total
76 77	1,540 (49)	990 (31)	140 (4)	15 (0.4)	300 (9)	186 (7)	3,171 (100)
77 78	2,813 (48)	1,748 (30)	78 (1)	203 (3)	743 (13)	286 (5)	5,871 (100)
78 79	3,118 (49)	1,372 (22)	1,090 (17)	0	516 (8)	276 (4)	6,372 (100)
79 80	2,616 (55)	1,743 (36)	0	0	220 (5)	200 (4)	4,779 (100)
80 81	1,336 (43)	771 (25)	229 (7)	61 (2)	623 (20)	101 (3)	3,121 (100)
81 82	2,675 (64)	1,395 (33)	0	0	0	95 (3)	4,165 (100)
82 83	1,813 (66)	394 (14)	0	20 (1)	391 (14)	125 (5)	2,743 (100)
Whole	2,087 (49)	1,174 (28)	227 (5)	64 (2)	476 (11)	193 (5)	4,221 (100)

Non-project area

	Rice (Unhulled)	Wheat	Maize	Millet	Oil crops and pulses	Fruit tree, vegetable and others	Total
0 1	87 (71)	0	0	0	0	35 (29)	122 (100)
1 2	221 (41)	62 (12)	0	0	0	254 (47)	537 (100)
2 3	988 (56)	171 (10)	0	0	3 (0.1)	610 (34)	1,772 (100)
3 4	593 (60)	38 (4)	0	0	0	358 (36)	989 (100)
4 5	1,300 (66)	446 (23)	0	71 (4)	0	151 (7)	1,968 (100)
5 10	3,250 (75)	543 (12)	0	12 (0.2)	44 (1)	507 (12)	4,356 (100)
10 15	6,875 (55)	5,200 (41)	0	0	0	500 (4)	12,575 (100)
Whole	1,059 (63)	265 (16)	0	6 (0.3)	7 (0.4)	337 (21)	1,674 (100)

1-15 Non-farming income per farmer

Unit = Rs

I A P – 1983

	Employment	Coolie	Commerce	Support from out	Others	Total
0 1	331	321	541	306	44	1,543
1 2	313	43	443	52	0	851
2 3	391	0	130	282	0	803
3 4	50	0	83	83	0	216
4 5	0	0	0	0	0	0
5 10	150	0	750	0	0	900
Whole	284	118	324	189	15	930

A. A

	Employment	Coolie	Commerce	Support from out	Others	Total
7677	735	106	303	115	68	1,327
7778	1,056	0	1,283	0	804	3,143
7879	1,581	0	1,545	327	1,849	5,302
7980	600	0	0	0	19	619
8081	600	582	1,764	0	0	2,946
8182	4,800	0	0	0	900	5,700
8283	600	0	0	0	0	600
Whole	957	122	849	78	448	2,454

S T W P – 1983

	Employment	Coolie	Commerce	Support from out	Others	Total
0 1	0	0	0	0	0	0
1 2	0	0	0	1,250	0	1,250
2 3	833	2,000	167	0	0	3,000
3 4	1,575	0	75	0	0	1,650
4 5	769	0	154	308	0	1,231
5 10	400	0	447	132	0	979
10 15	1,025	0	600	1,000	35	2,660
15 20	1,100	0	0	0	0	1,100
20	0	0	0	2,333	0	2,333
Whole	670	119	323	475	7	1,594

Non-project area

	Employment	Coolie	Commerce	Support from out	Others	Total
0 1	104	314	369	0	674	1,461
1 2	1,377	286	400	130	303	2,496
2 3	1,096	0	115	115	0	1,326
3 4	3,250	0	438	0	0	3,588
4 5	0	0	286	0	0	286
5 10	776	0	0	0	294	1,070
10 15	0	0	0	0	0	0
Whole	975	136	253	59	261	1,684

1-16 Fund on loan

IAP - 1983

	Ratio of farmers on loan agrinst number of farmers				Amount on loan per farmer					Reason for loan (Ratio agrinst number of farmers on loan)								Reivbursement	
										For farming					Commercial business	Ceremonial occasions	Others	Possible	Impossible
	City bank	A D B	Merchant	Friend	City bank	A D B	Merchant	Friend	Total	Irrigating	Seeds	Agricultural tools	Lines tock	Fertilizer					
0 1	32	26	25	3	155	162	301	6	624	25	10	0	5	30	15	65	0	95	5
1 2	39	35	48	13	248	550	887	180	1,865	31	13	6	19	44	6	75	0	94	6
2 3	57	30	26	0	987	731	652	0	2,370	29	14	0	14	57	14	64	14	93	7
3 4	67	33	33	0	1,717	1,375	1,000	0	4,092	40	10	10	30	50	10	90	10	80	20
4 5	80	40	0	0	1,800	1,600	0	0	3,400	0	0	75	0	75	0	50	0	100	0
5 10	50	25	0	0	1,460	350	0	0	1,810	50	0	0	0	50	0	50	0	100	0
	%	%	%	%	Rs	Rs	Rs	Rs	Rs	%	%	%	%	%	%	%	%	%	%
Whole	47	31	31	4	711	602	437	43	1,793	29	11	8	14	45	11	70	3	92	8

STWP - 1983

	City bank	A D B	Merchant	Friend	City bank	A D B	Merchant	Friend	Total	For farming					Commercial business		Others	Possible	Impossible
										Irrigating	Seeds	Agricultural tools	Lines tock	Fertilizer		Ceremonial occasions			
0 1	0	100	0	0	0	10,000	0	0	10,000	0	0	100	0	100	0	0	0	100	0
1 2	0	75	0	0	0	7,000	0	0	7,000	0	0	100	67	0	0	0	0	100	0
2 3	0	83	0	0	0	8,483	0	0	8,483	0	20	100	20	60	0	0	0	100	0
3 4	25	88	38	0	388	10,300	2,775	0	13,463	13	38	88	25	38	0	50	0	88	12
4 5	36	100	38	0	900	18,784	2,230	0	21,914	0	31	85	23	54	8	23	0	100	0
5 10	26	87	16	0	2,789	17,405	1,092	0	21,286	3	32	87	5	61	0	21	0	87	13
1015	15	100	5	5	1,650	21,870	1,500	150	25,170	10	55	85	0	85	10	15	0	100	0
1520	0	100	0	0	0	17,625	0	0	17,625	25	0	100	0	50	0	0	0	100	0
20	33	100	17	0	1,895	11,000	0	0	12,875	17	17	100	0	0	0	17	0	100	0
	%	%	%	%	Rs	Rs	Rs	Rs	Rs	%	%	%	%	%	%	%	%	%	%
Whole	22	92	16	1	1,613	16,508	1,327	30	19,478	6	33	94	8	59	3	19	0	94	6

A A

	City bank	A D B	Merchant	Friend	City bank	A D B	Merchant	Friend	Total	For farming					Commercial business		Others	Possible	Impossible
										Irrigating	Seeds	Agricultural tools	Lines tock	Fertilizer		Ceremonial occasions			
7677	24	47	26	6	459	1,877	421	16	2,773	7	50	14	32	50	4	25	4	93	7
7778	17	52	30	9	287	1,504	1,043	26	2,860	11	61	22	28	78	11	39	0	93	7
7879	55	36	18	0	969	4,227	181	0	5,377	0	44	11	22	44	33	44	11	94	6
7980	0	25	25	0	0	750	75	0	825	0	50	0	0	0	0	50	0	100	0
8081	14	7	21	14	286	32	100	79	425	7	29	7	7	21	7	14	0	100	0
8182	0	50	0	0	0	7,500	0	0	7,500	0	100	100	0	0	0	0	0	100	0
8283	13	13	25	0	375	250	375	0	1,000	0	60	0	20	80	0	100	0	80	20
	%	%	%	%	Rs	Rs	Rs	Rs	Rs	%	%	%	%	%	%	%	%	%	%
Whole	22	38	25	6	415	1,723	469	23	2,630	7	55	16	26	57	10	38	3	96	4

Non-project area

	City bank	A D B	Merchant	Friend	City bank	A D B	Merchant	Friend	Total	For farming					Commercial business		Others	Possible	Impossible
										Irrigating	Seeds	Agricultural tools	Lines tock	Fertilizer		Ceremonial occasions			
0 1	9	43	13	0	156	8	688	0	711	7	27	0	0	40	7	87	0	80	20
1 2	30	22	33	7	380	175	1,305	24	1,884	0	36	7	14	50	7	71	0	64	36
2 3	46	23	31	4	902	469	788	19	2,178	8	58	0	0	67	0	100	0	75	25
3 4	63	25	25	13	988	225	755	19	1,987	17	17	0	0	33	0	50	0	67	33
4 5	29	43	57	0	271	971	2,529	0	3,771	14	71	0	0	43	0	57	0	86	14
5 10	29	71	24	00	624	5,717	1,353	0	7,694	0	67	50	8	75	0	67	0	100	0
1015	50	50	0	0	3,000	1,250	0	0	4,250	0	100	0	0	100	0	0	0	100	0
	%	%	%	%	Rs	Rs	Rs	Rs	Rs	%	%	%	%	%	%	%	%	%	%
Whole	36	28	37	4	579	1,140	1,075	12	2,806	6	46	10	4	54	3	76	0	79	21

1-17 Self-supply of food

I A P

	Possible to sell	Sufficient	Shortage	
			%	Number of month in shortage
0 1	12 %	59 %	29 %	months 5.2
1 2	48	30	22	3.5
2 3	74	17	9	2.3
3 4	83	17	0	0
4 5	80	20	0	0
5 10	75	25	0	0
Whole	98 %	34 %	17 %	months 4.4

S T W P

	Possible to sell	Sufficient	Shortage	
			%	Number of month in shortage
0 1	100 %	0 %	0 %	months 0
1 2	100	0	0	0
2 3	100	0	0	0
3 4	86	0	14	4
4 5	92	0	8	5
5 10	100	0	0	0
10 15	100	0	0	
15 20	100	0	0	0
20	100	0	0	0
Whole	98 %	0 %	0 %	months 4.5

Non-project

	Possible to sell	Sufficient	Shortage	
			%	Number of month in shortage
0 1	0 %	17 %	83 %	months 5.4
1 2	33	26	41	5.3
2 3	62	12	27	3.0
3 4	63	12	25	2.5
4 5	72	14	14	2.0
5 10	100	0	0	0
10 15	100	0	0	0
Whole	49 %	15 %	36 %	months 4.7

1-18 Change of production (qty)

I. A. P.

Unit = %

Q Change of production comparing the condition before excution of I.A.P.
(Ratio against number of farmer)

IAP area

	Paddy			Wheat			Others		
	Increase in production	No change	Decrease in production	Increase in production	No change	Decrease in production	Increase in production	No change	Decrease in production
0 1	100	0	0	100	0	0	100	0	0
1 2	100	0	0	100	0	0	80	20	0
2 3	96	0	4	100	0	0	56	44	0
3 4	92	8	0	100	0	0	0	100	0
4 5	100	0	0	100	0	0	0	100	0
5 10	100	0	0	100	0	0	0	100	0
Whole	98	1	1	100	0	0	61	39	0

OUT OF IAP area

	Paddy			Wheat			Others		
	Increase in production	No change	Decrease in production	Increase in production	No change	Decrease in production	Increase in production	No change	Decrease in production
0 1	80	7	13	75	8	17	50	0	50
1 2	71	18	11	93	7	0	50	13	37
2 3	50	40	10	84	16	0	45	36	19
3 4	45	55	0	90	10	0	0	100	0
4 5	50	50	0	75	25	0	0	100	0
5 10	75	25	0	80	0	20	0	67	33
Whole	62	29	9	83	11	6	34	41	25

Q Causes for increase in production
(Ratio against number of farmers answered "Increase")

IAP area

	Increase of land used	Chemical fertilizer	Water for irrigation	Improved variety	New technology	Agricultural chemical
0 1	0	92	97	53	97	26
1 2	0	87	83	74	83	61
2 3	0	100	97	91	97	83
3 4	0	100	92	92	100	42
4 5	0	100	100	100	100	40
5 10	25	100	100	100	100	50
Whole	1	97	96	76	97	52

OUT OF IAP area

	Increase of land used	Chemical fertilizer	Water for irrigation	Improved variety	New technology	Agricultural chemical
0 1	8	17	30	42	25	17
1 2	0	39	23	54	77	46
2 3	0	63	44	56	69	56
3 4	0	33	44	44	44	33
4 5	0	33	33	33	67	33
5 10	0	50	0	50	25	50
Whole	2	40	33	49	54	40

Q Cause for decrease in production
(Ratio against number of farmer answered "Decrease")

IAP area

	Decrease of land used	Deterioration of land itself	Short of fertilization	Deterioration of seed	Laborer in shortage	Others
0 1	0	0	0	0	0	0
1 2	0	0	0	0	0	0
2 3	0	0	0	0	0	0
3 4	0	0	0	0	0	0
4 5	0	0	0	0	0	0
5 10	0	0	0	0	0	0
Whole	0	100	0	0	0	0

OUT OF IAP area

	Decrease of land used	Deterioration of land itself	Short of fertilization	Deterioration of seed	Laborer in shortage	Others
0 1	0	100	100	100	25	0
1 2	0	100	33	33	0	0
2 3	0	100	0	0	0	0
3 4	0	0	0	0	0	0
4 5	0	0	0	0	0	0
5 10	0	100	0	0	0	0
Whole	0	100	50	50	10	0

1-18 Change of production (qty)

S T W P

Unit = %

Q Change of production comparing the condition before execution of STWP (Ratio against number of farmer)

STWP area

	Paddy			Wheat			Others		
	Increase in production	No change	Decrease in production	Increase in production	No change	Decrease in production	Increase in production	No change	Decrease in production
0 1	100	0	100	100	0	0	100	0	0
1 2	100	0	100	100	0	0	50	50	0
2 3	83	17	60	60	20	20	100	0	0
3 4	63	37	50	50	50	0	50	50	0
4 5	92	8	100	100	0	0	63	0	37
5 10	89	8	92	92	5	3	63	32	5
1015	100	0	90	90	10	0	86	0	14
1520	100	0	100	100	0	0	100	0	0
20	100	0	83	83	0	17	100	0	0
Whole	91	9	1	87	9	4	72	16	12

OUT OF STWP area

	Paddy			Wheat			Others		
	Increase in production	No change	Decrease in production	Increase in production	No change	Decrease in production	Increase in production	No change	Decrease in production
0 1	0	0	0	0	0	0	0	0	0
1 2	25	75	0	0	50	50	0	100	0
2 3	20	60	20	0	66	34	0	0	100
3 4	25	50	25	34	0	66	0	0	100
4 5	20	30	50	25	12	63	50	0	50
5 10	16	44	40	16	42	42	0	23	74
1015	40	47	13	9	64	27	20	60	20
1520	34	66	0	0	100	0	0	100	0
20	55	0	50	34	0	66	50	0	50
Whole	26	44	30	16	40	44	14	26	60

Q Causes for increase in production (Ratio against number of farmers answered "Increase")

STWP area

	Increase of land used	Chemical fertilizer	Water for irrigation	Improved variety	New technology	Agricultural chemical
0 1	0	100	100	100	100	0
1 2	0	75	75	75	100	25
2 3	0	67	100	67	83	40
3 4	0	80	100	100	60	60
4 5	0	100	92	100	75	50
5 10	5.9	94	100	91	71	62
1015	0	90	90	80	80	35
1520	0	100	100	100	100	75
20	0	100	100	100	100	67
Whole	2	93	97	90	78	52

OUT OF STWP area

	Increase of land used	Chemical fertilizer	Water for irrigation	Improved variety	New technology	Agricultural chemical
0 1	0	0	0	0	0	0
1 2	0	100	0	0	0	0
2 3	0	100	0	100	0	100
3 4	0	0	0	0	100	0
4 5	0	50	0	100	50	0
5 10	0	75	0	25	50	50
1015	0	34	0	34	17	17
1520	0	100	0	100	100	100
20	0	100	0	100	100	50
Whole	0	58	0	58	42	26

Q Cause for decrease in production (Ratio against number of farmer answered "Decrease")

STWP area

	Decrease of land used	Deterioration of land itself	Short of fertilization	Deterioration of seed	Laborer in shortage	Others
0 1	0	0	0	0	0	0
1 2	0	0	0	0	0	0
2 3	0	100	0	0	100	100
3 4	0	0	0	0	0	0
4 5	0	64	33	33	0	33
5 10	0	33	0	33	64	0
1015	0	100	55	100	50	100
1520	0	0	0	0	0	0
20	0	100	0	100	0	100
Whole	0	70	20	50	40	50

OUT OF STWP area

	Decrease of land used	Deterioration of land itself	Short of fertilization	Deterioration of seed	Laborer in shortage	Others
0 1	0	0	0	0	0	0
1 2	0	0	0	0	0	0
2 3	0	50	25	25	25	50
3 4	0	40	0	40	0	40
4 5	0	50	0	33	17	33
5 10	0	54	4	43	29	46
1015	0	100	0	100	17	83
1520	0	0	0	0	0	0
20	0	80	0	80	20	40
Whole	0	58	3	48	22	47

1-18 Change of production (qty)

A. A

Q Change of production comparing the condition before AA training (Ratio against number of farmer)

	A. A								
	Paddy			Wheat			Others		
	Increase in production	No change	Decrease in production	Increase in production	No change	Decrease in production	Increase in production	No change	Decrease in production
76 77	91	3	0	97	0	3	88	0	12
77 78	100	0	0	100	0	0	100	0	0
78 79	100	0	0	100	0	0	91	9	0
79 80	100	0	0	100	0	0	75	25	0
80 81	100	0	0	100	0	0	100	0	0
81 82	50	0	50	50	50	0	100	0	0
82 83	63	13	24	88	0	12	88	12	0
Whole	93	2	5	97	1	2	93	3	4

Q Causes for increase in production (Ratio against number of farmers answered "Increase")

	A. A					
	Increase of land used	Chemical fertilizer	Water for irrigation	Improved variety	New technology	Agricultural chemical
76 77	24	94	79	97	97	36
77 78	35	91	78	96	100	48
78 79	27	91	82	100	100	36
79 80	25	100	100	75	100	75
80 81	14	93	71	71	100	50
81 82	0	50	50	50	100	50
82 83	0	100	50	75	100	25
Whole	23	94	77	90	99	43

Q Cause for decrease in production (Ratio against number of farmer answered "Decrease")

	A. A					
	Decrease of land used	Deterioration of land itself	Deterioration Short of fertilization	Deterioration of seed	Laborer in shortage	Others
76 77	20	100	20	20	0	0
77 78	0	0	0	0	0	0
78 79	0	0	0	0	0	0
79 80	0	0	0	0	0	0
80 81	0	0	0	0	0	0
81 82	0	100	0	0	0	0
82 83	33	100	33	33	0	0
Whole	22	100	22	22	0	0

Non-project area

Q Change of production in these few years

	Non-project area								
	Paddy			Wheat			Others		
	Increase in production	No change	Decrease in production	Increase in production	No change	Decrease in production	Increase in production	No change	Decrease in production
0 1	22	39	39	43	26	31	14	0	86
1 2	24	42	34	56	22	22	0	0	100
2 3	38	38	24	77	15	8	0	11	89
3 4	50	25	25	74	13	13	0	0	100
4 5	68	16	16	72	14	14	0	0	0
5 10	54	23	23	88	6	6	0	0	100
10 15	50	0	50	100	0	0	0	0	100
Whole	37	34	29	66	17	17	3	3	94

	Non-project area					
	Increase of land used	Chemical fertilizer	Water for irrigation	Improved variety	New technology	Agricultural chemical
0 1	0	100	100	100	50	40
1 2	0	100	93	100	53	53
2 3	0	100	90	100	45	10
3 4	0	100	67	100	50	16
4 5	0	100	100	100	40	10
5 10	0	100	100	100	80	93
10 15	50	100	100	100	100	100
Whole	1	100	93	100	56	44

	Non-project area					
	Decrease of land used	Deterioration of land itself	Deterioration Short of fertilization	Deterioration of seed	Laborer in shortage	Others
0 1	0	100	11	89	33	56
1 2	11	100	22	100	44	89
2 3	0	00	13	88	13	100
3 4	0	100	0	100	50	100
4 5	0	100	0	0	100	0
5 10	0	100	25	50	0	100
10 15	0	50	0	0	0	50
Whole	3	97	14	80	29	80

1-19 Securing method of new techniques

Q How to secure new techniques
(Ratio against number of farmer answered "New techniques"
for a cause of increase in production)

I. A. P

	JT JTA AA	Demonstration	Princings	Training	Friends	JADP	Government farms
0 1	100	70	17	3	21	79	61
1 2	100	68	21	37	37	42	37
2 3	96	70	39	35	52	34	70
3 4	100	75	25	33	42	50	67
4 5	100	80	20	20	20	80	60
5 10	100	50	25	50	50	25	50
Whole	99	70	23	25	36	55	58

S. T. W. P

	JT JTA AA	Demonstration	Princings	Training	Friends	JADP	Government farms
0 1	100	0	0	100	100	0	0
1 2	50	25	25	25	50	50	0
2 3	40	20	20	0	40	40	0
3 4	50	50	0	0	33	100	17
4 5	100	100	22	67	56	78	33
5 10	96	80	20	20	64	100	24
10 15	100	75	50	19	31	81	43
15 20	100	25	0	0	0	100	0
20	83	50	17	17	17	50	17
Whole	87	66	24	24	46	83	24

A . A

	JT JTA	Demonstration	Princings	Training	Friends	JADP	Government farms
76 77	100	91	72	100	53	91	59
77 78	96	74	65	100	48	100	87
78 79	100	82	45	91	18	91	64
79 80	100	50	75	100	25	100	50
80 81	100	64	64	100	29	86	43
81 82	100	0	100	100	0	100	50
82 83	100	29	43	86	43	86	29
Whole	99	73	66	98	60	92	61

Non-project area

	JT JTA AA	Demonstration	Princings	Training	Friends	JADP	Government farms
0 1	40	60	0	0	100	0	40
1 2	63	75	13	0	100	37	37
2 3	100	89	11	33	89	67	33
3 4	33	36	0	0	100	33	100
4 5	100	0	0	0	100	100	0
5 10	100	55	9	18	91	55	27
10 15	100	100	50	0	100	50	100
Whole	80	68	10	13	95	47.5	40

1-20 Contact with extension worker

Q How many times to contact extension workers for one month? (per farmer)

I A P

	Number of person contacted
0 1	0.8
1 2	0.6
2 3	0.7
3 4	0.7
4 5	1.0
5 10	0.8
Total	0.7

Dtails to be discussed

Variety	Fertilizer	Disease and insect	Administration Techniques	Administration	Others
7	11	19	100	0	0
57	71	79	100	0	0
82	82	100	65	0	0
63	63	88	100	0	0
40	40	40	100	0	0
75	75	75	75	0	0
46	50	61	92	0	0

Q Details to be discussed with extension workers (Ratio against number of farmer contacted)

S T W P

	Number of person contacted
0 1	1.0
1 2	0.5
2 3	0.8
3 4	0.4
4 5	0.6
5 10	0.8
10 15	0.7
15 20	0.8
20	1.0
Total	0.73

Variety	Fertilizer	Disease and insect	Administration Techniques	Administration	Others
100	100	100	0	0	0
100	100	100	0	0	0
80	80	100	0	0	0
33	100	100	0	0	0
100	100	100	0	0	0
80	90	100	3	3	3
92	85	92	15	0	8
100	100	100	33	33	0
83	83	100	0	0	0
85	90	98	5	3	3

A A

Number of person contacted

	BEFORE TRAINING	AFTER TRAINING
76 77	0.2	0.8
77 78	0.1	0.9
78 79	0.2	0.9
79 80	0.0	0.75
80 81	0.4	1.0
81 82	0.5	0.5
82 83	0.2	0.9
Total	0.2	0.9

Dtails to be discussed

Variety	Fertilizer	Disease and insect	Administration Techniques	Administration	Others
92	96	85	100	23	0
95	91	91	95	13	0
80	90	60	100	0	0
100	100	67	100	0	0
93	100	86	86	14	0
100	100	0	100	0	0
86	71	100	100	14	0
92	93	83	96	14	0

Non-project area

Dtails to be discussed

	Number of person contacted
0 1	0.1
1 2	0.3
2 3	0.3
3 4	0.5
4 5	0.4
5 10	0.9
10 15	1.0
Total	0.4

Variety	Fertilizer	Disease and insect	Techniques Administration	Others
0	100	100	0	0
25	62	100	1.2	0
33	100	100	1.1	0
25	75	100	0	0
67	0	100	0	0
80	80	100	0	0
100	50	100	0	0
51	74	100	5	0

1-21 Utility of training, meeting, demonstration farm and newspaper (for farmers)

Training Number of attendance up to new per farmer

Meeting Number of attendance for one year per farmer

Demonstration farm Number of sightseeing for one year per farmer (AA includes number of execution)

Newspaper (for farmers) Aunual number of procurement per farmer

I A P

	Training	Meeting	Demonstration farm	Newspaper
0 1	0.1	1.6	2.4	1.4
1 2	1.2	1.7	2.4	2.0
2 3	1.1	2.2	1.7	1.8
3 4	0.9	3.0	1.2	2.4
4 5	1.2	1.4	0.4	1.4
5 10	2.0	2.5	1.8	3.3
Whole	0.8	1.9	2.0	1.8

A . A

	Training	Meeting	Demonstration farm	Newspaper
76 77	3.9	16	5.2	4.5
77 78	3.4	11	5.7	6.1
78 79	2.8	9	4.2	8.0
79 80	2.0	15	1.8	4.5
80 81	3.0	10	2.3	7.5
81 82	2.0	20	1.5	6.0
82 83	1.0	13	0.6	5.0
Whole	3.2	13	4.2	5.8

S T W P

	Training	Meeting	Demonstration farm	Newspaper
0 1	0	0	0	0.7
1 2	0.5	0	0.5	1.6
2 3	0.5	0.3	0.7	1.3
3 4	0.4	0.9	1.5	1.0
4 5	0.9	0.9	1.9	0.9
5 10	0.4	0.2	1.4	1.8
10 15	0.4	1.3	1.6	1.6
15 20	0	0	2.0	0.7
20	0.3	1.7	0.8	1.0
Whole	0.4	0.7	1.4	1.4

Non-project area

	Training	Meeting	Demonstration farm	Newspaper
0 1	0	0.04	0.4	0.2
1 2	0	0.07	1.1	0.2
2 3	0.2	0.3	1.0	0.9
3 4	0	0.5	0.6	0.9
4 5	0	0.6	0.6	0.3
5 10	0.3	1.0	1.1	1.3
10 15	0.5	0	1.0	0.5
Whole	0.1	0.4	1.0	0.7

Q I A P Profitable or not?

	Much profitable	Profitable	No effection
0 1	23 (68)	11 (32)	0
1 2	15 (65)	8 (35)	0
2 3	10 (43)	13 (57)	0
3 4	6 (50)	6 (50)	0
4 5	1 (20)	4 (80)	0
5 10	3 (75)	1 (25)	0
Whole	58 (57)	43 (43)	0

Q Irrigation matters were cleared or not?

	100% clear	50% clear	Not cleared
0 1	23 (68)	10 (29)	1 (3)
1 2	11 (48)	11 (48)	1 (4)
2 3	9 (39)	12 (52)	2 (9)
3 4	8 (67)	4 (33)	0
4 5	3 (60)	2 (40)	0
5 10	3 (75)	1 (20)	0
Whole	57 (56)	40 (40)	4 (4)

Q How is No. 5 system taken into consideration?

	Water supplied evenly	Water rised	Water in shortage	Unsatisfaction to water sold
0 1	33 (97)	8 (24)	3 (9)	9 (26)
1 2	21 (91)	9 (39)	5 (22)	3 (13)
2 3	22 (96)	13 (57)	2 (9)	0
3 4	11 (92)	8 (67)	0	0
4 5	5 (100)	3 (60)	0	0
5 10	4 (100)	0	0	0
Whole	96 (95)	41 (41)	10 (10)	12 (12)

Q The life was improved or not, comparing before?

	Very good	No change	Bad
0 1	33 (97)	0	1 (3)
1 2	22 (96)	0	1 (4)
2 3	22 (96)	0	1 (4)
3 4	12 (100)	0	0
4 5	5 (100)	0	0
5 10	4 (100)	0	0
Whole	98 (97)	0	3 (3)

2-2 S.T.W.P

Possessing conditions of pump and tube well

Water volume (ℓ／秒)

Farmer's idea on S.T.W.P (Ratio against number of farmer)

	Number of well per farmer	Number of pump possessed per farmer: Made in India	Number of pump possessed per farmer: Made in Japan	Average of water volume from tube well (assumed by farmer)
0 1	1.0		1.0	25ℓ／秒
1 2	1.0		0.8	19.0
2 3	1.0	0.5	0.3	17.0
3 4	1.1	0.3	0.5	11.4
4 5	1.3	0.2	0.9	16.4
5 10	1.5	0.3	0.9	17.2
10 15	1.5	0.5	0.7	13.7
15 20	1.75	0.0	1.0	11.8
20	1.7	1.2	1.5	17.6
Whole	1.42	0.4	0.8	16.6

	Extremely effective	Effective	Not effective
0 1	0 %	0	100
1 2	40 %	40	20
2 3	33 %	17	50
3 4	25 %	63	12
4 5	38 %	62	0
5 10	39 %	50	11
10 15	45 %	55	0
15 20	0 %	100	0
20	83 %	17	0
Whole	40 %	51	9

Number of troubles of pump and its remedy

(Ratio against number of farmer)

	Number of troubles per unit	Remedy: By oneself	By J.A.D.P	By the person experienced training	By the person not experienced training
0 1	1.0	0%	100	0	0
1 2	1.3	0%	25	75	0
2 3	1.0	29%	36	29	6
3 4	1.0	13%	40	34	13
4 5	0.8	20%	45	35	0
5 10	1.1	13%	33	33	21
10 15	2.5	8%	41	39	12
15 20	2.5	40%	0	0	60
20	1.2	5%	90	5	0
Whole	1.7	14%	42	31	13

Selling of water

	Ratio of number of farmer selling water on total number of farmer	Aunual total selling time per farmer	Average charge per hour	Total charge
0 1	0 %	0	0	0
1 2	25	25HR	Rs 15.0	Rs375
2 3	17	6.7	15.0	100.5
3 4	25	9.0	15.3	137.7
4 5	38	86.5	15.5	1,340.8
5 10	29	26.6	19.3	513.4
10 15	25	15.5	17.9	277.5
15 20	0	0	0	0
20	0	0	0	0
Whole	25	28.1	16.3	458.0

2-3 Irrigation condition by crops by STWP

	Paddy "Early"						Paddy "Normal"						Wheat							
	A (Ha)	B (回)	C (hr)	D (hr)	E (hr)	F (ha)	A	B	C	D	E	F	A	B	C	D	E	F	G	H
0 1	0.34	4.0	3.0	12.0	12.0	0.34	0.85	2.0	7.5	15.0	17.6	0.85	0.85	4.0	3.0	12.0	14.1	0.85	2.68	69.0
1 2	0.65	6.0	6.9	41.4	42.1	0.65	0.76	2.5	14.1	35.3	46.4	0.76	0.51	2.8	10.5	29.4	57.6	0.51	1.92	106.1
2 3	0.60	3.2	10.3	33.0	55.0	0.60	0.91	1.7	24.1	41.0	45.1	0.91	0.49	2.7	8.8	23.8	48.6	0.49	2.46	117.4
3 4	1.40	2.0	20.4	40.8	29.1	1.27	1.23	1.3	32.7	42.5	34.6	1.12	0.74	2.6	16.6	43.2	58.4	0.67	3.85	169.6
4 5	1.29	2.8	30.4	85.1	66.0	0.99	1.22	1.8	33.9	61.0	50.0	0.94	0.71	2.4	18.7	44.9	64.1	0.54	3.70	223.6
5 10	2.14	2.3	30.3	69.7	32.6	1.43	3.22	1.8	61.6	110.9	34.4	2.15	1.35	2.3	28.9	66.5	49.3	0.90	7.71	302.7
10 15	2.72	2.5	45.6	114.0	41.9	1.81	2.89	2.0	54.8	109.6	37.9	1.93	2.10	2.8	36.6	102.5	48.8	1.40	8.35	364.9
15 20	3.57	2.5	41.3	144.6	40.5	1.75	2.38	1.5	85.0	127.5	53.6	1.36	3.40	2.8	73.6	206.1	60.6	1.94	13.24	628.7
20	4.00	2.3	94.3	216.9	54.2	2.35	4.80	1.8	114.1	205.4	42.8	2.82	3.18	2.2	77.4	170.3	53.6	1.87	13.96	695.9
Whole	2.43	2.6	32.5	84.8	34.9	1.71	2.53	1.8	53.5	96.3	38.1	1.78	1.44	2.5	30.3	75.8	52.6	1.01	7.26	307.8

A = Irrigated area per farmer

B = Number of irrigation per farming

C = Irrigation hour for one time

D = Total irrigating hour per farming

E = Irrigating hour per ha

F = Irrigated area per well

G = Aunual total irrigated area per farmer

H = Aunual total irrigating time per farmer

I = Aunual total irrigated area per tube well

J = Aunual roral irrigating time per tube well

	Maize						Tobacco						Others							
	A	B	C	D	E	F	A	B	C	D	E	F	A	B	C	D	E	F	I	J
0 1	0.51	4.0	7.0	28.0	54.9	0.51	0.13	1.0	2.0	2.0	15.4	0.13	0.00	0.0	0.0	0.0	0.0	0.00	2.68	69.0
1 2	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	1.92	106.1
2 3	0.41	1.8	10.2	18.4	44.9	0.41	0.05	0.2	6.0	1.2	24.0	0.05	0.00	0.0	0.0	0.0	0.0	0.00	2.46	117.4
3 4	0.45	1.9	22.4	42.6	94.7	0.41	0.03	0.1	5.0	0.5	16.7	0.03	0.00	0.0	0.0	0.0	0.0	0.00	3.50	154.2
4 5	0.25	1.2	19.9	23.9	95.6	0.19	0.22	0.4	19.0	7.6	34.5	0.20	0.02	0.5	2.1	1.1	55.0	0.02	2.35	172.0
5 10	0.49	1.7	23.9	40.6	82.9	0.33	0.42	0.4	27.5	11.0	26.2	0.28	0.09	0.1	20.0	4.0	44.4	0.07	5.14	201.8
10 15	0.24	0.8	27.5	22.0	91.7	0.16	0.37	0.6	26.3	15.8	42.7	0.25	0.03	0.2	5.0	1.0	33.3	0.02	5.57	243.3
15 20	1.70	1.8	64.2	115.5	67.9	1.00	1.19	0.5	70.0	35.0	29.4	0.68	0.00	0.0	0.0	0.0	0.0	0.00	6.99	359.3
20	1.30	1.0	80.0	80.0	61.5	0.77	0.68	1.3	17.9	23.3	34.3	0.40	0.00	0.0	0.0	0.0	0.0	0.00	8.20	409.3
Whole	0.46	1.4	26.5	37.1	80.7	0.32	0.36	0.5	24.9	12.5	34.7	0.25	0.04	0.16	8.4	1.3	32.5	0.03	5.11	216.8

2-4 Training (Answer of A.A)

Q Training to be requested in future

	Crops	Gardenening	Soil	Disease & insect	Agricultural machine	Irrigation	Others
76 77	25 (74)	14 (41)	15 (44)	24 (71)	12 (35)	13 (38)	0
77 78	18 (78)	10 (43)	12 (52)	18 (78)	7 (30)	8 (35)	0
78 79	10 (91)	4 (36)	5 (45)	8 (73)	3 (27)	3 (27)	0
79 80	1 (25)	1 (25)	3 (75)	2 (25)	0	0	0
80 81	11 (79)	11 (79)	7 (50)	11 (79)	86 (57)	0 (43)	0
81 82	2 (100)	2 (100)	2 (100)	2 (100)	1 (50)	1 (50)	0
82 83	6 (75)	3 (38)	3 (38)	4 (50)	2 (25)	0	0
Whole	73 (76)	45 (47)	47 (49)	69 (72)	33 (34)	31 (32)	0

Q Training was effective to farming or not?

	Much effective	Effective	No change
76 77	28 (82)	6 (18)	0
77 78	22 (96)	1 ((4)	0
78 79	9 (82)	2 (18)	0
79 80	4 (100)	0	0
80 81	13 (93)	1 (7)	0
81 82	1 (50)	1 (50)	0
82 83	7 (88)	1 (12)	0
Whole	84 (88)	12 (12)	

2-5 Understanding of JADP

Q J.A.D.P is known well, together with detailed activities or not?

Non-project area

(Ratio against number of farmers answered "Yes")

	Yes	No	Detailed activities					
			Boring	Irrigating facilities	Extension activity	Training	Seed production	Others
0 1	78 %	22 %	89 %	17 %	39 %	6 %	17 %	0 %
1 2	93	7	88	48	48	16	28	0.4
2 3	100	0	96	35	73	50	54	0
3 4	100	0	88	25	88	13	34	0
4 5	100	0	100	29	57	29	29	0
5 10	100	0	100	24	53	47	41	0
10 15	100	0	100	50	50	50	50	0
Whole	93 %	7 %	93	32	57	29	36	1

Q J.A.D.P activities are necessary for your town/village or not?

(Ratio on whole number of farmers)

	Necessary	Not necessary
0 1	91 %	8 %
1 2	100	0
2 3	96	4
3 4	100	0
4 5	100	0
5 10	100	0
10 15	100	0
15 20	100	0
20	100	0
Whole	96 %	4 %

COMARIWG OF BEFORE & AFTER IMF IN HASINAPUR

Year	crops	cultivated area ha	yield t/ha	expenditure & income Rs/ha T C	C B	N B	ex.,& income Rs/total area T C	GG N	N B
1980/81 Before IMF	N. paddy	7.2	1.60	1,167	3,200	2,033	8,403	23,043	14,637
	Wheat	0.5	1.00	1,317	1,750	433	658	875	217
	Beans	4.5	0.15	447	825	378	2,012	2,012	1,701
	Total	12.2	–	–	–	–	11,073	27,631	16,555
	cropping intensily		170 %						
1981/82 1st.year after IMF	E.paddy	2.39	1.59	1,774	3,188	1,414	4,290	7,619	3,379
	N.paddy	7.16	2.77	1,939	5,540	3,601	13,883	39,666	25,783
	Wheat	6.81	1.88	1,854	4,701	2,848	12,626	12,625	2,014
	Beans	3.73	G.manure	447	–	−447	1,667	–	−1,667
	Total	20.09	–	–	–	–	32,416	79,299	46,883
	cropping intensity		279 %				46,883 − 3,377 =		43,506

(1) TC; total cost. (Rs) GB; grand benefit NB; net benefit
(2) production cost & selling price; at present in year
(3) pump's durable years; 8 years
(4) ex.; expenditure
(5) 3,377; annual capital cost

COMPARING OF INSIDE & OUT OF IMF IN HASINAPUR

year	crops	cultivated area ha	yield t/ha	expenditure & income Rs/ha T C	G B	N B	ex.,& income Rs/total area T C	G B	N B
1982/83 2nd year inside IMF (7.2ha)	E. paddy	3.96	2.57	2,736	6,925	3,689	10,834	25,443	14,609
	N. paddy	7.00	3.14	2,598	7,850	5,252	18,186	54,950	36,764
	Wheat	6.97	2.13	2,475	6,390	3,915	17,250	44,538	27,268
	Millet	0.45	2.22	2,527	4,440	1,913	1,137	1,993	861
	Maize	0.20	1.80	3,003	4,500	1,498	600	900	300
	Pulses	0.47	0.40	1,199	2,200	1,001	564	1,034	470
	Total	19.05	–	–	–	–	48,571	128,863	80,292
	cropping intensity		265 %				80,292 − 3,377 =		76,912
1982/83 Out of IMF (13.57ha)	E. paddy	2.32	2.22	2,317	5,539	3,222	5,380	12,855	7,475
	N. paddy	7.63	1.58	2,226	3,938	1,713	16,924	31,341	14,417
	Wheat	1.36	1.68	2,505	5,025	2,520	3,520	7,021	3,501
	Millet	0.65	1.30	2,465	2,595	130	1,688	1,730	42
	W. pulses	1.60	0.70	429	2,256	1,827	594	2,800	2,206
	Potato	0.27	9.00	5,186	9,000	3,814	1,385	2,403	1,013
	Oil seed	0.67	0.25	1,094	2,000	706	697	1,128	431
	Oat	0.16	0.54	1,049	1,620	576	167	259	92
	Onion	0.03	12.00	3,901	15,000	11,099	117	450	333
	Total	14.74	–	–	–	–	30,472	59,987	29,515
	cropping intensity		109 %					(7.2ha = 15,550)	

(1) TC; total cost (Rs) GB;grand benefit NB; net benefit
(2) pump's durable years; 8years
(3) production cost & selling price; at present in year
(4) ex.; expenditure
(5) 3,377; annual capital cost

COMPARING OF INSIDE & OUT OF IMF IN HASINAPUR

Year	crops	cultivated area ha	yield t/ha	expenditure & income Rs/ha			ex. & income Rs/total area		
				T C	G B	N B	T C	G B	N B
1983/84 3rd year inside of IMF (7.2ha)	E. paddy	3.28	2.02	2,985	5,050	2,065	9,790	16,564	6,773
	N. paddy	6.78	2.55	2,520	7,012	4,492	17,085	47,541	30,456
	Wheat	5.56	1.94	2,788	4,850	2,062	15,502	26,966	11,464
	Millet	0.65	0.97	2,973	1,940	−1,033	1 932	1,261	−671
	Total	16.27	–	–	–	–	44,309	92,332	48,023
	cropping intensity 226 %						48,023 − 3,377 = 44,646		
1983/84 Out of IMF (13.57 ha)	E. paddy	3.54	1.77	2,470	4,425	1,955	8,743	15,664	6,920
	N. paddy	11.20	2.02	2,715	5,555	2,840	30,408	62,216	31,808
	Wheat	3.76	1.64	2,543	4,100	1,557	9,562	15,416	5,854
	Linseed	3.93	0.31	402	1,860	1,458	1,579	7,309	5,730
	Khesari	0.34	1.20	807	4,800	3,993	275	1,632	1,357
	Millet	0.16	1.01	2,274	2,020	−254	364	324	−40
	B. gram	0.16	1.20	1,497	7,200	5,702	240	1,152	912
	Total	23.09	–	–	–	–	51,171	103,713	52,541
	cropping intensity 170 %						(7.2ha = 27,877		

COMPARING OF BEFOR & AFTER IMF IN SAPHI

year	crops	cultivated area ha	yield t/ha	expenditure & income Rs/ha			ex.& income Rs/total area		
				T C	G B	N B	T C	G B	T C
1980/81 Before IMF (4.4ha)	N. paddy	4.4	1.50	1.154	3,000	1,846	5,078	13,200	8,123
	Wheat	0.5	0.60	1,074	1,500	428	536	750	214
	W. pulses	4.1	0.10	447	550	103	1,833	2,255	422
	Total	9.0	–	–	–	–	7,447	16,205	8,758
	cropping intensity 205 %								
1981/82 1st year inside of IMF (4.4 ha)	N. paddy	4.4	2.84	1,798	5,680	3,882	7,912	24,992	17,080
	Wheat	3.63	1.60	1,764	4,000	2,236	6,403	14,520	8,117
	Moong	3.55	0.07	447	335	−112	1,587	1,189	−398
	Total	11.58	–	–	–	–	15,902	40,701	24,799
	cropping intensity 263 %						24,799 − 3,377 = 21,422		

(1) TC : total cost (Rs), CB : grand benefit, NB : net benefit,
(2) production cost & selling price : at present in year
(3) pump's durable year : 8 years
(4) ex, : expenditure
(5) 3,377 : annual capital cost

COMPARING OF INSIDE & OUT OF IMF IN SAPHI

year	crops	cultivated area ha	yield t/ha	expenditure & income Rs/ha T C	G B	N B	ex, income Rs/total area T C	G B	N B
1982/83 2nd year inside of IMF (4.4ha)	E. paddy	2.43	2.26	2,954	5,650	2,696	7,178	13,750	6,552
	N. paddy	3.73	2.44	2,392	6,100	3,708	8,946	22,814	13,868
	Wheat	4.25	1.81	2,571	5,430	2,857	10,927	23,078	12,151
	Millet	0.18	1.23	2,313	2,460	147	416	443	27
	S. Beans	0.53	0.50	1,257	2,750	1,475	626	1,458	832
	Total	11.13	–	–	–	–	28,093	61,523	33,430
	cropping intensity 253 %						33,430 – 3,377 =		30,053
1982/83 Out of IMF (21.52ha)	E. paddy	1.20	1.27	2,414	3,163	749	2,864	3,479	615
	N. paddy	10.82	2.00	2,469	5,000	2,577	26,722	54,613	27,841
	Wheat	4.70	1.47	2,660	4,415	1,755	13,425	21,529	8,140
	Millet	0.39	1.10	1,781	2,200	419	659	858	163
	W. pulses	3.81	0.52	739	2,860	2,121	2,816	10,896	8,080
	S. Beans	0.59	0.46	1,258	2,530	1,272	742	1,493	751
	Patato	0.20	7.00	5,792	7,000	1,208	1,158	1,400	242
	Total	21.71	–	–	–	–	45,426	92,720	47,294
	cropping intensity 101 %						(4.4ha =		9,670)

COMPARING OF INSIDE & OUT OF IMF IN SAPHI

year	crops	cultivated area ha	yield t/ha	expenditure & income Rs/ha T C	G B	N B	ex.& income Rs/total area T C	G B	N B
1983/84 3rd year Inside of IMF (4.4ha)	E. paddy	1.16	2.15	2,092	5,375	3,283	2,479	6,235	3,756
	N. paddy	4.37	2.99	3,159	8,222	5,063	13,805	35,930	22,125
	Wheat	3.89	1.72	2,064	4,300	2,236	8,029	16,728	8,699
	Moong	0.10	0.30	847	1,800	953	85	180	95
	Total	9.52	–	–	–	–	24,398	59,073	34,675
	cropping intensity 216 %						34,675 – 3,377 =		31,298
1983/84 Out of IMF (12.54ha)	E. paddy	1.48	2.30	1,628	5,750	4,123	2,409	8,510	6,101
	N. paddy	11.54	2.05	2,015	5,637	3,622	23,252	65,050	41,798
	Wheat	6.03	0.91	1,535	2,275	740	9,256	13,718	4,462
	Millet	0.58	0.72	1,525	1,440	–85	884	835	–49
	Moong	0.52	0.30	1,051	1,800	749	546	935	389
	Lentil	4.13	0.34	486	2,040	1,554	2,007	8,425	6,418
	Khesari	0.69	0.28	782	1,120	338	538	772	234
	Potato	0.86	10.93	7,808	10,930	3,122	6,715	9,399	2,684
	Total	25.83	–	–	–	–	45,607	107,644	62,037
	cropping intensity 206 %						(4.4ha =		21,767

COMPARING OF BEFORE & AFTER IMF IN GOUSHALA

year	crops	cultivated area ha	yield t/ha	expenditure & income Rs/ha			ex.& income Rs/total area		
				T C	G B	N B	T C	G N	N B
1980/81 Before IMF (4.1ha)	M.paddy	4.1	1.50	1,200	3,000	1,800	4,920	12,300	7,380
	Tobacco	2.4	0.86	3,000	8,600	5,630	7,200	20,688	13,488
	S.potato	0.33	6.00	1,050	1,500	450	346	495	149
	Millet	0.33	1.20	1,250	1,800	550	412	594	182
	Total	7.16	–	–	–	–	12,878	34,077	21,199
	cropping intensity 175 %								
1981/82 1st year after IMF (4.1ha)	E.paddy	0.12	2.4	3,662	4,800	1,138	440	576	136
	N.paddy	4.1	3.62	2,400	7,240	4,840	9,840	29,684	19,844
	Wheat	3.67	2.89	1,902	7,225	5,321	6,988	26,516	19,528
	Total	7.89	–	–	–	–	17,268	56,776	39,508
	cropping intensity 192 %						39,508 – 3,377 = 36,131		

COMPARING OF INSIDE & OUT SIDE OF TMF IN GOUSHALA

year	crops	cultivated area ha	yield t/ha	expenditure & income Rs/ha			ex.& income Rs/total area		
				T C	G B	N B	T C	G B	N B
1982/83 2nd year Inside of IMF (4.1ha)	E.paddy	0.27	2.75	2,266	6,875	4,609	612	1,856	1,244
	N.paddy	4.1	2.05	3,014	5,638	2,624	12,357	23,114	10,758
	Wheat	3.86	3.49	2,970	10,470	7,500	11,464	40,414	28,950
	Moong	0.27	0.30	920	1,650	730	248	446	198
	Total	8.50	–	–	–	–	21,893	63,728	41,150
	cropping intensity 207 %						41,150 – 3,377 = 37,773		
1982/83 Out of IMF (8.01ha)	N.paddy	3.04	0.80	2,476	2,000	–476	7,527	6,080	–1,447
	Oil seed	1.34	0.60	861	4,800	3,439	1,154	6,432	5,278
	Pulses	2.68	0.25	429	1,375	946	1,150	3,685	2,535
	S.potato	0.50	6.60	3,229	3,300	71	1,615	1,656	36
	Sugarcane	1.34	6.00	16,974	21,600	4,026	22,745	28,140	5,395
	Total	8.90	–	–	–	–	34,191	45,993	11,802
	cropping intensity 111 %							(4.1ha = 6,041	

(1) TC : total cost, GB : grand benefit, NB : net benefit.
(2) ex : cxpenditure
(3) Pump durable year : 8 year
(4) 3,377 : annual capital cost

COMPARING OF INSIDE & OUT OF IMF IN GOUSHALA

year	crops	cultivated area ha	yield t /ha	expenditure & income Rs /ha T C	G B	N B	ex.& income Rs /total area T C	G B	N B
1983/84 3rd year Inside of IMF (4.1ha)	E. paddy	0.33	2.47	2,968	6,175	3,207	979	2,037	1,058
	N. paddy	3.63	2.40	3,057	6,600	3.543	11,097	23,958	12,861
	Wheat	2.35	2.66	2,602	6,650	4,048	6,114	15,627	9,512
	Tobacco	1.26	0.60	3,418	8,400	4,982	4,306	10,584	6,277
	Mustard	0.33	0.45	1,760	3,600	1,839	580	1,188	667
	S. potato	0.16	6.00	2,548	3,000	452	407	480	72
	Total	8.06	–	–	–	–	23,483	53,874	30,447
	cropping intensity 197 %						30,447 – 3,377 =		27,070
1983/84 Out of IMF (8.01ha)	E. paddy	1.00	2.10	2,663	5,250	2,587	2,663	5,250	2,587
	N. paddy	4.00	1.20	2,592	3,300	707	10,371	13,200	2,828
	Wheat	0.33	1.80	2,274	4,500	2,225	750	1,485	734
	Mustard	4.10	0.60	962	4,800	3,838	3,945	19,680	15,735
	Total	9.43	–	–	–	–	17,729	39,615	21,893
	cropping intensity 118 %							(4.1ha =	11,206)

COMPARING OF BEFORS & AFTER IMF IN ISWARPUR

year	crops	cultivated area ha	yield t /ha	expenditure & income Rs /ha T C	G B	N B	ex. & income Rs /total area T C	G N	N B
1980/81 Before IMF (5.6ha)	E. paddy	0.50	2.40	1,505	4,764	3,259	753	2,382	1,629
	N. paddy	5.60	2.30	1,416	4,600	3,184	7,930	25,760	17,830
	Wheat	1.00	0.80	1,339	2,000	661	1,339	2,000	661
	Maize	4.00	1.00	1,317	1,750	433	5,268	7,000	1,732
	Pulses	0.60	0.20	447	1,000	653	269	660	391
	Total	11.70	–	–	–	–	15,559	37,802	22,243
	cropping intensity 209 %								
1981/82 Ist year Inside of IMF	E. paddy	0.10	2.40	5,722	4,800	–922	572	480	–92
	N. paddy	5.60	3.73	2,354	7,460	5,106	13,183	41,776	28,593
	Wheat	1.57	3.17	3,374	7,925	4,551	5,297	12,422	7,145
	W. maize	3.80	0.90	1,317	1,575	258	5,044	6,032	988
	Pulses	0.50	0.2	447	1,100	653	223	550	327
	Total	11.60	–	–	–	–	24,319	61,280	36,961
	cropping intensity 207 %						36,961 – 3,377 =		33,584

(1) TC : total cost, GB : grand benefit, NB : net benefit.
(2) ex : expenditure
(3) Pump durable year : 8 years
(4) 3,377 : annual capital cost

COMPARING OF INSIDE & OUT OF IMF IN ISWARPUR

year	crops	cultivated area ha	yield t/ha	expenditure & income Rs/ha			ex.& income Rs/total area		
				T C	G B	N B	T C	G B	N B
1982/83 2nd year inside of IMF (5.6ha)	E. paddy	2.04	2.93	2,927	7,325	4,398	5,971	14,943	8,972
	N. paddy	5.60	3.16	2,531	7,900	5,369	14,173	44,240	30,067
	Wheat	1.61	3.30	4,119	9,900	5,781	6,632	15,939	9,307
	Maize	0.90	2.70	2,536	5,400	2,864	2,282	4,860	2,578
	Moong	0.17	0.54	1,279	2,970	1,691	217	505	288
	Pulses	1.04	0.60	431	3,300	2,819	500	3,432	2,932
	Pulses	1.48	0.36	578	1,980	1,402	855	2,930	2,075
	Oil seed	0.68	0.18	331	1,440	1,089	239	979	740
	Total	13.52	–	–	–	–	30,869	87,828	56,959
	cropping intensity 241 %						56,959 – 3,377 = 53,580		
1982/83 Out of IMF (1.67ha)	M. paddy	1.34	2.40	2,382	6,000	3,618	3,192	8,040	4,848
	Maize	0.33	1.92	1,793	4,800	3,007	591	1,584	992
	Tobacco	1.34	0.67	4,536	10,080	5,544	6,078	13,507	7,429
	Total	3.01	–	–	–	–	9,861	23,131	13,270
	cropping intensity 180 %							(5.6ha = 44,498)	

COMPARING OF INSIDE & OUT OF IMF IN ISWARPUR

year	crops	cultivated area ha	yield t/ha	expenditure & income Rs/ha			ex.& income Rs/total area		
				T C	G B	N B	T C	G B	N B
1983/84 3rd year inside of IMF (5.6ha)	E. paddy	5.33	2.40	2,390	6,000	3,610	12,743	31,980	19,237
	N. paddy	4.67	3.10	2,391	8,525	6,134	11,166	39,811	28,845
	Wheat	1.16	3.13	2,265	7,825	5,560	2,628	9,077	6,449
	Moong	0.06	0.80	1,639	4,800	3,160	98	288	190
	Lentil	2.66	0.66	475	3,300	2,824	1,263	7,980	6,717
	Total	13.88	–	–	–	–	27,898	89,136	61,238
	cropping intensity 248 %						61,238 – 3,377 = 57,861		
1983/83 Out of IMF (1.67ha)	M. paddy	1.00	2.40	2,026	7,562	5,536	2,026	7,562	5,536
	W. maize	0.67	2.10	1,915	5,250	3,334	1,283	3,517	2,234
	Tobacco	0.66	0.65	4,638	9,100	4,462	3,062	6,006	2,944
	Lentil	1.00	0.61	540	3,050	2,510	540	3,050	2,510
	Total	3.33	–	–	–	–	6,911	20,135	13,224
	cropping intensity 199 %							(5.6ha =44,343)	

COMPARING OF BEFORE & AFTER IMF IN IAP NO,5

year	crops	cultivated area ha	yield t/ha	expenditure & income Rs/ha			ex.& income Rs/total area		
				T C	G B	N B	T C	G B	N B
1979/80 Artesin Irrigation (45.6ha)	E. paddy	10.5	1.99	1,100	2,978	1,885	11,550	31,343	19,793
	N. paddy	45.0	2.08	1,093	3,120	2,027	140,400	231,615	90,215
	Wheat	12.0	1.33	1.180	2,394	1,214	14,160	29,728	15,568
	Maize	4.2	2.00	1,152	2,600	1,448	4,838	10,920	6,082
	Pulses	9.0	0.20	420	1,000	580	3,780	9,000	5,220
	Total	80.7	—	—	—	—	—	312,600	137,878
	cropping intensity 179 %								
1982/83	E. paddy	12.60	2.10	2,469	5,250	2,783	31,074	66,129	35,055
	N. paddy	42.57	2.53	2,724	6,958	4,234	115,961	296,202	180,241
	Wheat	18.32	1.92	2,727	5,760	3,033	49,959	105,523	55,564
	Pluses	8.60	0.59	1,253	2,950	1,697	10,776	25,370	14,594
	Pluses	3.40	0.60	994	2,400	1,406	3,380	8,160	4,780
	Oil seed	0.86	0.65	1,364	5,200	3,836	1,173	44,472	3,229
	Total	86.35	—	—	—	—	212,323	505,856	293,533
	cropping intensity 192 %						293,533 − 3,377 = 288,468		

AFTER IMF IN IAP NO,5

year	crops	cultivated area ha	yield t/ha	expenditure & income Rs/ha			ex.& income Rs/total area		
				T C	G B	N B	T C	G B	N B
1983/84 2 nd year inside of IMF(IAP 5)	E. paddy	17.4	2.20	2,584	5,770	3,180	44,962	100,398	55,436
	N. paddy	40.73	2.66	2,828	7,315	4,487	115,184	297,940	182,756
	Wheat	29.96	2.23	2,368	5,575	3,207	70,945	167,027	96,082
	Millet	3.15	1.20	2,123	3,000	877	6,687	9,450	2,763
	Chickpea	3.07	0.69	1,055	4,197	3,216	3,239	12,185	9,646
	Linseed	4.53	0.25	718	1,521	875	3,253	6,890	3,637
	other pulses	7.90	0.88	961	4,484	3,369	7,592	35,424	27,832
	Total	106.74	—	—	—	—	251,862	630,014	378,152
	cropping intensity 234 %						378,152 − 3,377 = 374,775		

(1) TC : total cost, GB : grand benefit, NB : net benefit
(2) ex : expenditure
(3) Pump durable year : 8 years
(4) 3,377 : annual capital cost

3-6 Annual total yield of principal 3 crops

Irrigated area of IMF

Year \ District	Hasimapur	Saphi	Goushala	Iswarpur
First year of IMF 1981/82	5.06	4.16	6.21	5.27
Second year of IMF 1982/83	6.57	5.08	5.52	5.61
Average	5.82	4.62	5.87	5.44

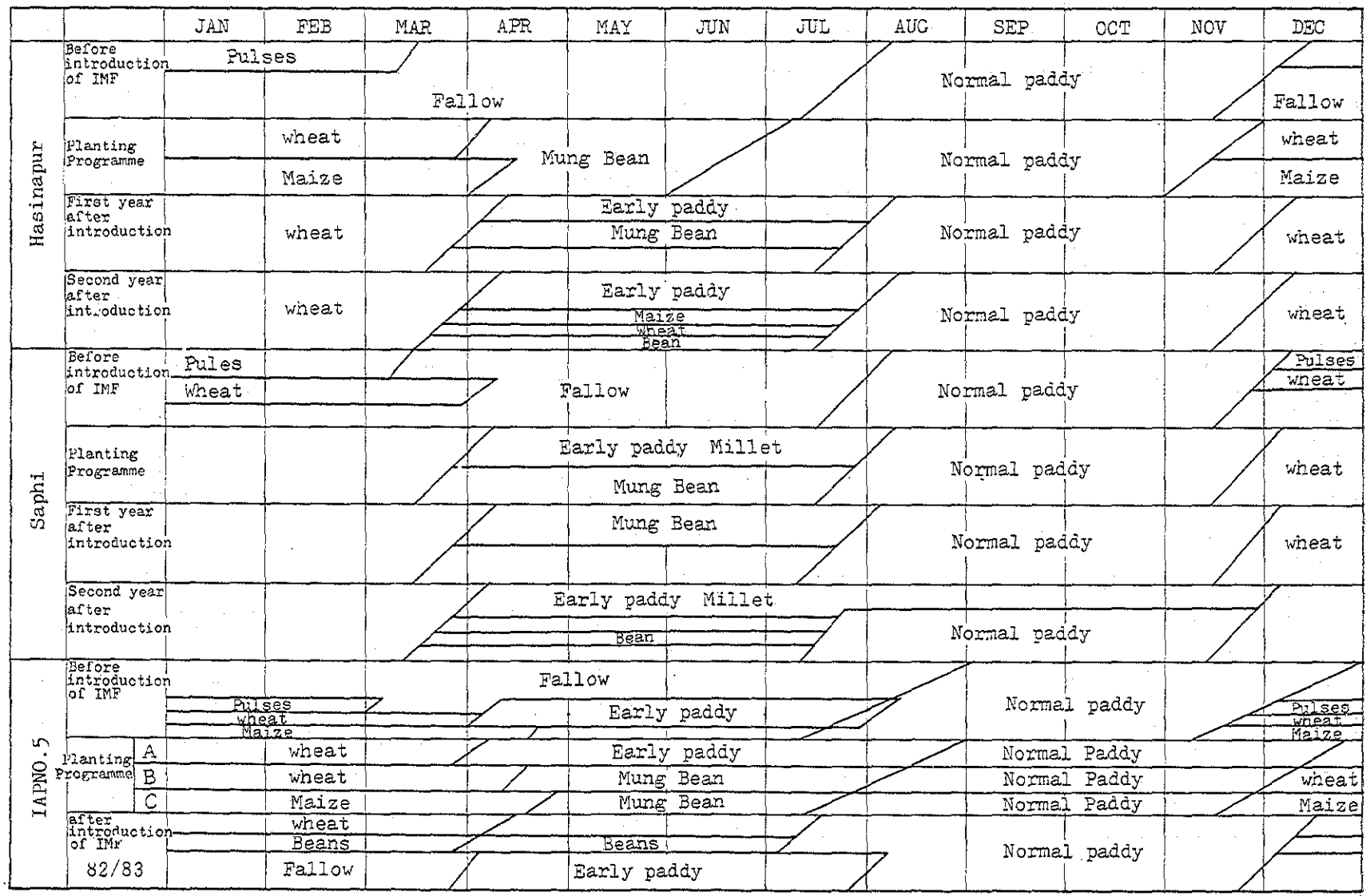
Verification and Display of improved techniques

Year \ District	Hasimapur	Saphi	Goushala	Iswarpur
First year of IMF 1981/82	2.76	5.48	7.55	8.26
Second year of IMF 1982/83	6.50	5.46	6.00	8.10
Average	4.63	5.47	6.78	8.18

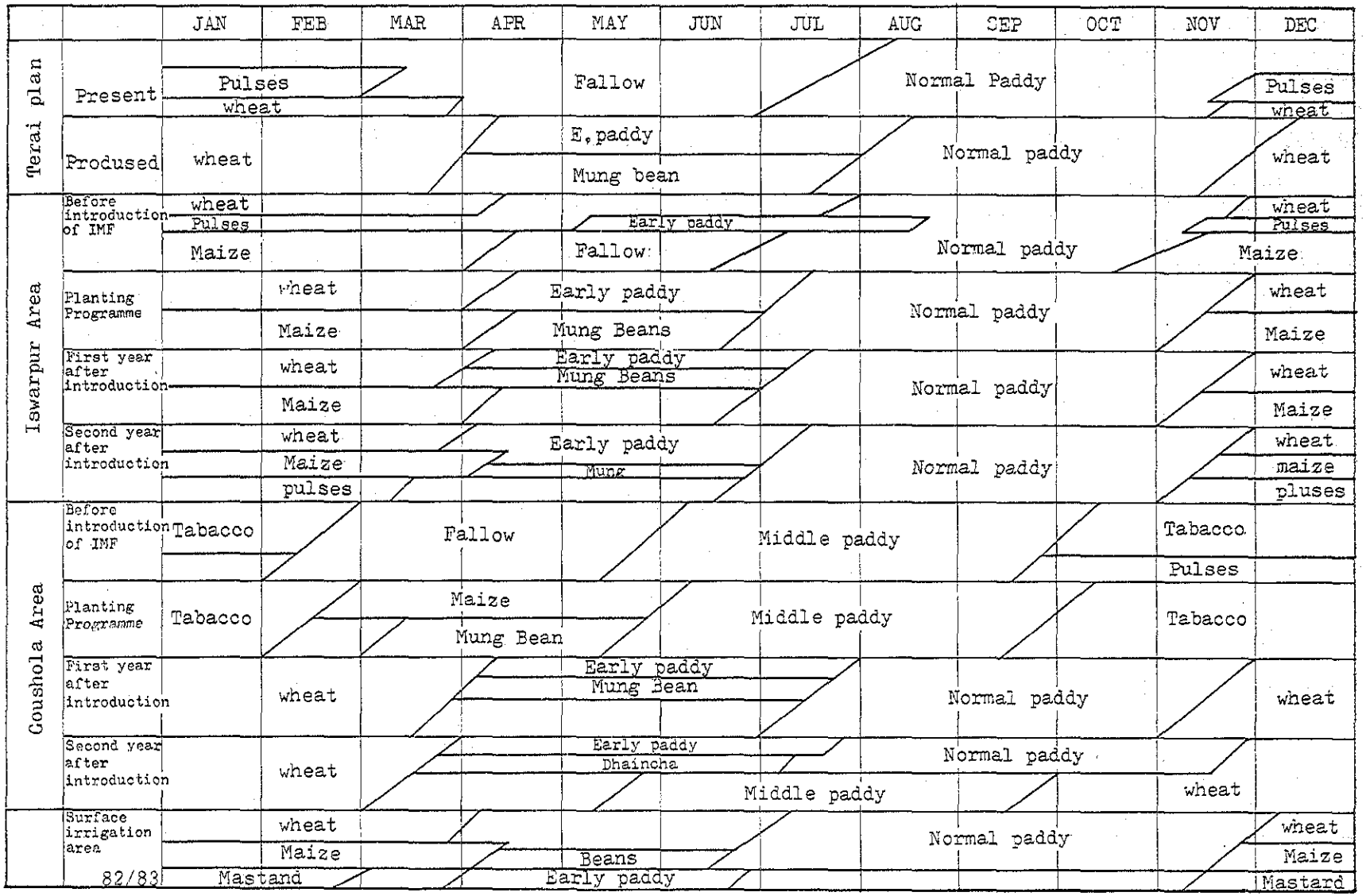
Non-irrigated area

Year \ District	Hasimapur	Saphi	Goushala	Iswarpur
Before introduction of IMF 1980/81	2.60	2.10	1.50	3.36
Area other than IMF 1982/83	3.26	3.43	0.80	4.32
Average	2.93	2.77	1.15	3.84

3-7-a Change of rotation system



3-7-b Change of rotation system



3-8 Table of working outline

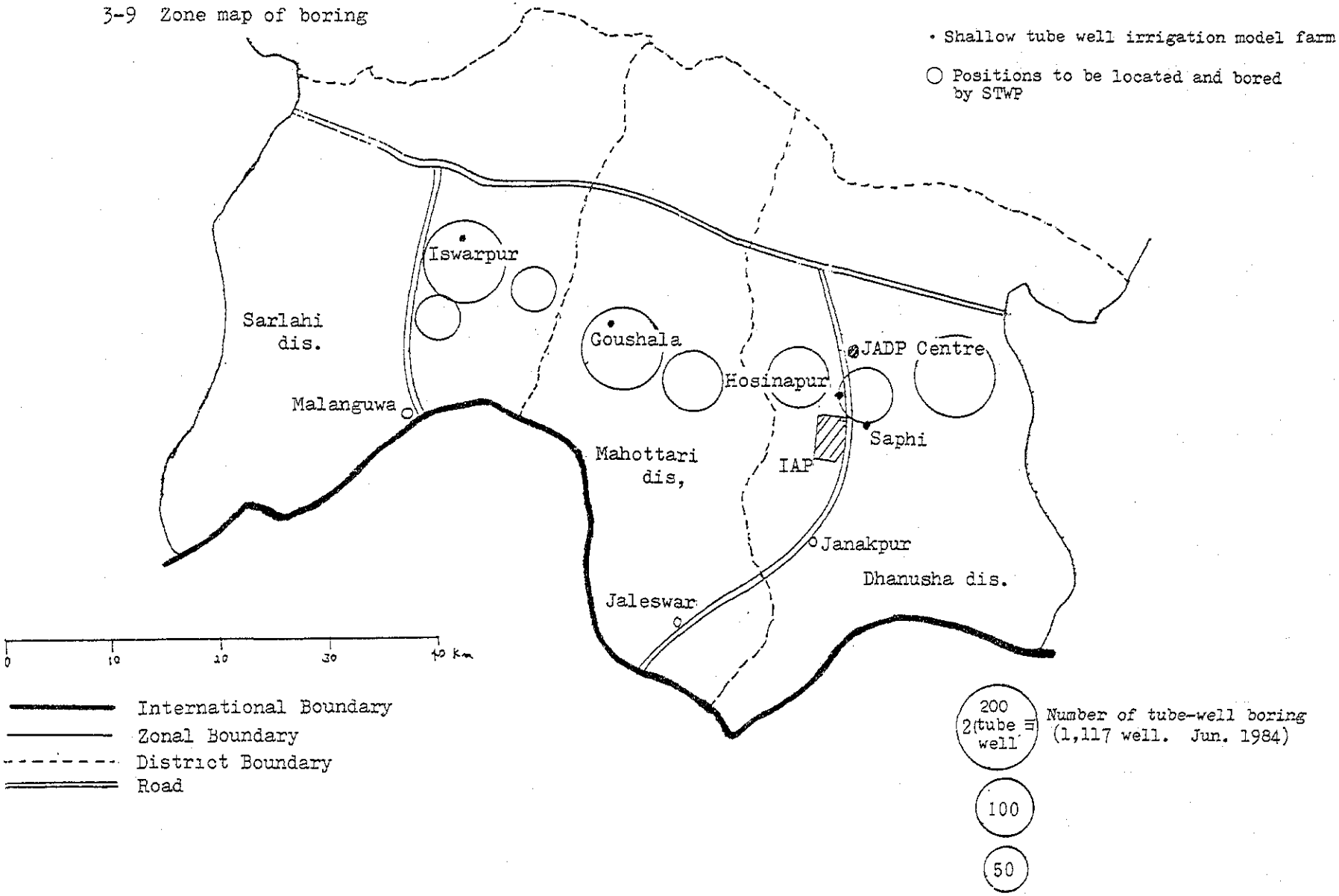
Area Name	Isuwarupur	Goshala	Saphi	Hasinapur	I A P No. 5
District	Sarlahi	Mahottari	Dhanusha	Dhanusha	Dhanusha
Profitable area (ha)	5.6	4.1	4.6	7.2	45.6
Number of profiteer (人)	2	2	2.0	17	122
Water source	Shallow tube well 39.7	Shallow tube well 27.2	Shallow tube well 31.3	Shallow tube well 27.9	Deep tube well 130
Amount of pump-up water (m)	2,200 6	2,200 14	2,200 20	2,200 23	2,200 50
r p m l/s	1,600 5	1,700 12	1,600 18	1,600 20	1,800 43
Construction type	general	ganeral	general	Intensive	general
Irrigation canel pass (m)	Main 135 Branch 470	Main 142 Branch 370	Main 249 Branch 550	Main 498	幹・新 1,406 幹・改 328
Farms pass (m)	135	142	249	498	1,734
Size of pump house (m)	3 × 2	3 × 2	3 × 2	3 × 2	4.5×3.0
Pump set	Horizontal axis 4″, 8HP Centrifugal type	Horizontal axis 4″, 8HP Centrifugal type	Horizontal axis 4″, 8HP Centrifugal type	Horizontal axis 4″, 8HP Centrifugal type	Horizontal axis 6″, 11HP Centrifugal type
Construction attached					
For water diffused	4	6	6	15	32
For head	1	—	—	5	3
For static water	1	—	2	2	—
Delivery tank	1	1	1	1	1
Land consolidation	None	None	None	有	None
Land leveling	None	None	None	有	None
Construction cost (人/RS)[2]	66,100	62,500	82,000	146,700	370,800

1: Amount of pump-up water was measured in Sep. 1982.

2: Construction cost shall be generally calculated pursuant to the total cost from direct-acted, contracted, pump set and installation.

3: Amount of pump-up water in Iswarpur area is to be by 15 /sec. since Apr. 1983.

3-9 Zone map of boring



COST OF PRODUCTION AND EXPECTED PRODUCTION INCREASE FOR SHALLOW TUBE-WELL DEVELOPMENT PROGRAMME IN TERAI PLAIN OF JANAKPUR ZONE

3-10

(Per ha. base)

Crops / Items	Paddy		Wheat	Maize			Mung bean	Tobacco
	Normal	Early		Winter	Spring	Summer		
Duration(days)	120	100	120	150	120/90	120/90	75	120
Days/Times of irrigation	105	85	4times	5times	4times	4times	2times	5times
Required water (mm/day or time)	6.28 mm/day	6.28 mm/day	60mm/ time	60mm/ time	60mm/ time	60mm/ time	60mm/ time	60mm/ time
Water for field preparation	100mm	100mm	-	-	-	-	-	-
Total water required(m /ha.)	7,600	6,340	2,400	3,000	2,400	2,400	1,200	3,000
Expected effective rainfall(m /ha.) 6/15-11/30	5,600	2,670 4/15-7/15	-	-	640 2/1-5/30	4,390 4/15-8/15	1,050 4/15-6/30	-
Water to be irrgated (m /ha.)	2,000	3,670	2,400	3,000	1,760	-	150	3,000
Pump operation (hrs./ha/)	77	141	92	115	68	-	6	115
Pump operation/ running cost (fuel lubricant) A. (RS/ha.)	716	1,311	855	1,070	632	-	56	1,070
Fertilizer cost (RS/ha.)	472	472	782	722	722	722	193	903
Seed (RS/ha.)	70	70	318	40	40	40	100	45
B.fertilizer seed	542	542	1,100	762	762	762	293	948
Labour/operation cost(RS./ha.) Present	850	850	630	650	650	650	450	3,500
C. Programme	950	950	680	720	720	720	500	4,000
Total cost(RS.) A B C	2,208	2,803	2,635	2,552	2,114	1,482	849	6,018
Expected yield (t/ha.)	3.5	3.0	2.5	3.0	2.8	2.8	0.5	1.0
Expected unit price of product(RS/kg)	1.5	1.5	1.8	1.3	1.3	1.3	5.0	13.2
Cross output D. (RS/ha.)	5,250	4,500	4,500	3,900	3,640	3,640	2,500	13,200
Net benefit(RS/ha.) D - (A B C)	3,042	1,697	1,865	1,348	1,526	2,158	1,651	7,182

Note : *Effective rainfall recorded in 1981 at Hardinath Agriculture Farm, counted on daily rainfall base with 80% of more than 5mm and less than 80mm.

**Pump operation hours and running cost are calculated based on the assumption of 10 l/sec(discharge),20% losses and fuel consumption of 1.5 litre/hour.

Unit price of inputs are assumed as follows:

Fuel/diesel : RS.5.65/l., Lubricant: 10% of fuel cost,

Fertilizer Urea: RS.3.10/kg,
Triple Super Phosphate(TSP): RS.2.73/kg.

Labour: RS.6.0/day (7 hours/day)

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Summary of Feld Studies Concerning Irrigation Cum Crops Cultivation with some Recommendation At Janakpur Zone in Nepal