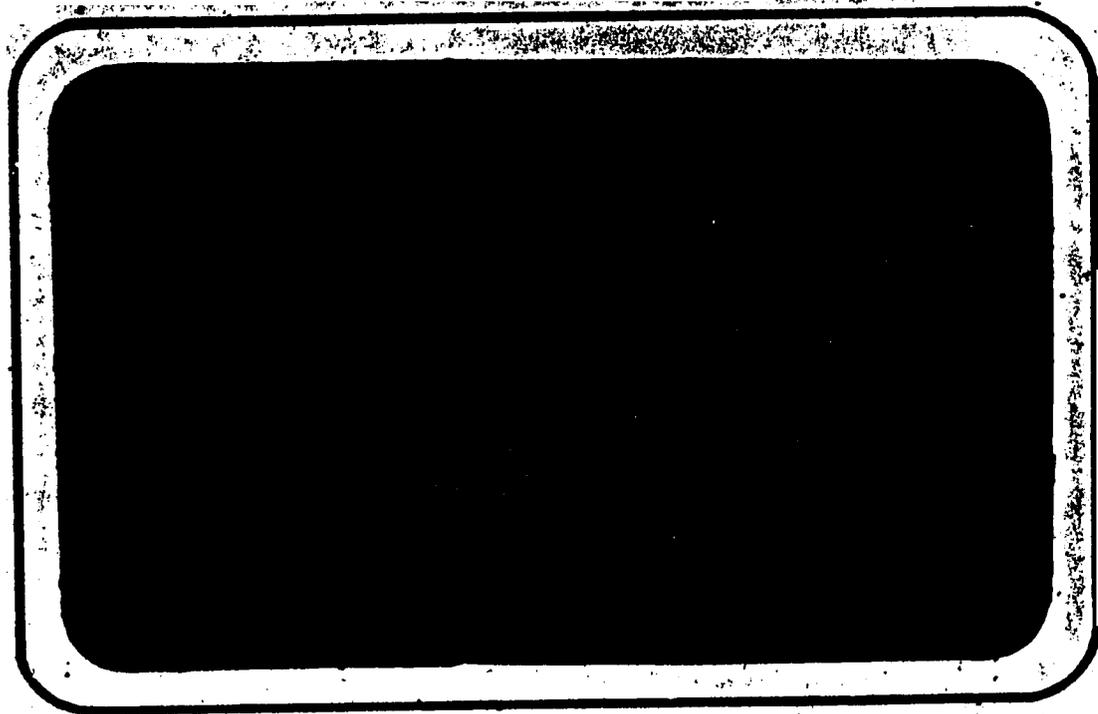
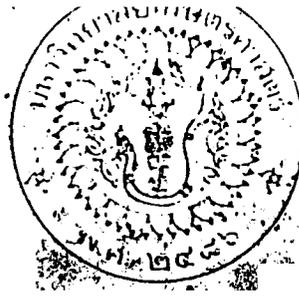


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FACULTY OF ECONOMICS AND BUSINESS ADMINISTRATION

มหาวิทยาลัยเกษตรศาสตร์
กรุงเทพฯ

KASETSART UNIVERSITY,
BANGKOK, THAILAND.

IX Basic Baseline Data on Ubonrat Dam
Land Settlement, 1976

Faculty of Economics & Business Administration
Kasetsart University
Bangkok
1978

IX Basic Baseline Data on Ubonrat Dam Land Settlement, 1976

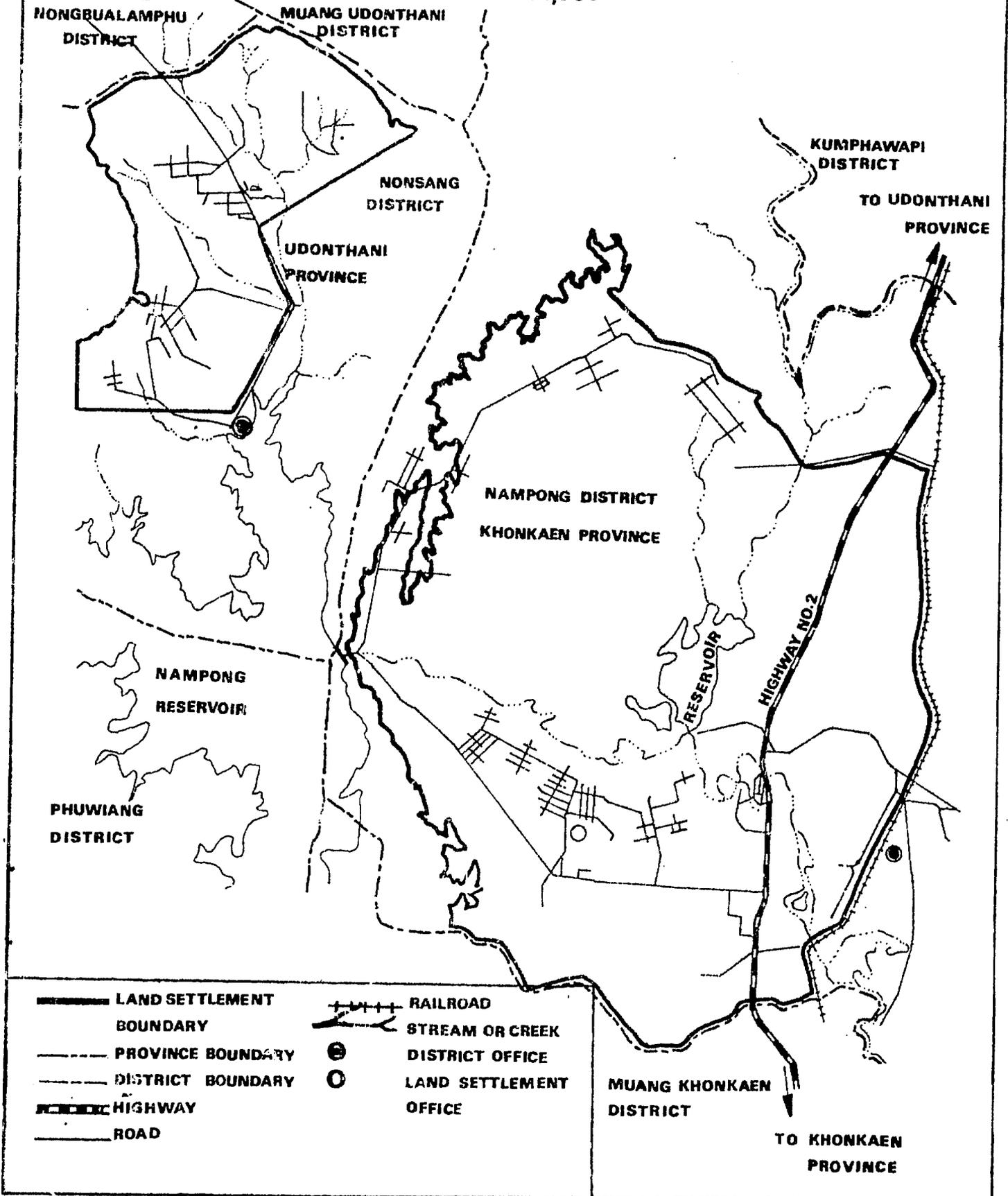
Land Settlement	<u>Ubonrat Dam</u>
Location	<u>Nampong</u> district <u>Khon Kaen</u> province
Year established	<u>1964</u>
Total area	<u>373,900</u> rais
Total area allocated	<u>61,960</u> rais
Official membership	<u>1,946</u>
Size of land plot	<u>15</u> rais



UBONRAT DAM LAND SETTLEMENT.

TOTAL ACHEAGE 373,900 rai

SCALE 1 : 250,000



- LAND SETTLEMENT BOUNDARY
- PROVINCE BOUNDARY
- DISTRICT BOUNDARY
- HIGHWAY
- ROAD

- RAILROAD
- STREAM OR CREEK
- DISTRICT OFFICE
- LAND SETTLEMENT OFFICE

MUANG KHONKAEN DISTRICT

TO KHONKAEN PROVINCE

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IX. 1. Brief Report on Ubonrat Dam Land Settlement.

Ubonrat Dam land settlement was established in 1964. The total area under the project is about 373,900 rais. Until 1976, an amount of 61,960 rais has been allocated for farmers. The formal plot size for each family is 15 rais.

The survey covered 100 settlers from all over the land settlement. About 8% of the survey farmers had farmed in the area before the establishment of the land settlement. Almost two-thirds of the settlers became settlement less than 6 years.

Seventy-three percent of the survey settlers were the settlement's cooperative members. Twenty-four percent joined the USAID's sericulture project whereas 13% belonged to BAAC's credit group.

In considering main income sources of the settlers, it was found that 92% drew their main income from upland crop farming and only 7% from paddy farming.

Forty percent of heads of farm households was in the age group of 40-49 and 22% each was in 30-39, and 50-59 years. About three-fourths of all heads finished 4th grade education.

The average family size was 6.99, with 4.2 persons working in the first season and 1.2 persons did that for the second season of 1976 crop year. Almost 5 persons in each family were in the working-age group of 11-60 years.

On the average, a family held land about 22 rais. Of this, about 7 rais of land was outside of the settlement. Settlers were found rented

in additional pieces of land both in and outside the settlement. This may be due to the formal plot size of 15 rais which was too small for settlers with an average member of 5 in the working-age group. Chances of each of different members of the same family owning a plot of land were very rare in this settlement.

Upland crops and paddy occupied about two-thirds of the cultivated land of the settlement. The land use figures revealed that zone 1 of the settlement is more suitable to upland crop growing than that of zone 2. It also indicated that paddy cultivation in Ubonrat Dam settlement concentrated in zone 2. Other categories of land use were of non-significant.

As far as the wealth of settlers was concerned, land accounted about 58% of the average value which was $\text{฿ } 51,528$. 'Building' and 'animals' groups ranked very close together as second and third. 'Equipment and machinery' group constituted only 6 per cent of the average wealth of the settlers. There was a narrow gap between wealth of zone 1 and zone 2 of the settlement.

As far as individual crop production was concerned, the major part of land was used for kenaf and cassava cultivation. Paddy was found as the third-ranked crop for this settlement. This was rather an unusual situation found in the Northeast Thailand where most farmers tried to grow paddy as their main crop. The fourth crop produced by Ubonrat Dam's settlers was cassava, the fast growing crop of the Northeast. Other crops such as groundnut and tobacco were rarely found and were of non-significant to the area. Yields of most crops were found to be rather low.

In considering the production costs of crops, cost items were grouped into three categories; variable inputs (both cash and in kind), family labor, and hired labor and machine services. The major portion of production cost was family labor which constituted over three-fourths of total production cost except of sugar cane cultivation. Hired labor and machine services formed a very small part of production cost. For the non-settlers, they seemed to employ less family labor and spent more on the variable inputs category. The breakdown of production cost into three groups of farm activities indicated that growing activity (care taking included) ranked first in terms of value of production costs followed by harvesting and land preparation activities. It was also true for those of non-settlers of Ubonrat Dam land settlement.

It was found that about 44% of farmer-settlers borrowed money in 1976. Their main credit source was the settlement's cooperatives. Bank ranked second in giving credit to settlers. Other sources were of non-significant. Average loan sizes from the cooperatives, and banks were $\text{฿ } 4,111$ and $\text{฿ } 16,250$ respectively. Those who borrowed money from neighbors had paid a 67% per annum of interest.

The majority of rice produced was home-consumed, leaving a very small portion, less than 10%, for sale especially to neighbors for their consumption needs. For upland crops, they were for sales mostly except in the case keeping them as seed use.

As far as contribution of farm income by fruits and vegetable production was concerned, settlers sold one-third to two-thirds of their production of fruits and vegetables. Non-settlers sold about 11 percent of their fruit and vegetables production.

Buffalo and chicken were among popular livestock and poultry raised by settlers in 1976. Cattle and duck production were done by a very small numbers of settlers. Chicken and buffalo were also top among poultry and livestock production.

As far as farm income was concerned, sugar-cane, cassava, and tobacco formed the big portion of income of settlers in zone 1 where as glutinous rice was dominated in zone 2. This was mainly due to yields of these particular crops.

Income from local trading, hired labor services, silk product sales, and salary were among major income components from non-farm work. They constituted about 75% of average value of non-farm income of $\text{P} 2,433$ for Ubonrat Dam's settlers, their non-farm incomes were comparable to those of the survey non-settlers.

The average family incomes earned by a farm household were $\text{P} 3,472$ and $\text{P} 6,414$ for zone 2 and zone 1 respectively. The same type of income for their counterpart non-settlers was $\text{P} 4,118$. On the average, farm income was proportionately less than non-farm income as experienced by Ubonrat Dam's settlers in 1976.

Fish and meat were only two main items of weekly consumption expenses of Ubonrat Dam's settlers. They accounted for over 50% of total weekly expenditures of 9 survey items. On the monthly basis, rice was the only important item and accounted for about three-fourths of the study monthly consumption expenditures. Expenses on clothing, medical care, housing, merit making, and family ceremonies were among the top fives ranking of annual expenditures reported by farmer-settlers.

As far as savings was concerned, it was found that 79% of settlers has saved money in the average amount of ¥ 3,706 in 1976. Their most favorite form of savings was 'self kept in cash' which averaged ¥ 1,573 per household. Other popular forms of savings included 'self kept as assets', and 'loaned to relatives'. The pattern of savings by non-settlers was pretty much the same as that of settlers except the larger average savings of ¥ 13,460 per family.

The distribution of settlers on silk worm rearing status showed that in 1976 about 47% reared silk worm on traditional method, 6% completely stopped rearing, 3% engaged in PWD's sericulture project, 5% will soon join USAID's sericulture project, and the rest 39% never reared silk worm. Major reasons for heads of farm household not joining the sericulture project training program themselves were 'too busy with other work' and 'too old for work'. Reasons for children not joining the training were they were still too young and they were busy with other work.

Among Ubonrat Dam's settlers who were aware of the sericulture project, eligible, and ready to join it, 42% indicated that they will not join the project.

Pilot farmers of the USAID's sericulture project were normally asked questions concerning the project by other settlers. Only one-third of them reported that they were asked questions from neighbor settlers while the remaining two-thirds were not asked any questions. Of those who asked pilot farmers about the project, three-fourths decided to join the project and the remaining one-third decided not to take part in the project.

Forty-two percent of Ubonrat Dam's settlers reported that they were not aware of the family planning program available in the settlement in 1976. Of those who were aware of it indicated that they learned it from government source.

Sixty-one percent of settlers in Ubonrat Dam did not practice any form of birth control at the time of the survey. Among those who practiced, 14% used pills, 9% each used IDU and sterilization, and one percent each used condoms and traditional medicine.

As far as migration of family members was concerned, it was reported that 41 percent of the survey households did have member migrated. One-half of those families had one member migrated, and about one-fourth had two members moving out.

Nikom Ubonrat Dam

IX 2. Statistical Tables

Nikom Ubonrat Dam

Table 1 Distribution of sample farms by zone and by organization membership, 1976.

Organization	Zone 1		Zone 2		Total	
	No.	%	No.	%	No.	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Ag. cooperatives	62	82.67	11	44.00	73	73.00
2. BAAC's credit group	10	13.33	3	12.00	13	13.00
3. Thai-German group	-	-	-	-	-	-
4. PWD's sericulture	3	4.00	-	-	3	3.00
5. USAID's sericulture	24	32.00	-	-	24	24.00
6. Others	-	-	2	8.00	2	2.00

Nikom Ubonrat Dam

Table 2 Percentage distribution of farm households by number of years farmed in the settlement area and number of years became settlers, by zone, 1976.

Category	Number of years				total
	5 and less	6 - 10	11 - 15	over 15	
(1)	(2)	(3)	(4)	(5)	(6)
<u>SETTLERS</u>					
<u>Zone 1</u>					
A	5.4	13.4	75.9	5.3	100.0
B	5.3	13.4	81.3	-	100.0
<u>Zone 2</u>					
A	24.0	52.0	8.0	16.0	100.0
B	32.0	56.0	12.0	-	100.0
<u>Total</u>					
A	10.0	23.0	59.0	8.0	100.0
B	12.0	24.0	64.0	-	100.0
<u>NON-SETTLERS</u>					
A	10.0	-	-	90.0	100.0

Note : A = number of years farmed in the (settlement) area
 B = number of years became settlers

Table 3 Percentage distribution of heads of farm households by sex, age group and zone, 1976.

Category	Age group (years)					total
	under 30	30 - 39	40 - 49	50 - 59	60 & over	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<u>SETTLERS</u>						
<u>Zone 1</u>						
male	-	24.0	29.3	25.3	16.0	94.7
female	-	-	2.7	2.6	-	5.3
total	-	24.0	32.0	28.0	16.0	100.0
<u>Zone 2</u>						
male	4.0	16.0	64.0	4.0	12.0	100.0
female	-	-	-	-	-	-
total	4.0	16.0	64.0	4.0	12.0	100.0
<u>Total</u>						
male	1.0	22.0	38.0	20.0	15.0	96.0
female	-	-	2.0	2.0	-	4.0
total	1.0	22.0	40.0	22.0	15.0	100.0
<u>NON-SETTLERS</u>						
male	-	20.0	30.0	30.0	20.0	100.0
female	-	-	-	-	-	-
total	-	20.0	30.0	30.0	20.0	100.0

Table 4 Education among heads of farm households, by age group, 1976.

Category	% fo heads of farm households by age group					
	20-29 years	30-39 years	40-49 years	50-59 years	over 60 years	total
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<u>SETTLERS</u>						
<u>Zone 1</u>						
- below 4 th grade	-	-	4.0	2.0	1.3	8.0
- 4 th grade	1.3	25.3	24.0	14.7	8.0	73.4
- 5 th - 7 th grade	-	-	-	1.3	-	1.3
- higher than 7 th grade	-	1.3	-	-	-	1.3
- No formal education/ uneducated	-	-	4.0	5.3	6.7	16.0
<u>Zone 2</u>						
- below 4 th grade	-	4.0	12.0	-	-	16.0
- 4 th grade	4.0	16.0	40.0	4.0	12.0	76.0
- 5 th - 7 th grade	-	-	4.0	-	-	4.0
- higher than 7 th grade	-	-	-	-	-	-
- No formal education/ uneducated	-	-	4.0	-	-	4.0
<u>Total</u>						
- below 4 th grade	-	1.0	6.0	2.0	1.0	10.0
- 4 th grade	2.0	23.0	28.0	12.0	9.0	74.0
- 5 th - 7 th grade	-	-	1.0	1.0	-	2.0
- higher than 7 th	-	1.0	-	-	-	1.0
- No formal education/ uneducated	-	-	4.0	4.0	5.0	13.0
<u>NON-SETTLERS</u>						
- below 4 th grade	-	-	-	10.0	-	10.0
- 4 th grade	-	20.0	40.0	20.0	-	80.0
- 5 th - 7 th grade	-	-	-	-	-	-
- higher than 7 th grade	-	-	-	-	-	-
- No formal education/ uneducated	-	-	-	-	10.0	10.0

Nikom Ubonrat Dam

Table 5 Main income source of farm households, 1976.

Category	Settlers				Non-settlers
	Zone 1	Zone 2	Total		
	(2)	(3)	(4)		
(1)	(2)	(3)	(4)	(5)	
Paddy farming	1.37	24.00	7.14	30.00	
Upland crop farming	97.26	76.00	91.84	70.00	
Civil service & other services	1.37	-	1.02	-	
Total	100	100	100	100	

Nikom Ukonrat Dam

Table 6 Land holding among farmers by zone, 1976.

Categories	Land use (rai)					
	Zone 1		Zone 2		Total	
	average	%	average	%	average	%
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<u>Inside settlement</u>						
Land owned	15.64	75.95	14.75	54.63	15.42	69.46
Land rented in	0.18	0.87	-	-	0.13	0.58
Land rented free	0.24	1.17	0.91	0.04	0.19	0.86
<u>Outside settlement</u>						
Land owned	4.27	20.74	11.52	42.67	6.08	27.39
Land rented in	0.17	0.83	-	-	0.13	0.58
Land rented free	0.09	0.44	0.72	2.67	0.25	1.13
Total	20.59	100	27.00	100	22.20	100

Nikom Ukonrat Dam

Table 7 Average land use by zone, 1976.

Unit : rai

Type	Settlers						Non-settlers	
	Zone 1		Zone 2		Total		Av.	%
	Av.	%	Av.	%	Av.	%		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Paddy crop	2.30	11.16	10.20	37.73	4.27	19.23	15.70	43.30
Upland crops	11.07	53.74	7.26	26.09	10.12	45.59	13.75	37.92
Fruit trees	0.38	1.84	0.04	0.15	0.03	1.35	0.10	0.27
Mulberry	0.77	3.74	0.23	0.85	0.64	2.88	0.30	0.82
Others	4.56	22.14	7.52	27.85	5.30	23.87	5.38	14.84
Home	1.51	7.33	1.75	6.40	1.57	7.07	1.04	2.87
Total	20.60	100	27.00	100	22.20	100	36.26	100

Table 8 Average value of farm assets at the end of 1976 by zone.

unit : baht per farm

Category	Settlers			Non-settlers
	Zone 1	Zone 2	Total	
(1)	(2)	(3)	(4)	(5)
Land	28,408 (57.61)	30,420 (59.19)	29,911 (58.05)	57,620 (59.29)
Building	9,213 (18.68)	8,189 (16.68)	8,957 (17.38)	29,954 (30.83)
Animals	8,804 (17.85)	10,234 (17.69)	9,162 (17.78)	8,259 (8.50)
Equipment & machinery	2,372. (4.81)	4,955 (8.52)	3,018 (5.86)	1,341 (1.38)
Others	518 (1.05)	364 (0.63)	480 (0.93)	-
Total	49,315 (100.00)	58,162 (100.00)	51,528 (100.00)	97,174 (100.00)

Note : The numbers in brackets are percentage
 The 'Land' category includes only farmers' own land.
 The 'Building' category includes farm house, storage, and animal shelter. Cattle, buffaloes, swine, chicken, and ducks belong to the 'animal' category. The 'equipment & machinery' category includes all farmers' equipment and machine.
 'Others' includes only farm's well.

Nikom Ubonrat Dam

Table 9 Average value of non-farm assets at the end of 1976 by zone.

Unit : Baht

Category	Settlers			Non-settlers
	Zone 1	Zone 2	Total	
(1)	(2)	(3)	(4)	(5)
1. Desks, Chairs, Closets	300.24	38.20	234.73	512.50
2. Bed room furniture	904.05	725.60	859.44	627.90
3. Watches, clocks	221.07	120.00	195.80	360.00
4. Radios, Television sets	369.60	275.20	346.00	310.00
5. Gun	256.27	468.00	309.20	880.00
6. Iron, sewing machines	210.73	94.20	181.60	273.00
7. Gold ornaments	232.27	71.20	192.00	500.00
8. Bicycles	292.00	193.20	244.80	520.00
9. Motorcycles	-	3,020.00	755.00	-
10. Water containers	131.19	109.60	125.79	128.50
11. Lamp	31.48	16.96	27.85	0.90
12. Kitchenware	269.29	189.00	249.22	305.10
13. Others	4.52	1,490.00	353.39	-
Total	4,229.37	3,611.16	4,074.82	4,417.90

Nikom Ubonrat Dam

Table 10 Distribution of family size and average member per farm, 1976.

Category	Family size (no. of persons)				
	under 4	5 - 6	7 - 9	more than 9	total
(1)	(2)	(3)	(4)	(5)	(6)
<u>SETTLERS</u>					
<u>Zone 1</u>					
- % of farm households	5.30	37.30	45.30	12.10	100.0
- average member per farm	2.25	5.18	7.82	10.44	6.85
<u>Zone 2</u>					
- % of farm households	-	44.00	32.00	24.00	100.00
- average member per farm	-	5.18	7.88	10.83	7.40
<u>Total</u>					
- % of farm households	4.00	39.00	42.00	15.00	100.00
- average member per farm	2.25	5.18	7.83	10.60	6.99
<u>NON-SETTLERS</u>					
- % of farm households	-	70.0	30.0	-	100.0
- average member per farm	-	5.43	7.67	-	6.10

Nikom Ubonrat Dam

Table 11 Percentage distribution of family by number of children and average children per family, by zone, 1976.

No. of children	Settlers						Non-settlers	
	Zone 1		Zone 2		Total		A	B
	A	B	A	B	A	B		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
no.children	1.3	-	-	-	1.0	-	-	-
1 - 3	26.7	2.5	24.0	2.3	26.0	2.4	20.0	3.0
4 - 6	45.3	5.2	48.0	5.0	46.0	5.3	80.0	5.0
7 - 9	22.7	7.8	28.0	8.0	24.0	7.8	-	-
10 & over	4.0	10.0	-	-	3.0	10.0	-	-
Total	100.0	5.2	100.0	5.5	100.0	4.2	100.0	4.6

Note : A = percentage of family
 B = average children per family

Nikom Ukonrat Dam

Table 12 Average family member and their work on farms by zone and age group, 1976.

age group (year)	Settlers									Non-settlers		
	Zone 1			Zone 2			Total			1	2	3
	1	2	3	1	2	3	1	2	3			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
under 11	1.88	0.23	0.11	2.56	0.16	-	2.05	0.21	0.06	1.1	0.10	0.1
11 - 13	0.65	0.21	0.03	0.08	0.36	0.08	0.69	0.25	0.04	0.90	0.40	0.30
14 - 18	1.09	0.96	0.33	0.88	0.84	0.24	1.04	0.93	0.31	1.00	0.60	0.10
19 - 55	2.79	2.53	0.75	2.92	2.64	0.56	2.82	2.56	0.70	2.70	2.50	0.60
56 - 60	0.23	0.16	0.06	0.20	0.16	0.04	0.22	0.16	0.06	0.30	0.30	0.10
over 60	0.21	0.11	0.01	0.04	0.04	-	0.17	0.09	0.01	0.10	-	-
Total	6.85	4.20	1.29	7.40	4.20	0.92	6.99	4.20	1.20	6.1	3.9	1.2

Note : 1 = average member of farm households.
 2 = average member who work on farm in first season.
 3 = average member who work on farm in second season.

Nikom Ubonrat Dam

Table 13 Amount of credit, by source of loan among farmer-borrowers, 1976

Category	Source of loan					
	Merchants	Neighbors	Relatives	Banks	Cooperatives	Others
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<u>SETTLERS</u>						
<u>Zone 1</u>						
- % of farmer-borrower	-	-	1.33	5.33	40.00	-
- amount per farmer-borrower (฿)	-	-	200.00	16,250.00	4,450.00	-
- average interest rate (%)	-	-	0.00	12.00	12.00	-
<u>Zone 2</u>						
- % of farmer-borrower	-	4.00	-	-	20.00	4.00
- amount per farmer-borrower (฿)	-	400.00	-	-	2,080.00	5,000.00
- average interest rate (%)	-	67.00	-	-	12.00	12.00
<u>Total</u>						
- % of farmer-borrower	-	1.00	1.00	4.00	35.00	1.00
- amount per farmer-borrower (฿)	-	400.00	200.00	16,250.00	4,111.42	5,000.00
- average interest rate (%)	-	67.00	0.00	12.00	12.00	12.00
<u>NON-SETTLERS</u>						
- % of farmer-borrower	-	-	-	-	-	-
- amount per farmer-borrower (฿)	-	-	-	-	-	-
- average interest rate (%)	-	-	-	-	-	-

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Table 14 Percentage of farmers who borrowed and average loan size, by type of loan and zone, 1976.

Category	Zone 1	Zone 2	Total
(1)	(2)	(3)	(4)
1. % of borrower on short-term loan	26.67	20.00	25.00
2. average short-term loan (฿)	3,585	2,680	3,364
3. % of borrower on intermediate term loan	22.67	8.00	19.00
4. average intermediate term loan (฿)	7,235	1,700	6,653

Table 15 Amount of credit by type and source of loan, 1975.

Category	Sources of loan					
	Merchants	Neighbors	Relatives	Banks	Coopera- tives	Others
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<u>Zone 1</u>						
Short-term loan						
% borrowed	-	-	1.33	-	22.67	-
average amount (B)	-	-	200	-	3,882	-
Intermediate-term loan						
% borrowed	-	-	-	4.00	21.33	-
average amount (B)	-	-	-	20,000	4,219	-
<u>Zone 2</u>						
Short-term loan						
% borrowed	-	4.00	-	-	12.00	4.00
average amount (B)	-	4.00	-	-	2,333	5,000
Intermediate-term loan						
% borrowed	-	-	-	-	8.00	-
average amount (B)	-	-	-	-	1,700	-
<u>Total</u>						
Short-term loan						
% borrowed	-	1.00	1.00	-	20.00	1.00
average amount (B)	-	400	200	-	3,650	5,000
Intermediate-term loan						
% borrowed	-	-	-	-	18.00	-
average amount (B)	-	-	-	-	3,939	-

Table 16 Number of farmer-savers and their average savings by zone and type of savings, 1976.

Category	Settlers			Non-settlers
	total	zone 1	zone 2	
(1)	(2)	(3)	(4)	(5)
1. Kept by relatives				
- no. of farm h.h.	5	3	2	1
- av. amount per h.h. (฿)	265.00	200.00	460.00	6,000.00
2. Loaned to relatives				
- no. of farm h.h.	19	16	3	2
- av. amount per h.h. (฿)	575.00	652.00	344.00	300.00
3. Loaned to others				
- no. of farm h.h.	5	4	1	1
- av. amount per h.h. (฿)	147.00	169.33	80.00	150.00
4. Self kept in cash				
- no. of farm h.h.	69	52	17	6
- av. amount per h.h. (฿)	1,573.30	1,926.00	514.00	960.00
5. Self kept as assets				
- no. of farm h.h.	14	12	2	1
- av. amount per h.h. (฿)	476.30	563.07	216.00	50.00
6. Deposit with banks				
- no. of farm h.h.	7	6	1	1
- av. amount per h.h. (฿)	670.00	493.33	1,200.00	6,000.00
Total				
- no. of farm h.h.	79 (79.00)	68 (90.00)	19 (76.00)	7 (70.00)
- av. amount per h.h. (฿)	3,706.00	4,004.13	2,814.00	13,460.00

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Table 17 Distribution of Farms by Crop Grown and area planted by zone, 1976.

Unit : rai

Categories	Settlers						Non-settlers	
	zone 1.		zone 2		total.		no. of farm	area planted
	no. of farm	area planted	no. of farm	area planted	no. of farm	area planted		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<u>First season</u>								
Rice	3	18.00	5	50.00	8	68.00	1	1.00
Glutinous rice	16	142.75	11	195.00	27	337.75	8	156.00
Maize	-	-	-	-	-	-	1	15.00
Groundnut	1	0.25	-	-	1	0.25	-	-
Mungbean	-	-	-	-	-	-	-	-
Tobacco (Turkish)	5	3.57	-	-	5	3.75	-	-
Sugarcane	9	59.00	-	-	9	59.00	1	6.00
Cassava	57	353.75	14	72.50	71	426.25	4	38.00
Kenaf	60	428.00	17	109.00	77	537.75	6	49.00

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Table 18 Average yield per rai on planted and harvested area, by type of crops, 1976.

Unit : kg./rai

Crops	Settlers						Non-settlers	
	zone 1		zone 2		total		1	2
	1	2	1	2	1	2	1	2
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<u>First season</u>								
Rice	33.33	85.71	140.80	171.71	112.35	159.71	150.00	230.00
Glutinous rice	89.93	248.06	142.57	241.75	120.32	243.71	105.77	165.00
Maize	-	-	-	-	-	-	293.33	628.57
Groundnut	700.00	700.00	-	-	700.00	700.00	-	-
Tobacco (Turkish)	156.80	156.80	-	-	156.80	156.80	-	-
Sugarcane	4,288	4,306	-	-	4,288	4,306	7,000	7,000
Cassava	1,526.58	1,652.72	1,127.02	1,266.81	1,456.62	1,589.10	644.07	775.51
Kenaf	131.01	161.59	112.16	136.59	127.18	156.46	139.70	223.52

1 = yield/rai planted
2 = yield/rai harvested

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Table 19 Crop disposition for selected crops, zone 1, 1976.

Unit : kg						
Crops	Crop Disposition					
	Total	debt- repaid	seed use	home- consumed	sold	stocked
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<u>First season</u>						
Rice	8.00 (100.00)	- -	- -	8.00 (100.00)	- -	- -
Glutinous rice	171.16 (100.00)	16.00 (9.35)	2.19 (2.18)	105.51 (61.64)	- -	47.47
Groundnut	2.33 (100.00)	- -	- -	2.15 (92.27)	0.18 (7.73)	- -
Tobacco (Turkish)	7.84 (100.00)	- -	- -	0.27 (3.44)	7.57 (96.56)	- -
Sugarcane	3,373.3 (100.00)	- -	240.0 (7.11)	- -	3,133.33 (92.89)	- -
Cassava	7,200.36	17.47 (0.24)	- -	- -	7,182.89 (99.76)	- -
Kenaf	747.63	-	-	0.15 (0.02)	747.48 (99.98)	-

Note : figures in parentheses are percentage

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Table 20 Crop disposition for selected crops, zone 2, 1976.

Unit : kg

Crops	Crop Disposition					
	Total	debt-repaid	seed use	home-consumed	sold	stocked
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<u>First season</u>						
Rice	281.60 (100)	2.40 (0.85)	-	185.60 (65.91)	24.00 (8.52)	69.60 (24.72)
Glutinous rice	1,112.04	14.40 (1.29)	2.88 (0.26)	1,026.76 (92.33)	40.00 (3.60)	28.00 (2.52)
Cassava	3,268.36 (100.00)	-	-	-	3,268.36 (100.00)	-
Kenaf	489.00 (100.0)	-	-	-	489.00 (100.0)	-

Note : figures in parentheses are percentage

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Table 21 Crop disposition for selected crops, whole settlement, 1976.

Unit : kg						
Crops	Crop disposition					
	Total	debt- repaid	seed- use	home- consumed	sold	stock
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<u>First season</u>						
Rice	76.40 (100.00)	0.60 (0.78)	-	52.40 (68.59)	6.00 (7.85)	17.40 (22.77)
Glutinous rice	406.32 (100.00)	15.60 (3.84)	2.36 (0.58)	335.82 (82.64)	10.0 (2.64)	42.60 (10.48)
Groundnut	1.75 (100.00)	-	-	1.61 (92.0)	0.14 (8.0)	-
Tobacco (Turkish)	5.88 (100.00)	-	-	0.20 (3.40)	5.68 (96.6)	-
Sugarcane	253.0 (100.00)	-	18.00 (7.11)	3.00 (1.19)	232.00 (91.70)	-
Cassava	6,217.36 (100.00)	13.10 (0.21)	-	-	6,204.26 (99.79)	-
Kenaf	682.97 (100.0)	-	-	0.11 (0.02)	682.86 (99.98)	-

Note : figures in parentheses are percentage

Table 22 Crop disposition for selected crops, outside the settlement, 1976.

Crops	Unit :kg					
	Crop Disposition					
	Total	debt- repaid	seed- use	home- consumed	sold	stocked
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<u>First season</u>						
Rice	15.00 (100.00)	-	-	15.00 (100.00)	-	-
Glutinous rice	1,650.00 (100.00)	-	15.00 (0.91)	1,290.00 (78.18)	153.00 (9.27)	299.50 (13.91)
Maize	440.00 (100.00)	-	10.00 (2.27)	-	430.00 (97.73)	-
Sugarcane	4,200.00 (100.00)	-	4,200.00 (100.00)	-	-	-
Cassava	3,800.00 (100.00)	-	-	-	3,800.00 (100.00)	-
Kenaf	558.80 (100.00)	-	-	-	558.80 (100.00)	-

Note : figures in parentheses are percentage

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Table 23 Cost of production per rai planted by crop and zone, 1976.

Unit : ฿/rai

Crops	Zone 1				Zone 2			
	LP	GR	HA	T	LP	GR	HA	T
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<u>First season</u>								
Rice	23.1	122.2	28.1	173.4	192.8	90.3	99.5	382.6
Glutinous rice	38.2	102.4	47.4	188.0	50.7	54.9	65.2	170.8
Maize	-	-	-	-	-	-	-	-
Groundnut	120.0	1,376.0	480.0	1,976.0	-	-	-	-
Tobacco (Turkish)	256.0	864.0	350.6	1,470.6	-	-	-	-
Sugarcane	33.1	219.4	17.1	269.6	-	-	-	-
Cassava	74.2	188.9	114.5	377.6	72.8	296.7	160.3	529.8
Kenaf	75.3	191.8	145.8	412.9	81.9	130.9	89.5	302.3

Note : LP = land preparation
 GR = growing
 HA = harvesting
 T = total

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Table 23 (continued)

Crops	Unit : P/rai							
	Settlers				Non-settlers			
	LP	GR	HA	T	LP	GR	HA	T
(1)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
<u>First season</u>								
Rice	149.2	98.7	80.5	328.4	30.0	220.0	40.0	290.0
Glutinous rice	45.4	75.0	57.6	178.0	33.8	100.9	62.8	197.5
Maize	-	-	-	-	6.0	92.1	30.0	128.1
Groundnut	120.0	1,376.0	420.0	1,976.0	-	-	-	-
Tobacco (Turkish)	256.0	864.0	350.6	1,470.6	-	-	-	-
Sugarcane	33.1	219.4	17.1	269.6	10.0	195.3	20.0	225.3
Cassava	74.0	207.2	122.3	403.5	25.1	75.3	75.9	176.3
Kenaf	76.7	179.4	134.4	390.5	43.0	135.5	204.5	433.0

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Table 24 Cash cost of production per rai planted by crop by zone, 1976.

Unit : Y/rai

Crops	Zone 1				Zone 2			
	LP	GR	HA	T	LP	GR	HA	T
*1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<u>First season</u>								
Rice	-	11.7	-	11.7	-	7.9	4.8	12.6
Glutinous rice	-	46.9	3.8	50.7	15.6	21.3	7.6	44.5
Maize	-	-	-	-	-	-	-	-
Groundnut	-	536.0	-	536.0	-	-	-	-
Tobacco (Turkish)	-	368.8	-	368.8	-	-	-	-
Sugarcane	-	94.1	-	94.1	-	-	-	-
Cassava	12.8	43.2	46.0	102.0	24.7	107.9	105.8	318.4
Kenaf	3.8	39.0	23.6	66.4	-	15.7	13.2	28.9

Note : LP = land preparation
 GR = growing
 HA = harvesting
 T = total

Nikom Ubonrat L'm

Table 24 (continued)

Unit : E/rai									
Crops	Settlers				Non-settlers				
	LF	GR	HA	T	LF	GR	HA	T	
(1)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	
<u>First season</u>									
Rice	-	8.8	3.5	12.3	-	160.0	-	160.0	
Glutinous rice	9.0	32.1	6.0	47.1	-	51.8	9.5	61.3	
Maize	-	-	-	-	-	18.4	-	18.4	
Groundnut	-	536.0	-	536.0	-	-	-	-	
Tobacco (Turkish)	-	368.8	-	368.8	-	-	-	-	
Sugarcane	-	94.1	-	94.1	-	83.3	-	83.3	
Cassava	14.8	67.8	56.2	138.8	-	17.4	65.2	82.6	
Kenaf	3.0	34.2	21.5	58.7	-	11.1	41.8	52.9	

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Table 25 Cost of production per rai planted by crop and zone, 1976.

Unit : Baht

Crops	Zone 1				Zone 2			
	A	B*	C**	Total	A	B*	C**	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
<u>First season</u>								
Rice	11.7	166.7	-	178.4	7.8	369.9	4.8	382.5
Glutinous rice	38.5	137.3	12.2	188.0	15.2	126.2	29.4	170.8
Maize	-	-	-	-	-	-	-	-
Groundnut	536.0	1,440.0	-	1,976.0	-	-	-	-
Tobacco (Turkish)	368.8	1,101.9	-	1,470.7	-	-	-	-
Sugarcane	91.5	175.5	2.6	269.6	-	-	-	-
Cassava	29.3	275.6	72.7	377.6	125.0	211.4	193.4	529.8
Kenaf	16.5	346.6	49.9	412.9	12.2	273.4	16.6	302.2

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Table 25 (continued)

Crops	Unit : $\text{฿}/\text{rai}$							
	Settlers				Non-settlers			
	A	B*	C**	Total	A	B*	C**	Total
(1)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
<u>First season</u>								
Rice	8.8	316.1	3.5	328.5	160.0	130.0	-	290.0
Glutinous rice	25.0	130.9	22.1	178.0	25.9	136.2	35.4	197.5
Maize	-	-	-	-	18.4	109.7	-	128.1
Groundnut	536.0	1,440.0	-	1,976.0	-	-	-	-
Tobacco (Turkish)	368.8	1,101.9	-	1,470.7	-	-	-	-
Sugarcane	91.5	175.5	2.6	269.6	83.3	142.0	-	225.3
Cassava	45.6	264.7	93.2	403.5	17.4	93.7	65.2	176.3
Konaf	15.6	331.7	43.2	390.5	11.1	300.1	41.8	433.0

Note : A = variable inputs, B = family labor,

C = hired labor and machine

* average labor cost per day ranges from $\text{฿}15$ to $\text{฿}20$

** hired labor and machine service are normally charged together for the land preparation and growing activities. Hired labor cost alone is seldom found in harvesting activities.

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Table 26 Average value of vegetables and fruits home-consumed and sold in 1976 by zone.

Unit : Baht.

Category	Settlers			Non-settlers
	Total	Zone 1	Zone 2	
(1)	(2)	(3)	(4)	(5)
Vegetables				
- av. value per farm	810.64	1,054.09	89.28	90.20
-- av. value home-consumed	303.51	378.98	77.40	90.20
-- av. value sold	507.13	675.21	2.88	0
Fruits				
- av. value per farm	585.72	701.74	237.64	58.50
- av. value home-consumed	159.11	170.36	125.36	42.50
- av. value sold	426.61	531.38	112.28	16.00
Vegetables & Fruits				
-- av. value per farm	1,396.36	1,755.83	317.92	148.70
-- av. value home-consumed	462.62	549.24	202.76	132.70
- av. value sold	933.74	1,206.59	115.16	16.00

Table 27 Average number and value of livestock and poultry per family kept in farm households at the end of 1976, by zone.

Category	Settlers			Non-settlers
	Total	Zone 1	Zone 2	
(1)	(2)	(3)	(4)	(5)
Cattle				
- av. number (heads)	0.27	0.36	-	0.50
- av. value (Baht)	914.00	1,218.67	-	2,100.00
- % of h.h. raised cattle	11.00	14.67	-	20.00
Buffaloes				
- av. number (heads)	2.17	2.19	2.12	1.50
- av. value (Baht)	7,752.40	7,029.60	9,920.80	5,580.00
- % of h.h. raised buffaloes	68.00	72.00	56.00	70.00
Swine				
- av. number (heads)	-	-	-	-
- av. value (Baht)	-	-	-	440.00
- % of h.h. raised swine	-	-	-	10.00
Chicken				
- av. number (heads)	-	-	-	-
- av. value (Baht)	469.13	534.45	273.16	108.00
- % of h.h. raised chicken	86.00	86.67	84.00	90.00
Duck				
- av. number (heads)	-	-	-	-
- av. value (Baht)	26.18	21.52	40.16	31.00
- % of h.h. raised duck	22.00	21.33	24.00	30.00

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Table 28 Amount of non-farm income per farm by zone, 1976.

Category	Unit : Baht per farm			
	Settlers			Non-settlers
	zone 1	zone 2	total	
(1)	(2)	(3)	(4)	(5)
1. local trade	630.67	40.00	483.00	-
2. firewood sale	9.20	20.00	11.90	5.00
3. charcoal making	75.97	644.43	218.08	129.60
4. carpenter service	33.33	140.00	60.00	757.50
5. fishing	160.09	220.48	175.19	22.00
6. forest product sale	2.67	-	2.00	-
7. hired labor service	505.57	664.00	545.18	845.00
8. salary	415.91	297.20	386.23	810.00
9. silk product sale	564.67	92.40	446.60	-
10. cottage manufacturing	12.53	19.60	14.30	-
11. others	107.67	40.00	90.75	-
Total	2,518.28	2,178.08	2,433.23	2,569.10

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Table 29 Average family income by zone, 1976.

Unit : Baht

Category	Settlers			Non-settlers
	zone 1	zone 2	Total	
(1)	(2)	(3)	(4)	(5)
1. net farm income from crops	2,689.10	1,179.40	2,109.59	1,533.18
2. income from fruits & vegetables	1,206.59	115.16	933.74	16.00
3. non-farm income	2,518.28	2,178.08	2,433.23	2,569.10
Total (family income)	6,413.97	3,472.64	5,472.56	4,118.28

Nikom Uboulat Dam

Table 30 Gross Margin per rai on individual crops, zone 1, 1976.

Crops	Yield (kg/rai)	Value (฿/rai)	Cash cost (฿/rai)	Gross margin 1 (฿/rai)	Total var. cost (฿/rai)	Gross margin 2 (฿/rai)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<u>First season</u>						
Rice	33.33	36.66	11.7	24.96	178.4	-141.74
Glutinous rice	89.93	224.83	50.7	174.13	188.0	36.83
Groundnut	700.00	2,548.00	536.0	2,012.00	1,976.0	572.00
Tobacco (Turkish)	156.80	2,822.40	368.8	2,543.60	1,470.7	1,351.70
Sugarcane	4,288.00	870.46	94.1	776.36	269.6	600.82
Cassava	1,526.58	854.88	102.0	752.88	377.6	477.28
Kenaf	131.01	387.79	66.4	321.39	412.9	-25.14

Note : gross margin 1 = value - total cash cost

gross margin 2 = value - total variable cost

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Table 31 Gross Margin per rai on individual crops, zone 2, 1976.

Crops	Yield (kg/rai)	Value (฿/rai)	Cash cost (฿/rai)	Gross margin 1 (฿/rai)	Total vari. cost (฿/rai)	Gross margin 2 (฿/rai)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<u>First season</u>						
Rice	140.80	154.88	12.6	142.28	382.5	-227.62
Glutinous rice	142.57	356.43	44.5	311.93	170.8	185.63
Cassava	1,127.02	540.97	318.4	222.57	529.8	11.17
Kenaf	112.16	337.60	28.9	308.70	302.2	35.40

Note : gross margin 1 = value - total cash cost

gross margin 2 = value - total variable cost

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Table 32 Gross Margin per rai on individual crops whole settlement, 1976.

Crops	Yield (kg/rai)	Value (฿/rai)	Cash cost (฿/rai)	Gross margin 1 (฿/rai)	Total var. cost (฿/rai)	Gross margin 2 (฿/rai)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<u>First season</u>						
Rice	112.35	123.59	12.3	111.29	328.4	-204.81
Glutinous rice	120.32	300.80	47.1	253.70	178.0	122.80
Groundnut	700.00	2,548.00	536.0	2,012.0	1,976.0	572.0
Tobacco (Turkish)	156.80	2,822.40	368.8	2,543.60	1,470.7	1,351.70
Sugarcane	4,283.0	870.46	94.1	776.36	269.64	600.82
Cassava	1,458.62	802.24	133.8	668.44	403.5	398.74
Kenaf	127.18	377.72	58.7	319.02	390.5	-12.78

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Table 33 Gross Margin per rai on individual crops, outside the settlement, 1976.

Crops	Yield (kg/rai)	Value (฿/rai)	Cash cost (฿/rai)	Gross margin 1 (฿/rai)	Total var. cost (฿/rai)	Gross margin 2 (฿/rai)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
<u>First season</u>						
Rice	150.00	165.00	160.00	5.00	290.0	-125.00
Glutinous	105.77	158.66	61.3	97.36	197.5	- 38.84
Maize	293.33	440.00	18.4	421.60	128.1	311.90
Sugar cane	7,000.00	1,421.00	83.3	1,337.70	225.3	1,195.70
Cassava	644.07	322.04	82.6	239.44	176.3	145.74
Kenaf	139.70	459.61	52.9	406.71	433.0	26.61

Note : gross margin 1 = value - total cash cost

gross margin 2 = value - total variable cost

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Table 34 Average weekly expenditures for household consumption in 1976,
cash and in kind, by agricultural zone.

Unit : Baht

Category	Settlers									Non-settlers		
	Zone 1		Zone 2		Total							
	cash	in kind	total	cash	in kind	total	cash	in kind	total			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1. meat	11.5	4.5	16.0	20.0	0.6	20.6	13.63	3.55	17.18	20.7	2.5	23.2
2. fish	6.5	9.8	16.3	14.2	16.2	30.4	8.41	11.41	19.86	13.5	13.5	27.0
3. vegetables	2.3	6.9	9.2	1.9	4.0	5.9	2.22	6.19	8.41	6.3	3.0	9.3
4. fruits	1.1	8.4	9.5	0.9	3.8	4.7	1.03	7.20	8.23	3.0	1.3	4.3
5. sugar	1.7	-	1.7	3.1	-	3.1	2.02	-	2.02	1.7	-	1.7
6. spices	1.1	-	1.1	2.1	-	2.1	1.33	-	1.33	3.0	-	3.0
7. non-alcoholic drinks	0.7	-	0.7	1.9	-	1.9	1.01	-	1.01	2.4	-	2.4
8. alcoholic drinks	0.6	-	0.6	9.6	-	9.6	2.87	-	2.87	17.8	-	17.8
9. cigarette	1.5	4.6	6.1	5.6	7.0	12.6	2.48	5.20	7.68	6.2	3.0	9.2
Total	27.0	34.2	61.2	59.3	31.6	90.9	35.04	33.55	68.59	74.6	23.3	97.9

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Table 35 Average monthly consumption expenditures per farm household
by zone , 1976.

Unit : $\text{฿}/\text{farm}$				
Type of expenditures	Settlers			Non-settlers
	Zone 1	Zone 2	total	
(1)	(2)	(3)	(4)	(5)
A. <u>Cash expenditures</u>				
rice	234.61	56.40	190.06	27.50
cereal	3.57	3.08	3.45	0.50
fuel	10.44	0.12	7.86	-
kerosene	13.49	11.76	13.06	5.80
newspaper	7.05	31.12	13.07	3.00
dry battery	7.15	6.12	6.89	10.50
soap	9.01	8.20	8.81	71.40
tooth paste	10.09	13.08	10.84	9.10
detergent	11.89	11.44	11.78	14.20
charcoal	2.55	1.76	2.35	4.50
total	309.87	143.08	268.17	146.50
B. <u>Expenditures in kind</u>				
rice	29.93	181.84	67.91	225.90
charcoal	13.36	14.40	13.62	14.70
total	43.29	196.24	81.53	240.60
Grand total	353.16	339.32	349.70	387.10

Table 36 Average annual consumption expenditures per farm household
in 1976 by zone.

Unit : Baht per h.h.

Category	Settlers			Non-settlers
	Zone 1	Zone 2	total	
(1)	(2)	(3)	(4)	(5)
1. Food (eating out)	184,80	317,20	217,90	624,00
2. Travelling exp.	292,47	387,28	316,17	582,00
3. Clothing	882,80	802,00	862,60	840,00
4. Housing	462,67	134,80	380,70	2,100,00
5. Furniture	17,40	-	13,05	-
6. Ornaments	59,64	29,20	52,03	25,00
7. Medical care	821,87	565,20	757,70	867,00
8. Educational exp.	141,67	88,48	128,37	1,203,70
9. Merit making	343,67	467,60	374,65	270,50
10. Ceremony	273,87	564,40	346,50	133,00
11. Gifts	18,13	8,00	15,60	-
12. Amusement	134,32	50,40	113,34	202,20
Total	3,633.29	3,414.56	3,578.61	6,856.20

Table 37 Percentage distribution of households by silk worm rearing status, 1976.

Category	Settlers			Non-settlers
	zone 1	zone 2	Total	
(1)	(2)	(3)	(4)	(5)
1. Traditional silk worm rearing	50.67	36.00	47.00	50.00
2. PWD's sericulture project	4.00	-	3.00	-
3. USOM's sericulture project	-	-	-	-
4. Will soon join the project	6.67	-	5.00	-
5. Stop rearing silk worm	8.00	-	6.00	20.00
6. Never reared	30.67	64.00	39.00	30.00
Total	100	100	100	100

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Table 38 Percentage distribution of heads of farm households by reasons for not joining the sericulture training program, 1976.

reasons	zone 1	zone 2	total
(1)	(2)	(3)	(4)
1. too old	5.41	-	4.08
2. busy with other work	3.51	-	10.20
3. afraid of being in debt	4.05	-	3.06
4. family member already joined	5.41	-	4.08
5. project not yet started	5.41	8.33	6.12
6. unaware of the project	1.35	12.50	4.08
7. not interested	2.70	-	2.04
8. could not grow mulberry	1.35	-	1.02
9. unqualified for training	1.35	-	1.02
10. not yet applied for	1.35	-	1.02
11. quit rearing	-	-	-
12. other	5.41	4.17	5.10
13. no answer	4.05	-	3.06
14. not applicable	43.65	75.0	55.10
Total	100.0	100.0	100.0

Table 39 Percentage distribution of farm households on reasons children not joining the training project, 1976.

reasons	Zone 1	Zone 2	total
(1)	(2)	(3)	(4)
1. too young	9.33	-	7.0
2. afraid of being in debt	1.33	-	1.0
3. busy with other work	6.67	8.0	7.0
4. unable to receive training	1.33	-	1.0
5. children grown up	2.67	-	2.0
6. project not yet started	4.00	4.0	4.0
7. unaware of the project	1.33	8.0	3.0
8. wait for mulberry growing	-	-	-
9. children not interested	1.33	-	1.0
10. prefer traditional method	1.33	-	1.0
11. family member already joined	-	-	-
12. have no children	-	-	-
13. could not grow mulberry	1.33	-	1.0
14. others	6.67	-	5.0
15. no answer	5.33	12.0	7.0
16. not applicable	57.33	68.0	60.0
Total	100.0	100.0	100.0

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Table 40 Percentage distribution of farms classified by decision made toward sericulture project, by zone, 1976.

Category	zone 1	zone 2	Total
(1)	(2)	(3)	(4)
1. already joined the project	25.68	-	19.00
2. will not join the project	44.59	37.50	42.00
3. not applicable*	29.73	62.50	39.00
Total	100	100	100

Note : *"not applicable" includes 'not aware of', 'not eligible', and 'not ready to join'.

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Table 41 Percentage distribution of settlers by ownership of silk worm rearing house, by zone 1976.

Category	zone 1	zone 2	Total
yes	6.67	4.00	6.00
no	13.33	-	10.00
not applicable*	80.00	96.00	84.00
Total	100	100	100

Note : *not applicable includes those who have not decided to join the sericulture project.

Table 42 Percentage distribution of settlers who are aware of sericulture project classified by opportunity of answering questions about the project to other settlers, by zone, 1976.

Category	zone 1	zone 2	Total
(1)	(2)	(3)	(4)
1. Those who have been asked	6.76	-	5.00
2. Those who have never been asked	17.57	8.33	15.00
3. Not applicable*	75.68	91.67	80.00
Total	100	100	100

Note : *"not applicable" includes those who are not aware of the project themselves and those who are not eligible to join the project.

Table 43 Percentage distribution of settlers by decisions made toward joining the sericulture project after having informed about the project by other settlers, by zone, 1976.

Category	zone 1	zone 2	Total
(1)	(2)	(3)	(4)
1. will join the project	8.11	-	6.00
2. will not joined the project	1.35	4.17	2.00
3. not applicable*	90.54	95.83	92.00
Total	100	100	100

Note : * "not applicable" includes those who have never been informed about the project and those who are not eligible for the project.

Table 44 Awareness of family planning program in the settlement of settlers, by source of information and by zone, 1976.

Unit : %

Category	Settlers			Non-settlers
	zone 1	zone 2	Total	
(1)	(2)	(3)	(4)	(5)
private source	-	-	-	-
government source	44.00	56.00	47.00	70.00
unaware	42.67	40.00	42.00	20.00
not applicable (no need of the program)	13.00	4.00	11.00	10.00
Total	100	100	100	100

Table 45 Percentage distribution of settlers by form of birth control practiced by zone, 1976.

Category	Settlers			Non-settlers
	zone 1	zone 2	Total	
(1)	(2)	(3)	(4)	(5)
not practiced	61.33	60.00	61.00	70.00
abstinence	-	-	-	-
female sterilization	10.67	4.00	9.00	-
male sterilization	1.33	-	1.00	-
IDU	10.67	4.00	9.00	30.00
condoms	-	4.00	1.00	-
injection	-	-	-	-
pills	10.67	24.00	14.00	-
traditional medicine	1.33	-	1.00	-
others	2.67	4.00	3.00	-
not applicable	1.33	-	1.00	-
Total	100	100	100	100

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Table 46 Percentage distribution of farm households by number of member migrated out 1976.

Category	Settlers			Non-settlers
	Zone 1	Zone 2	Total	
(1)	(2)	(3)	(4)	(5)
1) Farm h.h. with no member migrated	58.7	60.0	59.0	60.0
2) Farm h.h. with member migrated	41.3	40.0	41.0	40.0
No of member migrated :				
1	18.7	24.0	20.0	20.0
2	13.3	4.0	11.0	20.0
3	4.0	4.0	4.0	-
4	1.3	-	1.0	-
5	-	-	-	-
6	2.7	4.0	3.0	-
7	1.3	4.0	2.0	-
8	-	-	-	-
Total	41.3	40.0	41.0	40.0

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Table 47. Percentage distribution of problems by farmer group, 1976.

Problems	Settlers			Non-settlers
	zone 1	zone 2	Total	
(1)	(2)	(3)	(4)	(5)
<u>About farming</u>				
Weather	62.67	64.00	63.00	80.00
Insufficient capital	100.00	84.00	96.00	30.00
Crop diseases & insects	65.33	76.00	68.00	80.00
Low quality land	40.00	56.00	44.00	20.00
Monopoly from trader	37.33	100.00	38.00	30.00
Agricultural extension	-	-	-	-
<u>General</u>				
Crime	16.00	-	12.00	60.00
Communications	8.00	20.00	11.00	-