CHAPTER 5

INFORMATION FROM THE INTERVIEWED HOUSEHOLDS

Household Characteristics

Household Size - From the 24 samples obtained by household interviews in October 1975, it was found that the number of persons per household ranged from 3 to 11. Most of the households are composed of between 5 and 8 members, and the average number of members per household is 6.6. The distribution in percentages and the histogram and cumulative distribution curve are shown in Table 28 and Fig.32.

Table 28 - Percentage Distribution of the Number of Members per Household

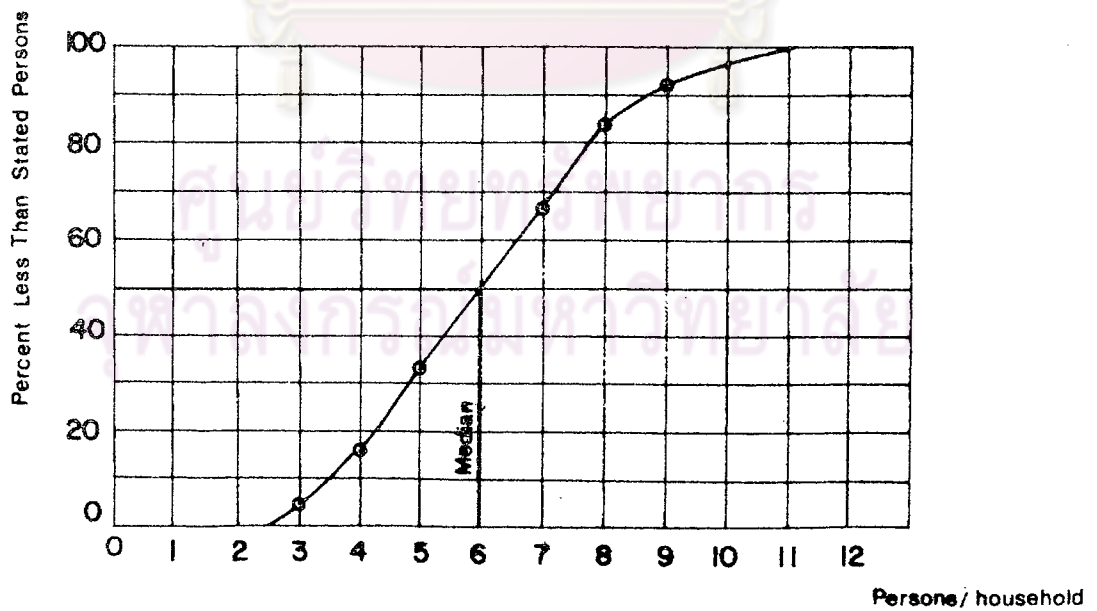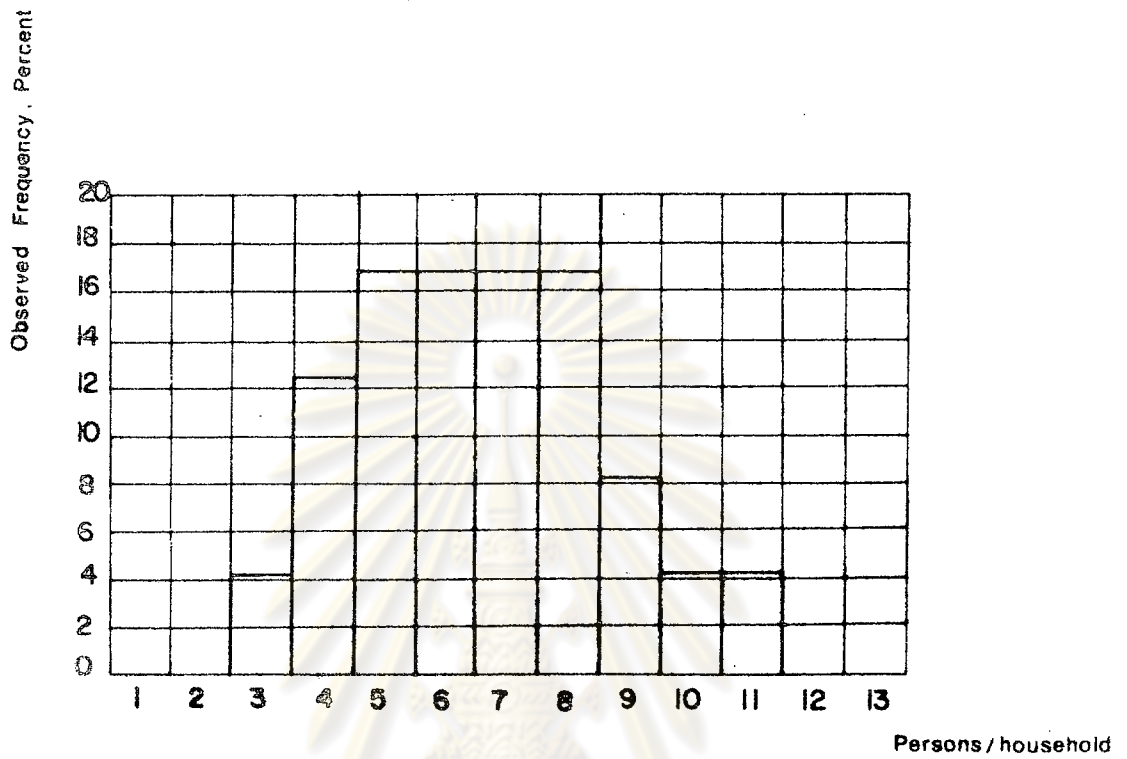| Persons/household	Frequency	Percent	Cumulative Percent
3	1	4.2	4.2
4	3	12.4	16.6
5	4	16.7	33.3
6	4	16.7	50.0
7	4	16.7	66.7
8	4	16.7	83.4
9	2	8.2	91.6
10	1	4.2	95.8
11	1	4.2	100.0
Totals	24	100.0	

Fig. 32 — Histogram and Cumulative Distribution Curve
of the Number of Persons per Household

Members in interviewed households are distributed by age-band as follows. Seven intervals of age were selected for analysis of the age-band distribution. Table 29 shows the distribution by percentage in each age-band, and Fig. 33 shows the histogram and cumulative distribution curve of age-bands.

Table 29 - Observed and Cumulative Frequencies of Ages of Household Members

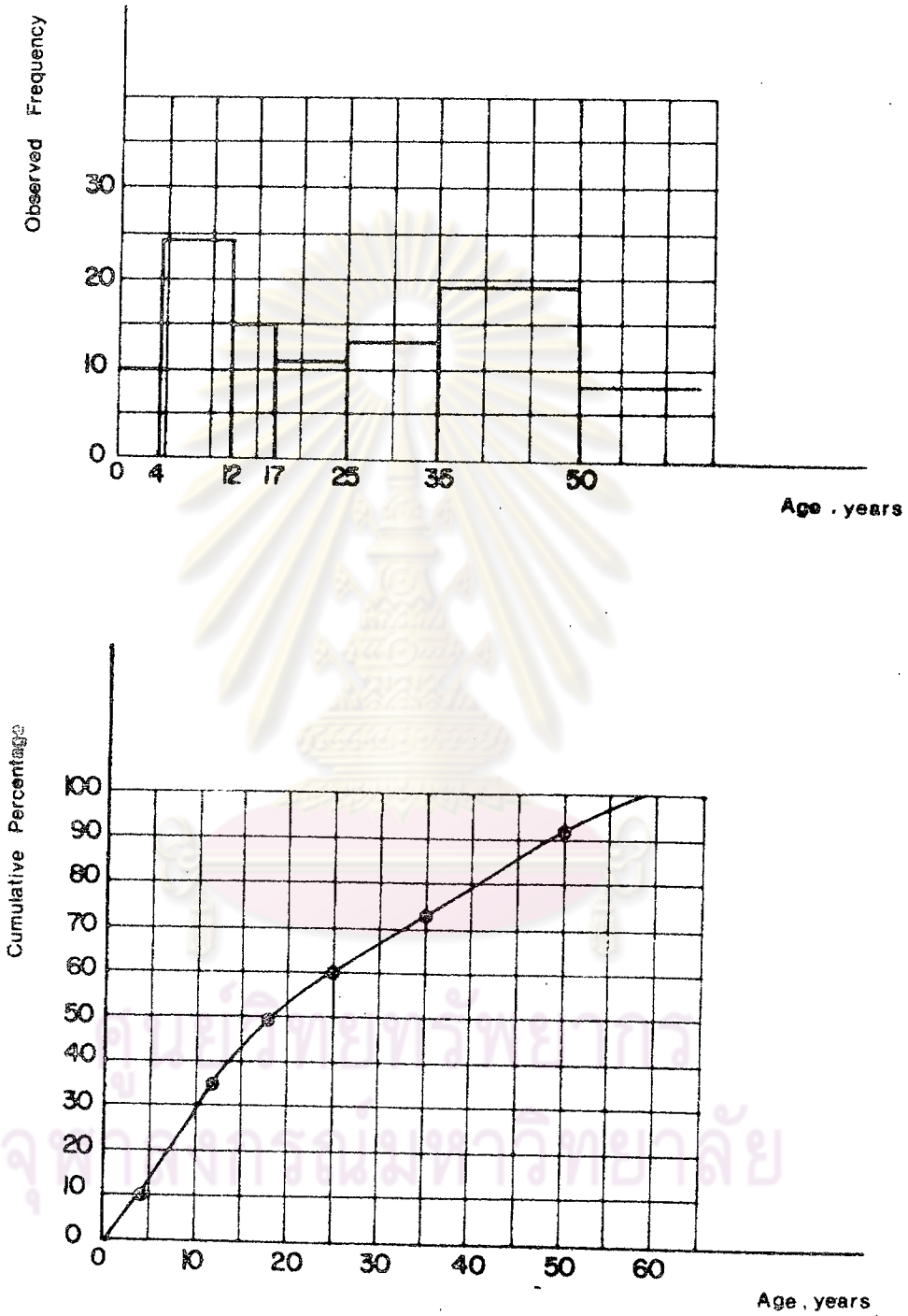| Age-band	Observed Frequency	Percent	Cumulative Percentage
0 - 4	15	10	10
5 - 12	38	24	34
13 - 17	24	15	49
18 - 25	18	11	60
26 - 35	20	13	73
36 - 50	30	19	92
> 50	13	8	100
Totals	158	100	-

Fig. 33 — Histogram and Cumulative Distribution Curve of Residents by Age-bands

From Fig. 33, it may be seen that the most frequently occurring age group (24 percent) is that between 5 and 12 years. From the cumulative percentage distribution, it can be seen that about 50 percent of the population is less than 18 years old. This is indicative of the high growth rate of population in the area.

Level of Education of the Household Heads and Wives

Interviews of farming households in the study area included questions pertaining to the level of education achieved by individual members of each household. In Thailand, the seven years of primary education are designated by P-1 through P-7, being the English-letter equivalent of "Prathom". Subsequent secondary education through five years of schooling is designated by MS-1 through MS-5 (MS for Mathyom Suksa).

From Tables 30 and 31, it can be concluded that substantial fractions of the heads of households and house-wives finished the level of P-4. This has been the minimum education requirement under the Thai Government. (But the requirement has been recently raised to P-7). It may be noted that household heads had a higher average of level of education than the housewives. In the sample, there were

Table 30 – Level of Education of Heads of Households

Level of Education	f	Percent	Cum. Percent
None	0	0	0
P1	0	0	0
P2	1	4	4
P3	1	4	8
P4	18	75	83
P5-P7	3	13	96
> P7	1	4	100
Totals	24	100	-

Table 31 – Level of Education of Housewives

Level of Education	f	Percent	Cum. Percent
None	2	9	9
P1	0	0	9
P2	1	4	13
P3	1	4	17
P4	19	83	100
P5-P7	0	0	-
> P7	0	0	-
Totals	23	100	-

no heads of households having less than P-1 level of schooling, while 9 percent of the housewives in the sample had no formal schooling. For levels higher than P-4, there were no housewives in this group, but 17 percent of the household heads reported having been schooled above P-4 level. A possible reason for the male heads of households having received a better education than the housewives may have come from the attitudes and policies of their parents. In the rural areas, and in the poorer social strata, it is usually thought that women do not need high levels of education because they are expected only to work at home -- either cooking, housekeeping, or inside-house business. The data of these two tables show a behavior similar to that observed generally in other rural areas of Thailand.

Transportation

   Owned Vehicles: It was found that motorcycles are the most common type of vehicle owned by the farmers in the study area. About 25 percent of total vehicles are motorcycles, 19 percent are bicycles, and 17 percent are trucks. Motorcycles are the most popular vehicle because they can travel along small tracks and in the mountainous terrain with reasonable speed. The cost of buying a motorcycle is within the financial capacity of many farmers. Operating cost and maintenance expenditures are low compared with those of 4-wheeled vehicles. Farmers can use motorcycles to carry farm products to markets, and these vehicles play an important role in personal transportation. Table 32 lists the distribution of ownership of the eight classes of vehicles encountered in the survey.

Table 32 - Percentage Distribution of Vehicles Owned by Farmers

Type of Vehicles	Frequency	Percent
BC	12	19
MC	16	25
Pick-up	3	5
PC	6	9
Truck	8	13
Bus	11	17
Tractor	1	2
Ox-Cart	6	10
Totals	63	100

Travel Around the Farm: Farmers' trips from houses to farms, distributed by mode of transport, are shown in Table 33. There were eight means of transport used in the study area: walking, bicycle, motorcycle, pick-up, passenger car, truck, bus, and ox-cart. The most significant mode was motorcycle; it was found that 36 percent of total trips were served by motorcycles. This information also agrees with the data shown in Table 32, the motorcycle being the most popular type of

vehicle owned by the farmers in the study area. On the Ban Khai-Ban Bung feeder road, the presence of motorcycles is ubiquitous.

The second type of vehicle, less significant than the motorcycle was the passenger car. About 19 percent of total trips were made by passenger cars. It must be recognized that Land Rovers and Jeeps were classed as passenger cars. These kinds of vehicles are also suitable in travelling on bumpy roads.

Table 33 - Farmers' Trip from Houses to Farms, Distributed by Mode of Transport

Usual Mode Used	Frequency	Percent
Walk	3	8
BC	6	16
MC	13	36
Pick-up	2	6
PC	7	19
Truck	1	3
Bus	2	6
OX-Cart	2	6
Totals	36	100

House to Farm: Travel Time and Distance

Transport modes used from house to farm can be grouped into four types: walking, bicycle, motorcycle, and motor car. The actual distances reported by 20 respondents in the farm interview survey are listed by mode in Table 34. Walking can be used where the distance from house to farm is not too far, on averge 2.3 km. If the distance is further, the farmers usually use other modes. From Table 34, it can be seen that the average distance for using a bicycle is 8 km, motorcycle is 11.5 km, and motor car is 12.6 km. By using reasonable but arbitrary time factors -- 15 min/km for walking, 8 min/km by bicycle, 4 min/km by motorcycle and motor car -- the average distance corresponding to each mode of transport can be converted to average travel time; these are also shown in Table 34.

Table 34 - Distance and Travel Time from House to Farm by
Mode of Transport

Transport Modes	Reported Travel Distance, D, km	Average Distance, $\bar{D}$, km	Time Factor, min/km	Average Time Spent, min
Walking	1, 2, 4	2.3	15	34
Bicycle	8, 8	8.0	8	64
Motorcycle	4,5,8,8,15,15,15,22	11.5	4	46
Car	5,8,8,15,15,15,22	12.6	4	50

Most Useful Vehicle

The results from interviewing 24 farmers in the study area regarding the most useful vehicle for them to own are shown in Table 35. The largest fraction (about 45 %) of the farmers thought that a truck was the most useful vehicle. Less useful vehicles were reported to be: motorcycle (17 %), tractor (17 %) pick-up truck (13 %), and bus (8 %). The concept of usefulness of a truck doubtless arises because trucks can transport farm supplies for cultivation and, subsequently, farm products. But, the research found that

the most popular vehicles owned by farmers are motorcycles, not trucks. This is paradoxical. The farmers owned motorcycles, although they said that the most useful vehicles are trucks. The answer is, of course, that trucks cost large amounts of money to purchase; only rich farmers can own trucks. On the other hand, the capital investment in a motorcycle is relatively low and its operating costs are low. It appears that this is a display of the farmers' evaluating the cost-effectiveness of their vehicle purchases.

Table 35 - Farmers' Opinions as to Most Useful Vehicle to be Owned

Type of Vehicle	f	Percent
Motorcycle	4	17
Pick-up	3	13
Truck	11	45
Bus	2	8
Tractor	4	17
Totals	24	100

Farmers' Preference of Bus, Minibus, or Pick-up for Trips to Town

A question about the preferred type of service among bus, minibus, and pick-up was asked of the 24 farmers in the home interviews. It was found that 22 farmers (92 %) indicated their preference for bus service while only one farmer preferred pick-up service and none chose the minibus. They pointed to the advantages of using bus service: travelling by bus provided more comfort than either a minibus or a pick-up. Regarding the interior headroom, they said that they felt distressed while sitting in a minibus, but this feeling did not occur on a bus. Travelling by bus was thought to be safer than by minibus or pick-up. Another reason for preferring the bus was that the fare is cheaper than on a minibus. At present, there is more frequent bus service than minibus service in the study area; this gives the farmers a greater chance to use a bus instead of a minibus. Table 36 shows the farmers' preference of type of service among bus, minibus, or pick-up for trips to town.

Table 36 - Farmers' Preference of Bus, Minibus, or Pick-up
for Trips to Town

Type of Service	f	Percent
Bus	22	92
Minibus	0	0
Pick-up	1	4
Others	1	4
Totals	24	100

Problems in Transportation

Farmers interviewed in the study area were asked about
the problems of transportation associated with their routine
activities. The result are summarized in the following
paragraphs.

Vehicle safety: 21 of the 24 farmers (88 %) stated that
the vehicles presently used were safe for travel. They
reported being satisfied with the vehicle type, size, and
other characteristics of the vehicles. Only 3 in 24 farmers
(12 %) were not satified. They complained that the vehicles
were too old and that they were not safe.

Traffic safety: Of the interviewed farmers, 67 percent stated that travel was not safe on the roads in the study area. Their ideas for improving the roads were distributed in six categories as shown in Table 37.

Table 37 - Road Improvements Suggested by the Farmers

Type of Improvement	f	Percent
Resurfacing	13	50
Widening	5	19
Short cut	3	11.5
Drainage improvement	3	11.5
Require standard designs	1	4
Bridge improvement	1	4
Totals	26*	100

*Total greater than 24 interviews because two respondents each suggested two improvements.

Problems in Travelling at Night-time

All of the interviewed farmers agreed that travelling at night caused them considerable trouble. They complained about the difficulty of driving their own vehicles on the feeder roads at night, and it was very hard to find a bus or minibus after dark. Table 38 describes the problems associated with travelling at night.

Table 38 - Problems in Travelling at Night

Problems	f	Percent
Robbery	19	58
Lack of bus service	8	24
Travel too slow	3	9
Darkness	3	9
Totals	33*	100

*Total greater than 24 interviews because several respondents stated more than one problem.

It can be seen that a large fraction of the farmers
(58 %) were fearful of robbery. This indicates that it is
very dangerous to travel at night. This factor would tend
to decrease the usefulness of the feeder road. This
information should be helpful to the provincial Governors'
thinking in improving the quality of life in the rural areas.

Farming

Cultivated Area: There are two main crops cultivated
in the study area: cassava and sugar cane. These two crops
are grown widely in Changwads Rayong and Chonburi. The
planted area of these two main crops cultivated by the 24
farmers interviewed were analyzed to see which one was the
favorite crop. Cultivated areas of cassava and sugar cane
for 24 farmers interviewed in the study area are shown in
Table 39. From these data, it was found that the number of
farmers who planted cassava was more than the numbers who
planted sugar cane in the crop year studied. But the total
area of sugar cane cultivated was much larger than the area
of cassava planted. From Table 39, it may be seen that only
one of the 24 interviewed farmers did not grow cassava,
while 10 of the 24 farmers did not grow sugar cane. The total
area of cassava planted by the 23 interviewed farmers was

Table 39 - Cultivated Area of Cassava and Sugar Cane

Interview No.	Cassava Cultivated Area, rai	Sugar Cane Cultivated Area, rai	Total Cultivated Area, rai
1	20	0	20
2	18	0	18
3	10	0	10
4	250	580	830
5	57	0	57
6	100	310	410
7	40	0	40
8	50	100	150
9	7	20	27
10	30	0	30
11	55	0	55
12	8	0	8
13	100	100	200
14	30	100	130
15	10	20	30
16	60	200	260
17	50	110	160
18	0	450	450
19	50	300	350
20	60	90	150
21	25	40	65
22	10	0	10
23	10	0	10
24	100	50	150
Totals	1,150	2,470	3,620
Averages* Arith. mean	48	103	151
Median*	39	39	64

* Arithmetic mean and median of all interviewed farmers,
  including those who did not plant one of these two crops.

1150 rai.*, and the total area of sugar cane planted by the 14 farmers was 2470 rai. The range of size of the cassava farms was between 7 and 250 rai; the average was 48 rai, the median was 39 rai. The sugar cane planted area ranged from 20 to 580 rai; the average was 103 rai, the median was 39 rai. The total cultivated area of these two main crops was 3620 rai, the average of total area was 151 rai, and the median was 64 rai. These data provide an insight to the scale of farming being practiced in the study area.

Beside these two crops, other crops are also grown in this area, but these are only of minor importance compared with cassava and sugar cane. Because only a few households planted other crops, the present study has not attempted to analyze the characteristics of these minor agricultural activities.

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* 1 rai = 1600 sq.meters = 0.396 acre = 0.16 hectare