
CHAPTER IV

LOAN AND LOAN REPAYMENT

4.1 Agricultural Credit Sources

Agricultural credit has long been existence in Thailand as a tool for developing the agricultural sector. Agricultural credit is generally provided to farmers to buy inputs for farm expansion and operations such as purchasing equipment, land, seed, fertilizer, pesticide, livestock units, feeds, medicine etc. and to improve farm technology. Therefore, agricultural credit is an important input for the improvement of farm efficiency. Agricultural credit can be obtained from both non-institutional and institutional credit sources. The government was greatly concerned with the farmers' credit needs since the majority of the population in the country are farmers. Therefore, the government established many cooperatives to provide loans with low interest rate to the farmers in the past. Since these cooperatives has limited amount of money to lend out, the government had to urge other monetary institutions like commercial banks, Bank for Agriculture and Agricultural Cooperatives (BAAC), and agricultural cooperatives to provide loans to farmers with reasonable interest rates (Thanee *et al.*, 1982).

Most of interviewed farmers in the study areas needed to borrow money to operate their farms because they could not afford the high capital investment during the establishment their farms. Dairy farmers borrowed money from available sources including institutional and non-institutional sources of credit.

4.1.1 Institutional Source of Credit

The major institutional sources of credit are commercial banks, agricultural cooperatives and Bank for Agriculture and Agricultural Cooperatives (BAAC). Among them, BAAC has the largest share providing 80% of agricultural loans (Onchan, 1972). BAAC was

established in 1966, to replace the former Bank for Cooperatives with paid-up capital of 1 million baht subscribed by the government. The primary objective of BAAC is to provide a constantly expanding agricultural credit service. BAAC carries out the lending operations through agricultural cooperatives, farmers' groups, and directly to individual farmers who are not members of agricultural cooperatives or farmers' groups.

At the initial stages, BAAC has confined its lending operations to short and medium term credit, most needed by small and medium sized farmers. In 1974, BAAC started a new pilot supervised credit program so as to supply agricultural credit with technical assistance among the sub-marginal farmers. To provide credit facilities to individual farmers, the bank operates through branches established in agricultural production provinces. In 1974, in order to cope with the fertilizer crisis, BAAC also provided financial assistance to agricultural cooperatives so as to cooperate with the Ministry of Agriculture and Cooperatives in acquiring and distributing assess fertilizer. In 1974, with additional money from the Farmers Aid Fund, BAAC provided long-term credit to agricultural cooperatives for improve storage facilities for rice and other produce. Loans granted by BAAC in 1973 amounted to 1,022.8 million baht, about 75 percent being direct lending to individual farmers (FAO, 1975).

In the study area, the survey result revealed that the main credit source of the farmers was BAAC which covered nearly all of dairy farmers (98%). Because of its low interest rate and long pay back period than other commercial banks. BAAC disbursed loans in term of cash and kinds such as fertilizer, pesticide, seed etc. Furthermore, BAAC has some special activities to cooperate with other government organizations in term of special projects such as the reduction of cassava growing areas by replacing rubber plantation, shrimp and dairy farming promotion.

In the Dairy Farming Promotion Special Project, the Department of Agricultural Cooperative (DAC) cooperated with BAAC to disburse credit to dairy farmers at a lower interest rate of 9 percent per year. This special project had the objective to increase raw

milk production in the country and replace the agricultural activities which has marketing and production problems such as cassava and rice production. DAC set a target to increase 2,000 dairy cows per year and 400 dairy farmers with the average of 5 dairy cows per household during 1988-1991 in the country. To expand the credit facility, the Dairy Farming Promotion Special Project began in 1988 targeting to pay back all till 1999. The preliminary report on the operation of this project during 1988-1993 covering 12 areas of the country found that this project benefited 521 dairy farmers distributing 2,121 dairy cows. During the same period the total loan disbursement was 96.12 million baht, 54 million baht of which was from DAC and the remaining was from BAAC (Table 4.1).

4.1.2 Non-Institutional Source of Credit

Non-institutional sources of credit do not have obviously formal regulations being money borrowed from relatives, family members, merchants, neighbors etc. However, it is important for farmers because they can get credit easier than the institutional source. It does not require complicated procedure to borrow money. Also, the loan obtained from government institutional credit might not be enough for the farmers' needs and they had to seek additional loan from non-institutional credit sources. Non-institutional credit can be classified in two groups; a) non-commercial lenders such as neighbors and relatives b) commercial money lenders such as merchants, landlords, traders and local shop owners that they charge higher interest rate and shorter pay back period than the first group as an assurance of high risk. In the study area, about 2% of the dairy farmers obtained credit from their relatives.

Table 4.1 The twelve Dairy Farming Promotion Special Project of BAAC

NO.	Dairy farming promotion project	Dairy farmers (hh)	No. of dairy cows	Amount of loan (million baht)
1	Nikhom Lam Taklong in Nakhon Ratchasima province	19	95	3.8
2	Pattalung province	35	105	5.3
3	Nikhom Praputtabat 3 in Saraburi and Ropburi province	69	344	13.97
4	Land reform 2 in Saraburi province	73	219	9.74
5	Nakhon Pathom province	97	485	20.97
6*	Ban Pa-Teong in Chiang Mai province	25	75	3.09
7	Khon Kaen province	32	150	6.41
8	Progressive farmers in Khon Kaen province	27	81	5.22
9	Samchuke in Suphunburi province	55	260	11.33
10	Progressive farmers in Saraburi province	49	147	9.63
11	Samutsakhon province	20	100	4.07
12	SukhoThai province	20	60	2.59
Total		521	2,121	96.12

Source: Department of Agriculture and Agricultural Cooperatives, 1993.

Note: * Ban Pateong is in On-Tai subdistrict, San Kamphaeng district.

4.2 Loan Collateral

Most of institutional credit sources require land and/or group assurance as collateral. Land is the most important kind of loan collateral that most of interviewed

farmers who borrowed money from BAAC (68%) used land collateral while 32 % of the farmers used group assurance. If land collateral is used, the amount of loan is dependent on the value of land. Farmers can borrow money not more than 50% of the land value. As for group assurance, the members are selected by the lender and a leader is elected by the members. As a condition to loan eligibility, each member of group agrees to assume liability for loans acquired by other members of the group. The liability is limited to the ratio of loan to the total loan for which the group is jointly liable such as farmers can borrow with the maximum of 50,000 baht among 5 persons. For group assurance, the lender gains two possible advantage from group assurance including a) a reduction of administrative costs, especially after the group has been formed b) socio-economic sanctions to ensure repayment of joint liability loans. Group assurance permits lending to those who have no land to pledge as collateral.

However, group loan assurance have a limited credit amount that it might be not enough for farmers' capital need. Therefore, land is important for farmers to take loan, particularly dairy farmers who need high capital investment. Most of interviewed farmers owned only small piece of land and some of farmers have no land property right. Dairy farmers with no land borrow a limited amount of loan. In addition, if land did not have the property right, farmers could not borrowed money as per their requirement. So that the interviewed farmers faced capital constraint which negatively affects on productivity and expansion their farms.

For the non-institutional credit sources, groups of non-commercial lenders do not have loan security but they will normally trust each other. But groups of commercial lenders have many kinds of loan security such as asset security, agricultural production security etc. In the study area, only 2% of dairy farmers borrowed money from their relatives which need no collateral.

4.3 Pay Back Period

Pay back period differs in each credit source and the amount borrowed. Non-institutional credit sources have flexible pay back period depending on decision of the lenders. Credit from non-commercial lenders have a longer period than that from the commercial lenders.

For institutional credit sources, BAAC has 3 types of loans based on pay back period a) short term b) medium term c) long term. Furthermore, BAAC term pay back period of loan is also dependent on the amount of loan and the ability of farmers to pay back the loan.

4.3.1 Short-Term Pay Back Period

Short term loans are provided for operating expenses in one crop season i.e. wages, purchase of seed, fertilizer and feed, etc.. Farmers have to pay back money within one year but not longer than one and a half years in special cases such as storms, flooding etc.

4.3.2 Medium-Term Pay Back Period

Medium term loans are used for purchasing capital goods such as investment in cattle farming, purchase of land, house and machinery. Farmers have to pay back within 3-5 years but not longer than 5 years.

4.3.3 Long-Term Pay Back Period

The objectives of long-term are for repayment old debt and high capital investment in permanent assets such as house construction and other, buying additional new land etc. Farmers have to pay back within 10 years but not longer than 15 years or not longer than 20 years in special cases such as flooding, storm etc.

In the study area, most of dairy farmers obtained credit in term of medium-term and long-term loan. Thirty nine percent of interviewed farmers who borrowed money from BAAC had to pay back within 3-5 years (medium term loans), 38% had long term loans and 23% had short term loans.

4.4 Interest Rate

Interest rates in Thailand are determined by a combination of control and market forces. The most difficult interest rates to compute are those charged by non-institution credit lenders, including merchants, money lenders, friends, relatives, etc. These rates vary by sources, risk of loan, borrowers, region and purpose of the loan, averaging 25% per year in Chiang Mai province (Thanee *et al.*, 1982). There are some reports that some borrowers pay a much higher rate.

In 1979, the Thai Usury Law sets a maximum 15 percent interest rate for institutional loan. Loans to agro-business cannot exceed 10.5%, while loans to farmers have a maximum rate of 12% (Meyer *et al.*, 1979). These rates change slightly as time passes.

At present, BAAC sets three different types of interest rate based on the amount of loan sanctioned; a) if the amount of loan is less than 60,000 baht, the interest rate is 9% per year b) if the amount of loan is 60,000 baht to 1 million baht, the interest rate is 12.25% per year c) if the amount of loan is more than 1 million baht, the interest rate is the highest i.e. 14.5% per year. However, in case of agricultural cooperatives the interest rate charge is 3 percent less than to individual farmers and agro-business as mentioned earlier.

The main credit source for dairy farmers is BAAC where they obtained credit from BAAC the average interest rate of 10.25% per year in the study area. The less important credit sources were relatives with no interest rate.

4.5 Indebtedness and Reasons for Obtaining Loan

Sixty percent of interviewed farmers borrowed money to invest during the establishment phase in their farm. Twenty three percent of them borrowed all of initial investment averaging 109,565 baht per household. As for another, 37% of them borrowed some part of initial investment averaging 60,729 baht per household (Table 4.2).

The rest (40%) of the dairy farmers did not borrow money for the initial investment and their own capital investment for the establishment of dairy farming was averaging 34,500 baht per household (Table 4.2). However, it was found that all of them later borrowed money for subsequent farm investment and operating costs such as buying additional cows, machinery, feeding stuff, medicine, etc. The average amount of loan was 21,592 baht per household (Table 4.3). Furthermore, the dairy farmers who borrowed money from their relatives for initial investment later borrowed money from BAAC for subsequent farm investment and operating cost also, averaging 17,500 baht per household.

Table 4.2 Amount of initial investment in the study area

Source of capital	San Kamphaeng		King Mae On		Average
	Chae-Chang	On-Tai	On-Klang	On-Neor	
	------(baht/hh)-----				
Own capital	24,181 (66.7)	0 (0)	37,500 (33.3)	66,333 (50)	34,500 (40)
Borrow all capital	57,500 (6)	112,143 (56)	160,000 (22.3)	65,000 (12.5)	109,565 (23)
Borrow some capital	61,111 (27.3)	92,727 (44)	26,500 (44.4)	97,500 (37.5)	60,729 (37)

Note: Numbers in parentheses () are % of hh

Table 4.3 Amount of subsequent investment and operating costs

Area	Average	Std. Dev.	Min.	Max.	No. of hh
San Kamphaeng					
Chae-Chang	21,122	33,304	5000	140,000	22
On-Tai	0	0	0	0	0
King Mae On					
On-Klang	18,833	10,590	5,000	30,000	6
On-Neor	23,833	21,340	5,000	76,000	12
Total	21,593	27,256	5,000	140,000	40

The usage of loan is best examined with loans classified according to credit term i.e. short, medium, and long term loan. Of the medium-term loans, most of interviewed farmers (48.5%) used loan money mainly to buy cows, equipment such as mowers, water pumps, milk containers etc., making bio-gas and purchasing land and household expenditure or building houses. Of the long-term loan, 46.5% of interviewed farmers obtained credit for building dairy barns, purchasing more land, repayment old debts, purchasing large number of dairy cows (>5 dairy cows) and the other 5 % of interviewed farmers obtained short-term loan for wages, purchasing seed and concentrate feed (Table 4.4).

Furthermore, it was found that most of interviewed farmers (95%) who borrowed money from BAAC used loan in dairy farming that mentioned above. There were only 5% of interviewed farmers used loan in the other activities to pay for such expenditure as household expenditure or fixing and building houses etc.

Table 4.4 Reasons for obtaining loans from BAAC

Terms of loan	Dairy farmers (%hh)	Reason for obtaining credit
- short-term	5	- wage, purchasing seed and concentrate feed.
- medium-term	48.5	- buying cows, equipments such as mowers, water pumps, milk containers etc., purchasing land and household expenditure.
- long-term	46.5	- building dairy barn, house and buying large no. of dairy cows (> 5 dairy cows).

4.6 Loan by Farmers' Experience

Dairy farmers who have dairy farming experience of 1-5 years (36%) borrowed the highest amount of loan averaging 102,444 baht per household and dairy farmers who have the experience more than 10 years (28%) obtained the lowest credit, averaging 21,153 baht per household (Table 4.5). This is because most of the experienced with more than 10 years started their farms by raising dairy cows with a small herd size having about 1-2 heifers. After that, they expanded their farms by their own female calves. On the other hand, most of new dairy farmers (1-5 years of experience) started their farm by raising the dairy cows with large herd size with higher initial investment for buying dairy cows which needed a high amount of money not less than 75,000 - 100,000 baht for 3-4 cows (excluding dairy barns and the other expenditure). As for the other group, the dairy farmers who have the experience of 6-10 years (36%) obtained credit averaging 66,650 baht per household (Table 4.5).

Table 4.5 Loan by different farmers' experience in the study area

Experience (years)	Mean	Std. Dev.	Minimum	Maximum	Dairy farmers (%hh)
1-5	102,444	99,554	9,000	3900000	36
6-10	66,650	56,089	5,000	160,000	36
>10	21,153	16,489	5,000	76,000	28

4.7 Loan by Farm Size

Dairy farmers who have large farm size (>20 cows) borrowed the highest loan amount averaging 202,500 baht per household and the dairy farmers who have medium farm sized (1-10 cows) (48%) obtained the lowest loan amount averaging 54,618 baht per household. The dairy farmers with small farm size (50%) have the average credit 73,060 baht per household (Table 4.6). It can be seen here that the dairy farmers who have small farm size obtained slightly more credit than those with medium farm size. Because from the survey result, it was found that most of dairy farmers who have medium farm size are experienced dairy farmers (> 10 years) and started their farm with small herd size and expanded from their own female calves. Most of the experienced dairy farmers used lower capital investment and borrowed money less than the new dairy farmers in the beginning of their farms.

Table 4.6 Loan by farm size of dairy farmers in the study area

Farm size	Mean	Std. Dev.	Minimum	Maximum	Dairy farmers (%hh)
	------(baht/hh)-----				
Small (1-10)	73,060	57,394	5,000	200,000	50
Medium (11-20)	54,618	78,656	5,000	350,000	48
Large (>20)	202,500	265,165	15,000	390,000	2

4.8 Loan Repayment

Repayment both of the principle and interest were made in cash. Most of dairy farmers paid back money per year or per month installment basis depending upon the amount of loan and pay back period. If dairy farmers borrowed a high amount money, they have to pay back with long pay back period about 10-15 years. Besides repayment in cash, dairy farmers can pay back loan through dairy cooperatives. The amount of payment that the dairy farmers get from the cooperatives for their milk will be deducted to pay back to the bank. Because of this payment scheme, both the farmers as well as the bankers are benefited. Since the farmers can pay back the loan in time and the bank will be assured for their loan. But those with poor milk production will suffer from this scheme because the amount they get after deducting the amount for loan repayment certain percentage will not sufficient to make up for day to day operating costs.

4.8.1 Loan Repayment in Different Sites in the Study Area

The average amount of outstanding loan was 27,526 baht per household in the study area. Some dairy farmers could pay back with no debt but some dairy farmers still have outstanding loan with the maximum 350,000 baht per household. From the Table

4.7 shown that dairy farmers in On-Tai have the highest outstanding loan average 47,898 baht per household that most of them borrowed money through BAAC special project with large size of loan.

Table 4.7 Outstanding loan per household of dairy farmers in the study area

Area	Dairy farmers (hh)	Average outstanding loan	Std. Dev.	Min.	Max
----- (baht/hh) -----					
San Kamphaeng					
Chae-Chang	33	18,152	66,593	0	350,000
On-Tai	25	47,898	49,546	0	200,000
King Mae On					
On-Klang	18	31,000	50,616	0	150,000
On-Neor	24	16,591	61,613	0	298,195
Total	100	27,526	59,293	0	350,000

After a loan is due, if the dairy farmers were able to pay back more than 80% (LR > 80%), it is considered that the dairy farmers have good repayment performance. If the dairy farmers were able to pay back 41-80% of total indebtedness (LR = 41-80%), it is considered that dairy farmers have average repayment performance. On the other hand, if the dairy farmers were able to pay back only 0-40% of total loan (LR = 0-40%) that dairy farmers have poor repayment performance.

Loan repayment rate (LR) was calculated as follows:

$$\text{Loan repayment rate (LR)} = \frac{(x_2 - x_4)}{x_2} * \frac{x_3}{(2540 - x_1)} * 100$$

where,

X1 = Year loaned

X2 = Initial loan

X3 = Pay back period

X4 = Outstanding loan

If $X4 = 0$, LR will be 100 and $X1 \neq 2540$

Most of dairy farmers (77%) were able to pay back more than 80% of total loan. Fifteen percent of them were able to pay back 41-80% of total loan but only 8% of them were able to pay back 0-40% of total loan. In general, the dairy farmers in the study area have good repayment performance. Particularly, more than 90% of dairy farmers who have debt in On-Neor and Chae-Chang have good repayment performance that the farmers were able to pay back more than 80% of total loan in the study area. As for the other sites, 77% of the dairy farmers in On-Klang were able to pay back more than 80% of total debt and 44% of the dairy farmers in On-Tai were able to pay back more than 80% of total debt (Table 4.8).

Table 4.8 Loan repayment rate by different sites in the study area

LRR (%)	Area				Total
	Chae-Chang	On-Tai	On-Klang	On-Neor	
	-----(%hh)-----				
0-40	0	24	6	4	8
41-80	9	32	17	4	15
>80	91	44	77	92	77

4.8.2 Loan Repayment by Experience of Dairy Farmers

Among dairy farmers who borrowed money from BAAC, nearly all of the dairy farmers who have experience more than 10 years have good repayment performance and

most of dairy farmers (80%) who have experience between 6-10 years have good repayment performance. About 58 % of the dairy farmers who have experience between 1-5 years have good repayment rate (Table 4.9). So, it can be seen that the dairy farmers who have more experience have better repayment performance than the less experience. However, the dairy farmers who have experience between 1-5 years (16.7%) and 6-10 years (6%) have poor repayment performance as some of them have problem on loan repayment due to probable poor management in dairy farming.

Table 4.9 Loan repayment rate with different farmers' experience in the study area

LRR (%)	Experience (years)		
	1-5	6-10	>10
	-----(%hh)-----		
0-40	16.7	6	0
41-80	25	14	3.6
>80	58.3	80	96.4

4.8.3 Loan Repayment by Farm Size

Most of dairy farmers (88%) with the medium farm size have good repayment performance and 50% of dairy farmers with the large farm size have the lowest good repayment performance. As for 50% of the dairy farmers with large farm size have average repayment performance that they have experience with 2 years of dairy farming (Table 4.10). Furthermore, most of dairy farmers (68%) with the small farm size have good repayment. From the result, it revealed that dairy farmers who have medium farm size have the highest good repayment performance due to most of them are the experience dairy farmers (>10 years) in dairy farming.

Table 4.10 Loan repayment rate by farm size in the study area

LRR (%)	Farm size		
	Small (1-10 cows)	Medium (11-20 cows)	Large (>20 cows)
	-----(%hh)-----		
0-40	14	2	0
41-80	18	10	50
>80	68	88	50