

G. ECONOMY AND RURAL FINANCE

APPENDIX G. ECONOMY AND RURAL FINANCE

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Table G-1 Main macro economic indicators

| | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 |
|----------------------------------|--------|--------|--------|--------|--------|----------|---------|
| Economic growth rate | 8.5 | 8.1 | 8.3 | 8.8 | 8.6 | 6.4 | 4.0**** |
| Gross Domestic Product(GDP) | 982 | 1,113 | 1,250 | 1,430 | 1,670 | 1,776 | 1,847 |
| GDP per capita | 1,725 | 1,943 | 2,154 | 2,434 | 2,807 | 3,005 | 2,500 |
| Manufacturing sector growth rate | 7.2 | 10.4 | 10.5 | 9.2 | 11.8 | 7.3 | 6.6 |
| Unemployment rate | 3.1 | 3 | 2.6 | 2.6 | 2.6 | n.a. | n.a. |
| Consumer Price Index(CPI) | 5.7 | 4.1 | 3.4 | 5.1 | 5.8 | 5.9 | 7.0**** |
| Balance of trade | -2,473 | -2,054 | -2,217 | -2,268 | -3,738 | -4,176 | -3,620 |
| Export | 7,205 | 8,152 | 9,214 | 11,180 | 13,817 | 13,782 | 14,780 |
| Import | 286 | 319 | 361 | 446 | 549 | 542 | 494 |
| % increase of the previous year | - | 13.1 | 13.0 | 21.3 | 23.6 | -0.2 | 4.0 |
| % increase of the previous year | 9,678 | 10,206 | 11,431 | 13,448 | 17,555 | 17,958 | 18,400 |
| Exchange rate | 383 | 400 | 448 | 536 | 697 | 706 | 724 |
| Bank rate of BOT | - | 5.5 | 12.0 | 17.6 | 30.5 | 2.3 | 2.4 |
| Foreign reserve | 25.28 | 25.52 | 25.54 | 25.09 | 25.19 | 25.42** | 29.9*** |
| External Debt | 11 | 11 | 9 | 9.5 | 10.5 | 10.5 | - |
| Balance of payments | 184 | 212 | 254 | 303 | 369 | 387 | - |
| Current account | 33,070 | 37,358 | 46,828 | 55,001 | 68,208 | 89,800 | 91,700 |
| Capital and financial account | -1,933 | -1,601 | -1,611 | -2,032 | -3,376 | -3,726 | -3,120 |
| Direct investment | 2,882 | 2,407 | 2,659 | 3,059 | 5,451 | 4,272 | - |
| Portfolio investment | 471 | 500 | 398 | 219 | 300 | (-) | - |
| Trade credits | 8 | 235 | 1,382 | 619 | 1,015 | (352)** | - |
| Loans | 182 | 72 | 127 | 64 | 52 | (6)** | - |
| Others | 1,762 | 1,133 | 1,044 | 2,112 | 3,913 | (387)* | - |
| Errors and omissions | 579 | 387 | 534 | 298 | 856 | (934)* | - |
| Overall Balance | 109 | -36 | -60 | 21 | -280 | (-143)** | - |
| | 1,058 | 770 | 988 | 1,048 | 1,795 | 546 | 200 |

Source : Bank of Thailand, Note : () * First quarter of 1996, **Sep 1996, ***July 15, 1997, ****NESDB estimates

Table G-2 Export classified by sector

Unit Millions of baht

| | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 Q1,Q2p |
|-------------------------------------|----------------|----------------|----------------|------------------|------------------|----------------|
| Agriculture | 109,279 | 123,809 | 110,695 | 129,559 | 160,312 | 85,448 |
| Fisheries | 43,704 | 48,793 | 55,689 | 67,903 | 71,190 | 29,021 |
| Forestry | 877 | 780 | 414 | 586 | 790 | 556 |
| Mining | 7,530 | 6,803 | 5,749 | 6,817 | 7,656 | 4,491 |
| Manufacturing | 553,186 | 634,385 | 752,557 | 922,791 | 1,151,370 | 568,563 |
| Sample and unclassified goods | 8,717 | 8,648 | 9,006 | 7,855 | 12,628 | 7,509 |
| Re-exports | 2,337 | 1,425 | 1,752 | 2,089 | 2,365 | 1,034 |
| Total exports | 725,630 | 824,643 | 935,862 | 1,137,600 | 1,406,311 | 696,622 |
| Aircraft | 2,000 | - | - | - | - | - |
| Adjustments of balance of payments | -7,085 | -9,441 | -14,429 | -19,551 | -24,651 | -13,650 |
| Marchandise exports (f.o.b.) | 720,545 | 815,202 | 921,433 | 1,118,049 | 1,381,660 | 682,972 |

Note : Data of 1996 is based on the First quarter Q1 and estimate of Second quarter Q2. Source Bank of Thailand

Table G-3 Percentage of export by sector

Unit %

| | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 Q1,Q2p |
|-------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Agriculture | 15.1 | 15.0 | 11.8 | 11.4 | 11.4 | 12.3 |
| Fisheries | 6.0 | 5.9 | 6.0 | 6.0 | 5.1 | 4.2 |
| Forestry | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 |
| Mining | 1.0 | 0.8 | 0.6 | 0.6 | 0.5 | 0.6 |
| Manufacturing | 76.2 | 76.9 | 80.4 | 81.1 | 81.9 | 81.6 |
| Sample and unclassified goods | 1.2 | 1.0 | 1.0 | 0.7 | 0.9 | 1.1 |
| Re-exports | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 |
| Total exports | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Note : Data of 1996 is based on the First quarter Q1 and estimate of Second quarter Q2. Source Bank of Thailand

Table G-4 Quantity of Agricultural exports

(000' metric tons)

| | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 Q1,Q2p |
|---|-------|-------|-------|-------|-------|-------------|
| Rice | 4,165 | 4,899 | 4,778 | 4,858 | 6,198 | 2,961 |
| Rubber | 1,259 | 1,464 | 1,493 | 1,711 | 1,747 | 862 |
| Tapioca products | 7,044 | 9,105 | 7,342 | 5,668 | 4,080 | 2,583 |
| Fozen fowl | 168 | 180 | 163 | 158 | 155 | 669 |
| Fresh fruits | 500 | 748 | 932 | 1,158 | 1,366 | 1,004 |
| Coffee | 326 | 699 | 585 | 682 | 761 | 524 |
| Tobacco leaves | 436 | 583 | 459 | 386 | 220 | 152 |
| Others | - | - | - | - | - | - |
| Quantity of Agricultural processed exports | | | | | | |
| Canned pineapples | 4,177 | 4,914 | 503 | 527 | 383 | 220 |
| Sugar | 2,900 | 3,757 | 2,219 | 2,611 | 3,757 | 3,917 |
| Molasses | 1,047 | 1,113 | 569 | 838 | 1,194 | 779 |

Note : Data of 1996 is based on the First quarter Q1 and estimate of Second quarter Q2. Source Bank of Thailand

Table G-5 Value of Export by each agricultural product

Unit Millions of baht

| | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 Q1,Q2p |
|---|----------------|----------------|----------------|----------------|----------------|---------------|
| Rice | 30,516 | 36,214 | 32,947 | 39,188 | 48,629 | 26,434 |
| Rubber | 24,954 | 28,925 | 29,180 | 41,820 | 61,262 | 17,109 |
| Tapioca products | 24,368 | 29,611 | 21,736 | 18,774 | 18,254 | 11,424 |
| Fozen fowl | 10,540 | 10,830 | 9,294 | 10,223 | 10,047 | 4,372 |
| Fresh fruits | 726 | 1,160 | 1,420 | 2,065 | 2,791 | 1,851 |
| Coffee | 715 | 1,245 | 1,249 | 2,153 | 4,615 | 2,172 |
| Tobacco leaves | 2,864 | 3,600 | 2,640 | 2,208 | 1,403 | 1,088 |
| Others | 12,605 | 10,232 | 10,236 | 11,136 | 11,316 | 20,998 |
| Total | 109,279 | 123,809 | 110,695 | 129,559 | 160,312 | 85,448 |
| Value of Export by each agricultural Processed product | | | | | | |
| Canned pineapples | 7,265 | 8,274 | 7,190 | 6,607 | 5,762 | 4,065 |
| Sugar | 14,782 | 18,920 | 12,185 | 17,201 | 28,752 | 27,718 |
| Molasses | 1,474 | 1,136 | 557 | 1,108 | 1,714 | 1,500 |
| Rubber products | 7,116 | 9,151 | 11,373 | 12,802 | 20,472 | 8,991 |

Note : Data of 1996 is based on the First quarter Q1 and estimate of Second quarter Q2. Source Bank of Thailand

Table G-6 Major Agricultural Produce (Metric tons)

| Whole country | 1991/92 | 1992/93 | 1993/94 | 1994/95 | 1995/96 | 1996/97* |
|------------------------|---------|---------|---------|---------|---------|----------|
| Rice | 19,809 | 20,184 | 19,098 | 20,125 | 20,550 | 21,680 |
| First crop | 17,518 | 17,302 | 16,483 | 18,161 | 17,600 | 17,900 |
| Second crop | 2,291 | 2,882 | 2,615 | 1,964 | 2,950 | 3,780 |
| Rubber | 1,340 | 1,500 | 1,553 | 1,737 | 1,810 | 1,900 |
| Maize | 3,600 | 3,400 | 3,300 | 3,900 | 4,060 | 4,200 |
| Tapioca | 20,356 | 20,203 | 19,091 | 15,374 | 17,340 | 18,000 |
| Sugarcane | 47,430 | 34,712 | 37,569 | 50,459 | 57,693 | 59,000 |
| Groundnuts | 157 | 137 | 136 | 150 | 147 | 154 |
| Sesame | 32.0 | 31.5 | 32.8 | 31.8 | 33.5 | 34.3 |
| Coconuts | 1,379 | 1,411 | 1,462 | 1,476 | 1,412 | 1,410 |
| Castro beans | 28.0 | 12.0 | 10.0 | 7.0 | 5.7 | 5.6 |
| Kapok and Bombax fiber | 37.1 | 37.2 | 39.7 | 40.9 | 43.0 | 46.4 |
| Tabacco leaves | 85.4 | 93.6 | 50.8 | 48.8 | 51.1 | 53.4 |
| Kenaf | 139 | 140 | 139 | 116 | 82 | 90 |
| Colton | 129 | 99 | 67 | 78 | 81 | 78 |
| Mungbean | 304 | 261 | 231 | 256 | 253 | 258 |
| Soybean | 436 | 435 | 513 | 528 | 368 | 394 |

Source : Bank of Thailand, Quarterly Bulletin June 1996

*Estimates

Table G-7 Percentage change from the previous year (%)

| Whole country | 1991/92 | 1992/93 | 1993/94 | 1994/95 | 1995/96 | 1996/97* |
|---------------|---------|---------|---------|---------|---------|----------|
| Rice | 16.3 | 1.9 | -5.4 | 5.4 | 2.1 | 5.5 |
| First crop | 17.6 | -1.2 | -4.7 | 10.2 | -3.1 | 1.7 |
| Second crop | 7.9 | 25.8 | -9.3 | -24.9 | 50.2 | 28.1 |
| Rubber | 7.2 | 11.9 | 3.5 | 11.8 | 4.2 | 5.0 |
| Maize | -5.3 | -5.6 | -2.9 | 18.2 | 4.1 | 3.4 |
| Tapioca | 3.3 | -0.8 | -5.5 | -19.5 | 12.8 | 3.8 |
| Sugarcane | 16.9 | -26.8 | 8.2 | 34.3 | 14.3 | 2.3 |
| Kenaf | -27.2 | 0.7 | -0.7 | -16.5 | -29.3 | 9.8 |
| Cotton | 33.0 | -23.3 | -32.3 | 16.4 | 3.8 | -3.7 |
| Mungbean | 0.3 | -14.1 | -11.5 | 10.8 | -1.2 | 2.0 |
| Soybean | -12.8 | -0.2 | 17.9 | 2.9 | -30.3 | 7.1 |

Source : Bank of Thailand, Quarterly Bulletin June 1996

*Estimates

Table G-8 Average Price of Agricultural Produce (Baht per ton)

| Whole country | 1995 Q1,Q2 | 1995 Q3,Q4 | 1996 Q1 | 1996 Q2 | 1996 First half | 1996/97* |
|------------------------------------|------------|------------|---------|---------|-----------------|----------|
| Paddy (1 st grade) | 3,791 | 4,768 | 4,279 | 4,843 | 5,236 | 5,040 |
| 10% glutinous paddy, long-grain | 3,711 | 4,344 | 4,028 | 4,539 | 4,855 | 4,697 |
| Cassava roots | 1,210 | 1,190 | 1,200 | 1,020 | 870 | 810 |
| Maize | 3,618 | 3,867 | 3,743 | 4,587 | 5,107 | 4,847 |
| Rubber sheets(3rd grade) | 34,660 | 29,120 | 31,890 | 31,210 | 29,760 | 30,490 |

Source : Bank of Thailand, Quarterly Bulletin June 1996

*Estimates

Regional Economy

Table G-9 GDP and GPP at current prices (100million bahts)

| | National (GDP) | N.E region | Kohn Kean | Mukudahan | Sakhon Nakhon | Maha Sarakhm |
|---------------------|-------------------|------------|-----------|-----------|------------------|-----------------|
| 1990 | 21,860 | 2,589 | 276 | 34 | 131 | 118 |
| 1994 | 35,974 | 4,059 | 513 | 56 | 179 | 167 |
| Growth rate 94/90 % | 64.6 | 56.8 | 85.8 | 64.7 | 36.7 | 41.5 |

Source : National Statistical Yearbook 1995

Table G-10 Agriculture Sector Output at current prices (100million bahts)

| | National (GDP) | N.E region | Kohn Kean | Mukudahan | Sakhon Nakhon | Maha Sarakhm |
|---|-------------------|------------|-----------|-----------|------------------|-----------------|
| 1990 | 2,638 | 720 | 49 | 10 | 37 | 41 |
| Percentage Share of agriculture (%) 1990 | 12.1 | 27.8 | 17.8 | 29.4 | 28.2 | 34.7 |
| 1994 | 3,778 | 773 | 50 | 12 | 34 | 35 |
| Percentage Share of agriculture (%) 1994 | 10.5 | 19.0 | 9.7 | 21.4 | 18.9 | 21.0 |
| Growth rate 94/90 % | 43.2 | 7.4 | 2.0 | 20.0 | -8.1 | -14.6 |

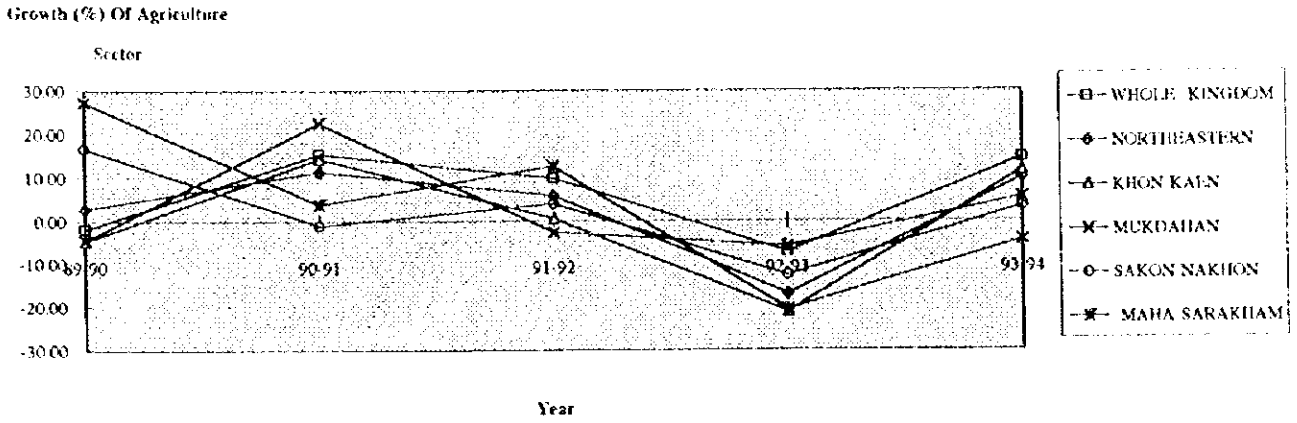
Source : National Statistical Yearbook 1995

Table G-11 Per capita GDP and GPP at current prices (baht/year)

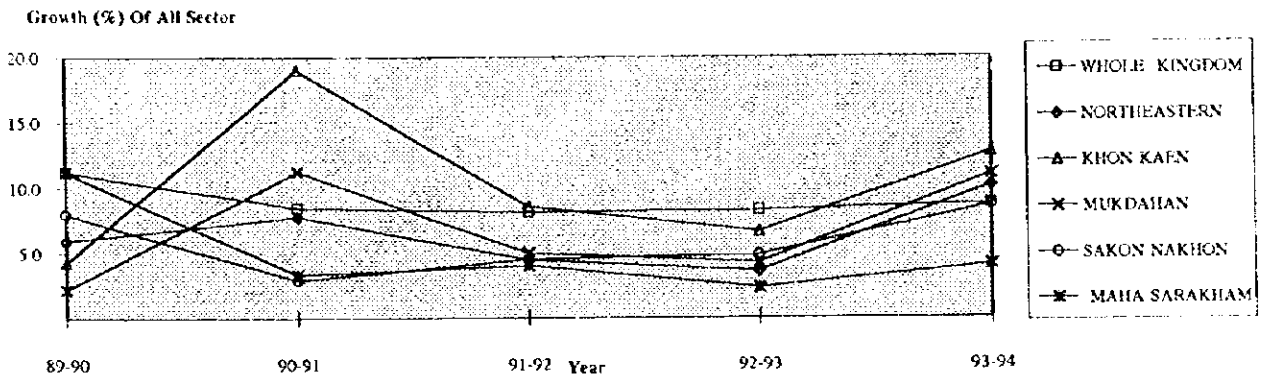
| | National (GDP) | N.E region | Kohn Kean | Mukudahan | Sakhon Nakhon | Maha Sarakhm |
|---------------------|-------------------|------------|-----------|-----------|------------------|-----------------|
| 1991 | 44,264 | 14,927 | 20,353 | 13,743 | 13,356 | 14,302 |
| 1994 | 61,335 | 20,235 | 29,989 | 20,018 | 18,015 | 18,050 |
| Growth rate 94/91 % | 22.2 | 12.7 | 15.5 | 9.5 | 11.2 | 19.3 |

Source : National Statistical Yearbook 1995

Graph G-1 Growth Ratio of Agricultural Sector (%)



Graph G-2 Economic Growth of All Sector (%)



Graph G-3 Per Household Income (Baht/houschold)

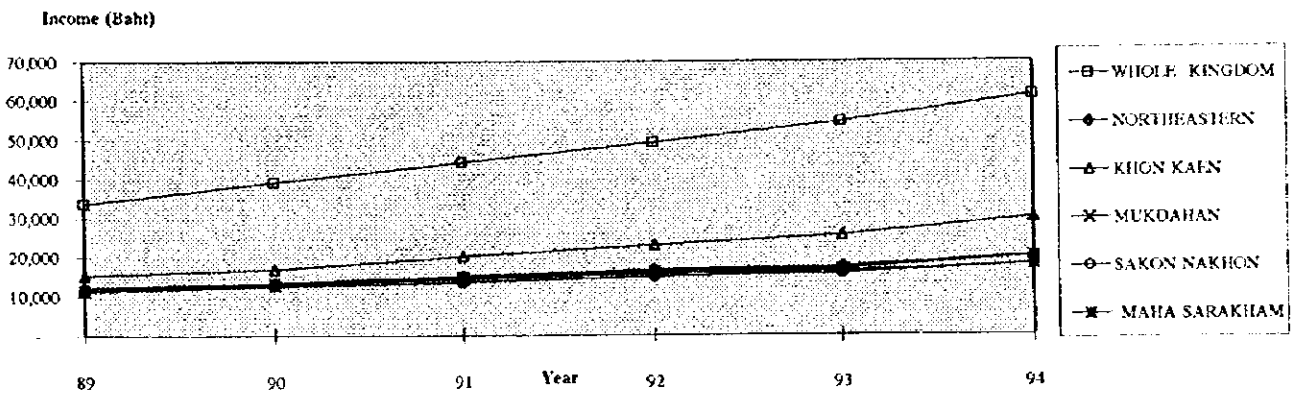


Table G-12 Household Income

baht/month 1994

| | Whole kingdom | N.E. region | Mukdahan | Kohn Kean | Maha Sarakham | Sakon Nakohn |
|------------------------|---------------|-------------|----------|-----------|---------------|--------------|
| Average household size | 3.8 | 4 | 4.4 | 4 | 4.1 | 4 |
| Average monthly income | 8,222 | 5,685 | 4,328 | 6,371 | 4,494 | 5,541 |
| Money income | 6,599 | 4,132 | 2,567 | 5,001 | 2,817 | 3,920 |
| Wages and salaries | 3,501 | 1,883 | 1,312 | 2,346 | 1,070 | 1,598 |
| Profits, non farm | 1,622 | 898 | 387 | 1,528 | 537 | 1,037 |
| Profits, from farming | 802 | 645 | 583 | 381 | 447 | 516 |
| Profits from roomiers | 27 | 5 | n.a. | n.a. | n.a. | n.a. |
| property income | 97 | 83 | 9 | 7 | 6 | 27 |
| Current transfers | 550 | 618 | 276 | 739 | 757 | 692 |
| Non-money income | 1,623 | 1,462 | 1,724 | 1,293 | 1,583 | 1,110 |
| Other money receipts | 104 | 91 | 37 | 77 | 94 | 16 |
| Insurance proceeds | 21 | 8 | 2 | n.a. | n.a. | n.a. |
| lottery winnings | 39 | 45 | 18 | n.a. | n.a. | n.a. |
| other receipts | 44 | 38 | 17 | n.a. | n.a. | n.a. |

Source : Preliminary socio-economic survey data 1994

Table G-13 Household Expenditure

baht/month 1994

| | Whole kingdom | N.E. region | Mukdahan | Kohn Kean | Maha Sarakham | Sakon Nakohn |
|-----------------------------|---------------|-------------|----------|-----------|---------------|--------------|
| Average monthly expenditure | 8,034 | 6,134 | 5,234 | 5,991 | 4,665 | 6,071 |
| Consumption expenditure | 7,246 | 5,596 | 4,971 | 5,421 | 4,256 | 5,503 |
| Food and beverage | 2,583 | 2,101 | 2,197 | | | 2,150 |
| Alcoholic beverage | 123 | 76 | 20 | 2,622 | 1,939 | 14 |
| Tabacco products | 87 | 58 | 35 | | | 25 |
| Apparel | 460 | 374 | 405 | 320 | 227 | 349 |
| Housing | 1,856 | 1,431 | 1,332 | 1,192 | 1,204 | 1,321 |
| Medical care | 289 | 187 | 100 | 275 | 260 | 292 |
| personal care | 192 | 146 | 144 | | | 158 |
| Transport and communication | 1,234 | 871 | 556 | 777 | 328 | 966 |
| Recreation and reading | 181 | 127 | 75 | | | 69 |
| Education | 144 | 84 | 69 | 235 | 238 | 72 |
| Miscellaneous | 98 | 141 | 38 | | | 87 |
| Non-consumption expenditure | 788 | 538 | 263 | 570 | 409 | 568 |
| | 8,034 | 6,134 | 5,234 | 5,991 | 4,665 | 6,071 |

Source : Preliminary socio-economic survey data 1994

Table G-14 Farm Household Income/Expenditure Summary

baht/year 1994

| | Whole kingdom | N.E. region | Mukdahan | Kohn Kean | Maha Sarakham | Sakon Nakohn |
|-----------------------------|---------------|-------------|----------|-----------|---------------|--------------|
| Cash farm income | 35,043 | 19,027 | 11,482 | 18,492 | 13,446 | 16,979 |
| Crop | 25,208 | 12,960 | 8,839 | 12,401 | 6,940 | 9,601 |
| Livestock and poultry | 6,252 | 3,600 | 2,591 | 4,612 | 4,300 | 3,655 |
| Others | 3,583 | 2,467 | 52 | 1,479 | 2,206 | 3,723 |
| Cash farm expense | 23,811 | 12,972 | 9,354 | 15,742 | 8,754 | 9,311 |
| Crop | 11,960 | 7,397 | 6,730 | 7,830 | 5,046 | 4,755 |
| Livestock and poultry | 5,065 | 2,067 | 1,441 | 3,253 | 1,990 | 1,337 |
| Others | 6,786 | 3,508 | 1,183 | 4,659 | 1,718 | 3,219 |
| Net farm cash income | 11,232 | 6,055 | 2,128 | 2,750 | 4,692 | 7,742 |
| Non-farm cash income | 22,931 | 19,148 | 20,912 | 25,575 | 19,867 | 19,033 |
| Farm household cash expense | 35,432 | 24,005 | 22,176 | 25,017 | 23,474 | 23,066 |
| Total income | 57,974 | 38,175 | 32,394 | 44,067 | 33,313 | 36,012 |
| Total expense | 59,243 | 36,977 | 31,530 | 40,759 | 32,228 | 32,377 |
| Cash saving | -1,269 | 1,198 | 864 | 3,308 | 1,085 | 3,635 |

Source : Preliminary socio-economic survey data 1994

Table G-15 Farm Income (On-Farm and Off-Farm) Table

baht/year 1994

| | Whole Kingdom | N.E. region | Mukdahan | Kohn Kean | Maha Sarakham | Sakon Nakhon |
|--|---------------|---------------|---------------|---------------|---------------|---------------|
| Farm Income Total | 57,974 | 38,175 | 32,394 | 44,067 | 33,313 | 36,012 |
| Average Cash farm income | 35,043 | 19,027 | 11,482 | 18,492 | 13,446 | 16,979 |
| Crop farm cash income | 25,208 | 12,960 | 8,839 | 12,401 | 6,940 | 9,601 |
| Rice | 8,387 | 4,972 | 1,808 | 3,691 | 4,293 | 5,062 |
| Field crops | 7,464 | 5,639 | 5,649 | 5,778 | 1,501 | 2,117 |
| Oil crops | 717 | 212 | 51 | 569 | 5 | 57 |
| Fiber crops | 879 | 736 | 89 | 173 | 405 | 344 |
| Vegetables | 2,313 | 1,075 | 846 | 2,060 | 632 | 1,799 |
| Fruit tree/tree crops | 5,301 | 251 | 396 | 128 | 104 | 206 |
| Flowers | 147 | 15 | N.A. | 2 | 0 | 16 |
| Livestock farm cash income | 6,252 | 3,600 | 2,591 | 4,612 | 4,300 | 3,655 |
| Livestock and livestock products | 5,077 | 3,543 | 2,591 | 4,430 | 4,264 | 3,389 |
| Aquatic animals | 1,175 | 57 | N.A. | 182 | 36 | 266 |
| Other farm cash income | 3,583 | 2,467 | 52 | 1,479 | 2,206 | 3,723 |
| Renting farm land | 240 | 128 | 47 | 136 | 118 | 190 |
| Renting farm building | 11 | 2 | - | 0 | 0 | 1 |
| Renting farm equipment | 14 | 22 | - | 5 | 4 | N.A. |
| Sale of seed | 615 | 735 | - | 667 | 497 | 1,440 |
| Sale of breeding stock | 543 | 524 | 1 | 470 | 598 | 754 |
| Sale of agricultural land | 1,445 | 581 | 1 | 146 | 43 | 557 |
| Sale of other agricultural property | 200 | 253 | 3 | 44 | 903 | 22 |
| Others | 510 | 222 | - | 11 | 43 | 759 |
| Non farm cash income | 22,931 | 19,148 | 20,912 | 25,575 | 19,867 | 19,033 |
| Income related to agriculture | 6,498 | 4,530 | 5,239 | 7,165 | 4,019 | 7,227 |
| Employed in farm custom work | 2,114 | 1,507 | N.A. | 2,352 | 1,009 | N.A. |
| Hiring brought animals | 17 | 12 | N.A. | 13 | 111 | 28 |
| Hiring farm equipments | 497 | 445 | 32 | 437 | 261 | 71 |
| Custom hauling with own draft vehicles | 170 | 153 | N.A. | 93 | 0 | 204 |
| Agriculture aid | 44 | 18 | 3,431 | 14 | 53 | 3,251 |
| Agricultural processing | 105 | 98 | N.A. | 36 | 9 | N.A. |
| Agricultural services | 73 | 49 | N.A. | 32 | 3 | N.A. |
| Handicraft manufacture | 792 | 655 | 437 | 2,305 | 974 | 616 |
| Others | 162 | 64 | 24 | 33 | 32 | 1,676 |
| Profit on business | 2,236 | 1,303 | 1,289 | 1,364 | 1,294 | 1,215 |
| Service | 288 | 226 | 26 | 486 | 273 | 166 |
| Off Farm | 16,433 | 14,618 | 15,673 | 18,410 | 15,848 | 11,806 |

Source : Preliminary socio-economic survey data 1994

Table G-16 Farm Expenditure (On-Farm and Off Farm) Table

baht/year 1994

| | Whole Kingdom | N.E. region | Mukdahan | Kohn Kean | Maha Sarakham | Sakon Nakorn |
|---------------------------------------|---------------|-------------|----------|-----------|---------------|--------------|
| Farm Expenditure Total | 59,243 | 36,977 | 31,530 | 40,759 | 32,228 | 32,377 |
| Average Cash farm Expenditure | 23,811 | 12,972 | 9,354 | 15,742 | 8,754 | 9,311 |
| Crop farm cash expense | 11,960 | 7,397 | 6,730 | 7,830 | 5,046 | 4,755 |
| Seeds | 654 | 213 | 1,657 | 477 | 41 | 64 |
| Insecticides | 832 | 181 | 47 | 222 | 170 | 109 |
| Fertilizers | 2,611 | 2,044 | 1,149 | 2,039 | 2,136 | 1,364 |
| Food in community labor exchange | 256 | 209 | 105 | 378 | 317 | 240 |
| Lime | 10 | 3 | 3 | 12 | 1 | 4 |
| Fuels | 646 | 228 | 148 | 326 | 134 | 123 |
| Irrigation fees | 17 | 6 | 5 | 5 | 26 | 4 |
| Farm Electricity | 16 | 4 | 1 | 6 | 1 | 2 |
| Equipments | 105 | 35 | 8 | 60 | 2 | 93 |
| Paid out for labors | 6,613 | 4,437 | 3,606 | 4,201 | 2,202 | 2,742 |
| Other expenditure | 150 | 37 | 2 | 104 | 16 | 10 |
| Livestock farm cash expense | 5,065 | 2,067 | 1,441 | 3,253 | 1,990 | 1,337 |
| Buy animals for working | 183 | 240 | 2 | 574 | 453 | 158 |
| Purchase of livestock | 1,509 | 752 | 1,289 | 1,732 | 416 | 556 |
| Purchase of animal nutrition | 2,134 | 593 | 47 | 359 | 190 | 194 |
| Purchase of medicine | 180 | 71 | 19 | 82 | 58 | 67 |
| Sterilization and breeding | 116 | 84 | 7 | 228 | 225 | 30 |
| Fuels | 116 | 4 | N.A. | 2 | 3 | 3 |
| Irrigation Fee | 3 | 0 | N.A. | 0 | 1 | 1 |
| Farm Electricity bill | 37 | 10 | N.A. | 23 | 8 | 5 |
| Paid out for labor | 581 | 233 | 23 | 146 | 219 | 22 |
| Other expenditure | 206 | 80 | 54 | 107 | 417 | 301 |
| Other on farm cash expense | 6,786 | 3,508 | 1,183 | 4,659 | 1,718 | 3,219 |
| Repairs of equipments / farm building | 1,002 | 573 | 219 | 529 | 158 | 121 |
| Rented equipments/ farm building | 994 | 283 | 46 | 295 | 169 | 676 |
| Loan interest | 1,861 | 700 | 435 | 1,126 | 497 | 610 |
| Farm land levelling | 88 | 68 | N.A. | 268 | 58 | 9 |
| Farm land redeeming | 75 | 23 | N.A. | 7 | 16 | 1 |
| Purchase of farm land | 1,389 | 807 | 84 | 1,385 | 324 | 420 |
| Purchase of farm equipment | 1,027 | 734 | 399 | 931 | 310 | 883 |
| Dike for dam water | 24 | 21 | N.A. | 3 | 1 | 18 |
| others | 336 | 294 | N.A. | 115 | 185 | 481 |
| Non farm cash Expense | 35,432 | 24,005 | 22,176 | 25,017 | 23,474 | 23,066 |
| Expense related to agriculture | 503 | 331 | 38 | 911 | 403 | 239 |
| Agricultural processing | 45 | 24 | 10 | 45 | 13 | 45 |
| Handicraft manufacture | 94 | 166 | 16 | 510 | 315 | 145 |
| Agricultural service | 28 | 15 | N.A. | 37 | 12 | 23 |
| Others | 336 | 126 | 12 | 319 | 63 | 26 |
| Family expense | 34,929 | 23,674 | 22,138 | 24,106 | 23,071 | 22,827 |
| Food | 13,505 | 8,659 | 8,699 | 10,337 | 7,144 | 5,453 |
| Clothing | 1,910 | 1,513 | 1,236 | 1,256 | 1,782 | 1,693 |
| Housing | 3,898 | 2,951 | 1,912 | 2,693 | 4,095 | 4,291 |
| Fuels, Electricity, Water Supply | 1,192 | 688 | 698 | 605 | 443 | 648 |
| Education | 1,749 | 1,002 | 966 | 1,190 | 1,147 | 991 |
| Others | 12,675 | 8,861 | 8,627 | 8,025 | 8,460 | 9,751 |

Source : Preliminary socio-economic survey data 1994

Table G-17 Household Income/ Expenditure 1994

| | Whole Kingdom | N.E. Region | Mukdahan | Kohn Kean | Maha Sarakham | Sakhon Nakohn |
|-------------|---------------|-------------|----------|-----------|---------------|---------------|
| Income | 98,664 | 68,220 | 51,936 | 76,452 | 53,928 | 66,492 |
| Expenditure | 96,408 | 73,608 | 62,808 | 71,892 | 71,892 | 72,852 |

Source : Preliminary socio-economic survey data 1994

Table G-18 Household Income/ Expenditure 1996

| | Whole Kingdom | N.E. Region | Mukdahan | Kohn Kean | Maha Sarakham | Sakhon Nakohn |
|-------------|---------------|-------------|----------|-----------|---------------|---------------|
| Income | 125,402 | 86,708 | 66,011 | 97,170 | 68,542 | 84,511 |
| Expenditure | 129,090 | 98,561 | 84,100 | 96,263 | 96,263 | 97,549 |

Data are estimated based on the below note.

Note :

All data of income are estimated based on the growth rate of GDP and Producer Price Index (PPI) of food stuff.

All data of expenditure are estimated based on the growth rate of GDP and Consumer Price Index (CPI).

Table G-19 Farm Income/ Expenditure 1994

| | Whole Kingdom | N.E. Region | Mukdahan | Kohn Kean | Maha Sarakham | Sakhon Nakohn |
|-------------|---------------|-------------|----------|-----------|---------------|---------------|
| Income | 57,974 | 38,175 | 32,934 | 44,067 | 32,313 | 36,013 |
| Expenditure | 59,243 | 36,977 | 31,530 | 40,759 | 32,228 | 32,377 |

Source : Agricultural Statistic 1994

Table G-20 Farm Income/ Expenditure 1996

| | Whole Kingdom | N.E. Region | Mukdahan | Kohn Kean | Maha Sarakham | Sakhon Nakohn |
|-------------|---------------|-------------|----------|-----------|---------------|---------------|
| Income | 65,916 | 43,405 | 37,446 | 50,104 | 36,740 | 40,947 |
| Expenditure | 75,298 | 47,885 | 40,831 | 52,783 | 41,735 | 41,928 |

Data are estimated based on the below note.

Note :

All data of income are estimated based on the combined growth rate of GNP and agricultural sector, and Producer Price Index (PPI) of food stuff.

Expenditure of whole kingdom is estimated based on the combined growth rate of GNP and agricultural sector, and Consumer Price Index (CPI)

Expenditure of N.E. region and chanwats are estimated based on the combined growth rate of GNP and agricultural sector, and Rural Consumer Price Index (RCPI).

Table G-21 Farming Type in Study Areas

| Type A | Type B | Type C | Type D1 | Type D2 | Type E |
|------------|--|--|---|---|--|
| Paddy only | Paddy + Upland crops | Paddy + Cattle raising | Integrated Farming (1) | Integrated Farming (2) | Paddy + Forest |
| | rai 20 Paddy Cassava (Sugarcane) | rai 10 Paddy Cassava Meat Cow Chicken | rai/head 10 Paddy Forest Vegetables Fruits Pond | rai/head 10 Paddy 4.4 Forest 1 Vegetables 3 Pond 1.6 Meatcow Chicken | rai 10 Paddy 8 Forest 1 (Eucalyptus) |

1997 July Baht/year

Table G-22 Farming Type Income/ Expenditure

| | Type A | Type B | Type C | Type D1 | Type D2 | Type E |
|---------------------------------------|---------|---------|---------|---------|---------|---------|
| Farm Income | 16,175 | 20,930 | 43,036 | 59,095 | 69,456 | 22,950 |
| Farm Expense (Payment of Interest) | 7,190 | 7,430 | 21,286 | 21,091 | 37,886 | 8,720 |
| Net Farm Income | 1,870 | 1,540 | 3,595 | 8,127 | 4,813 | 2,513 |
| | 7,115 | 11,960 | 18,155 | 29,877 | 26,757 | 11,717 |
| Non-farm Income | 29,500 | 29,500 | 23,500 | 7,500 | 13,500 | 29,500 |
| Non-farm Expense | 23,800 | 23,800 | 23,800 | 21,300 | 21,300 | 23,800 |
| Ratio of farm and non-farm income | 35 : 65 | 42 : 58 | 65 : 35 | 89 : 11 | 84 : 16 | 44 : 56 |
| Total Income | 45,675 | 50,430 | 66,536 | 66,595 | 82,956 | 52,450 |
| Total Expense | 32,860 | 32,770 | 48,681 | 50,518 | 63,999 | 35,033 |
| Cash-saving w/o Non farm income | -16,685 | -11,840 | -5,645 | 8,577 | 5,457 | -12,083 |
| Cash-Saving | 12,815 | 17,660 | 17,855 | 16,077 | 18,957 | 17,417 |

Source : Farm survey

Farming Type A-C

| Model A Paddy only | Bahts |
|-----------------------------|--------|
| Cash farm income | 16,175 |
| Paddy | 16,175 |
| Cash farm expense | 7,190 |
| Paddy | 7,190 |
| Payment of interest | 1,870 |
| Net farm cash income | 7,115 |
| Non-farm cash income | 29,500 |
| Handicraft | 2,500 |
| Wages | 18,000 |
| Hired labor in agriculture | 9,000 |
| Farm household cash expense | 23,800 |
| Total income | 45,675 |
| Total expense | 32,860 |
| Cash saving | 12,815 |

Note : Cash farm expense doesn't include Fixed Cost.

| Model B Paddy + Upland crops | Bahts |
|------------------------------|--------|
| Cash farm income | 20,930 |
| Paddy | 4,950 |
| Cassava | 15,980 |
| Cash farm expense | 7,430 |
| Paddy | 1,530 |
| cassava | 5,900 |
| Payment of interest | 1,540 |
| Net farm cash income | 11,960 |
| Non-farm cash income | 29,500 |
| Handicraft | 2,500 |
| Wages | 18,000 |
| Hired labor in agriculture | 9,000 |
| Farm household cash expense | 23,800 |
| Total income | 50,430 |
| Total expense | 32,770 |
| Cash saving | 17,660 |

Note : Cash farm expense doesn't include Fixed Cost.

| Model C Paddy + Cattle raising | Bahts |
|--------------------------------|--------|
| Cash farm income | 43,036 |
| Paddy | 4,950 |
| Cassava | 15,980 |
| Meat cow | 20,000 |
| Chicken | 2,106 |
| Cash farm expense | 21,286 |
| Paddy | 3,620 |
| Cassava | 5,900 |
| Meat cow | 10,350 |
| Chicken | 1,416 |
| Payment of interest | 3,595 |
| Net farm cash income | 18,155 |
| Non-farm cash income | 23,500 |
| Handicraft | 2,500 |
| Wages | 12,000 |
| Hired labor in agriculture | 9,000 |
| Farm household cash expense | 23,800 |
| Total income | 66,536 |
| Total expense | 48,681 |
| Cash saving | 17,855 |

Note : Cash farm expense doesn't include Fixed Cost.

Farming Type D1-E

| Model D1 - Integrated Farming | Bahts |
|------------------------------------|--------|
| Cash farm income | 59,095 |
| Paddy | 4,950 |
| Eucalyptus | 7,920 |
| Fruits | 30,225 |
| Vegetables | 16,000 |
| Cash farm expense | 21,091 |
| Paddy | 8,020 |
| Eucalyptus | 3,168 |
| Fruits | 2,583 |
| Vegetables | 5,900 |
| O&M for Farm Pond | 1,420 |
| Payment of interest | 8,127 |
| Net farm cash income | 29,877 |
| Non-farm cash income | 7,500 |
| Handicraft | 2,500 |
| Hired labor in agriculture | 5,000 |
| Farm household cash expense | 21,300 |
| Total income | 66,595 |
| Total expense | 50,518 |
| Cash saving | 16,077 |

Note : Cash farm expense doesn't include Fixed Cost.

| Model D2 - Integrated Farming | Bahts |
|------------------------------------|--------|
| Cash farm income | 69,456 |
| Paddy | 4,950 |
| Eucalyptus | 14,400 |
| Chicken | 2,106 |
| Meatcow | 32,000 |
| Vegetables | 16,000 |
| Cash farm expense | 37,886 |
| Paddy | 8,020 |
| Eucalyptus | 5,760 |
| Chicken | 1,416 |
| Meatcow | 16,500 |
| Vegetables | 5,900 |
| O&M for Farm Pond | 290 |
| Payment of interest | 4,813 |
| Net farm cash income | 26,757 |
| Non-farm cash income | 13,500 |
| Handicraft | 2,500 |
| Wages | 6,000 |
| Hired labor in agriculture | 5,000 |
| Farm household cash expense | 21,300 |
| Total income | 82,956 |
| Total expense | 63,999 |
| Cash saving | 18,957 |

Note : Cash farm expense doesn't include Fixed Cost.

| Model E - Paddy + Forest | Bahts |
|------------------------------------|--------|
| Cash farm income | 22,950 |
| Paddy | 4,950 |
| Eucalyptus | 18,000 |
| Cash farm expense | 8,720 |
| Paddy | 1,520 |
| Eucalyptus | 7,200 |
| Payment of interest | 2,513 |
| Net farm cash income | 11,717 |
| Non-farm cash income | 29,500 |
| Handicraft | 2,500 |
| Wages | 18,000 |
| Hired labor in agriculture | 9,000 |
| Farm household cash expense | 23,800 |
| Total income | 52,450 |
| Total expense | 35,033 |
| Cash saving | 17,417 |

Note : Cash farm expense doesn't include Fixed Cost.

Table G-23 Cash Flow Analysis : Farming type A Paddy only (The case : Short term loan 17,000 baht, interest rate 11%)

| | Year | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|-----------------------------------|----------------------------------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|---------|
| Farm income | Paddy (20ra)*1 | 16,175 | 16,175 | 16,175 | 16,175 | 16,175 | 16,175 | 16,175 | 16,175 | 16,175 | 16,175 | 16,175 | 16,175 | 16,175 | 16,175 | 16,175 |
| Non-farm income | Handicraft | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 |
| | Construction work | 18,000 | 18,000 | 18,000 | 18,000 | 18,000 | 18,000 | 18,000 | 18,000 | 18,000 | 18,000 | 18,000 | 18,000 | 18,000 | 18,000 | 18,000 |
| | Hired labor in agriculture | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 |
| | Sub total | 45,675 | 45,675 | 45,675 | 45,675 | 45,675 | 45,675 | 45,675 | 45,675 | 45,675 | 45,675 | 45,675 | 45,675 | 45,675 | 45,675 | 45,675 |
| Short term loan*2 | | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 |
| Long term loan | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total disbursement of loan | | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 |
| Total Cash Income | | 62,675 | 62,675 | 62,675 | 62,675 | 62,675 | 62,675 | 62,675 | 62,675 | 62,675 | 62,675 | 62,675 | 62,675 | 62,675 | 62,675 | 62,675 |
| Farm Cash Expense | Paddy | 7,190 | 7,190 | 7,190 | 7,190 | 7,190 | 7,190 | 7,190 | 7,190 | 7,190 | 7,190 | 7,190 | 7,190 | 7,190 | 7,190 | 7,190 |
| Household Cash Expense*3 | Sub total | 7,190 | 7,190 | 7,190 | 7,190 | 7,190 | 7,190 | 7,190 | 7,190 | 7,190 | 7,190 | 7,190 | 7,190 | 7,190 | 7,190 | 7,190 |
| | Total | 30,990 | 30,990 | 30,990 | 30,990 | 30,990 | 30,990 | 30,990 | 30,990 | 30,990 | 30,990 | 30,990 | 30,990 | 30,990 | 30,990 | 30,990 |
| | Sub total | 10,380 | 10,380 | 10,380 | 10,380 | 10,380 | 10,380 | 10,380 | 10,380 | 10,380 | 10,380 | 10,380 | 10,380 | 10,380 | 10,380 | 10,380 |
| Loan payment | Interest payment for short term | 1,870 | 1,870 | 1,870 | 1,870 | 1,870 | 1,870 | 1,870 | 1,870 | 1,870 | 1,870 | 1,870 | 1,870 | 1,870 | 1,870 | 1,870 |
| | Principal payment for short term | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 |
| | Interest payment for long term | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Principal payment for long term | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total payment for loan | | 18,870 | 18,870 | 18,870 | 18,870 | 18,870 | 18,870 | 18,870 | 18,870 | 18,870 | 18,870 | 18,870 | 18,870 | 18,870 | 18,870 | 18,870 |
| Total Cash Expense | | 49,860 | 49,860 | 49,860 | 49,860 | 49,860 | 49,860 | 49,860 | 49,860 | 49,860 | 49,860 | 49,860 | 49,860 | 49,860 | 49,860 | 49,860 |
| Net saving | | 12,815 | 12,815 | 12,815 | 12,815 | 12,815 | 12,815 | 12,815 | 12,815 | 12,815 | 12,815 | 12,815 | 12,815 | 12,815 | 12,815 | 12,815 |
| Accumulated cash saving | | 12,815 | 25,630 | 38,445 | 51,260 | 64,075 | 76,890 | 89,705 | 102,520 | 115,335 | 128,150 | 140,965 | 153,780 | 166,595 | 179,410 | 192,225 |

Note: *1 The income from paddy shows the substantial cash income and excludes the value of self consumption.

*2 Short term loan is provided based on the area size of paddy in considering the land productivity.

*3 The expense of self-made rice, vegetables, fish are excluded from the household expense

Table G-24 Cash Flow Analysis : Farming type B Cassava/Paddy farming (The case : Short-term loan 14,000 baht, interest rate 11%)

| Year | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|-----------------------------------|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Farm income | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 |
| Paddy (10rai)*1 | 15,980 | 15,980 | 15,980 | 15,980 | 15,980 | 15,980 | 15,980 | 15,980 | 15,980 | 15,980 | 15,980 | 15,980 | 15,980 | 15,980 | 15,980 |
| Cassava (10rai) | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 |
| Handicraft | 18,000 | 18,000 | 18,000 | 18,000 | 18,000 | 18,000 | 18,000 | 18,000 | 18,000 | 18,000 | 18,000 | 18,000 | 18,000 | 18,000 | 18,000 |
| Construction work | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 |
| Hired labor in agriculture | 50,430 | 50,430 | 50,430 | 50,430 | 50,430 | 50,430 | 50,430 | 50,430 | 50,430 | 50,430 | 50,430 | 50,430 | 50,430 | 50,430 | 50,430 |
| Sub total | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 |
| Loan | 6,000 | 6,000 | 6,000 | 6,000 | 6,000 | 6,000 | 6,000 | 6,000 | 6,000 | 6,000 | 6,000 | 6,000 | 6,000 | 6,000 | 6,000 |
| Short term loan | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 |
| Cassava | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sub total | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 |
| Total disbursement of loan | 64,430 | 64,430 | 64,430 | 64,430 | 64,430 | 64,430 | 64,430 | 64,430 | 64,430 | 64,430 | 64,430 | 64,430 | 64,430 | 64,430 | 64,430 |
| Total Cash Income | 1,530 | 1,530 | 1,530 | 1,530 | 1,530 | 1,530 | 1,530 | 1,530 | 1,530 | 1,530 | 1,530 | 1,530 | 1,530 | 1,530 | 1,530 |
| Farm Cash Expense | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 |
| Paddy | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cassava | 7,430 | 7,430 | 7,430 | 7,430 | 7,430 | 7,430 | 7,430 | 7,430 | 7,430 | 7,430 | 7,430 | 7,430 | 7,430 | 7,430 | 7,430 |
| Sub total | 23,800 | 23,800 | 23,800 | 23,800 | 23,800 | 23,800 | 23,800 | 23,800 | 23,800 | 23,800 | 23,800 | 23,800 | 23,800 | 23,800 | 23,800 |
| Household Cash Expense*3 | 31,230 | 31,230 | 31,230 | 31,230 | 31,230 | 31,230 | 31,230 | 31,230 | 31,230 | 31,230 | 31,230 | 31,230 | 31,230 | 31,230 | 31,230 |
| Loan payment | 1,540 | 1,540 | 1,540 | 1,540 | 1,540 | 1,540 | 1,540 | 1,540 | 1,540 | 1,540 | 1,540 | 1,540 | 1,540 | 1,540 | 1,540 |
| Interest payment for short term | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 |
| Principal payment for short term | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Interest payment for long term | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Principal payment for long term | 15,540 | 15,540 | 15,540 | 15,540 | 15,540 | 15,540 | 15,540 | 15,540 | 15,540 | 15,540 | 15,540 | 15,540 | 15,540 | 15,540 | 15,540 |
| Total payment for loan | 46,770 | 46,770 | 46,770 | 46,770 | 46,770 | 46,770 | 46,770 | 46,770 | 46,770 | 46,770 | 46,770 | 46,770 | 46,770 | 46,770 | 46,770 |
| Total Cash Expense | 17,660 | 17,660 | 17,660 | 17,660 | 17,660 | 17,660 | 17,660 | 17,660 | 17,660 | 17,660 | 17,660 | 17,660 | 17,660 | 17,660 | 17,660 |
| Net saving | 17,660 | 35,320 | 52,980 | 70,640 | 88,300 | 105,960 | 123,620 | 141,280 | 158,940 | 176,600 | 194,260 | 211,920 | 229,580 | 247,240 | 264,900 |
| Accumulated cash saving | | | | | | | | | | | | | | | |

Note: *1. The income from paddy shows the substantial cash income and exclude the value of self consumption.

*2. Short term loan is provided based on the area size of paddy in considering the land productivity.

*3. The expense of self-made rice, vegetables, fish is deducted from the household expense

Table G-25 Cash Flow Analysis: Farming type C Paddy/Cattle raising (The case: Short term loan 15,500 baht, interest rate 11%, Medium term loan 21,000 baht for 2 yrs interest rate 9%)

| Year | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|---|---------------|---------------|---------------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Farm income | | | | | | | | | | | | | | | |
| Paddy (10rai)*1 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 |
| Cassava | 15,980 | 15,980 | 15,980 | 15,980 | 15,980 | 15,980 | 15,980 | 15,980 | 15,980 | 15,980 | 15,980 | 15,980 | 15,980 | 15,980 | 15,980 |
| Cow | 0 | 16,000 | 24,000 | 16,000 | 24,000 | 16,000 | 24,000 | 16,000 | 24,000 | 16,000 | 24,000 | 16,000 | 24,000 | 16,000 | 24,000 |
| Chicken | 2,106 | 2,106 | 2,106 | 2,106 | 2,106 | 2,106 | 2,106 | 2,106 | 2,106 | 2,106 | 2,106 | 2,106 | 2,106 | 2,106 | 2,106 |
| Handicraft | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 |
| Construction work | 12,000 | 12,000 | 12,000 | 12,000 | 12,000 | 12,000 | 12,000 | 12,000 | 12,000 | 12,000 | 12,000 | 12,000 | 12,000 | 12,000 | 12,000 |
| Hired labor in agriculture | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 |
| Sub total | 46,536 | 62,536 | 70,536 | 62,536 | 70,536 | 62,536 | 70,536 | 62,536 | 70,536 | 62,536 | 70,536 | 62,536 | 70,536 | 62,536 | 70,536 |
| Short term loan² | | 15,500 | 15,500 | 15,500 | 15,500 | 15,500 | 15,500 | 15,500 | 15,500 | 15,500 | 15,500 | 15,500 | 15,500 | 15,500 | 15,500 |
| Medium term loan⁴ | | 15,500 | 15,500 | 15,500 | 15,500 | 15,500 | 15,500 | 15,500 | 15,500 | 15,500 | 15,500 | 15,500 | 15,500 | 15,500 | 15,500 |
| Total disbursement of loan | | 9,000 | 12,000 | 9,000 | 12,000 | 9,000 | 12,000 | 9,000 | 12,000 | 9,000 | 12,000 | 9,000 | 12,000 | 9,000 | 12,000 |
| Total Cash Income | | 9,000 | 12,000 | 9,000 | 12,000 | 9,000 | 12,000 | 9,000 | 12,000 | 9,000 | 12,000 | 9,000 | 12,000 | 9,000 | 12,000 |
| Total Cash Income | 71,036 | 90,036 | 95,036 | 90,036 | 95,036 | 90,036 | 95,036 | 90,036 | 95,036 | 90,036 | 95,036 | 90,036 | 95,036 | 90,036 | 95,036 |
| Farm Cash Expense | | | | | | | | | | | | | | | |
| Paddy | 3,670 | 3,670 | 3,670 | 3,670 | 3,670 | 3,670 | 3,670 | 3,670 | 3,670 | 3,670 | 3,670 | 3,670 | 3,670 | 3,670 | 3,670 |
| Cassava | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 |
| Cow | 8,850 | 11,850 | 8,850 | 11,850 | 8,850 | 11,850 | 8,850 | 11,850 | 8,850 | 11,850 | 8,850 | 11,850 | 8,850 | 11,850 | 8,850 |
| Chicken | 1,416 | 1,416 | 1,416 | 1,416 | 1,416 | 1,416 | 1,416 | 1,416 | 1,416 | 1,416 | 1,416 | 1,416 | 1,416 | 1,416 | 1,416 |
| Sub total | 19,786 | 22,786 | 19,786 | 22,786 | 19,786 | 22,786 | 19,786 | 22,786 | 19,786 | 22,786 | 19,786 | 22,786 | 19,786 | 22,786 | 19,786 |
| Household Cash Expense^{3,5} | | | | | | | | | | | | | | | |
| Total | 43,586 | 46,586 | 43,586 | 46,586 | 43,586 | 46,586 | 43,586 | 46,586 | 43,586 | 46,586 | 43,586 | 46,586 | 43,586 | 46,586 | 43,586 |
| Loan payment | | | | | | | | | | | | | | | |
| Interest payment for short term | 1,705 | 1,705 | 1,705 | 1,705 | 1,705 | 1,705 | 1,705 | 1,705 | 1,705 | 1,705 | 1,705 | 1,705 | 1,705 | 1,705 | 1,705 |
| Principal payment for short term | 15,500 | 15,500 | 15,500 | 15,500 | 15,500 | 15,500 | 15,500 | 15,500 | 15,500 | 15,500 | 15,500 | 15,500 | 15,500 | 15,500 | 15,500 |
| Interest payment for medium term | 810 | 1,890 | 1,890 | 1,890 | 1,890 | 1,890 | 1,890 | 1,890 | 1,890 | 1,890 | 1,890 | 1,890 | 1,890 | 1,890 | 1,890 |
| Principal payment for medium term | 0 | 9,000 | 12,000 | 9,000 | 12,000 | 9,000 | 12,000 | 9,000 | 12,000 | 9,000 | 12,000 | 9,000 | 12,000 | 9,000 | 12,000 |
| Total payment for loan | 18,015 | 28,095 | 31,095 | 28,095 | 31,095 | 28,095 | 31,095 | 28,095 | 31,095 | 28,095 | 31,095 | 28,095 | 31,095 | 28,095 | 31,095 |
| Total Cash Expense | 67,601 | 74,681 | 74,681 | 74,681 | 74,681 | 74,681 | 74,681 | 74,681 | 74,681 | 74,681 | 74,681 | 74,681 | 74,681 | 74,681 | 74,681 |
| Net saving | 9,435 | 15,355 | 20,355 | 15,355 | 20,355 | 15,355 | 20,355 | 15,355 | 20,355 | 15,355 | 20,355 | 15,355 | 20,355 | 15,355 | 20,355 |
| Accumulated cash saving | 9,435 | 24,790 | 45,145 | 60,500 | 80,855 | 96,210 | 116,565 | 131,920 | 152,275 | 167,630 | 187,985 | 208,340 | 223,695 | 239,050 | 259,405 |

Note: *1 The income from paddy shows the substantial cash income and includes the value of self consumption.

*2 Short term loan is provided based on the area size of paddy in considering the land productivity.

*3 The expense of self-meat rice, vegetables, fish are excluded from the household expense

*4 Medium term loan is provided for livestock raising for 2 years.

Table G-26-1 Cash Flow Analysis : Farming type D1 (The case : Short term loan 14,000 baht, interest rate 5%, Long term loan 100,000 baht, interest rate 5%)

| Year | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|----------------------------------|--------|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Farm income | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 |
| Paddy(10rai)*1 | 0 | 0 | 0 | 0 | 72,000 | 0 | 0 | 0 | 72,000 | 0 | 0 | 0 | 72,000 | 0 | 0 |
| Eucalyptus(8rai) | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 |
| Vegetables(1rai) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Fruits | 19,500 | 19,500 | 19,500 | 19,500 | 19,500 | 19,500 | 19,500 | 19,500 | 19,500 | 19,500 | 19,500 | 19,500 | 19,500 | 19,500 | 19,500 |
| Handicraft and hired in agricul | 40,450 | 40,450 | 40,450 | 40,450 | 40,450 | 40,450 | 40,450 | 40,450 | 40,450 | 40,450 | 40,450 | 40,450 | 40,450 | 40,450 | 40,450 |
| Sub total | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 |
| Non-farm income | | | | | | | | | | | | | | | |
| Loan | | | | | | | | | | | | | | | |
| Short term loan*2 | | | | | | | | | | | | | | | |
| Long term loan | | | | | | | | | | | | | | | |
| Total Cash Income | 84,150 | 62,450 | 62,450 | 61,450 | 148,850 | 54,450 | 54,450 | 54,450 | 126,450 | 54,450 | 54,450 | 54,450 | 126,450 | 54,450 | 54,450 |
| Farm Cash Expense | 8,020 | 2,400 | 2,400 | 1,600 | 22,400 | 2,400 | 2,400 | 1,600 | 22,400 | 2,400 | 2,400 | 1,600 | 22,400 | 2,400 | 2,400 |
| Paddy | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 |
| Eucalyptus | 0 | 290 | 290 | 290 | 290 | 290 | 290 | 290 | 290 | 290 | 290 | 290 | 290 | 290 | 290 |
| Vegetables | 290 | 16,610 | 16,610 | 15,810 | 36,610 | 16,610 | 16,610 | 15,810 | 36,610 | 16,610 | 16,610 | 15,810 | 36,610 | 16,610 | 16,610 |
| Fruits | 29,410 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 |
| O&M for Farm Pond | 50,710 | 37,910 | 37,910 | 37,110 | 57,910 | 37,910 | 37,910 | 37,110 | 57,910 | 37,910 | 37,910 | 37,110 | 57,910 | 37,910 | 37,910 |
| Sub total | 700 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 |
| Total | 14,700 | 14,700 | 14,700 | 14,700 | 14,700 | 14,700 | 14,700 | 14,700 | 14,700 | 14,700 | 14,700 | 14,700 | 14,700 | 14,700 | 14,700 |
| Household Cash Expense*3 | | | | | | | | | | | | | | | |
| Loan payment | | | | | | | | | | | | | | | |
| Interest payment for short term | | | | | | | | | | | | | | | |
| Principal payment for short term | | | | | | | | | | | | | | | |
| Interest payment for long term | | | | | | | | | | | | | | | |
| Principal payment for long term | | | | | | | | | | | | | | | |
| Total Cash Expense | 65,410 | 52,610 | 52,610 | 51,810 | 72,610 | 58,265 | 62,755 | 62,887 | 79,745 | 63,124 | 62,749 | 65,140 | 85,377 | 68,381 | 67,630 |
| Net saving | 18,740 | 9,840 | 9,840 | 9,640 | 76,240 | -3,815 | -8,305 | -8,437 | 46,706 | -8,674 | -8,299 | -10,690 | 41,073 | -13,931 | -13,180 |
| Accumulated cash saving | 18,740 | 28,580 | 38,420 | 48,060 | 124,300 | 120,485 | 112,180 | 103,743 | 150,448 | 141,774 | 133,476 | 122,786 | 163,859 | 149,928 | 136,748 |

Note: *1 The income from paddy shows the substantial cash income and exclude the value of self consumption.

*2 Short term loan is provided based on the acre size of paddy in considering the land productivity.

*3 The expense of self-made rice, vegetables, fish is excluded from the household expense

Short term loan interest rate 5%, Long term loan 5 year grace period, 5% interest rate. Farm pond is provided for free by AI HD fund.

Table G-26-2 Cash Flow Analysis : Farming Type D1 (The case : Short term loan 14,000 baht interest rate 5%, Long term loan 100,000 baht interest rate 5%, Farm pond 131,685 baht)

| Year | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|--------------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Farm income | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 |
| Paddy(10rai) ¹⁾ | 0 | 0 | 0 | 0 | 39,600 | 0 | 0 | 0 | 39,600 | 0 | 0 | 0 | 39,600 | 0 | 4,950 |
| Fucalyptus(4.4 rai) | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 |
| Vegetables(1rai) | 0 | 0 | 0 | 7,800 | 9,750 | 19,500 | 39,000 | 52,650 | 58,500 | 58,500 | 58,500 | 58,500 | 58,500 | 58,500 | 58,500 |
| Fruits(3rai) | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 |
| Handicraft and hired in agriculture | 28,450 | 28,450 | 28,450 | 36,250 | 77,800 | 47,950 | 67,450 | 81,100 | 126,550 | 86,950 | 86,950 | 126,550 | 86,950 | 86,950 | 86,950 |
| Sub total | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 |
| Loan | | | | | | | | | | | | | | | |
| Short term loan ²⁾ | | | | | | | | | | | | | | | |
| Long term loan | | | | | | | | | | | | | | | |
| Fucalyptus | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 |
| Fruits | 12,000 | 5,000 | 5,000 | 4,000 | 3,000 | 6,500 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Farm pond (6,000m ²) | 16,000 | 15,000 | 15,000 | 7,500 | 5,000 | 4,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sub total | 131,685 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total disbursement of loan | 161,685 | 20,000 | 20,000 | 11,500 | 8,000 | 10,500 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sub total | 175,685 | 34,000 | 34,000 | 25,500 | 22,000 | 24,500 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 |
| Total Cash Income | 204,135 | 62,450 | 62,450 | 61,750 | 99,800 | 72,450 | 81,450 | 95,100 | 140,550 | 100,950 | 100,950 | 100,950 | 140,550 | 100,950 | 100,950 |
| Farm Cash Expense | | | | | | | | | | | | | | | |
| Paddy | 8,020 | 8,020 | 8,020 | 8,020 | 8,020 | 8,020 | 8,020 | 8,020 | 8,020 | 8,020 | 8,020 | 8,020 | 8,020 | 8,020 | 8,020 |
| Fucalyptus | 8,360 | 1,320 | 1,320 | 880 | 12,400 | 1,320 | 1,320 | 880 | 12,400 | 1,320 | 1,320 | 880 | 12,400 | 1,320 | 1,320 |
| Vegetables | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 |
| Fruits | 6,270 | 1,770 | 1,770 | 1,770 | 1,770 | 2,520 | 2,520 | 2,520 | 2,520 | 2,520 | 2,520 | 2,520 | 2,520 | 2,520 | 2,520 |
| O&M for Farm Pond | 1,420 | 1,420 | 1,420 | 1,420 | 1,420 | 1,420 | 1,420 | 1,420 | 1,420 | 1,420 | 1,420 | 1,420 | 1,420 | 1,420 | 1,420 |
| Sub total | 29,970 | 18,430 | 18,430 | 17,990 | 29,510 | 19,180 | 19,180 | 18,740 | 30,260 | 19,180 | 19,180 | 18,740 | 30,260 | 19,180 | 19,180 |
| Household Cash Expense ³⁾ | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 |
| Sub total | 51,270 | 39,730 | 39,730 | 39,290 | 50,810 | 40,480 | 40,480 | 40,040 | 51,560 | 40,480 | 40,480 | 40,040 | 51,560 | 40,480 | 40,480 |
| Loan payment | | | | | | | | | | | | | | | |
| Interest payment for short term | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 |
| Principal payment for short term | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 |
| Interest payment for long term | 0 | 0 | 0 | 0 | 0 | 27,253 | 33,303 | 22,589 | 10,426 | 9,267 | 8,109 | 6,371 | 4,634 | 2,317 | 0 |
| Principal payment for long term | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11,584 | 11,584 | 23,169 | 23,169 | 34,753 | 34,753 | 46,337 | 46,337 |
| Total payment for loan | 14,700 | 14,700 | 14,700 | 14,700 | 14,700 | 41,953 | 48,003 | 48,874 | 36,710 | 47,136 | 45,977 | 55,824 | 54,086 | 63,354 | 61,037 |
| Total Cash Expense | 65,970 | 54,430 | 54,430 | 53,990 | 65,510 | 82,433 | 88,483 | 88,914 | 88,270 | 87,616 | 86,457 | 95,864 | 105,646 | 103,834 | 101,517 |
| Net saving | 138,165 | 8,020 | 8,020 | 7,760 | 34,290 | -9,983 | -7,033 | 6,186 | 52,280 | 13,334 | 14,493 | 5,086 | 34,904 | -2,884 | -567 |
| Accumulated cash saving | 138,165 | 146,185 | 154,205 | 161,965 | 196,255 | 186,272 | 179,240 | 185,426 | 237,706 | 251,040 | 285,533 | 270,618 | 305,522 | 302,638 | 302,071 |

Note: ¹⁾ The income from paddy shows the substantial cash income and exclude the value of self consumption.
²⁾ Short term loan is provided based on the area size of paddy in considering the land productivity.
³⁾ The expense of self-made rice, vegetables, fish is excluded from the household expense.
Short term loan interest rate 5%, Long term loan 5 year grace period, 5% interest rate. In this case, the farm borrows money for excavating pond.

Table G-26-3 Cash Flow Analysis : Farming type D1 (The case : Short term loan 14,000 baht interest rate 5%, Long term loan 100,000 baht interest rate 5%, Farm pond 100,100 baht)

| Year | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|----------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Farm income | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 |
| Paddy(10rai)*1 | 0 | 0 | 0 | 0 | 39,600 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Eucalyptus(4.4rai) | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 |
| Vegetables(1rai) | 0 | 0 | 7,800 | 7,800 | 19,500 | 19,500 | 39,000 | 52,650 | 58,500 | 58,500 | 58,500 | 58,500 | 58,500 | 58,500 | 58,500 |
| Fruits(3rai) | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 |
| Handicraft and hired in agricul | 28,450 | 28,450 | 28,450 | 36,250 | 77,800 | 47,950 | 67,450 | 81,100 | 126,550 | 86,950 | 86,950 | 126,550 | 86,950 | 86,950 | 86,950 |
| Sub total | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 |
| Loan | | | | | | | | | | | | | | | |
| Short term loan*2 | | | | | | | | | | | | | | | |
| Long term loan | | | | | | | | | | | | | | | |
| Sub total | | | | | | | | | | | | | | | |
| Non-farm income | | | | | | | | | | | | | | | |
| Fruits | 12,000 | 5,000 | 5,000 | 4,000 | 4,500 | 5,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Farm pond (6,000m ²) | 18,000 | 15,000 | 15,000 | 7,500 | 5,000 | 4,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sub total | 109,185 | 20,000 | 20,000 | 11,500 | 9,500 | 9,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total disbursement of loan | 139,185 | 34,000 | 34,000 | 25,500 | 23,500 | 23,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 |
| Total Cash Income | 181,635 | 62,450 | 62,450 | 61,750 | 101,300 | 70,950 | 81,450 | 95,100 | 140,550 | 100,950 | 100,950 | 100,950 | 140,550 | 100,950 | 100,950 |
| Farm Cash Expense | | | | | | | | | | | | | | | |
| Paddy | 8,020 | 8,020 | 8,020 | 8,020 | 8,020 | 8,020 | 8,020 | 8,020 | 8,020 | 8,020 | 8,020 | 8,020 | 8,020 | 8,020 | 8,020 |
| Eucalyptus | 8,360 | 1,320 | 1,320 | 880 | 12,400 | 1,320 | 1,320 | 880 | 12,400 | 1,320 | 1,320 | 880 | 12,400 | 1,320 | 1,320 |
| Vegetables | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 |
| Fruits | 6,270 | 1,770 | 1,770 | 1,770 | 1,770 | 2,520 | 2,570 | 2,520 | 2,520 | 2,520 | 2,520 | 2,520 | 2,520 | 2,520 | 2,520 |
| O.4 M for Farm Pond | 1,420 | 1,420 | 1,420 | 1,420 | 1,420 | 1,420 | 1,420 | 1,420 | 1,420 | 1,420 | 1,420 | 1,420 | 1,420 | 1,420 | 1,420 |
| Sub total | 29,970 | 18,430 | 18,430 | 17,990 | 29,510 | 19,180 | 19,180 | 18,740 | 30,260 | 19,180 | 19,180 | 18,740 | 30,260 | 19,180 | 19,180 |
| Household Cash Expense*3 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 |
| Total | 51,270 | 39,730 | 39,730 | 39,290 | 50,810 | 40,480 | 40,480 | 40,040 | 51,560 | 40,480 | 40,480 | 40,040 | 51,560 | 40,480 | 40,480 |
| Loan payment | | | | | | | | | | | | | | | |
| Interest payment for short term | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 |
| Principal payment for short term | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 |
| Interest payment for long term | 0 | 0 | 0 | 0 | 0 | 23,878 | 30,003 | 20,396 | 9,413 | 8,367 | 7,321 | 5,753 | 4,184 | 2,092 | 0 |
| Principal payment for long term | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10,459 | 10,459 | 20,919 | 20,919 | 31,378 | 31,378 | 41,837 | 41,837 |
| Total payment for loan | 14,700 | 14,700 | 14,700 | 14,700 | 14,700 | 38,578 | 44,703 | 45,555 | 34,573 | 43,986 | 42,940 | 51,830 | 50,261 | 58,629 | 56,537 |
| Total Cash Expense | 65,970 | 54,430 | 54,430 | 53,990 | 65,510 | 79,058 | 85,183 | 85,595 | 86,133 | 84,466 | 83,420 | 91,870 | 101,821 | 99,109 | 97,017 |
| Net saving | 115,665 | 8,020 | 8,020 | 7,760 | 35,790 | -8,108 | -3,733 | 9,505 | 54,417 | 16,484 | 17,530 | 9,080 | 38,729 | 1,841 | 3,932 |
| Accumulated cash saving | 115,665 | 123,685 | 131,705 | 139,465 | 175,255 | 167,147 | 163,415 | 172,920 | 227,337 | 243,821 | 261,351 | 270,431 | 309,159 | 311,001 | 314,934 |

Note: *1 The income from paddy shows the substantial cash income and include the value of self consumption.
*2 Short term loan is provided based on the area size of paddy in considering the land productivity.
*3 The expense of self-made rice, vegetables, fish is excluded from the household expense
Short term loan interest rate 5%, Long term loan 5 year grace period, 5% interest rate. In this case, a farm is subsidized to excavate farm pond of 1200m² and, for rest of pond excavation, farm borrows money with 5% interest rate.

Table G-26-4 Cash Flow Analysis : Farming Type D1 (The case : Short term loan 14,000 baht interest rate 5%, Long term loan 100,000 baht interest rate 5%, Farm pond 75,435 baht)

| | Year | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|-------------------------------------|-------------------------------------|--------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|
| Farm income | Paddy (10ra) ¹ | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 |
| | Cucalyptus(1.4 ra) | 0 | 0 | 0 | 0 | 39,600 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Vegetables(11ra) | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 |
| | Fruits(3ra) | 0 | 0 | 0 | 7,800 | 9,750 | 19,500 | 49,000 | 52,650 | 58,500 | 58,500 | 58,500 | 58,500 | 58,500 | 58,500 | 58,500 |
| | Handicraft and hired in agriculture | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 |
| Sub total | 28,450 | 28,450 | 28,450 | 36,250 | 77,800 | 77,800 | 67,450 | 67,450 | 81,100 | 126,550 | 86,950 | 86,950 | 126,550 | 86,950 | 86,950 | |
| Loan | Short term loan ² | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 |
| | Long term loan | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 |
| | Eucalyptus | 12,000 | 5,000 | 5,000 | 4,000 | 4,500 | 5,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Fruits | 18,000 | 15,000 | 15,000 | 7,500 | 5,000 | 4,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Farm pond (6,000m ²) | 75,435 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sub total | 119,435 | 34,000 | 34,000 | 25,500 | 23,500 | 23,500 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | |
| Total Cash Income | 147,885 | 62,450 | 62,450 | 61,750 | 101,300 | 70,950 | 81,450 | 81,450 | 95,100 | 140,550 | 100,950 | 100,950 | 140,550 | 100,950 | 100,950 | |
| Farm Cash Expense | Paddy | 8,020 | 8,020 | 8,020 | 8,020 | 8,020 | 8,020 | 8,020 | 8,020 | 8,020 | 8,020 | 8,020 | 8,020 | 8,020 | 8,020 | 8,020 |
| | Cucalyptus | 9,360 | 1,320 | 1,320 | 880 | 12,400 | 1,320 | 1,320 | 880 | 12,400 | 1,320 | 1,320 | 880 | 12,400 | 1,320 | 1,320 |
| | Vegetables | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 |
| | Fruits | 6,270 | 1,770 | 1,770 | 1,770 | 1,770 | 2,520 | 2,520 | 2,520 | 2,520 | 2,520 | 2,520 | 2,520 | 2,520 | 2,520 | 2,520 |
| | O.G.M for Farm Pond | 1,420 | 1,420 | 1,420 | 1,420 | 1,420 | 1,420 | 1,420 | 1,420 | 1,420 | 1,420 | 1,420 | 1,420 | 1,420 | 1,420 | 1,420 |
| Sub total | 29,370 | 18,430 | 18,430 | 17,990 | 29,510 | 19,180 | 19,180 | 18,740 | 18,740 | 30,260 | 19,180 | 19,180 | 18,740 | 30,260 | 19,180 | |
| Total Cash Expense | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | |
| Household Cash Expense ³ | 51,270 | 39,730 | 39,730 | 39,790 | 50,810 | 40,480 | 40,480 | 40,480 | 40,040 | 51,560 | 40,480 | 40,480 | 40,040 | 51,560 | 40,480 | |
| Loan payment | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 | |
| Interest payment for short term | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | |
| Principal payment for short term | 0 | 0 | 0 | 0 | 0 | 18,815 | 24,940 | 17,105 | 7,895 | 7,017 | 6,140 | 4,824 | 3,509 | 1,754 | 0 | |
| Interest payment for long term | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8,772 | 8,772 | 17,544 | 17,544 | 26,315 | 26,315 | 35,087 | |
| Principal payment for long term | 14,700 | 14,700 | 14,700 | 14,700 | 14,700 | 14,700 | 33,515 | 39,640 | 40,577 | 31,366 | 39,261 | 38,384 | 45,840 | 44,524 | 51,541 | |
| Total payment for loan | 65,970 | 54,430 | 54,430 | 53,990 | 65,510 | 73,995 | 80,120 | 80,617 | 82,926 | 79,741 | 78,864 | 85,880 | 96,084 | 92,021 | 90,267 | |
| Total Cash Expense | 81,915 | 8,020 | 8,020 | 7,760 | 7,760 | 35,790 | -3,045 | 1,330 | 14,483 | 57,624 | 21,209 | 22,066 | 15,070 | 44,466 | 8,929 | |
| Net saving | 81,915 | 89,935 | 97,955 | 105,715 | 141,505 | 138,460 | 139,790 | 154,273 | 211,897 | 233,106 | 255,192 | 270,262 | 314,728 | 323,657 | 334,340 | |
| Accumulated cash saving | | | | | | | | | | | | | | | | |

Note: ¹ The income from paddy shows the substantial level income and exclude the value of self consumption.
² Short term loan is provided based on the size of paddy in considering the land productivity.
³ The expense of self-made rice, vegetables, fish is excluded from the household expense

Short term loan interest rate 5%, Long term loan 5 year grace period, 5% interest rate. In this case, a farm is subsidized to excavate farm pond of 3,000m² and with regard to the rest of pond excavation, farm borrows money with 5% interest rate.

Table G-26-5 Cash Flow Analysis : Farming type D1 (The case : Short term loan 14,000 baht interest rate 5%, Long term loan 100,000 baht interest rate 5%, Farm pond 75,433 baht, Subsidy 4,900 baht for O&M cost)

| Year | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|--|---------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Farm income | | | | | | | | | | | | | | | |
| Paddy(10rai)*1 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 |
| Eucalyptus(4.4rai) | 0 | 0 | 0 | 0 | 39,600 | 0 | 0 | 0 | 39,600 | 0 | 0 | 0 | 39,600 | 0 | 0 |
| Vegetables(1rai) | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 |
| Fruits(3rai) | 0 | 0 | 0 | 7,800 | 9,750 | 19,500 | 39,000 | 57,600 | 58,500 | 58,500 | 58,500 | 58,500 | 58,500 | 58,500 | 58,500 |
| Handicraft and hired in agricu | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 | 7,500 |
| Sub total | 28,450 | 28,450 | 28,450 | 36,250 | 77,800 | 47,950 | 67,450 | 81,100 | 126,550 | 96,950 | 86,950 | 126,550 | 86,950 | 86,950 | 86,950 |
| Loan | | | | | | | | | | | | | | | |
| Short term loan*2 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 |
| Long term loan | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 |
| Total disbursement of loan | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 | 28,000 |
| Subsidy | 119,435 | 34,000 | 34,000 | 34,000 | 34,000 | 34,000 | 34,000 | 34,000 | 34,000 | 34,000 | 34,000 | 34,000 | 34,000 | 34,000 | 34,000 |
| Total Cash Income | 149,305 | 63,870 | 63,870 | 63,170 | 102,720 | 72,370 | 82,870 | 96,570 | 141,970 | 102,370 | 102,370 | 102,370 | 141,970 | 102,370 | 102,370 |
| Farm Cash Expense | | | | | | | | | | | | | | | |
| Paddy | 8,020 | 8,020 | 8,020 | 8,020 | 8,020 | 8,020 | 8,020 | 8,020 | 8,020 | 8,020 | 8,020 | 8,020 | 8,020 | 8,020 | 8,020 |
| Eucalyptus | 5,360 | 1,320 | 1,320 | 880 | 12,400 | 1,320 | 1,320 | 880 | 12,400 | 1,320 | 1,320 | 880 | 12,400 | 1,320 | 1,320 |
| Vegetables | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 |
| Fruits | 6,270 | 1,770 | 1,770 | 1,770 | 1,770 | 2,520 | 2,520 | 2,520 | 2,520 | 2,520 | 2,520 | 2,520 | 2,520 | 2,520 | 2,520 |
| O&M for Farm Pond | 1,420 | 1,420 | 1,420 | 1,420 | 1,420 | 1,420 | 1,420 | 1,420 | 1,420 | 1,420 | 1,420 | 1,420 | 1,420 | 1,420 | 1,420 |
| Sub total | 29,970 | 18,430 | 18,430 | 17,990 | 29,510 | 19,180 | 19,180 | 18,740 | 30,260 | 19,180 | 19,180 | 18,740 | 30,260 | 19,180 | 19,180 |
| Household Cash Expense ³ | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 |
| Total | 51,270 | 39,730 | 39,730 | 39,290 | 50,810 | 40,480 | 40,480 | 40,040 | 51,560 | 40,480 | 40,480 | 40,040 | 51,560 | 40,480 | 40,480 |
| Loan payment | | | | | | | | | | | | | | | |
| Interest payment for short term | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 |
| Principal payment for short term | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 |
| Interest payment for long term | 0 | 0 | 0 | 0 | 0 | 18,815 | 24,940 | 17,105 | 7,895 | 7,017 | 6,140 | 4,824 | 3,509 | 1,754 | 0 |
| Principal payment for long term | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8,772 | 17,544 | 17,544 | 26,315 | 26,315 | 35,087 | 35,087 |
| Total payment for loan | 14,700 | 14,700 | 14,700 | 14,700 | 14,700 | 33,515 | 39,640 | 40,577 | 31,366 | 39,261 | 38,384 | 45,840 | 44,524 | 51,541 | 49,787 |
| Total Cash Expense | 65,970 | 54,430 | 54,430 | 53,990 | 65,510 | 73,995 | 80,120 | 80,617 | 82,926 | 79,741 | 78,864 | 85,880 | 86,084 | 92,021 | 90,267 |
| Net saving | 83,335 | 9,440 | 9,440 | 9,180 | 37,210 | -1,625 | 2,750 | 15,903 | 59,044 | 22,629 | 23,506 | 16,490 | 45,886 | 10,349 | 12,103 |
| Accumulated cash saving | 83,335 | 92,775 | 102,215 | 111,395 | 148,605 | 146,980 | 149,730 | 165,633 | 224,877 | 247,306 | 270,812 | 287,302 | 333,188 | 343,537 | 355,640 |

Note: *1 The income from paddy shows the substantial cash income and include the value of self consumption.
 *2 Short term loan is provided based on the x/ba/s or partly in considering the land productivity.
 *3 The expense of self-made rice, vegetables, fish is excluded from the household expense
 Short term loan interest rate 5%, Long term loan 5 year grace period, 5% interest rate. In this case, a farm is subsidized to excavate farm pond of 3,000m² and for the rest of pond excavation, farm borrows money with 5% interest rate.
 Furthermore, in this model, 4,900 baht of O&M cost of farm pond every year is subsidized.

Table G-27 Cash Flow Analysis : Farming type D2 (The Case : Short term loan 14,000 baht interest rate 5%, Medium term loan 34,000 baht interest rate 5%, Long term loan 62,000 baht interest rate 5%)

| Year | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|-------------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Farm income | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 |
| Paddy(10-rai)*1 | 0 | 0 | 0 | 0 | 72,000 | 0 | 0 | 0 | 72,000 | 0 | 0 | 0 | 72,000 | 0 | 0 |
| Eucalyptus(8rai) | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 | 16,000 |
| Vegetables(1rai) | 0 | 32,000 | 32,000 | 32,000 | 32,000 | 32,000 | 32,000 | 32,000 | 32,000 | 32,000 | 32,000 | 32,000 | 32,000 | 32,000 | 32,000 |
| Cows(8) | 2,106 | 2,106 | 2,106 | 2,106 | 2,106 | 2,106 | 2,106 | 2,106 | 2,106 | 2,106 | 2,106 | 2,106 | 2,106 | 2,106 | 2,106 |
| Chicken(60) | 13,500 | 13,500 | 13,500 | 13,500 | 13,500 | 13,500 | 13,500 | 13,500 | 13,500 | 13,500 | 13,500 | 13,500 | 13,500 | 13,500 | 13,500 |
| Handicraft and hired in agriculture | 36,556 | 68,556 | 68,556 | 68,556 | 140,556 | 68,556 | 68,556 | 140,556 | 68,556 | 68,556 | 68,556 | 140,556 | 68,556 | 68,556 | 68,556 |
| Sub total | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 |
| Loan | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 |
| Short term loan*2 | 29,700 | 8,000 | 8,000 | 6,400 | 22,400 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Medium term loan*4 | 60,700 | 39,000 | 39,000 | 37,400 | 53,400 | 31,000 | 31,000 | 31,000 | 31,000 | 31,000 | 31,000 | 31,000 | 31,000 | 31,000 | 31,000 |
| Long term loan | 60,700 | 39,000 | 39,000 | 37,400 | 53,400 | 31,000 | 31,000 | 31,000 | 31,000 | 31,000 | 31,000 | 31,000 | 31,000 | 31,000 | 31,000 |
| Sub total | 137,400 | 94,000 | 94,000 | 90,800 | 129,200 | 62,000 | 62,000 | 62,000 | 62,000 | 62,000 | 62,000 | 62,000 | 62,000 | 62,000 | 62,000 |
| Total disbursement of loan | 123,400 | 86,000 | 86,000 | 84,400 | 116,800 | 62,000 | 62,000 | 62,000 | 62,000 | 62,000 | 62,000 | 62,000 | 62,000 | 62,000 | 62,000 |
| Total Cash Income | 97,256 | 107,556 | 107,556 | 105,956 | 193,956 | 49,556 | 99,556 | 171,556 | 99,556 | 99,556 | 99,556 | 171,556 | 99,556 | 99,556 | 99,556 |
| Farm Cash Expense | 8,120 | 8,120 | 8,120 | 8,120 | 6,120 | 8,120 | 8,120 | 8,120 | 8,120 | 8,120 | 8,120 | 8,120 | 8,120 | 8,120 | 8,120 |
| Paddy | 16,200 | 8,000 | 8,000 | 6,400 | 22,400 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 |
| Eucalyptus | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 | 5,900 |
| Vegetables | 16,500 | 16,500 | 16,500 | 16,500 | 16,500 | 16,500 | 16,500 | 16,500 | 16,500 | 16,500 | 16,500 | 16,500 | 16,500 | 16,500 | 16,500 |
| Cows | 1,416 | 1,416 | 1,416 | 1,416 | 1,416 | 1,416 | 1,416 | 1,416 | 1,416 | 1,416 | 1,416 | 1,416 | 1,416 | 1,416 | 1,416 |
| Chicken | 290 | 290 | 290 | 290 | 290 | 290 | 290 | 290 | 290 | 290 | 290 | 290 | 290 | 290 | 290 |
| O&M for Farm Pond | 48,426 | 40,226 | 40,226 | 38,626 | 54,626 | 40,226 | 40,226 | 40,226 | 40,226 | 40,226 | 40,226 | 40,226 | 40,226 | 40,226 | 40,226 |
| Sub total | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 | 21,300 |
| Total | 69,726 | 61,526 | 61,526 | 59,926 | 75,926 | 61,526 | 61,526 | 61,526 | 61,526 | 61,526 | 61,526 | 61,526 | 61,526 | 61,526 | 61,526 |
| Household Cash Expense*3 | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 | 700 |
| Loan payment | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 | 14,000 |
| Interest payment for short term | 850 | 1,700 | 1,700 | 1,700 | 1,700 | 1,700 | 1,700 | 1,700 | 1,700 | 1,700 | 1,700 | 1,700 | 1,700 | 1,700 | 1,700 |
| Principal payment for short term | 0 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 | 17,000 |
| Interest payment for medium term | 0 | 0 | 0 | 0 | 0 | 5,655 | 10,055 | 7,264 | 3,353 | 2,980 | 2,608 | 2,049 | 1,490 | 745 | 0 |
| Principal payment for medium term | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Interest payment for long term | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Principal payment for long term | 15,550 | 33,400 | 33,400 | 33,400 | 33,400 | 39,055 | 43,455 | 44,389 | 40,478 | 43,830 | 43,458 | 46,674 | 46,065 | 49,045 | 48,300 |
| Total payment for loan | 85,276 | 94,926 | 94,926 | 93,326 | 109,326 | 100,581 | 104,981 | 104,315 | 116,404 | 105,356 | 104,984 | 106,550 | 121,991 | 110,571 | 109,926 |
| Total Cash Expense | 11,980 | 12,630 | 12,630 | 12,630 | 84,630 | -1,025 | -5,425 | -4,759 | 55,153 | -5,800 | -5,428 | -6,994 | 49,565 | -11,015 | -10,270 |
| Net saving | 11,980 | 24,610 | 37,240 | 49,870 | 134,500 | 133,475 | 128,050 | 123,291 | 178,444 | 172,644 | 167,216 | 160,223 | 209,788 | 198,773 | 188,503 |
| Accumulated cash saving | | | | | | | | | | | | | | | |

Note: *1 The income from paddy shows the substantial cash income and excludes the value of self consumption.

*2 Short term loan is provided based on the area size of paddy in considering the land productivity.

Short term loan interest rate 5%, Long term loan 5 year grace period, 5% interest rate. Farm pond is provided for free by ALRO fund and irrigation cost of 10,300 baht is self-provided.

*4 Medium term loan is provided for livestock raising for 7 years.

Table G-28 Cash Flow Analysis : Farming type E Paddy /Eucalyptus (The case : Short term loan 8,000 baht, interest rate 5%, Long term loan 80,000baht interest rate 5%)

| | Year | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|----------------------------------|----------------------------|--------|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Farm income | Paddy (10rai)*1 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 | 4,950 |
| | Eucalyptus(10rai) | 0 | 0 | 0 | 0 | 90,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 90,000 | 0 | 0 |
| Non-farm income | Handicraft | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 | 2,500 |
| | Construction work | 18,000 | 18,000 | 18,000 | 18,000 | 18,000 | 18,000 | 18,000 | 18,000 | 18,000 | 18,000 | 18,000 | 18,000 | 18,000 | 18,000 | 18,000 |
| | Hired labor in agriculture | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 | 9,000 |
| | Sub total | 34,450 | 34,450 | 34,450 | 34,450 | 124,450 | 34,450 | 34,450 | 34,450 | 34,450 | 34,450 | 34,450 | 34,450 | 174,450 | 34,450 | 34,450 |
| Short term loan*2 | | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 |
| Long term loan | | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 |
| | Sub total | 24,000 | 10,000 | 10,000 | 8,000 | 28,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total disbursement of loan | | 24,000 | 10,000 | 10,000 | 8,000 | 28,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Sub total | 32,000 | 18,000 | 18,000 | 16,000 | 36,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 |
| Total Cash Income | | 66,450 | 52,450 | 52,450 | 50,450 | 160,450 | 42,450 | 42,450 | 42,450 | 132,450 | 42,450 | 42,450 | 42,450 | 132,450 | 42,450 | 42,450 |
| Farm Cash Expense | Paddy | 1,520 | 1,520 | 1,520 | 1,520 | 1,520 | 1,520 | 1,520 | 1,520 | 1,520 | 1,520 | 1,520 | 1,520 | 1,520 | 1,520 | 1,520 |
| | Eucalyptus | 18,000 | 3,000 | 3,000 | 2,000 | 28,000 | 3,000 | 3,000 | 2,000 | 28,000 | 3,000 | 3,000 | 2,000 | 28,000 | 3,000 | 2,000 |
| | Sub total | 19,520 | 4,520 | 4,520 | 3,520 | 29,520 | 4,520 | 4,520 | 3,520 | 29,520 | 4,520 | 4,520 | 3,520 | 29,520 | 4,520 | 3,520 |
| Household Cash Expense*3 | | 23,800 | 23,800 | 23,800 | 23,800 | 23,800 | 23,800 | 23,800 | 23,800 | 23,800 | 23,800 | 23,800 | 23,800 | 23,800 | 23,800 | 23,800 |
| | Sub total | 43,320 | 28,320 | 28,320 | 27,320 | 53,320 | 28,320 | 28,320 | 27,320 | 53,320 | 28,320 | 28,320 | 27,320 | 53,320 | 28,320 | 27,320 |
| Loan payment | | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 |
| Interest payment for short term | | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 | 8,000 |
| Principal payment for short term | | 0 | 0 | 0 | 0 | 0 | 5,100 | 10,600 | 7,800 | 3,600 | 3,200 | 2,800 | 2,200 | 1,600 | 800 | 0 |
| Interest payment for long term | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Principal payment for long term | | 8,400 | 8,400 | 8,400 | 8,400 | 8,400 | 13,500 | 19,000 | 20,200 | 16,000 | 19,600 | 19,200 | 22,600 | 22,000 | 25,200 | 24,400 |
| Total payment for loan | | 51,720 | 36,720 | 36,720 | 35,720 | 61,720 | 41,820 | 47,320 | 47,520 | 69,320 | 47,920 | 47,520 | 49,920 | 75,320 | 53,520 | 51,720 |
| Total Cash Expense | | 14,730 | 15,730 | 15,730 | 14,730 | 98,730 | 630 | -4,870 | -5,070 | 63,130 | -5,470 | -5,070 | -7,470 | 57,130 | -11,070 | -9,270 |
| Net saving | | 14,730 | 30,460 | 46,190 | 60,920 | 159,650 | 160,280 | 155,410 | 150,340 | 213,470 | 208,000 | 202,980 | 195,460 | 252,590 | 241,520 | 232,250 |
| Accumulated cash saving | | | | | | | | | | | | | | | | |

Note: *1 The income from paddy shows the substantial cash income and excludes the value of self consumption.

*2 Short term loan is provided based on the area size of paddy in considering the land productivity.

*3 The expense of self-made-rice, vegetables, fish are excluded from the household expense

Farm economy survey

Objective of the Survey

Farm economy survey was conducted in the Study Area to understand the average farming type. 125 sample was taken from 4 Study Areas, Kohn Kean, Maha Sarakham, Mukudahan, Sakhon Nakhon provinces.

This survey targets to clarify the income/expenditure structure in each farming type and know which type of farming can get enough income from only farming activity.

Sampling procedure

Through the field visit and interview to local expertise who works in the agricultural field, we firstly understood prevalent farming type in our Study Area. Then decided the farming types to be taken as samples.

The sampling method is not random, but selective. Porcedure for selective sampling is as follows. Sampling process is as follows.

1. Interviewer visits village mayors.
2. Ask which farms are engaging in what kinds of farming type to village mayors (because usually mayors know about the informtion and can tell which farms engage in what kinds of farming.)
3. Then select typical farms to be interviewd.
4. Start interview to farmers.

Sampling number

Total number of questionnaire to be taken is 125 shown as the table below.

| | Declared | Undeclared | Total |
|---------------|----------|------------|-------|
| Kohn Kaen | 20 | 15 | 35 |
| Maha Sarakham | 20 | 15 | 35 |
| Mukudahan | 20 | 15 | 35 |
| Sakhon Nakhon | 20 | - | 20 |
| | | | 125 |

Sampling Category

1. Declaration category

First is Declaration category. Land Reform Areas (LRAs) is characterized to be encroaching forest land illegally settled by people. In the declared areas, farmers received land certificate and can borrow loan as a collateral. In undeclared areas, the land is still legally government land and farmers has to wait the declaration for their land. Alleviating income disparity between urban areas and rural areas, especially in north eastern region, Thai government strated to distribute the national land to farmers under the 8th National Development Plan. Concurrently, the project is supported by the agricultural restructuring program called Kor Po Lor project supplying subsidy with farmers on the problem areas. ALRO started to distribute the land to farmers.

So we divided into the two blocks to know the effect of loan to agricultural activity; one in declared area where already received the land certificate and undeclared area where is going to receive land certificate in the future.

2. Changwat category

Second is Changwats category. To grip out the characteristic of farming characteristic in each Changwats, we take same number of sample in each changwats.

(Cf In Sakhon Nakohn, undeclared areas don't exist and integrated farming which needs enough money to invest for agriculture is practised in undecred area because farms in the area which don't have land certificate can't borrow money from BAAC.)

The table below is the area where the sutvey was conducted.

Surveyed Areas

| Province | No. on the map | Name of forest | Area of Declared LRAs (rai) | Area of Undeclared LRAs (rai) |
|---------------|----------------|--------------------------------|-----------------------------|-------------------------------|
| Kohn Kean | 1 | Phu rangam forest | 68,125 | |
| | 3 | Khok Luang Forest | 19,700 | |
| | 6 | Non-nam Baeng Forest | 63,675 | 88,668 |
| Maha Sarakham | 2 | Din daeng and wang kung forest | | 69,747 |
| | 6 | Nong khu and Na dun forest | 9,600 | |
| | 8 | Kut Rang Forest | 2,075 | 78,327 |
| Mukdahan | 1 | Dong Bung1(plot1) forest | | 109,055 |
| | 3 | Dong Bung1(plot3)forest | | 103,958 |
| | 8 | Dong phu phan forest | 64,800 | |
| Sakhon Nakhon | 3 | Kut Hai | 139,813 | |
| | 5 | Doug Chomphu | 69,350 | |

3. Farming type category

Third is Farming type category. Though field survey and interview to local expertise, we understand that next five farming type be typical ones in our Study Areas. Off course, models described below don't cover all types of farms. However, setting up the typical farming and analysing the income and expenditure flow would make us understood which farming type is feasible one as proposals in our project plan.

20 questionnaire in one Changwat is composed of following farming type .

| Farming Type | | Number of questionnaire |
|---------------------------|---|-------------------------|
| Major Paddy only | A | 5 |
| Paddy plus upland crops | B | 5 |
| Paddy plus cattle raising | C | 5 |
| Integrated farming | D | 3 |
| Agro-forestry | E | 2 |
| | | 20 |

Results of Farm Survey

Table G-FS-1 Size of household, age, sex, and household labour

| Items | Unit | Kohn Kaen | Maha Sarakham | Mukudahan | Sakon Nakhon | Average |
|----------------------|--------|-----------|---------------|-----------|--------------|---------|
| 1. Size of household | person | 5.26 | 4.91 | 5.63 | 5.55 | 5.31 |
| 2. Average age | year | 32.26 | 30.34 | 27.2 | 31.33 | 30.1 |
| 3. Sex -male | | 2.4 | 2.43 | 2.77 | 3.1 | 2.62 |
| -female | | 2.86 | 2.48 | 2.86 | 2.45 | 2.69 |
| 4. Household labour | | | | | | |
| -wet season | person | 3.57 | 2.74 | 3.4 | 3.9 | 3.36 |
| -dry season | person | 3.03 | 1.6 | 2.91 | 3.15 | 2.63 |

Table G-FS-2 Time of settlement, land ownership, and certificates

| Items | Unit | Kohn Kaen | Maha Sarakham | Mukudahan | Sakon Nakhon | Average |
|-----------------------|-------|-----------|---------------|-----------|--------------|---------|
| 1. Time of settlement | year | 45.57 | 36.82 | 36.82 | 44.15 | 41.09 |
| 2. Total farm size | rai | 32.81 | 37.3 | 29.14 | 34.64 | 33.33 |
| -own | | 30.9 | 37.18 | 29.14 | 33.99 | 32.63 |
| -certificate | | | | | | |
| -collateral | % | 40 | 35.29 | 26.56 | 47.6 | 28.13 |
| -ALRO 401 | % | 20 | 29.41 | 31.25 | 47.62 | 31.25 |
| -other | % | 40 | 35.3 | 42.19 | 47.62 | 40.62 |
| -rent | rai | 1.91 | 0.12 | - | 0.65 | 0.7 |
| -fee/year | B/rai | 231.75 | 200 | - | 200 | 221.17 |
| -method of payment | | | | | | |
| -cash | % | 50 | 100 | - | 200 | 66.67 |
| -other | % | 50 | - | - | - | 33.33 |

Table G-FS-3 Land utilization and agro-forestry

| Items | Unit | Kohn Kaen | Maha Sarakham | Mukudahan | Sakon Nakhon | Average |
|-----------------------|------|-----------|---------------|-----------|--------------|---------|
| 1. Total land holding | rai | 32.81 | 37.3 | 29.14 | 34.64 | 33.33 |
| -housing | rai | 0.72 | 1.43 | 1.18 | 1.31 | 1.14 |
| -crops | rai | 25.96 | 29.34 | 20.43 | 20.44 | 24.5 |
| -glu.paddy -own | rai | 12.55 | 16.81 | 12.51 | 15.38 | 14.18 |
| -rent | rai | 0.57 | - | - | - | 0.16 |
| -nonglu.paddy -own | rai | 2.4 | 3.2 | 2.23 | 0.48 | 2.27 |
| -rent | rai | - | - | - | - | - |
| -cassava -own | rai | 4.31 | 4.66 | 2.71 | 1.8 | 3.56 |
| -rent | rai | 1.14 | - | - | - | 0.32 |
| -sugarcane -own | rai | 3.89 | 2.51 | 1.83 | - | 2.3 |
| -rent | rai | 0.2 | 0.2 | - | 0.65 | 0.22 |
| -kenaf -own | rai | - | - | 0.77 | - | 0.22 |
| -rent | rai | - | - | - | - | - |
| -other upland -own | rai | - | - | 0.03 | 0.38 | 0.09 |
| -rent | rai | - | - | - | - | - |
| -fruit tree -own | rai | 0.86 | 1.96 | 0.06 | 1.55 | 1.05 |
| -rent | rai | - | - | - | - | - |
| -vegetables -own | rai | 0.04 | - | 0.29 | 0.1 | 0.11 |
| -rent | rai | - | - | - | - | - |
| -other -own | rai | - | - | - | 0.1 | 0.02 |
| -rent | rai | - | - | - | - | - |
| -Agro forestry -own | rai | 2.54 | 1.4 | 2.17 | 1.1 | 1.89 |
| -rent | rai | - | - | - | - | - |
| -pasture land -own | rai | - | - | 0.26 | - | 0.07 |
| -rent | rai | - | - | - | - | - |
| -pond | rai | 0.33 | 0.52 | 0.13 | 0.48 | 0.34 |

Table G-FS-4 Livestock : Inventory at beginning and end of year 1996, amount sold and disappearance in 1996

| Items | Unit | Kohn Kaen | Maha Sarakham | Mukudahan | Sakon Nakhon | Average |
|--------------------|------|-----------|---------------|-----------|--------------|---------|
| 1. Cows | | | | | | |
| -at 1 st Jan. 96 | head | 2.34 | 2.2 | 2.4 | 3.25 | 2.46 |
| -sold | head | 0.77 | 0.54 | 0.26 | 0.25 | 0.48 |
| -at 31th Dec.96 | head | 1.97 | 2.17 | 2.63 | 3.7 | 2.49 |
| -disappearance | head | 0.4 | 0.51 | 0.49 | 0.7 | 0.51 |
| 2. Buffalos | | | | | | |
| -at 1 st Jan. 96 | head | 0.8 | 1.49 | 2 | 0.8 | 1.33 |
| -sold | head | 0.29 | 0.2 | 0.71 | - | 0.34 |
| -at 31th Dec.96 | head | 0.6 | 1.54 | 1.8 | 0.9 | 1.25 |
| -disappearance | head | 0.09 | 0.25 | 0.51 | 0.1 | 0.26 |
| 3. Pigs | | | | | | |
| -at 1 st Jan. 96 | head | 1.71 | 0.91 | 2.26 | 0.2 | 1.4 |
| -sold | head | 1.97 | 0.94 | 0.63 | 0.3 | 1.04 |
| -at 31th Dec.96 | head | 1.43 | 0.43 | 1.38 | 0.2 | 0.94 |
| -disappearance | head | 1.69 | 0.46 | 0.26 | 0.3 | 0.58 |
| 4. Chicken | | | | | | |
| -at 1 st Jan. 96 | head | 16.11 | 16.86 | 13.17 | 24.85 | 16.9 |
| -sold | head | 5.71 | 3.29 | 4.11 | 14 | 5.91 |
| -at 31th Dec.96 | head | 15.94 | 16.91 | 15.4 | 33.75 | 18.91 |
| -disappearance | head | 5.54 | 3.34 | 6.34 | 22.9 | 7.92 |
| 5. Ducks | | | | | | |
| -at 1 st Jan. 96 | head | 0.94 | 4.51 | 8.83 | 1.1 | 4.18 |
| -sold | head | - | 1.43 | 5.2 | 0.15 | 1.88 |
| -at 31th Dec.96 | head | 0.91 | 3.66 | 7.97 | 1.95 | 3.82 |
| -disappearance | head | 0.03 | 0.58 | 4.34 | 1 | 1.52 |
| 6. Fish | | | | | | |
| -at 1 st Jan. 96 | | 657 | 1657 | 400 | 2850 | 1936 |
| -sold | kg | 2.68 | 3.43 | - | - | 1.76 |
| -at 31th Dec.96 | kg | 122.86 | 174.86 | - | 1000 | 243.36 |
| -disappearance | kg | 120.18 | 171.43 | - | 1000 | 241.6 |

Table G-FS-5 Household labor available, hire labor situation, and rate of payment for hired labor in each activity

| Items | Unit | Kohn Kaen | Maha Sarakham | Mukudahan | Sakon Nakhon | Average |
|-----------------------------------|--------|-----------|---------------|-----------|--------------|---------|
| 1. Household labour | | | | | | |
| -dry season | person | 3.57 | 2.74 | 3.4 | 3.9 | 3.36 |
| -wet season | person | 3.03 | 1.6 | 2.91 | 3.15 | 2.63 |
| 2. Hired labour used/farm | | | | | | |
| -in 1995 | % | 65.71 | 71.43 | 68.57 | 95 | 72.8 |
| -in 1996 | % | 77.14 | 77.14 | 71.43 | 95 | 78.4 |
| 3. Rate of payment in 1996 | | | | | | |
| -land preparation | B/rai | 145.45 | 120 | 169.09 | 202.22 | 157.73 |
| -planting | B/day | 89.29 | 99.52 | 94.09 | 90.71 | 94.08 |
| -weeding & fertilizing | B/day | 82.5 | 77.5 | 70 | - | 79.06 |
| -harvesting of | | | | | | |
| -paddy | B/day | 111.11 | 109.44 | 95 | 103.33 | 105.08 |
| -cassava | B/day | 79.29 | 71.67 | 90 | - | 76.79 |
| -sugarcane | B/day | 106.67 | 81.67 | 135 | - | 104.4 |
| -kenaf | B/day | - | - | - | - | 40 |

Table G-FS-6 Labour Use in each operation of agriculture production

| Items | Unit | Paddy | Cassava | Sugarcane | Kenaf | Other field crops | Agro-forestry | Vegetables | Fruit tree(Mango) |
|----------------------|--------|--------|---------|-----------|-------|-------------------|---------------|------------|-------------------|
| 1. Total labour use | manday | 145.69 | 99.67 | 218.43 | 44.48 | 64.48 | 88.97 | 106.36 | 88.27 |
| -land prepa+planting | manday | 66.44 | 21.97 | 58.93 | 8.23 | 15.55 | 11.97 | 16.19 | 11.93 |
| -own | manday | 46.64 | 15.25 | 29.76 | 7.54 | 15.17 | 10.62 | 16 | 10.1 |
| -hired | manday | 19.8 | 6.72 | 29.17 | 0.69 | 0.38 | 1.35 | 0.19 | 1.83 |
| -weeding+fertilizing | manday | 15.41 | 32.23 | 43.5 | 12.08 | 14.17 | 41.5 | 35.83 | 40.84 |
| -own | manday | 13.08 | 22.02 | 17.56 | 12.08 | 14.17 | 24.83 | 35.83 | 24.17 |
| -hired | manday | 2.33 | 10.21 | 25.94 | - | - | 16.67 | - | 16.67 |
| -harvesting | manday | 58.01 | 377.93 | 93.84 | 23.42 | 32.34 | 31.5 | 51.84 | 31.5 |
| -own | manday | 41.13 | 20.2 | 24 | 19.42 | 25.67 | 9 | 33.17 | - |
| -hired | manday | 16.88 | 17.73 | 69.84 | 4 | 6.67 | 22.5 | 18.67 | - |
| -post harvesting | manday | 5.83 | 7.54 | 22.16 | 0.75 | 2.42 | 4 | 2.5 | - |
| -own | manday | 4.89 | 5.85 | 9.33 | 0.71 | 2.42 | - | 2.5 | - |
| -hired | manday | 0.94 | 1.69 | 12.83 | 0.04 | - | 4 | - | - |

Table G-FS-7 Use of agricultural inputs for crop

| Items | unit | Paddy | Cassava | Sugarcane | Kenaf | Agroforestry | Fruit tree | Vegetable |
|-------------------------|---------|-------|-------------------|-----------------|---------------|----------------|-----------------|---------------|
| 1. Seed,Stems,Corn | | | | | | | | |
| - Amount use | kg./rai | 6.01 | (stem/rai) 323.23 | (ton/rai) 0.8 | 1.76 | (tree/rai) 480 | (tree/rai) 62.5 | 79.25 |
| - other | % | - | - | - | - | 50 | 100 | - |
| - own | % | 75.56 | 45.83 | 21.43 | 50.00 | - | - | 33.33 |
| - buy | % | 24.44 | 54.17 | 78.58 | 33.33 | 50 | - | 66.67 |
| - price | B/kg. | 5.91 | 5.52 | (B/ton) 527.92 | 40 | (B/tree) 1.5 | (B/tree) | 1.71 |
| buy from - COOP. | % | 33.33 | - | - | - | - | - | - |
| - BAAC | % | - | - | - | - | - | - | - |
| - merchant | % | 11.11 | - | 45.45 | 50 | 75 | - | 100 |
| - neighbor | % | 11.11 | 100 | 54.55 | 50 | - | - | - |
| - govt agency | % | 77.78 | - | - | - | 25 | - | - |
| - transportation cost | B/kg. | - | - | - | - | - | - | - |
| - use of certified seed | | | | | | 100 | | |
| -> 70 % | % | 95.54 | 100 | 100 | 100 | - | 100 | 100 |
| - about 50 % | % | 2.68 | - | - | - | - | - | - |
| - < 30 % | % | 1.78 | - | - | - | - | - | - |
| 2. Fertilizer | | | | | | | | |
| - Amount use | kg./rai | 20.34 | 24.38 | 55.77 | 16.67 | 2.76 | 20.94 | 71.71 |
| - formula 16-16-8 | kg./rai | 10.95 | (46-0-0) 6.19 | (16-11-14) 3.17 | (46-0-0) 1.85 | - | 10.23 | 7.55 |
| - price | B/kg. | 6.11 | 6.17 | 7.05 | 4.40 | - | 6.60 | 4.60 |
| - formula 16-20-0 | kg./rai | 1.20 | (15-15-15) 9.38 | (16-16-8) 7.94 | (16-8-8) 5.56 | - | - | (46-0-0) 7.55 |
| - price | B/kg. | 6.15 | 6.78 | 6.02 | 6.55 | - | - | 7.00 |
| - formula 15-15-15 | kg./rai | 2.91 | (16-8-8) 4.43 | 44.76 | 9.26 | 1.91 | - | 49.06 |
| - price | B/kg. | 6.63 | 6.10 | 6.92 | 7.10 | 7.00 | - | 6.73 |
| - formula 16-8-8 | kg./rai | - | - | - | - | - | - | 7.55 |
| - price | B/kg. | - | - | - | - | - | - | 5.00 |
| - manure made | kg./rai | - | - | - | - | 0.85 | 10.66 | - |
| - Other | kg./rai | 5.23 | 4.33 | - | - | - | - | - |
| - price | B/kg. | 6.10 | 5.88 | - | - | - | - | - |
| - Buy from - COOP | % | 17.60 | 8.83 | 13.33 | - | 25 | 40 | 33.33 |
| - BAAC | % | 17.60 | 8.82 | - | - | - | - | - |
| - Merchant | % | 64.8 | 82.35 | 86.67 | 100 | 75 | 60 | 66.67 |
| - | % | - | - | - | - | - | - | - |
| - Transportation cost | B/kg. | 0.12 | 0.18 | 0.08 | 0.1 | 0.1 | 0.04 | 0.07 |
| 3. Chemicals | | | | | | | | |
| - Amount use | kg./rai | - | - | - | - | - | - | 0.06 |
| - Amount use | cc./rai | 20.92 | - | (cc) 3.17 | - | - | 70.80 | 90.56 |
| - pesticide/insecticide | cc./rai | 7.13 | - | (cc) 3.17 | - | - | 40.35 | 15.09 |
| - price | B/cc. | 0.32 | - | - | - | - | 0.25 | 0.25 |
| - pesticide | kg. | - | - | - | - | - | - | 0.60 |
| - price | B/kg. | - | - | - | - | - | - | 25 |
| - Mold | | | | | | | 30.45 | 75.47 |
| - price | | | | | | | 0.05 | 0.05 |
| - weed | cc. | 13.72 | - | - | - | - | - | - |
| - price | B/cc | 0.39 | - | 0.6 | - | - | - | - |
| - fungicide | cc. | 0.07 | - | - | - | - | - | - |
| - price | B/cc. | 1 | - | - | - | - | - | - |
| - Hormone | cc. | - | - | - | - | - | - | - |
| - Buy From | | | | | | | | |
| - merchant | % | 95.24 | - | 100 | - | - | 100 | 100 |
| - govt agency | % | 4.76 | - | - | - | - | - | - |

Table G-FS-8 Uses of agricultural inputs for animal and fish

| Items | unit | Cows | Buffalos | Pigs | Chicken | Ducks | Fish |
|---------------------------|---------|----------|---------------|------------------|-------------|-----------------|----------------|
| 1. offspring/young animal | | | | | | | |
| - buy | # | 0.13 | 0.08 | 2.11 | 0.49 | 1.52 | 2,564.86 |
| - price | B/@ | 9,928.57 | 7,500 | 1,607.50 | 37.50 | 11.26 | 0.18 |
| - birth | # | 1.13 | 0.47 | 4.58 | 37.72 | 18.04 | - |
| 2 Feed - bran | kg/mth. | - | - | (B/mth.) 93.84 | (kg.) 16.83 | 7.20 | (kg/y.) 605.54 |
| - price | B/kg. | - | - | 6.00 | 5.85 | 7.50 | 2.91 |
| - concentrates | Kg/mth. | - | - | (kg/mth.) 107.11 | 0.15 | 1.20 | (kg/y.) 84.43 |
| - price | B/kg. | - | - | 10.38 | 6.60 | 7.60 | 8.08 |
| - grain | kg/m. | - | - | - | 9.71 | (kg/mth.) 21.89 | - |
| - price | B/kg. | - | - | - | 4.75 | 10.00 | - |
| - other | B/kg. | - | (kg/m.) 11.32 | - | - | - | (kg/y.) 33.23 |
| - price | - | - | - | - | - | - | - |
| 3. own / farm made | % | - | 100 | 27.78 | 70.97 | 72.73 | 25 |
| - buy | % | - | - | 72.22 | 29.03 | 27.27 | 75 |
| 4. buy from - COOP | % | - | - | 100 | - | - | - |
| - merchant | % | - | - | - | 22.22 | 100 | 55.56 |
| - other | % | - | - | - | 77.78 | - | 44.44 |

Table G-FS-9 O&M expenditure of machinery per household

| Items | unit | average |
|---------------|--------|----------|
| - electricity | B/year | 162.24 |
| - repairing | B/year | 1,413.20 |
| - fuel | B/year | 1,421.88 |

Table G-FS-10-1 Agricultural Machine

| Items | unit | Procurement of machine type | | | | | | | | | |
|---------------------|----------|-----------------------------|------------|-----------------|-----------|-----------|-------------|----------------|-------|---------|--|
| | | 2 Wheel Tractor | Water Pump | Spraying Equip. | Rice Mill | Warehouse | Pick-up Car | Weeding Equip. | Truck | Tractor | |
| 1. Average capacity | HP. | 9.5 | 5 | 5 | 5.09 | 10 | 100 | 3.5 | 110 | 2,640 | |
| 2. Age of machine | year | 4.48 | 5.14 | 4.73 | 9.45 | 13.74 | 7.11 | 2 | 9 | 3 | |
| 3. Procurement | % | 83.54 | 81.25 | 90.91 | 69.23 | 100 | 90 | 100 | 100 | 25 | |
| - own/buy | % | 50 | 100 | 90 | 77.78 | 100 | 55.56 | 100 | 100 | - | |
| - cash | % | 50 | - | 10 | 22.22 | - | 44.44 | - | - | 100 | |
| - loan/credit | % | 16.46 | 18.75 | 9.09 | 30.77 | - | 10 | - | - | 75 | |
| - rent | Baht/rai | 157.73 | 293.33 | 30 | 745 | - | - | - | - | 120 | |
| - fee | | | | | | | | | | | |

Table G-FS-10-2 Possession Ratio of Agricultural Machine

| Items | unit | Possession Ratio | | | | Average |
|------------------------|------|------------------|---------------|----------|--------------|---------|
| | | Khon Kaen | Maha Sarakham | Mukdahan | Sakon Nakhon | |
| 1. Machine uses | % | | | | | |
| - Tractor | % | 2.86 | - | - | - | 0.80 |
| - 2 wheel tractor | % | 48.57 | 60.00 | 45.71 | 60.00 | 52.80 |
| - water pump | % | 11.43 | 14.29 | 11.43 | 5.00 | 11.20 |
| - Spraying | % | 8.57 | 11.43 | 5.71 | 10.00 | 8.80 |
| - Harvesting equipment | % | - | - | - | - | - |
| - Threshing | % | - | - | - | - | - |
| - Rice mill | % | 5.71 | 2.86 | 20.20 | 5.00 | 8.80 |
| - Warehouse | % | 37.14 | 88.57 | 82.86 | 65.00 | 72.00 |
| - Pick-up car | % | 14.29 | 2.86 | 8.57 | - | 7.20 |
| - Truck | % | 2.86 | - | - | - | 0.80 |
| - Wedding equipment | % | 2.86 | - | - | - | 0.80 |
| - Animal | % | 28.57 | 54.29 | 51.43 | 45.00 | 44.80 |

Table G-FS-11 Selling and marketing of Agricultural products

| Items | unit | Paddy | Cassava | Sugarcane | Kenaf | Other upland crop | Vegetable | Fruit tree | Agroforestry | Cows | Buffalo | Pigs | Chicken | Ducks | Fish |
|-----------------------------------|-------|----------|---------|-----------|--------|-------------------|-----------|------------|--------------|----------|----------|--------|---------|--------|--------|
| 1. Total production per household | kg. | 4,404.51 | 6341.6 | 15.22 | 18.41 | 13.6 | 25.36 | 226.32 | 1.05 | 0.33 | 0.16 | 0.72 | 0.61 | 1.37 | 12.8 |
| 2. Private consumption | kg. | 3437.18 | 56.00 | 0.00 | 0.00 | 1.20 | 1.01 | 6.48 | 0.00 | n.a. | n.a. | 0.18 | 0.43 | 0.51 | 8.40 |
| 3. Sold out | kg. | 967.33 | 6,286 | 15.22 | 18.41 | 12.40 | 94.35 | 219.84 | 1.05 | 0.06 | 0.14 | 0.54 | 0.18 | 0.86 | 4.40 |
| 4. Price | B/kg. | 5.89 | 0.73 | 547.48 | 12.28 | 7.78 | 4.45 | 3.69 | 601.60 | 3,857.14 | 4,705.88 | 1,578 | 39.13 | 73.27 | 32.33 |
| 5. Sold to - COOP | % | 8.70 | - | - | - | - | 25.00 | - | - | - | - | - | - | - | - |
| - factory | % | 1.45 | 12.00 | 93.33 | - | - | - | - | 66.67 | - | - | - | - | - | - |
| - merchant | % | 84.05 | 86.00 | 6.67 | 100.00 | 100.00 | 50.00 | 63.64 | 33.33 | 50.00 | 75.00 | 80.00 | 100.00 | 100.00 | 50.00 |
| - other | % | 5.80 | 2.00 | - | - | - | 25.00 | 36.36 | - | 50.00 | 25.00 | 20.00 | 100.00 | 100.00 | 50.00 |
| 6. Sold at - in town | % | 42.03 | 36.00 | 57.14 | 60.00 | 33.33 | 25.00 | 9.09 | 33.33 | - | 25.00 | - | - | - | - |
| - local market | % | 40.58 | 52.00 | 42.86 | 40.00 | 33.34 | - | 18.18 | 66.67 | - | 25.00 | 20.00 | - | - | - |
| - farmgate | % | 7.25 | 6.00 | - | - | - | 25.00 | 54.55 | - | 75.00 | 25.00 | 80.00 | 100.00 | 100.00 | 75.00 |
| - other | % | 10.14 | 6.00 | - | - | 33.33 | 25.00 | 18.18 | - | 25.00 | 25.00 | - | - | - | 25.00 |
| - unknown | % | - | - | - | - | - | 25.00 | - | - | - | - | - | - | - | - |
| 7. Transportation cost | B/kg. | 0.18 | 0.11 | 0.14 | 0.52 | - | - | - | 0.12 | - | - | - | - | - | - |
| 8. Type of carrier | % | 10.00 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - 4 wheels (pickup,etc) | % | 70.00 | 76.74 | 43.75 | 83.33 | - | - | - | - | - | - | - | - | - | - |
| - 6 wheels (med.truck) | % | 8.33 | 16.28 | 56.25 | - | - | - | - | 100.00 | - | - | - | - | - | - |
| - 10 wheels (big truck) | % | 3.33 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| - local route bus | % | 1.67 | 2.33 | - | - | 100.00 | 100.00 | 100.00 | - | - | 100.00 | 100.00 | - | - | 100.00 |
| - sold at farm gate | % | 6.67 | 2.33 | - | 16.67 | - | - | - | - | - | - | - | - | - | - |
| - other | % | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 9. Frequency of selling | % | 2.98 | 18.00 | - | - | - | 20.00 | - | - | - | - | - | - | - | 50.00 |
| - daily/weekly | % | 22.39 | 18.00 | - | 20.00 | - | 80.00 | 20.00 | 100.00 | - | - | - | - | - | - |
| - monthly | % | 74.63 | 64.00 | 100.00 | 80.00 | 100.00 | - | 80.00 | - | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 50.00 |
| - seasonally | % | 14.90 | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 10. Distance to usual sell place | km. | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

Table G-FS-12 Marketing of farm products : more details

| Items | unit | Khon Kaen | Maha Sarakham | Mukdahan | Sakon Nakhon | Average |
|------------------------------|------|-----------|---------------|----------|--------------|---------|
| 1. Available of nearby mkt. | | | | | | |
| - yes | % | 14.29 | 2.86 | 2.86 | 55.00 | 14.40 |
| - no | % | 85.71 | 97.14 | 97.14 | 45.00 | 85.60 |
| 2. Post-harvest losses | % | 1.23 | 3.75 | 6.50 | 4.37 | 4.52 |
| - harvesting | % | 0.41 | 0.99 | 4.00 | 2.74 | 2.34 |
| - transporting | % | 0.40 | 0.26 | 0.72 | 0.37 | 0.46 |
| - processing | % | 0.16 | 0.14 | 0.27 | 0.42 | 0.25 |
| - damaging | % | 0.26 | 2.18 | 1.25 | 0.58 | 1.27 |
| - other | % | - | 0.18 | 0.26 | 0.26 | 0.20 |
| 3. how to get higher price ? | | | | | | |
| - no idea | % | 28.57 | 5.88 | 29.41 | 27.50 | 25.20 |
| - yes, | % | 71.43 | 94.12 | 70.57 | 72.50 | 74.80 |
| by - good packaging | % | 3.85 | - | - | - | 1.69 |
| - stable supply | % | 7.69 | 6.25 | - | - | 5.08 |
| - good mkt. inform. | % | 88.46 | 93.75 | 50.00 | 100.00 | 84.75 |
| - mass selling | % | - | - | 50.00 | - | 8.48 |
| 4. Member of BAAC ? | | | | | | |
| - yes, what for | % | 74.29 | 82.86 | 60.00 | 65.00 | 71.20 |
| - credit/loan | % | 100.00 | 85.29 | 86.36 | 68.42 | 86.14 |
| - buy inputs | % | - | 14.71 | 9.09 | 5.26 | 7.92 |
| - welfare | % | - | - | 4.55 | 26.32 | 5.94 |
| - no | % | 25.71 | 17.14 | 40.00 | 35.00 | 28.80 |
| 5. Want to be member ? | | | | | | |
| - yes | % | 55.56 | 66.67 | - | - | 25.00 |
| - no | % | 44.44 | 33.33 | 100.00 | 100.00 | 75.00 |
| 6. Problem in selling prod. | | | | | | |
| - low price | % | 63.27 | 39.66 | 40.00 | 60.00 | 49.20 |
| - low quality | % | 14.29 | 15.52 | 16.00 | 16.67 | 15.51 |
| - lack of transportation | % | 16.33 | 20.69 | 10.00 | - | 13.37 |
| - lack of warehouse | % | - | 1.72 | 4.00 | - | 1.60 |
| - other | % | 6.11 | 22.41 | 30.00 | 23.33 | 20.32 |

Table G-FS-13 Pond data

| Items | unit | Average | Items | unit | Average |
|--------------------------|------|---------|--------------------------|------|---------|
| 1. Have it ? | | | 4. Utilization of pond | | |
| - no, then want it ? | % | 48.80 | - no problem | % | 80.95 |
| - yes | % | 85.25 | - problem | % | 19.05 |
| - no | % | 14.75 | - lack of access | % | 33.33 |
| - yes | % | 51.20 | - muddy road | % | - |
| - # of pond | # | 1.20 | - no water | % | 33.33 |
| - overall area | rai | 0.55 | - lack of pump | % | 16.67 |
| - provide by | | | - flood over pond | % | 16.67 |
| - ALRO | % | 13.15 | 5. Efficiency of use | | |
| - RID | % | 15.79 | - Fully | % | 50.00 |
| - COOP dept. | % | 1.32 | -75% | % | 12.91 |
| - DLD | % | 1.32 | -50% | % | 17.74 |
| - himself | % | 67.10 | - <50% | % | 8.06 |
| - DOAE | % | 1.32 | - almost none | % | 11.29 |
| 2. Position of pond | | | 6. reason for deficiency | | |
| - in paddy area | % | 90.67 | - lost > gain | % | 11.54 |
| - in upland crop area | % | 5.33 | - lack of capital | % | 7.69 |
| - near the house | % | 4.00 | - lack of labour | % | - |
| 3. Purpose of use | | | - inadequate water | % | 80.77 |
| - for crop production | % | 26.88 | 7. Want more pond ? | % | 67.19 |
| - for animal production | % | 19.35 | - no | % | 32.81 |
| - for fish | % | 45.16 | | | |
| - for integrated farming | % | 8.60 | | | |

Table G-FS-14 Income from off-farm job

| Items | Unit | Khon Kaen | Maha Sarakham | Mukdahan | Sakon Nakhon | Average |
|-------------------|--------|-----------|---------------|-----------|--------------|-----------|
| 1. Off-farm job | | | | | | |
| - # of member | # | 1.57 | 1.09 | 2.06 | 1.25 | 1.52 |
| - kinds of job | | | | | | |
| - construction | % | 16.36 | 21.05 | 26.39 | 20.00 | 21.58 |
| - earning | B/year | 4,080 | 4,557.14 | 10,345.71 | 2,800 | 5,736.20 |
| - trading | % | 14.55 | 13.16 | 9.72 | 20.00 | 13.16 |
| - earning | B/year | 10,485.71 | 4,628.57 | 1,286.57 | 2,740 | 5,030.64 |
| - hired labour | % | 30.91 | 31.58 | 55.56 | 36.00 | 41.05 |
| - earning | B/year | 12,217.86 | 7,017.14 | 18,224 | 5,125 | 11,308.52 |
| - office routines | % | 12.73 | 21.05 | 4.17 | 8.00 | 10.53 |
| - earning | B/year | 15,617.14 | 15,926.86 | 1,611.43 | 4,440 | 9,993.92 |
| - factory | % | 25.45 | 13.16 | 4.17 | 16.00 | 13.68 |
| - earning | B/year | 2,285.71 | 2,928.57 | 1,285.71 | 2,755 | 2,260.80 |

Rural Finance

According to the Farm survey, 62.4 % of farmers interviewed replied that they have gotten loan as ever. The difficulty of getting credit, they claimed that high interest rate be a most barrier. Furthermore, farmers who don't receive guarantee or have enough land, they mentioned that no collateral or guarantee be barrier to borrow money.

Among of them who are borrowing money, 75 % of farmers replied that they borrow money from BAAC. BAAC is a major source of providing loan. which average interest rate is 10.85%.

The interest rate is slightly lower than that of Commercial bank.

A few farmers answered that they are receiving ALRO fund. For small volume of the Fund, farmers in IRAs don't have benefit from the Fund very much up to now.

Also farmers who are members of cooperatives replied that they borrow money from cooperative around 1,700 baht with interest rate of 9.9%.

Trader/Merchant and Relatives are playing significant roles to ease farmers' cash flow, which the interest rate is 5% per month and quite high, the loan source plays key role at the time farmers are short of cash seasonally.

Source of credit in Study Areas (Baht)

| | BAAC | Commercial Bank | ALRO fund | Government Project | Cooperatives | Trader/Merchant | Relatives |
|------------------------|--------|-----------------|-----------|--------------------|--------------|-----------------|-----------|
| Average Amount of Loan | 37,056 | 1,666 | 256 | 4,538 | 1,778 | 1,205 | 2,000 |
| Interest rate(%) | 10.85 | 15.00 | 2.50 | 5.36 | 9.93 | 60.00 | 60.00 |

Besides those listed up, saving groups exist in some areas. However, the activity is not so active as ever. Contrary to qualified farmers to borrow money, as one aspect to represent real situation of farmers, there are still many unqualified farmers to borrow money even if they receive land certificate because of relatively small land and low land productivity. They are being forced to borrow money with high interest rate from informal lenders.

In the present time, due to the low return of investment of agriculture, comparatively high living cost and change of life style, farmers are usually apt to run short of money. That is, income from agriculture cannot cover all expense in a farm. For that, some of family members are obliged to work in non-agri sector to compensate their agri income. Some work as construction workers or street vender etc. And their remittance to home are now important cash source for living expense in the farm.

The stagnation of Thai economy are gradually triggering the increase of number of farms which cannot pay back loan they borrowed. As the result, such farmers will not be able to borrow money from Bank and have to borrow money with higher interest rate. The increasing debt by such behavior would damage their lives in financial points.

The reason that farmers cannot pay back or delay to pay are due to casualties, low costs of agricultural produce, increasing costs of production, failure of government policy, misvalue of farmers to agriculture, and extravagant characteristics of farmers. Solving debt burden of farmers, the government set up two committee, which are Aid committee for low income people and farmers, and National agricultural credit executive committee. Furthermore, the government set up a Fund to help farmers ease their debt. Those scheme helped them to some extent, the shortage of fund is intervening to expand the activity.

The drastic change of present Thai economy slump and devaluation of local currency would worse the situation in the right future.

So the government would need to establish concrete support system for farmers who are still majorities as occupations in Thailand especially in LRAs needless of budget deficit.

Otherwise, the income disparity between rural and urban areas will be a big intervention for forwarding further economic development.

Table G-RF-AC-1 Agricultural Credit Result of Farm Survey

| Item | unit | KHONKAEN | | | | MAHASARAKAM | | | | MUKDAHAN | | | | SAKON | | Average |
|-------------------------------|------|-----------|-----------|-----------|-----------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---------|
| | | Declared | | average | | Declared | | average | | Declared | | average | | Declared | | |
| | | Pending | Declared | Pending | Declared | Pending | Declared | Pending | Declared | Pending | Declared | Pending | Declared | Pending | Declared | |
| 2. Source of credit & details | | | | | | | | | | | | | | | | |
| 2.1 BAAC | % | 62.50 | 78.57 | 70.00 | 87.50 | 75.00 | 81.25 | 75.00 | 81.25 | 63.63 | 57.14 | 75.00 | 63.63 | 90.91 | 74.74 | |
| - amount | B | 37,307.69 | 25,692.31 | 31,500.00 | 68,466.67 | 16,785.71 | 48,538.46 | 20,500.00 | 48,538.46 | 32,692.31 | 43,142.86 | 20,500.00 | 32,692.31 | 12,500.00 | 37,056.34 | |
| - interest rate | % | 11.94 | 11.94 | 11.94 | 10.37 | 10.50 | 10.40 | 11.08 | 10.40 | 10.34 | 10.04 | 11.08 | 10.34 | 10.06 | 10.85 | |
| - guarantee | % | 30.00 | - | 14.29 | 26.67 | 25.00 | 25.93 | - | 25.93 | 7.14 | 12.50 | - | 7.14 | 10.00 | 15.49 | |
| - land | % | - | - | - | 13.33 | 8.33 | 11.11 | - | 11.11 | - | - | - | - | - | 4.23 | |
| - assets | % | 70.00 | 100.00 | 85.71 | 60.00 | 66.67 | 62.96 | 100.00 | 62.96 | 92.86 | 87.50 | 100.00 | 92.86 | 90.00 | 80.28 | |
| - group guaran. | % | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - none | % | 6.25 | - | 3.33 | - | - | - | - | - | 4.55 | 7.14 | - | 4.55 | - | 2.11 | |
| 2.2 Commercial bank | B | 3,846.15 | - | 1,923.08 | - | - | - | - | - | 6,153.85 | 11,428.57 | - | 6,153.85 | - | 1,666.67 | |
| - amount | B | 15.00 | - | 15.00 | - | 2.50 | 2.50 | - | 2.50 | 15.00 | 15.00 | - | 15.00 | - | 15.00 | |
| - interest rate | % | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - guarantee | % | 100.00 | - | 100.00 | - | - | - | - | - | - | 100.00 | - | - | - | 50.00 | |
| - land | % | - | - | - | - | - | - | - | - | - | - | - | - | - | 50.00 | |
| - assets | % | - | - | - | - | - | - | - | - | - | - | - | - | - | 50.00 | |
| - group guaran. | % | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - none | % | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| 2.3 ALRO Fund | % | - | - | - | - | 12.50 | 6.25 | - | 6.25 | - | - | - | - | - | 2.11 | |
| - amount | B | - | - | - | - | 1,428.57 | 689.66 | - | 689.66 | - | - | - | - | - | 256.41 | |
| - interest rate | % | - | - | - | - | 2.50 | 2.50 | - | 2.50 | - | - | - | - | - | 2.50 | |
| - guarantee | % | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - assets | % | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - group guaran. | % | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - none | % | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| 2.4 Government projects | % | - | 7.14 | 3.33 | 6.25 | - | - | - | - | - | - | - | - | - | 100.00 | |
| - amount | B | - | 3,615.98 | 1,807.69 | 4,666.67 | - | - | - | - | - | - | - | - | - | 100.00 | |
| - interest rate | % | - | 5.00 | 5.00 | 7.00 | - | - | - | - | - | - | - | - | - | - | |
| - guarantee | % | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - land | % | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - assets | % | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - group guaran. | % | - | 100.00 | 100.00 | 100.00 | - | - | - | - | - | - | - | - | - | - | |
| - none | % | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| 2.5 Cooperatives | % | 18.75 | - | 10.00 | - | 6.25 | 3.13 | - | 3.13 | - | 14.29 | - | 9.09 | - | 6.31 | |
| - amount | B | 7,307.69 | - | 3,653.85 | - | 264.29 | 127.159 | - | 127.159 | - | 5,714.29 | - | 3,076.92 | - | 1,778.21 | |
| - interest rate | % | 10.11 | - | 10.11 | - | 11.50 | 11.50 | - | 11.50 | - | 9.38 | - | 9.38 | - | 9.93 | |
| - guarantee | % | 33.33 | - | 33.33 | - | - | - | - | - | - | - | - | - | - | - | |
| - land | % | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - assets | % | 66.67 | - | 66.67 | - | 100.00 | 100.00 | - | 100.00 | - | 50.00 | - | 50.00 | - | 16.67 | |
| - group guaran. | % | - | - | - | - | - | - | - | - | - | - | - | - | - | 66.66 | |
| - none | % | - | - | - | - | - | - | - | - | - | - | - | - | - | 3.16 | |
| 2.6 Trader/Merchant | % | - | - | - | - | 6.25 | 3.13 | - | 3.13 | - | 14.29 | - | 9.09 | - | - | |
| - amount | B | - | - | - | - | 285.71 | 137.93 | - | 137.93 | - | 12,857.14 | - | 6,923.08 | - | 1,205.13 | |
| - interest rate | % | - | - | - | - | 60.00 | 60.00 | - | 60.00 | - | 10.94 | - | 10.94 | - | 13.08 | |
| - guarantee | % | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - land | % | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - assets | % | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - group guaran. | % | - | - | - | - | 100.00 | 100.00 | - | 100.00 | - | 100.00 | - | 100.00 | - | 100.00 | |
| - none | % | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| 2.7 Relatives | % | 12.50 | 14.29 | 13.33 | 6.25 | - | 3.13 | - | 3.13 | - | - | - | - | - | 6.32 | |
| - amount | B | 3,076.92 | 923.08 | 2,000.00 | 2,933.33 | - | 1,517.24 | - | 1,517.24 | - | - | - | - | - | 2,000.00 | |
| - interest rate | % | 60.00 | 64.00 | 60.92 | - | - | - | - | - | - | - | - | - | - | 20.31 | |
| - guarantee | % | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - land | % | 50.00 | - | 25.00 | - | - | - | - | - | - | - | - | - | - | 16.67 | |
| - assets | % | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| - group guaran. | % | 50.00 | 100.00 | 75.00 | 100.00 | - | 100.00 | - | 100.00 | - | 100.00 | - | 100.00 | - | 83.33 | |
| - none | % | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |

Table G-RF-AC-2 Agricultural Credit Result of Farm Survey2

| Item | Unit | MUKDAHAN | | | Average |
|------------------------------|------|----------|-------------|-------|---------|
| | | KHONKAEN | MAHASARAKAM | SAKON | |
| 1. Got the credit/loan | | | | | |
| - yes | % | 74.29 | 82.86 | 37.14 | 62.4 |
| - no | % | 25.71 | 17.14 | 62.82 | 37.6 |
| 3. Problem of getting credit | | | | | |
| - no collateral | % | 10.35 | 28 | 16.67 | 19.3 |
| - no guarantee | % | 15.79 | 8 | 41.67 | 19.3 |
| - high interest | % | 68.42 | 52 | 33.33 | 52.63 |
| - disqualified | % | 5.26 | - | - | 1.75 |
| - delay of credit | % | - | 4 | - | 1.75 |
| - other | % | - | 8 | 8.33 | 5.27 |
| 4. Objective of using credit | | | | | |
| - buy machine/equipment | % | 40 | 28.85 | 26.67 | 30.4 |
| - buy inputs | % | 57.14 | 50 | 26.67 | 48 |
| - crop insurance | % | - | 3.85 | - | 1.6 |
| - hire labour | % | - | 1.92 | 30 | 8.8 |
| - other | % | 2.86 | 15.38 | 16.66 | 11.2 |

Table G-RF-BA-1 Lending Operation of BAAC Fiscal years 1991-1995

(million baht)

| Loan Categories Classified by Fiscal Year | Principal outstanding at the beginning of the year | Disbursements | Repayment | | Principal outstanding at the end of the year |
|---|---|----------------|------------------|---|---|
| | | | Amount repaid | % of Repayment to principal matured | |
| 1991 | 36,850 | 42,705 | 31,789 | 87.85 | 47,776 |
| - Client farmers | | | | | |
| - Agricultural Cooperatives | 4,870 | 8,249 | 7,124 | - | 5,995* |
| - Farmer Associations | 203 | 32 | 37 | - | 198* |
| TOTAL | 41,923 | 50,986 | 38,950 | - | 53,959 |
| 1992 | 47,776 | 58,067** | 39,696 | 88.84 | 66,137 |
| - Client farmers | | | | | |
| - Agricultural Cooperatives | 5,995 | 9,989 | 9,092 | - | 6,892* |
| - Farmer Associations | 198 | 26 | 31 | - | 193* |
| TOTAL | 53,959 | 68,082 | 48,819 | - | 73,222 |
| 1993 | 66,137 | 63,810** | 54,339 | 88.63 | 75,608 |
| - Client farmers | | | | | |
| - Agricultural Cooperatives | 6,892 | 11,417 | 10,816 | - | 7,493* |
| - Farmer Associations | 193 | 32 | 34 | - | 191* |
| TOTAL | 73,222 | 75,259 | 65,189 | - | 83,292 |
| 1994 | 75,608 | 80,488** | 58,616 | 88.16 | 97,680*** |
| - Client farmers | | | | | |
| - Agricultural Cooperatives | 7,493 | 12,977 | 12,165 | - | 8,305* |
| - Farmer Associations | 191 | 40 | 62 | - | 169* |
| TOTAL | 83,292 | 93,505 | 70,843 | - | 106,154 |
| 1995 | 97,680 | 96,585** | 67,022 | 86.07 | 127,243 |
| - Client farmers | | | | | |
| - Agricultural Cooperatives | 8,305 | 15,873 | 13,431 | - | 10,747* |
| - Farmer Associations | 169 | 81 | 70 | - | 180* |
| TOTAL | 106,154 | 112,539 | 80,523 | - | 138,170 |
| 5 Years Average Growth Rate (%) | | | | | |
| - Client farmers | 27.24 | 21.64 | 20.70 | -0.48 | 26.48 |
| | (29.19) | (20.00) | (14.34) | (-2.37) | (30.26) |
| - Agricultural Cooperatives | 13.77 | 17.01 | 16.87 | - | 14.50 |
| | (10.84) | (22.32) | (10.41) | | (29.40) |
| - Farmer Associations | -3.95 | 25.71 | 21.75 | - | -3.18 |
| | (-11.52) | (102.50) | (12.90) | | (6.51) |
| TOTAL | 25.76 | 20.93 | 20.02 | - | 25.26 |
| | (27.45) | (20.36) | (13.66) | | (30.16) |

Footnotes : * Minor adjustments made to account for Compound interest

** Excluded disbursement on behalf of public agencies.

*** Included debts transferred to BAAC's from some public agencies.

Parenthesized figures denote increases over (decreases from) fiscal year 1994.

Table G-RF-BA-2 BAAC Lending Operations in Fiscal Year 1995
Classified by Client and Types of Loans

(million baht)

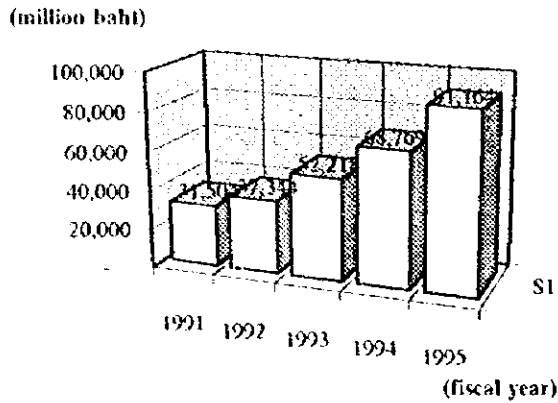
| Lending Category | Principal outstanding at the start of the year | Disbursements | Repayment | Novations | Principal outstanding at the end of the year |
|--|--|----------------|---------------|-----------|--|
| Client Farmers | | | | | |
| - Short term | 26,215 | 37,391 | 30,918 | 6 | 32,682 |
| - medium term | 28,372 | 19,446 | 13,246 | 2 | 34,570 |
| - cash credit lines | 13,961 | 17,937 | 16,486 | 2 | 15,410 |
| -long term for refinancing | 776 | 435 | 82 | - | 1,129 |
| -long term for investment in agriculture | 26,681 | 16,778 | 5,084 | 5 | 38,370 |
| -loans for activities related to agriculture | 1,580 | 4,598 | 1,187 | - | 4,991 |
| -novations | 95 | - | 19 | 15 | 91 |
| Sub-Total | 97,680 | 96,585 | 67,022 | - | 127,243 |
| (%) | (92.02) | (85.82) | (83.23) | - | (92.09) |
| Agricultural Cooperatives | | | | | |
| -for onlending to members | 7,872 | 15,192 | 12,870 | - | 10,194 |
| -for purchasing agricultural inputs | 75 | 288 | 209 | - | 154 |
| -for marketing agricultural products | 276 | 331 | 342 | - | 265 |
| -long term for investment in agriculture | 82 | 62 | 10 | - | 134 |
| Sub-Total | 8,305 | 15,873 | 13,431 | - | 10,747 |
| (%) | (7.82) | (14.11) | (16.68) | - | (7.78) |
| Farmer Associations | | | | | |
| -for onlending to members | 131 | 26 | 31 | - | 126 |
| -for purchasing agricultural inputs | 1 | - | - | - | 1 |
| -for marketing agricultural products | 9 | 12 | 12 | - | 9 |
| -long term for investment in agriculture | 28 | 43* | 27 | - | 44 |
| Sub total | 169 | 81 | 70 | - | 180 |
| (%) | (0.16) | (0.07) | (0.09) | - | (0.13) |
| Grand Total | 106,154 | 112,539 | 80,523 | - | 138,170 |
| (%) | (100.00) | (100.00) | (100.00) | - | (100.00) |

SOURCE BAAC 1995 ANNUAL REPORT

Graph G-4

Deposit from the General Public Fiscal years

1991-1995

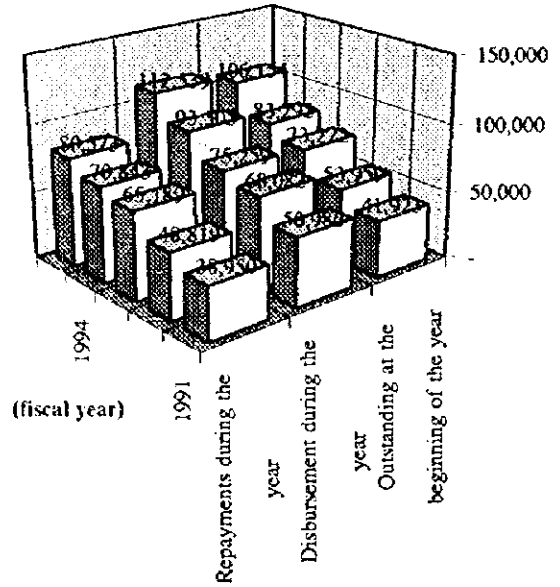


Graph G-5

Lending Operation (All categories) Fiscal years

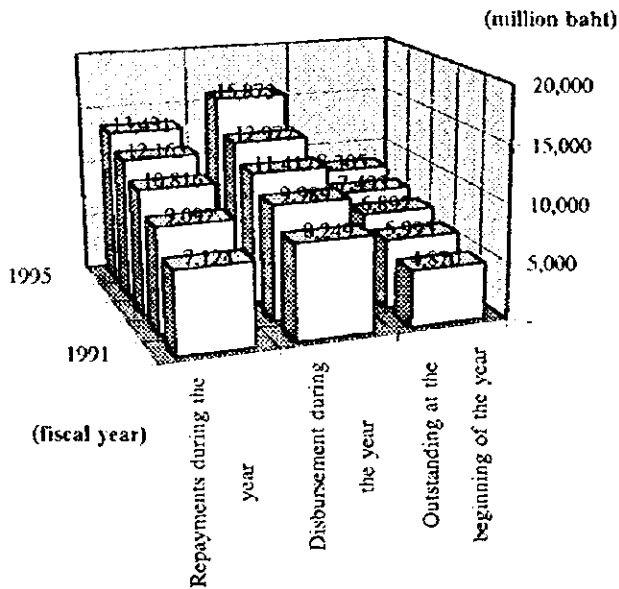
1991-1995

(million baht)



Graph G-6

Lending Operations with Agricultural Cooperatives Fiscal years 1991-1995



Graph G-7

Lending Operations with Farmer Association Fiscal years 1991-1995

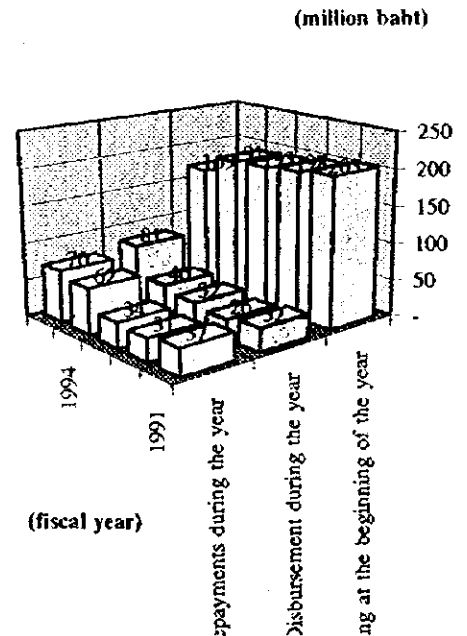


Table G-RF-BA-3 Interest Rate Structure for Loans to Client Farmers ^{*1/}

| Type of loan | 1 April 1995-30 September 1995 | 1 October 1995-31 March 1996 | Maximum Loanable Amount |
|---|---|--|--|
| short and medium term loans | 1. 11% Simple interest for loan not exceeding 60,000 baht 2. 12.25% Simple interest for loan over 60,000 baht but not exceeding 1,000,000 baht 3. 14.5% Simple interest for loan over 1,000,000 baht | 1. 9% Simple interest for loan not exceeding 30,000 baht 2. 11% Simple interest for loan over 30,000 baht but not exceeding 60,000 baht 3. 12.5% Simple interest for loan over 60,000 baht but not exceeding 1,000,000 baht 4. 14.5% Simple interest for loan over 1,000,000 baht | 5,000,000 baht for short and medium term loans |
| Short term loan for postponement of sale ^{*2/} | Simple interest rate equal to those on short and medium term loans | Simple interest rate equal to those on short and medium term loans | 250,000 baht |
| Long term loan for refinancing the prior debts | Simple interest rate equal to those on short and medium term loan | Simple interest rate equal to those on short and medium term loan | 300,000 baht |
| Long term loan for investment in agriculture ^{*3/} | 1. 10% Simple interest for loan not exceeding 60,000 baht 2. 11.25% Simple interest for loan over 60,000 baht but not exceeding 1,000,000 baht 3. 13.5% Simple interest for loan over 1,000,000 baht | 1. 9% Simple interest for loan not exceeding 30,000 baht 2. 10% Simple interest for loan over 30,000 baht but not exceeding 60,000 baht 3. 11.25% Simple interest for loan over 60,000 baht but not exceeding 1,000,000 baht 4. 13.5% Simple interest for loan over 1,000,000 baht | 15,000,000 baht ^{*4/} |
| Loans for other activities related to agriculture | 1. 10.5% Simple interest for loan not exceeding 60,000 baht 2. 11.5% Simple interest for loan over 60,000 baht but not exceeding 1,000,000 baht 3. 12.5% Simple interest for loan over 1,000,000 baht | 1. 9% Simple interest for loan not exceeding 30,000 baht 2. 10.5% Simple interest for loan over 30,000 baht but not exceeding 60,000 baht 3. 11.5% Simple interest for loan over 60,000 baht but not exceeding 1,000,000 baht 4. 12.5% Simple interest for loan over 1,000,000 baht | 15,000,000 baht ^{*5/} |

Footnote * 1/ Penalty rate of 3% per annum is added to the normal rate on all types of loans in the event that the loan falls past due for reasons other than force majeure, but not exceeding the ceiling rate specified by law.

2/ Loan extended under the government's special Paddy Pledging Scheme, for a repayment period of 6 months, (implemented during 1 November 1995-31 May 1996), were an exception, with the special interest rate of 3% per annum charged to participating farmers.

3/ Long term loans for investment in agriculture borrowed from the OECF with interest rate of 8% per annum under the first loan agreement, 12% per annum under loan agreement 2-5, 9.8% per annum under loan agreement 6-7, and 9% per annum under loan agreement 8-13.

4/ Amendment No.28, enforced 30 August 1995 onwards, from maximum loanable amount of 5,000,000 baht to 15,000,000 baht.

5/ Amendment No.1, enforced 30 August 1995 onwards, from maximum loanable amount of 5,000,000 baht to 15,000,000 baht.

Table G-RF-BA-4 Interest Rate Structure for to Farmer Institute^{1/}

| Agricultural Cooperatives and Farmer Associations/ Type of loan | 1 April 1995-30 September 1995 | 1 October 1995-31 March 1996 | Maximum loanable Amount | |
|---|---|---|--|--|
| - for lending to members | 1. 8% Compound interest on loan not exceeding 60,000 baht per member | 1. 6% Compound interest on loan not exceeding 30,000 baht per member | 10,000,000 baht per Agricultural Cooperatives ² | |
| | 2. 9.25% Compound interest on loan over 60,000 baht but not exceeding 1,000,000 baht per member | 2. 8% Compound interest on loan over 30,000 baht but not exceeding 60,000 baht per member | 1,000,000 baht per Farmer Association ³ | |
| | 3. 11.5% Compound interest on loan over 1,000,000 baht per member | 3. 9.25% Compound interest on loan over 60,000 baht but not exceeding 1,000,000 baht per member | 4. 11.5% Compound interest on loan over 1,000,000 baht per member | |
| | | | | |
| - for purchasing agricultural inputs | 9% Compound interest | 9% Compound interest | Six times amount of funds for agricultural Cooperatives Four times amount of own funds for Farmer Association | |
| - for marketing agricultural products | 9% Compound interest ⁴ | 9% Compound interest | 10,000,000 baht per Agricultural Cooperatives ⁵ 5,000,000 baht per Farmer Association | |
| - for long term loan for investment in agriculture | 7% simple interest | 7% simple interest | 15,000,000 baht ⁶ | |

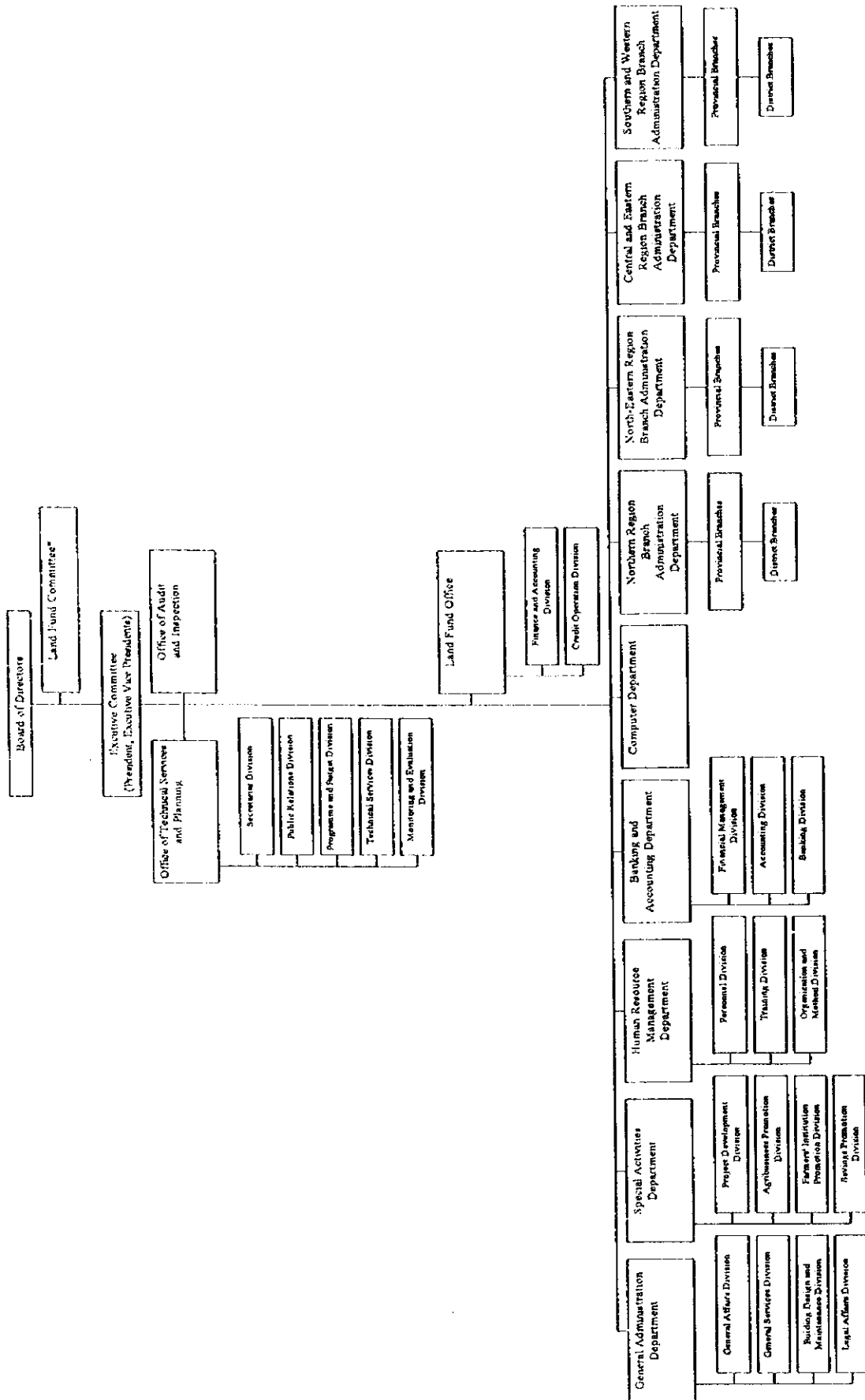
- Footnotes:
1. A penalty rate of interest of 3% per annum is added to normal rate on all types of loans borrowed by farmer institutions in the loan falls past due for reasons other than force majeure, but not exceeding the ceiling rate specified by law.
 2. Agricultural Cooperatives having operations experience of at least three years, or cooperatives registering after amalgamation, or cooperative federations may borrow an amount not exceeding 12 times the cooperatives own funds.
 3. In case of farmer associations having a membership over 150, the maximum loanable amount increases to 2 million baht, farmer associations having operations experience of at least three years may borrow an amount of not exceeding 10 times the association's own fund.
 4. Loan extended under the Paddy Pledging Scheme were an exception with the special interest rate of 3% per annum charged to participating institution (implementing during 1 November 1995-31 May 1996).
 5. In case of agricultural cooperatives borrowing under a project or scheme approved by BAAC's Board of Directors, the president may fix a loanable fund in an amount over 10 million baht but not exceeding 15 million baht.
 6. Amendment No. 16, enforced 30 August 1995 onwards, to the maximum loanable amount of 15 million baht.

Table G-RF-BA-5 BAAC profile summary Fiscal Years 1991-1995

| Particulars | Average 1986-1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 5 Years Average Growth Rate (%) | Increase/ Decrease from FY 1991 (%) |
|--|----------------------|-----------|-----------|-----------|-----------|-----------|---|---|
| 1. Capital fund (million baht) | 3,225 | 5,821 | 6,455 | 8,406 | 9,959 | 10,971 | 18.54 | +10.16 |
| 2. Total liabilities (million baht) | 39,749 | 67,039 | 78,509 | 100,922 | 122,546 | 152,239 | 23.19 | +24.23 |
| 3. Net profit (million baht) | 234 | 390 | 666 | 934 | 1,125 | 1,093 | 29.50 | -2.81 |
| 4. Total assets (million baht) | 42,975 | 72,860 | 84,964 | 109,328 | 132,505 | 163,210 | 22.81 | +23.17 |
| 5. Number of Provinces and District Branches | 107 | 218 | 268 | 304 | 365 | 494 | 21.52 | +35.62 |
| 6. Number of Field Offices | 594 | 657 | 703 | 794 | 840 | 847 | 7.10 | +0.83 |
| 7. Number of Districts served to elect farmers | 729 | 762 | 792 | 793 | 798 | 819 | 1.53 | +2.63 |
| 8. Number of Officers at Branches and Field Offices | 5,861 | 7,499* | 8,208 | 8,912 | 9,899 | 11,285 | 10.57 | +14.00 |
| 9. Number of Officers at Head Offices | 1,151 | 1,140 | 1,366 | 1,412 | 1,480 | 1,527 | 6.87 | +3.17 |
| 10. Number of farmers registered as Branch client (families) | 1,752,508 | 2,356,585 | 2,599,685 | 2,860,891 | 3,071,545 | 3,334,592 | 8.99 | +8.56 |
| 11. Loans extended to client farmers (million baht) | 23,912 | 42,705 | 58,067 | 63,810 | 80,488 | 96,585 | 21.64 | +20.00 |
| 12. Loans outstanding to client farmers (million baht) | 26,791 | 47,766 | 66,137 | 75,608 | 97,680 | 127,243 | 26.48 | +30.26 |
| 13. Number of client Agricultural Cooperatives | 825 | 851 | 836 | 846 | 854 | 855 | 0.31 | +0.12 |
| 14. Membership of client Agricultural Cooperatives | 814,942 | 952,349 | 1,020,935 | 1,107,657 | 1,180,355 | 1,277,602 | 7.60 | +8.24 |
| 15. Loans extended to Agricultural Cooperatives (million baht) | 4,936 | 8,249 | 9,989 | 11,417 | 12,977 | 15,873 | 17.01 | +22.32 |
| 16. Loans outstanding to Agricultural Cooperatives (million baht) | 3,858 | 5,995 | 6,892 | 7,493 | 8,305 | 10,747 | 14.50 | +29.40 |
| 17. Number of client Farmer Associations | 608 | 507 | 468 | 432 | 377 | 323 | -10.58 | -14.32 |
| 18. Membership of client Farmer Associations | 99,140 | 77,420 | 72,457 | 64,859 | 58,357 | 43,288 | -12.88 | -25.82 |
| 19. Loans extended to farmer Associations (million baht) | 29 | 32 | 26 | 32 | 40 | 81 | 25.71 | +102.50 |
| 20. Loans outstanding to farmer Associations (million baht) | 216 | 198 | 193 | 191 | 169 | 180 | -3.18 | +6.51 |

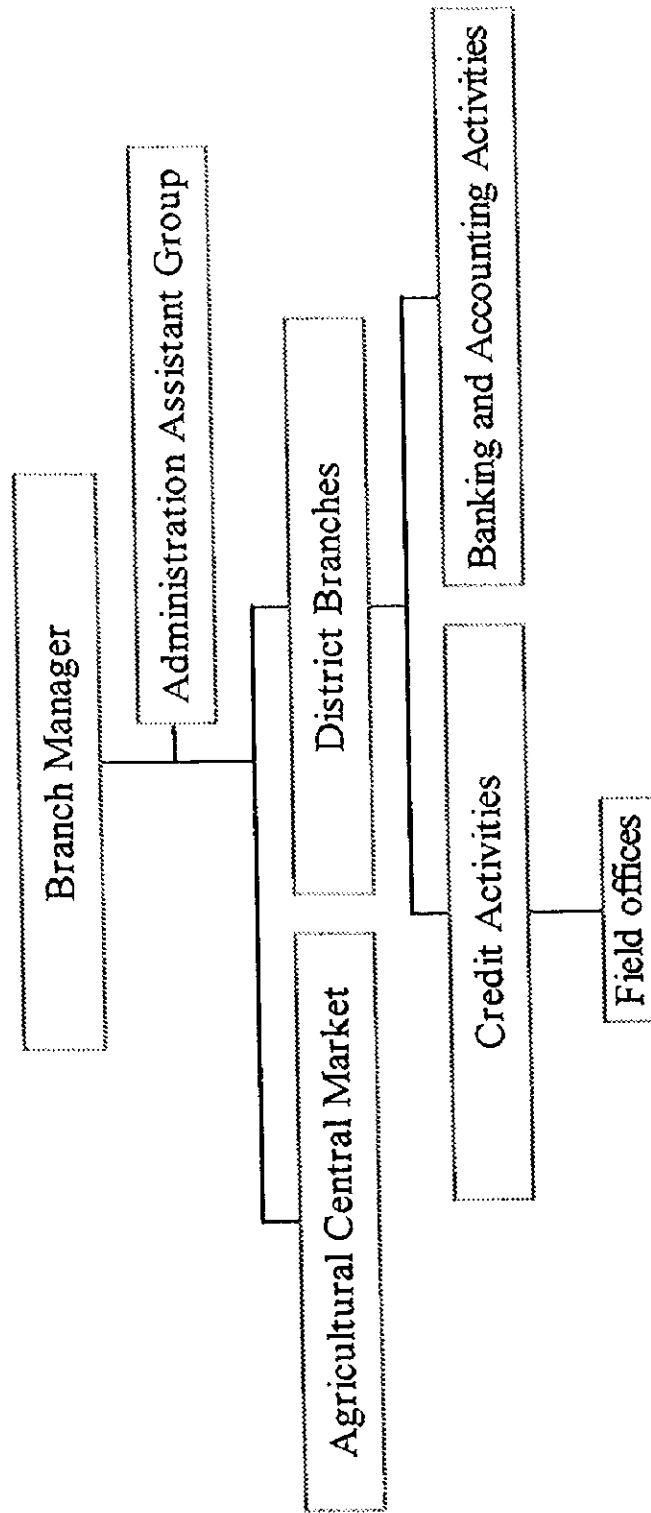
SOURCE: BAAC 1995 ANNUAL REPORT

Chart G-1 Bank for Agriculture and Agricultural Cooperatives Organization Chart



Note: Land Fund Committee supervises only the performance of the Land Fund Office

Chart G-2 ORGANIZATION CHART - PROVINCIAL BRANCH OFFICE



Note: Exists only in some branches

Table G-RF-BA-6 Loans Operations of Bank for Agriculture and Agricultural Cooperative By Amphoe at Maha Sarakham

(Unit: 000'Baht) 1994

| Amphoe/ King Amphoe | Total Outstanding | Short term loan | | Credit, cash and medium-term loans | | Long-term loans | | Payment on loans | | | | |
|------------------------|----------------------|-----------------|-----------|------------------------------------|-----------------|-----------------|-------------|------------------|-----------|-------------|----|-----|
| | | Loans disbursed | Repayment | Outstanding | Loans disbursed | Repayment | Outstanding | Loans disbursed | Repayment | Outstanding | | |
| Total | 1,595,276 | 694,452 | 47,450 | 647,002 | 449,165 | 20,097 | 429,068 | 529,300 | 10,843 | 518,457 | 23 | 749 |
| Muang Maha Sarakham | 178,279 | 81,204 | 3,378 | 77,826 | 55,354 | 6,338 | 49,016 | 54,044 | 2,618 | 51,426 | | 11 |
| Kancharawichai | 102,541 | 35,883 | 1,110 | 34,772 | 26,768 | 1,201 | 25,567 | 43,317 | 1,116 | 42,201 | | |
| Kae Dam | 55,849 | 23,997 | 2,441 | 21,556 | 19,307 | 1,574 | 17,733 | 17,080 | 520 | 16,560 | | |
| Kosum Phisai | 225,572 | 112,161 | 2,196 | 109,965 | 60,392 | 2,327 | 58,065 | 58,397 | 871 | 57,526 | | 16 |
| Chiang Yun | 144,456 | 67,657 | 956 | 66,701 | 48,805 | 1,022 | 47,783 | 30,459 | 531 | 29,928 | | 44 |
| Na Chuk | 122,022 | 51,288 | 3,092 | 48,196 | 17,258 | 423 | 16,835 | 57,526 | 823 | 56,703 | | 288 |
| Na Dun | 59,943 | 20,259 | 3,251 | 17,008 | 32,788 | 903 | 31,885 | 11,208 | 201 | 11,007 | | 43 |
| Borabu | 371,538 | 161,727 | 8,299 | 153,428 | 56,085 | 2,454 | 53,631 | 166,812 | 2,504 | 164,308 | | 171 |
| Phayakhaphum Phisai | 132,909 | 68,587 | 11,022 | 57,565 | 51,747 | 1,096 | 50,651 | 25,016 | 510 | 24,506 | | 87 |
| Wapi Pathum | 165,505 | 54,688 | 9,714 | 44,974 | 65,614 | 2,419 | 63,195 | 58,310 | 1,048 | 57,262 | | 74 |
| King Amphoe Si Surat | 36,762 | 17,001 | 1,991 | 15,010 | 15,047 | 340 | 14,707 | 7,131 | 101 | 7,030 | | 15 |

Table G-RF-BA-7 Loans Operations of Bank for Agriculture and Agricultural Cooperative By Amphoe at Mukdahan

(Unit: 000'Baht) 1994

| Amphoe/ King Amphoe | Total Outstanding | Short term loan | | Credit, cash and medium-term loans | | Long-term loans | | Payment on loans | | | | |
|------------------------|----------------------|-----------------|-----------|------------------------------------|-----------------|-----------------|-------------|------------------|-----------|-------------|----|-----|
| | | Loans disbursed | Repayment | Outstanding | Loans disbursed | Repayment | Outstanding | Loans disbursed | Repayment | Outstanding | | |
| Total | 409,640 | 25,972 | 28,502 | 139,310 | 57,263 | 22,756 | 119,868 | 67,288 | 7,274 | 149,948 | 42 | 514 |
| Muang Mukdahan | 110,889 | 6,146 | 9,522 | 43,794 | 15,904 | 5,496 | 32,582 | 14,176 | 2,277 | 34,326 | | 187 |
| Don Tan | 55,958 | 2,547 | 2,308 | 19,638 | 5,811 | 2,530 | 13,034 | 13,007 | 948 | 23,266 | | 20 |
| Khamchai | 46,543 | 3,575 | 4,156 | 22,914 | 6,699 | 2,849 | 14,321 | 6,955 | 493 | 9,297 | | 11 |
| Dong Luang | 31,991 | 3,950 | 5,080 | 8,622 | 6,386 | 1,503 | 11,336 | 4,352 | 75 | 12,033 | | |
| Nikhom Kham Soi | 90,292 | 5,775 | 3,438 | 29,311 | 13,539 | 4,540 | 32,639 | 8,527 | 1,796 | 28,080 | | 262 |
| Wan Yai | 31,166 | 2,031 | 1,870 | 4,931 | 5,696 | 4,327 | 8,613 | 11,055 | 781 | 17,622 | | |
| Nong Sung | 42,801 | 1,948 | 2,108 | 10,100 | 3,228 | 1,511 | 7,343 | 9,216 | 904 | 25,324 | | 34 |

(Unit: 000 Baht) 1994

Table G-RF-BA-8 Loans Operations of Bank for Agriculture and Agricultural Cooperative By Amphoe at Sakhon Nakhon

| Amphoe/ King Amphoe | Total Outstanding | Short term loan | | Credit, cash and medium-term loans | | Long-term loans | | Payment on loans | | | | |
|--------------------------|----------------------|-----------------|-----------|------------------------------------|-----------------|-----------------|-------------|------------------|-------------|---------|----|-----|
| | | Loans disbursed | Repayment | Outstanding | Loans disbursed | Repayment | Outstanding | Repayment | Outstanding | | | |
| Total | 1,359,566 | 382,046 | 350,324 | 361,807 | 296,402 | 233,321 | 408,184 | 348,773 | 117,448 | 588,696 | 95 | 279 |
| Muang Sakhon Nakhon | 170,369 | 24,340 | 24,228 | 19,445 | 41,422 | 33,349 | 52,954 | 56,408 | 15,387 | 97,851 | 4 | 119 |
| Kusuman | 52,957 | 11,630 | 9,380 | 9,841 | 14,704 | 13,201 | 22,639 | 9,403 | 5,567 | 20,279 | 1 | 198 |
| Kut Bak | 96,513 | 16,913 | 17,470 | 29,230 | 11,048 | 9,789 | 35,141 | 9,199 | 2,946 | 32,081 | | 61 |
| Kham Ta Kla | 70,849 | 21,660 | 18,414 | 23,853 | 10,435 | 6,726 | 13,352 | 21,082 | 4,750 | 33,587 | 15 | 57 |
| Khok Si Suphan | 57,449 | 11,533 | 9,959 | 8,970 | 29,561 | 14,161 | 20,007 | 15,834 | 2,257 | 28,472 | 10 | 39 |
| Charoen Sin | 56,943 | 27,214 | 23,747 | 25,387 | 8,191 | 8,080 | 10,541 | 16,971 | 4,344 | 20,976 | | 30 |
| Tao Ngoi | 63,662 | 6,273 | 11,101 | 7,137 | 7,762 | 7,688 | 23,261 | 21,160 | 5,966 | 33,234 | | |
| Nikhon Nam Un | 9,733 | 3,282 | 3,025 | 3,177 | 1,575 | 594 | 1,779 | 2,610 | 1,080 | 4,777 | | |
| Ban Muang | 84,961 | 32,429 | 29,618 | 36,606 | 8,171 | 6,707 | 11,594 | 24,102 | 3,889 | 36,741 | | 20 |
| Phanna Nakhom | 129,226 | 30,623 | 26,178 | 25,700 | 33,485 | 24,704 | 54,232 | 23,121 | 8,977 | 49,284 | 28 | 10 |
| Phang Khon | 68,712 | 21,845 | 18,808 | 20,147 | 20,602 | 15,296 | 24,114 | 11,883 | 11,038 | 24,343 | 6 | 108 |
| King Amphoe Phon Na Kaeo | 40,390 | 6,809 | 8,747 | 6,036 | 16,317 | 13,225 | 19,987 | 7,588 | 3,300 | 14,351 | | 16 |
| King Amphoe Phu Phan/1 | | | | | | | | | | | | |
| Wanon Nikat | 94,069 | 41,831 | 40,873 | 36,242 | 16,604 | 14,995 | 17,366 | 27,622 | 9,136 | 40,440 | | 21 |
| Wartichaphum | 109,956 | 39,173 | 34,664 | 36,195 | 21,850 | 11,720 | 26,565 | 25,629 | 5,483 | 47,171 | 2 | 25 |
| Sawang Daen Din | 124,225 | 47,979 | 43,214 | 40,560 | 24,751 | 27,259 | 31,660 | 41,518 | 12,102 | 51,938 | 2 | 67 |
| Song Dao | 40,481 | 19,275 | 13,059 | 18,103 | 6,594 | 7,261 | 8,169 | 10,586 | 3,107 | 14,154 | 21 | 55 |
| Allat Annual | 89,071 | 19,237 | 18,039 | 15,178 | 23,330 | 18,566 | 34,823 | 24,357 | 12,119 | 39,017 | 6 | 53 |

/1 Included in Amphoe Kut Bak.

Kor Po Lor Fund

For some representative export-oriented crops such as coffee and cassava, there are some anxiety for international price fluctuation and EU policy. Thai government proposed to restructure agriculture which are still income source for many people to stabilize their income. General idea is for farmers to encourage their current cultivating crops to more income stable crops by supplying with low interest loans.

Total amount of loan is 65.824 billion bahts and target area is 4.912 million rai and would be disbursed from year 2537 to 2553.

Short term loan Interest 5%

The loan for farming, farmer must have pay back within 12 months, or 18 months for some acceptable reasons

Medium term loan Interest 5%

The loan for farming, farmer must have pay back installment and interest within 3 years

Long term loan Interest 5%

The loan for farming which need to wait their income from their agricultural produce, repayment of principal should be paid back within 15 years.

Above mentioned target area has plan for diversifying current crops to more sustainable crop.

Table G-RF-KPL-1 Target area

| | Unit rai | | | |
|--|------------------|------------------|------------------|------------------|
| | 2537 | 2538 | 2539 | Total |
| Rice (poor grade paddy field and unsuitable field) | 1,000,000 | 1,000,000 | 1,500,000 | 3,500,000 |
| cassava | 400,000 | 400,000 | 400,000 | 1,200,000 |
| coffee | 70,000 | 70,000 | 70,000 | 210,000 |
| pepper | 2,000 | - | - | 2,000 |
| Total | 1,472,000 | 1,470,000 | 1,970,000 | 4,912,000 |

Table G-RF-KPL-2 Budget Plan

| | Unit million baht | | | | |
|---|-------------------|--------|--------|-----------|--------|
| | 2537 | 2538 | 2539 | 2540-2553 | Total |
| Credit | 6,900 | 7,497 | 11,433 | 7,926 | 33,756 |
| Support production factor and water supply | 2,650 | 2,940 | 3,572 | - | 9,162 |
| Budget | 180 | 270 | 330 | - | 780 |
| Compensation for interest and credit for BAAC | 540 | 1,013 | 1,605 | 18,968 | 22,126 |
| | 10,270 | 11,720 | 16,940 | 26,894 | 65,824 |

Table G-RF-KPL-3 Crop restructure plan

(Unit: rai)

| | 2537 | 2538 | 2539 | Total |
|---|-----------|-----------|-----------|-----------|
| Rice | 1,000,000 | 1,000,000 | 1,500,000 | 3,500,000 |
| <i>Current</i> | | | | |
| Poor grade field paddy | 750,000 | 600,000 | 700,000 | 2,050,000 |
| <i>Future</i> | | | | |
| Short-life crops (beans, watermelon etc.) | 400,000 | 400,000 | 400,000 | 1,200,000 |
| Fruits | 159,400 | 100,000 | 100,000 | 359,400 |
| vegetables, flower | 25,600 | 25,000 | 25,000 | 75,600 |
| Mixed-field (Integrated farming) | 165,000 | 75,000 | 175,000 | 415,000 |
| Sub-total | | | | 2,050,000 |
| <i>Current</i> | | | | |
| Unsuitable field for paddy | 250,000 | 400,000 | 800,000 | 1,450,000 |
| <i>Future</i> | | | | |
| Milk cows | 40,000 | 40,000 | 40,000 | 120,000 |
| 5 rai per head (head) | 8,000 | 8,000 | 8,000 | 24,000 |
| Meat cows | 60,000 | 90,000 | 60,000 | 210,000 |
| 3 rai per head (head) | 20,000 | 30,000 | 20,000 | 70,000 |
| Mixed-field (Integrated farming) | 100,000 | 170,000 | 350,000 | 620,000 |
| Fruit | - | 20,000 | 50,000 | 70,000 |
| Olive | 50,000 | 80,000 | 200,000 | 330,000 |
| Fast-growing trees | - | - | 100,000 | 100,000 |
| Sub-total | | | | 1,450,000 |

| Cassava | 2537 | 2538 | 2539 | Total |
|----------------------------------|---------|---------|---------|-----------|
| <i>Current</i> | 400,000 | 400,000 | 400,000 | 1,200,000 |
| <i>Future</i> | | | | |
| Milk cows | 10,000 | 10,000 | 10,000 | 30,000 |
| 5 rai per head (head) | 2,000 | 2,000 | 2,000 | 6,000 |
| Meat cows | 90,000 | 90,000 | 60,000 | 240,000 |
| 3 rai per head (head) | 30,000 | 30,000 | 20,000 | 80,000 |
| Mixed-field (Integrated farming) | 50,000 | 100,000 | 100,000 | 250,000 |
| Fruit | 50,000 | 50,000 | 50,000 | 150,000 |
| Olive | 100,000 | 50,000 | 50,000 | 200,000 |
| Fast-growing trees | 100,000 | 100,000 | 130,000 | 330,000 |
| Sub-total | | | | 1,200,000 |

| Coffee | 2537 | 2538 | 2539 | Total |
|-----------------------|--------|--------|--------|---------|
| <i>Current</i> | 70,000 | 70,000 | 70,000 | 210,000 |
| <i>Future</i> | | | | |
| Meat cows | 12,000 | 13,000 | 12,000 | 37,000 |
| 2 rai per head (head) | 6,000 | 6,500 | 6,000 | 18,500 |
| Fruit | 58,000 | 57,000 | 58,000 | 173,000 |
| Sub-total | | | | 210,000 |

| Pepper | 2537 | 2538 | 2539 | Total |
|----------------|-------|------|------|-------|
| <i>Current</i> | 2,000 | - | - | 2,000 |
| <i>Future</i> | | | | |
| Fruit | 2,000 | - | - | 2,000 |

Table G-RF-KPL- 4 Kor Po Lor : Budget estimation in each type of farming

The tables of budget below are standard models in calculating the loan amount for each type of farming in case Kor Po Lor fund lend money.

| 1. The budget of Integrated farming | | | |
|-------------------------------------|-----------------------|--------------------------|-------|
| Credit needed | 7,500 | Subsidy | 1,600 |
| Pond preparation | 3,600 | Fish, chicken, and fruit | 1,450 |
| Water pump | 750 | Vaccination | 150 |
| Soil preparation | 500 | | |
| Mango planting | 600 | | |
| Chicken breeding | 720 | | |
| Vegetable platform | 500 | | |
| Reserve budget | 770 | | |
| Total budget | 9,100 baht/rai | | |

| 2. The budget for fruit planting (Platform) | | | |
|---|------------------------|------------------------|-------|
| Credit needed | 10,980 | Subsidy | 1,500 |
| Soil preparation | 4,000 | Seeds | 750 |
| Implanting | 150 | Fertilizer | 250 |
| Supported stick | 250 | Labor cost for weeding | 500 |
| Compost | 1,216 | | |
| Fertilizer | 2,052 | | |
| Insecticide | 1,950 | | |
| Reserve budget and other | 1,242 | | |
| Total budget | 12,360 baht/rai | | |

| 3. The budget for fruit planting (No Platform) | | | |
|--|-----------------------|------------------------|-------|
| Credit needed | 6,680 | Subsidy | 1,500 |
| implantation | 150 | Seeds | 750 |
| Supported stick | 250 | Fertilizer | 250 |
| Compost | 1,216 | Labor cost for weeding | 500 |
| Fertilizer | 2,052 | | |
| Insecticide | 1,950 | | |
| Reserve budget and other | 1,062 | | |
| Total budget | 8,180 baht/rai | | |

| 4. The budget for eucalyptus | | | |
|------------------------------|-----------------------|------------------------|-----|
| Credit needed | 4,600 | Subsidy | 820 |
| Soil preparation | 440 | small trees 440pcs/rai | 680 |
| Ploughing | 850 | 1.5baht/pc | |
| Planting cost | 60 | Fertilizer | 140 |
| Labor cost for mowing | 40 | | |
| Fertilizer | 1,950 | | |
| Labor cost for weeding | 135 | | |
| Nursery | 120 | | |
| Living expense | 300 | | |
| Reserve budget | 275 | | |
| Total budget | 5,420 baht/rai | | |

| 5. The budget for bamboo | | | |
|--------------------------|-----------------------|---------------------|-----|
| Credit needed | 4,680 | Subsidy | 850 |
| Soil preparation | 200 | Seeds | 435 |
| implantation | 100 | Fertilizer | 200 |
| Supported stick | 150 | Farmyard fertilizer | 165 |
| Compost | 875 | | |
| Fertilizer | 2,596 | | |
| Insecticide | 300 | | |
| Living expense | 300 | | |
| Reserve budget | 159 | | |
| Total budget | 5,540 baht/rai | | |

| 6. The budget for vegetable planting (Platform) | | | |
|---|------------------------|---------|-------|
| Credit needed | 10,000 | Subsidy | 1,500 |
| Soil preparation | 4,000 | Seeds | 1,500 |
| Seeds | 2,000 | | |
| Fertilizer 15-15-15 | 600 | | |
| Fertilizer 48-0-0 | 250 | | |
| Chemical hormone | 1,500 | | |
| Other materials | 1,650 | | |
| Total budget | 11,500 baht/rai | | |

| 7. The budget for vegetable planting (No Platform) | | | |
|---|-----------------------|---------|-------|
| Credit needed | 6,500 | Subsidy | 1,500 |
| Soil preparation | 500 | Seeds | 1,500 |
| Seeds | 2,000 | | |
| Fertilizer 15-15-15 | 600 | | |
| Fertilizer 48-0-0 | 250 | | |
| Chemical hormone | 1,500 | | |
| Other materials | 1,650 | | |
| Total budget | 8,000 baht/rai | | |

| 8. The budget for flowers | | | |
|---------------------------|------------------------|---------|-------|
| Credit needed | 22,500 | Subsidy | 2,500 |
| Soil preparation | 3,000 | Seeds | 2,500 |
| Seeds | 2,500 | | |
| Fertilizer | 4,500 | | |
| Farmyard Fertilizer | 2,500 | | |
| Chemicals | 4,000 | | |
| Labor costs | 6,000 | | |
| Total budget | 25,000 baht/rai | | |

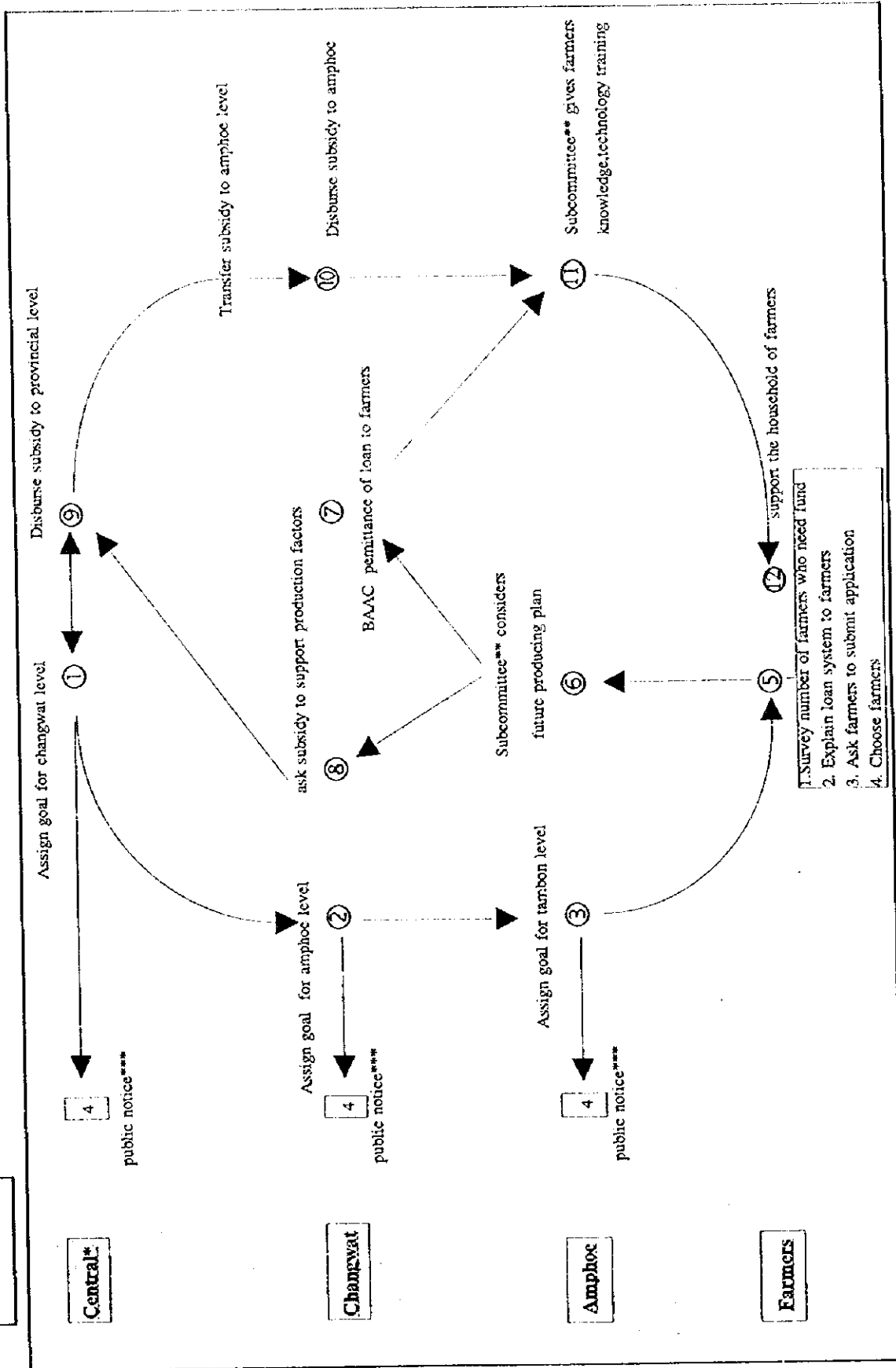
| 9. The budget for dairy cows farming | | | |
|--------------------------------------|-------------------------|-----------------------|--------|
| Credit needed | 212,500 | Subsidy | 30,650 |
| 5 dairy cows | 150,000 | Fertilizer for 25 rai | 3,000 |
| (30,000 Bt/cow) | | Haypond 1 pond | 3,000 |
| Stall and farm building | 40,000 | Equipment | 6,000 |
| Pond and water pumping | 15,000 | Feed | 17,350 |
| Cow insurance | 7,500 | Technical training | 1,300 |
| (1500 Bt /cow) | | | |
| Total budget | 243,150 baht/rai | | |

| 10-1. The budget for Meat cows farming (Domestic) | | | |
|---|------------------------|---------------------------|--------|
| Credit needed | 75,500 | Subsidy | 17,550 |
| 5 meat cows | 65,000 | The material for hay pond | 3,000 |
| (13,000 Bt/cow) | | Stall and building | 10,550 |
| Pond and water pumping | 7,500 | Feed | 3,500 |
| Cow insurance | 3,000 | Technical training | 500 |
| (600 Bt /cow) | | | |
| Total budget | 93,050 baht/rai | | |

| 10-2. The budget for Meat cows farming (Australia-brand) | | | |
|--|-------------------------|---------------------------|--------|
| Credit needed | 85,500 | Subsidy | 17,550 |
| 5 meat cows | 75,000 | The material for hay pond | 3,000 |
| (15,000 Bt/cow) | | Stall and building | 10,550 |
| Pond and water pumping | 7,500 | Feed | 3,500 |
| Cow insurance | 3,000 | Technical training | 500 |
| (600 Bt /cow) | | | |
| Total budget | 103,050 baht/rai | | |

| 11. The budget for Meat cows farming (Import) | | | |
|---|-------------------------|---------------------------|--------|
| Credit needed | 108,000 | Subsidy | 17,550 |
| 5 meat cows | 97,500 | The material for hay pond | 3,000 |
| (19,500 Bt/cow) | | Stall and building | 10,550 |
| Pond and water pumping | 7,500 | Feed | 3,500 |
| Cow insurance | 3,000 | Technical training | 500 |
| (600 Bt /cow) | | | |
| Total budget | 125,550 baht/rai | | |

Chart G-3 (Kor Po Lor) Loan System



note: * Central refers to as commitee organized by Department of Agriculture Extension (DAE), Department of Livestock Development (DLD), Royal Irrigation Department (RID).

** Sub commitee refers to The Agriculture development subcommitee of Amphoe.

*** Gives information about loan system through newspaper,television,radio and others.

Land Reform Fund

1. Revenue Source

Revenue of Land Reform Fund hereinafter called as LRF is composed of government budget, and farmer affair fund, revenue from the Act 10(4), and refunded budget due to the cancellation or delay of projects. At fiscal year of 1995, 801.43 million baht was formulated which 414.1 million baht from government budget, 85.32 million baht from the Act 10(4), 302.01 million baht from refunded budget.

2. Disbursement

LRF planned to spend al budget of which a large volume was supposed to be used for private land purchase, and 42.1 million baht for cadastral survey, and 87.3 million baht for lending loans to farmers and cooperatives.

Actual approval of the fund was 211.2 million baht and the disbursement of LRF was 337.9 million baht which was 1.6 time as much as that of approved. 190.7 million baht finally spent for purchasing private land and 43 million baht was used for compensating farmers in areas where projects were not implemented. Lending loans was carried out according to the approved plan at the amount of the 50 million baht.

3. Act 10(4)

According to the ALRO Act 10(4), LRF will pool a part of fund for revolving fund. This pooling money has revenue from 5 categories such as revenue form rent, hire purchase, loan payment and so on.

4. Lending loan to farmers and cooperatives

One of activities of LRF is to lend money for farmers for improving their income through agricultural activity. At 1995, LRF received repayment of 22 million baht which attained the 62.3 % of trageted revenue.

ALRO started the lending system at 1977. Up to now, 358 million was lended to farmers or cooperatives in LRAs. 62 coops received the loan and 25000 farmers recieved the loan and 452 farmers recived the 12.7 million baht loan due to Land Bank projects. Loan system is similar to that of Kor po lor. There are three types of loan; short term, medium term, long term. all types of loan have 5 % interest with 5 year grace period.

considering the number of population living in LRAs, the number of farmers who can borrow money is extremely low and generally, farmers in LRAs don't even know the existence of the system.

With the recogintion of income disparity will intervene the national economic development on the 8 th National economic development plan, budget for supporting farmers in LRAs is now increasing. And the volume of this type of loan should be expanded as soon as possible.

**Table G-RF-LRF-1 Lending operations to farmers and cooperatives
(Land Reform Fund)**

| | Cooperative | | Farmers | | Land bank projects | | Total |
|-----------|-------------|------------|---------|-------------|--------------------|------------|-------------|
| | No. | Baht | No. | Baht | No. | Baht | |
| 1977-1979 | | | 1,393 | 1,155,323 | | | 1,155,323 |
| 1980-1982 | | | 2,049 | 15,093,640 | | | 15,093,640 |
| 1983-1985 | 2 | 600,000 | 3,486 | 41,513,157 | | | 42,113,157 |
| 1986-1988 | 22 | 5,890,342 | 2,555 | 29,103,626 | | | 34,993,968 |
| 1989-1991 | 20 | 4,750,000 | 539 | 10,577,906 | 200 | 5,000,000 | 20,327,906 |
| 1992 | 11 | 4,600,000 | 1,291 | 31,514,192 | 251 | 6,048,000 | 42,162,192 |
| 1993 | 7 | 3,200,000 | 1,031 | 29,507,722 | 1 | 1,624,000 | 34,331,722 |
| 1994 | | | 5,540 | 117,808,330 | | | 117,808,330 |
| 1995 | | | 7,435 | 50,580,000 | | | 50,580,000 |
| Total | 62 | 19,040,342 | 25,319 | 326,853,896 | 452 | 12,672,000 | 358,566,238 |

Table G-RF-LRF-2 Loan repayment from borrowers (farmers and cooperatives)

| | Capital payment | Interest payment | Total loan repayment |
|------|-----------------|------------------|----------------------|
| 1990 | 10,832,983 | 4,209,048 | 15,042,030 |
| 1991 | 6,512,420 | 2,454,848 | 8,967,268 |
| 1992 | 9,528,901 | 3,297,552 | 12,826,453 |
| 1993 | 14,045,370 | 4,865,445 | 18,910,815 |
| 1994 | 13,211,992 | 3,740,865 | 16,952,857 |
| 1995 | 17,978,830 | 4,090,905 | 22,069,735 |

Table G-RF-LRF-3 Revenue Source (Land Refor Fund) (Unit millions of Baht)

| | 1977-1994 | 1994 | 1995 | 1977-1995 | |
|-------------------------------|-----------|---------|--------|-----------|-------|
| | | | | Average | % |
| 1. Government Budget | 3049.66 | 990.9 | 414.1 | 182.32 | 82.6 |
| 2. Farmer affair fund | 100 | - | - | 5.26 | 2.4 |
| 3. Revenue form the Act 10(4) | 545.82 | 78.62 | 85.32 | 33.22 | 15.0 |
| Sub-total | 3695.48 | 1069.52 | 499.42 | 220.8 | 100.0 |
| 4. Returning to the fund | | 211.66 | 302.01 | 173.93 | 100.0 |
| (1) Due to projects cancelled | | 41.89 | 32.25 | 17.61 | 10.1 |
| (2) Without any obligation | | 169.77 | 269.76 | 156.32 | 89.9 |
| Total amount of Fund | | 1281.18 | 801.43 | 394.73 | - |

Table G-RF-LRF-4 Revenue from the Act 10(4) 1995

| | Whole country | N.E. region |
|-------------------------------------|-------------------|-------------------|
| 1 Revenue from rent | 15,883,070 | 95,898 |
| 2 Revenue from hire purchase | 41,907,890 | 490,847 |
| 3 Revenue from loan repayment | 22,069,735 | 9,922,941 |
| Capital payment | 17,978,830 | 8,495,228 |
| Interest payment | 4,090,905 | 1,427,713 |
| 4 Revenue from locality maintenance | 2,671,229 | 13,892 |
| 5 Revenue from fine and others | 2,786,085 | 146,282 |
| Total | 85,318,008 | 10,669,859 |

Table G-RF-LRF-5 Target and Actual Revenue of the Act 10(4) 1995

| | Target Revenue | Actual Revenue 1995 | Completion rate % |
|-------------------------------------|--------------------|------------------------|----------------------|
| 1 Revenue from rent | 19,720,000 | 15,883,070 | 80.5 |
| 2 Revenue from hire purchase | 41,940,000 | 41,907,890 | 99.9 |
| 3 Revenue from loan repayment | 35,410,000 | 22,069,735 | 62.3 |
| Capital payment | 30,200,000 | 17,978,830 | 59.5 |
| Interest payment | 5,210,000 | 4,090,905 | 78.5 |
| 4 Revenue from locality maintenance | 3,930,000 | 2,671,229 | 68.0 |
| 5 Revenue from fine and others | - | 2,786,085 | - |
| Total | 101,000,000 | 85,318,008 | 84.5 |

Table G-RF-LRF 6 Land Reform Fund 1995

| Revenue Source | | | | |
|---|---------------------|--------------------------------|------------------------------------|--------------|
| 1. Government Budget | 414.1 | | | |
| 2. Farmer affair fund | - | | | |
| 3. Revenue from the Act 10(4) | 85.32 | | | |
| | 499.42 | | | |
| 4. Returning to the fund | 302.01 | | | |
| (1) Due to projects canceled | 32.25 | | | |
| (2) Without any obligation | 269.76 | | | |
| Total amount of Fund | 801.43 | | | |
| Disbursement | Expenditure Plan | (A) Approval of the Fund | (B) Disbursement of the Fund | (B)/(A) % |
| Private land purchase | 600.0 | 90.75 | 190.7 | 210.1 |
| Cadastral survey | 42.1 | 40.77 | 23.6 | 57.8 |
| Local maintenance tax | 3.2 | 2.723 | 2.7 | 98.6 |
| Loan to farmers | 87.3 | 50.58 | 50.0 | 98.9 |
| Others(1) | 1.0 | 0.01 | 0.6 | 5720.0 |
| Refundable Expense to the Fund | 17.0 | 17 | 17.0 | 100.0 |
| Farmers' affair fund interest payment to bonds | 7.6 | 7.615 | 7.6 | 100.0 |
| Expenditure with regard to the Land Code | 2.8 | 0.633 | - | - |
| Cadastral Survey | 2.4 | 0.547 | 0.4 | 75.9 |
| Project for assisting the population | 25.0 | - | 43.0 | - |
| Basic development work | 12.0 | - | 0.6 | - |
| Others(2) | 1.1 | 0.585 | 1.7 | 295.4 |
| | 801.5 | 211.2 | 337.9 | 160.0 |

Table G-RF-LRF-7 Lending activity 1995

| | Short term loan | Medium term loan | Long term loan | Baht | % |
|------------------------------------|-----------------|------------------|----------------|------------|-------|
| Income development | - | 44,080,000 | | 44,080,000 | 87.15 |
| Improvement rights of land holding | - | | 6,500,000 | 6,500,000 | 12.85 |
| Total | - | 44,080,000 | 6,500,000 | 50,580,000 | 100 |
| % | - | 87.15 | 12.85 | 100 | |

Loans to farmers

Short term loan Period not exceeding 1 year, 5% Interest rate

Medium term loan Period not exceeding 3 year, 5% Interest rate

Long term loan Period not exceeding 15 year, 5% Interest rate

Loans to cooperatives

All type of loans for cooperatives Interest rate of 3 %.

Chart G-4
LRF Loan Scheme in Changwat level

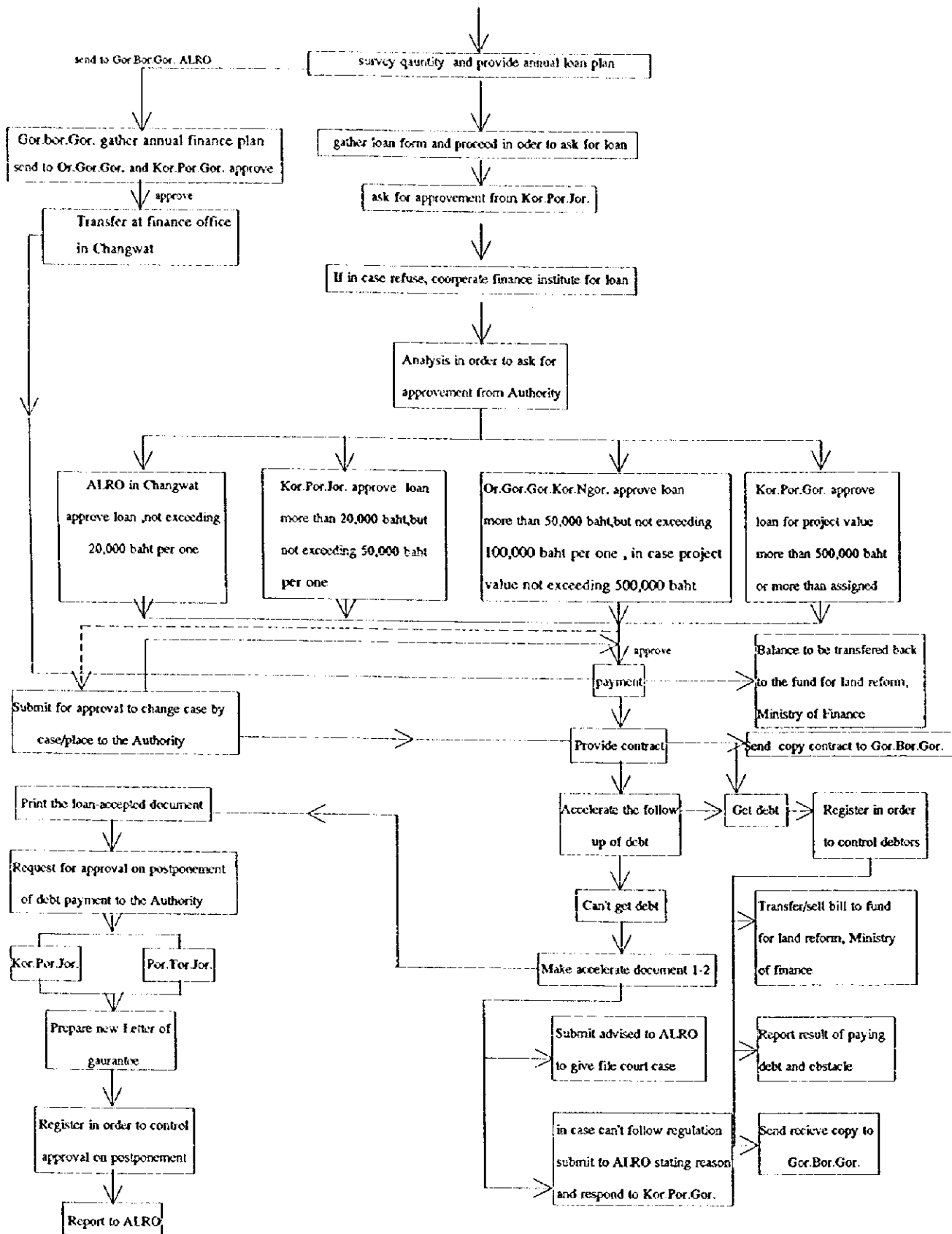


Table G-LO-1 Annual loan amount for each crop, livestock, and fish
(Baht)

| | Type of Loan | Unit | Initial Loan | Required Loan | |
|-------------------------|--------------|-----------|--------------|---------------|-------------------|
| | S | Bt/rai | | 500 | |
| Paddy | S | Bt/rai | | 500 | |
| Cassava | S | Bt/rai | | 1,100 | |
| Sugarcane | S | Bt/rai | | 2,300 | |
| Soybeans | S | Bt/rai | | 800 | |
| Groundnuts | S | Bt/rai | | 1,000 | |
| Mango | L | Bt/rai | | 15,000 | Incl. compensaton |
| Papaya (Banana) | S | Bt/rai | | 2,400 | |
| Chicken (Duck) | S | Bt/head | 2,000 | 23 | |
| Beef Cattle | M | Bt/head | 4,000 | 4,000 | Incl. compensaton |
| Vegetables (Stringbean) | S | Bt/rai | | 2,200 | |
| Vegetables (Chilli) | S | Bt/rai | | 4,500 | |
| Acacia(Eucalyptus) | L | Bt/rai | | 8,000 | Incl. compensaton |
| Tilapia | S | Bt/0.2rai | | 2,500 | |

Note Intial loan is provided for building a coop of cow or chicken.

S Short term loan within one year, interest rate 5%

M Medium term loan within two year, interest rate 5%.

L Long term loan 5 year grace period, Repayment starts from 6 th year and finishes 15 th year.

Table G-LO-2 Required Loan amount for agricultural activity and large scale pond construction
Case1 The case that ALRO Fund supports all required amount of loan.

(Baht)

| | No. of household | | Short term | Medium term | Long term | Total |
|--|------------------|--------------|--------------------------|-------------------|--------------------|--------------------|
| | | | | | | |
| Kohn Kean | Lowland | 105 | 1,724,604 | 0 | 7,839,107 | 9,563,711 |
| | Upland | 209 | 7,889,278 | 0 | 15,678,215 | 23,567,493 |
| | Mixed Land | 557 | 19,532,965 | 11,148,953 | 1,045,214 | 31,727,133 |
| | Sub total | 871 | 29,146,847 | 11,148,953 | 24,562,537 | 64,858,336 |
| Mahasarakam | Lowland | 144 | 1,758,503 | 2,883,294 | 0 | 4,639,796 |
| | Upland | 144 | 2,220,136 | 2,883,294 | 0 | 5,103,430 |
| | Mixed Land | 338 | 7,237,920 | 6,769,472 | 0 | 14,007,392 |
| | Sub total | 627 | 11,214,558 | 12,536,060 | 0 | 23,750,618 |
| Mukudahan | Lowland | 355 | 5,073,413 | 0 | 13,327,704 | 18,401,116 |
| | Upland | 605 | 7,815,510 | 0 | 30,257,490 | 38,072,999 |
| | Sub total | 961 | 12,888,922 | 0 | 43,585,193 | 56,474,115 |
| Sakohn Nakon | Lowland | 91 | 1,121,127 | 0 | 3,425,031 | 4,546,157 |
| | Upland | 177 | 1,928,091 | 0 | 9,485,320 | 11,413,411 |
| | Sub total | 269 | 3,049,217 | 0 | 12,910,351 | 15,959,568 |
| 6000m3 pond | Sub total | 623 | 27,941,550 | 0 | 28,035,000 | 55,976,550 |
| Loan Sub total (1) | | 3,350 | 84,241,095 | 23,685,013 | 109,093,081 | 217,019,188 |
| Loan for Pond (4800m3) Coop for Chicken Coop for Beef cattle Loan Sub total (2) | | 623 | Loan per farm 122,743 | | 76,468,889 | 76,468,889 |
| | | 3,350 | 2,000 | | 6,700,000 | 6,700,000 |
| | | 1,184 | 4,000 | | 4,737,003 | 4,737,003 |
| | | | | | 87,905,892 | 87,905,892 |
| Total Fund | | | 84,241,095 | 23,685,013 | 196,998,972 | 304,925,079 |

Loan per rai

3,587

Table G-LO-3 Required Loan amount for agricultural activity and large scale pond construction

Case 2 The case that ALRO Fund supports all required amount of loan for medium and long term loan and compensate interest for short term loan.

(Baht)

| | No. of household | | Short term | Medium term | Long term | Total |
|--|------------------|--------------|--------------------------|-------------------|--------------------|--------------------|
| | | | | | | |
| Kohn Kean | Lowland | 105 | 68,984 | 0 | 7,839,107 | 7,908,092 |
| | Upland | 209 | 315,571 | 0 | 15,678,215 | 15,993,786 |
| | Mixed Land | 557 | 781,319 | 11,148,953 | 1,045,214 | 12,975,486 |
| | Sub total | 871 | 1,165,874 | 11,148,953 | 24,562,537 | 36,877,363 |
| Mahasarakam | Lowland | 144 | 70,260 | 2,883,294 | 0 | 2,953,554 |
| | Upland | 144 | 88,805 | 2,883,294 | 0 | 2,972,099 |
| | Mixed Land | 338 | 289,517 | 0 | 0 | 289,517 |
| | Sub total | 627 | 448,582 | 5,766,587 | 0 | 6,215,170 |
| Mukudahan | Lowland | 355 | 202,937 | 0 | 13,327,704 | 13,530,640 |
| | Upland | 605 | 312,620 | 0 | 30,257,490 | 30,570,110 |
| | Sub total | 961 | 515,557 | 0 | 43,585,193 | 44,100,750 |
| Sakohn Nakon | Lowland | 91 | 44,845 | 0 | 3,425,031 | 3,469,876 |
| | Upland | 177 | 77,124 | 0 | 9,485,320 | 9,562,444 |
| | Sub total | 269 | 121,969 | 0 | 12,910,351 | 13,032,319 |
| 6000m3 pond | Sub total | 623 | 1,117,662 | 0 | 28,035,000 | 29,152,662 |
| Loan Sub total (1) | | 3,350 | 3,369,644 | 16,915,540 | 109,093,081 | 129,378,265 |
| Loan for Pond (4800m3) Coop for Chicken Coop for Beef cattle Loan Sub total (2) | | 623 | Loan per farm 122,743 | | 76,468,889 | 76,468,889 |
| | | 3,350 | 2,000 | | 6,700,000 | 6,700,000 |
| | | 1,184 | 4,000 | | 4,737,003 | 4,737,003 |
| | | | | | 87,905,892 | 87,905,892 |
| Total Fund | | | 3,369,644 | 16,915,540 | 196,998,972 | 217,284,156 |

Loan per rai

2,556

Note In the case 2, ALRO supports the interest shortage of 4 percent of normal BAAC short term loan. The interest of BAAC short term loan is 9%. That of ALRO Fund is 5%.

Table G-FB-1 Farming type in each priority area

(rai)

| Priority area | John Keen | | Maha Sarakham | | Mukdahan | | Sakohn Nakohn | | 6000m3 | |
|---------------|-----------|----|---------------|----|----------|----|---------------|----|--------|----|
| | 1200m3 | | 1200m3 | | 1200m3 | | 1200m3 | | 6000m3 | |
| Pond size | W/O | w/ | W/O | w/ | W/O | w/ | W/O | w/ | W/O | w/ |
| | 20 | 20 | 12 | 12 | 13 | 13 | 10 | 10 | 21 | 21 |

Farming at Lowland

| | | Pattern1 | | Pattern4 | | Pattern7 | | Pattern9 | | Pattern11 | |
|--|---------------|----------|-----|----------|------|----------|------|----------|------|-----------|-----|
| Paddy | Glutinous | 12 | 12 | 5 | 5 | 8 | 8 | 6 | 5 | 8 | 8 |
| | Non-glutinous | | | | | | | | | | |
| Cassava | | 7 | | 6 | | 5 | | | | 8 | |
| Sugarcane | | | | | | | | 3 | | 6 | 6 |
| Soybeans | | | | | | | 0.5 | | 0.5 | | 1 |
| Groundnuts | | | | | | | 0.5 | | | | 1 |
| Mango | | | 5 | | | | 2.5 | | 2.5 | | 3 |
| Papaya (Banana) (Intercropping) | | | 0.5 | | 0.16 | | 0.25 | | 0.25 | | 2 |
| Chicken (Duck) | | 60 | 150 | 60 | 150 | 60 | 200 | 100 | 200 | 100 | 200 |
| Beef Cattle | | | | | 5 | | | | | | |
| Vegetables(String bean) | | | 1.5 | | 1.5 | | 0.75 | | 0.75 | | 1.5 |
| Vegetables(Chilli) | | | 1.5 | | 1.5 | | 0.75 | | 0.75 | | 1.5 |
| Acacia(Eucalyptus) | | | | | | | | | | | |
| Tilapia | | | 0.2 | | 0.2 | | 0.2 | | 0.2 | | 1 |
| Grass | | | | | 4 | | | | | | |
| Fallow | | | | | | | | | | | |
| Pond | | | 1 | | 1 | | 1 | | 1 | | 2 |
| Non-cropped area (Livestock yard etc.) | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Sub total | | 20 | 22 | 12 | 14 | 14 | 15 | 10 | 11 | 22 | 25 |

The Sub total excludes the required area for feeding fish and for intercropping.

Unit of livestock refers to the number. Non-cropped area includes Road, Livestock yard etc.

Soybeans and Groundnuts are planted after rice harvesting.

Chicken is fed two times for a year and Vegetables are harvested three times for a year.

Farming at Upland

| | | Pattern2 | | Pattern5 | | Pattern8 | | Pattern10 | | |
|--|---------------|----------|------|----------|------|----------|------|-----------|------|---|
| Paddy | Glutinous | | | | 3 | | 6 | 3.5 | 3 | 3 |
| | Non-glutinous | | | | | | | | | |
| Cassava | | 7 | | 8 | 5 | 6 | 3.5 | 3 | | |
| Sugarcane | | 12 | 12 | | | | | 3 | | |
| Soybeans | | | | | | | | | | |
| Groundnuts | | | | | | | | | | |
| Mango | | | 5 | | | | 2 | | 2.5 | |
| Papaya (Banana) (Intercropping) | | | 0.35 | | 0.25 | | 0.35 | | 0.25 | |
| Chicken (Duck) | | 60 | 150 | 60 | 150 | 60 | 200 | 100 | 200 | |
| Beef Cattle | | | | | 5 | | | | | |
| Vegetables(String bean) | | | 1.5 | | 1.5 | | 0.75 | | 0.75 | |
| Vegetables(Chilli) | | | 1.5 | | 1.5 | | 0.75 | | 0.75 | |
| Acacia(Eucalyptus) | | | | | | | 2.5 | | 2 | |
| Tilapia | | | 0.2 | | 0.2 | | 0.2 | | 0.2 | |
| Grass | | | | | 4 | | | | | |
| Fallow | | | | | | | | | | |
| Pond | | | 1 | | 1 | | 1 | | 1 | |
| Non-cropped area (Livestock yard etc.) | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Sub total | | 20 | 22 | 12 | 14 | 13 | 15 | 10 | 11 | |

The Sub total excludes the required area for feeding fish and for intercropping.

Unit of livestock refers to the number. Non-cropped area includes Road, Livestock yard etc.

Chicken is fed two times for a year and Vegetables are harvested three times for a year.

Farming at mixture of Lowland and Upland

| | | Pattern3 | | Pattern6 | |
|--|---------------|----------|-------|----------|------|
| Paddy | Glutinous | 5 | 5 | 5 | 5 |
| | Non-glutinous | | | | |
| Cassava | | 4 | | 6 | |
| Sugarcane | | 10 | 10 | | |
| Soybeans | | | | | |
| Groundnuts | | | | | |
| Mango (Intercropping) | | | 0.125 | | |
| Papaya (Banana) (Intercropping) | | | 0.1 | | 0.16 |
| Chicken (Duck) | | 60 | 150 | 60 | 150 |
| Beef Cattle | | | 5 | | 5 |
| Vegetables(String bean) | | | 1.5 | | 1.5 |
| Vegetables(Chilli) | | | 1.5 | | 1.5 |
| Acacia(Eucalyptus) | | | | | |
| Tilapia | | | 0.2 | | 0.2 |
| Grass | | | 2 | | 4 |
| Fallow | | | | | |
| Pond | | | 1 | | 1 |
| Non-cropped area (Livestock yard etc.) | | 1 | 1 | 1 | 1 |
| Sub total | | 20 | 22 | 12 | 14 |

The Sub total excludes the required area for feeding fish and for intercropping.

Unit of livestock refers to the number. Non-cropped area includes Road, Livestock yard etc.

Table G-FB-2 Crop Budget Summary

| | | WITHOUT | | | WITH | | |
|---------------------------------|---------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| | | Income | Expense | Profit | Income | Expense | Profit |
| Paddy | Glutinous | | | | | | |
| | | Baht/rai | Baht/rai | Baht/rai | Baht/rai | Baht/rai | Baht/rai |
| | KK | 1,350 | 374 | 976 | 1,575 | 412 | 1,163 |
| | MH | 1,170 | 370 | 800 | 1,350 | 407 | 943 |
| Non-glutinous | | Baht/rai | Baht/rai | Baht/rai | Baht/rai | Baht/rai | Baht/rai |
| | MK | 1,125 | 369 | 756 | 1,350 | 407 | 943 |
| | SN | 1,575 | 379 | 1,196 | 1,800 | 417 | 1,383 |
| | 6,000 m ³ pond | 1,260 | 372 | 888 | 1,575 | 412 | 1,163 |
| Cassava | | Baht/rai | Baht/rai | Baht/rai | Baht/rai | Baht/rai | Baht/rai |
| | KK | 1,500 | 374 | 1,126 | 1,750 | 412 | 1,338 |
| | MH | 1,300 | 370 | 930 | 1,500 | 407 | 1,093 |
| | MK | 1,250 | 369 | 881 | 1,500 | 407 | 1,093 |
| Sugarcane | | Baht/rai | Baht/rai | Baht/rai | Baht/rai | Baht/rai | Baht/rai |
| | SN | 1,750 | 379 | 1,371 | 2,000 | 417 | 1,583 |
| | 6,000 m ³ pond | 1,400 | 372 | 1,028 | 1,750 | 412 | 1,338 |
| | | 1,692 | 743 | 949 | 2,350 | 1,041 | 1,309 |
| Soybeans | | Baht/rai | Baht/rai | Baht/rai | Baht/rai | Baht/rai | Baht/rai |
| | | 3,960 | 2,252 | 1,708 | 3,960 | 2,252 | 1,708 |
| | | 2,592 | 805 | 1,787 | 2,592 | 805 | 1,787 |
| | | 2,300 | 1,002 | 1,298 | 2,300 | 1,002 | 1,298 |
| Groundnuts | | Baht/rai | Baht/rai | Baht/rai | Baht/rai | Baht/rai | Baht/rai |
| | | 7,529 | 861 | 6,668 | 7,529 | 861 | 6,668 |
| | | 9,000 | 2,382 | 6,618 | 9,000 | 2,382 | 6,618 |
| | | 39 | 23 | 16 | 39 | 23 | 16 |
| Mango | | Baht/head | Baht/head | Baht/head | Baht/head | Baht/head | Baht/head |
| | | 4,000 | 1,963 | 2,037 | 4,000 | 1,963 | 2,037 |
| | | 7,000 | 2,189 | 4,811 | 7,000 | 2,189 | 4,811 |
| | | 9,200 | 4,448 | 4,752 | 9,200 | 4,448 | 4,752 |
| Papaya (Banana) (Intercropping) | | Baht/rai | Baht/rai | Baht/rai | Baht/rai | Baht/rai | Baht/rai |
| | | 1,800 | 720 | 1,080 | 1,800 | 720 | 1,080 |
| | | 6,230 | 2,494 | 3,736 | 6,230 | 2,494 | 3,736 |
| | | | | | | | |
| Chicken (Duck) | | Baht/head | Baht/head | Baht/head | Baht/head | Baht/head | Baht/head |
| | | 4,000 | 1,963 | 2,037 | 4,000 | 1,963 | 2,037 |
| | | 7,000 | 2,189 | 4,811 | 7,000 | 2,189 | 4,811 |
| | | 9,200 | 4,448 | 4,752 | 9,200 | 4,448 | 4,752 |
| Beef Cattle | | Baht/rai | Baht/rai | Baht/rai | Baht/rai | Baht/rai | Baht/rai |
| | | 1,800 | 720 | 1,080 | 1,800 | 720 | 1,080 |
| | | 6,230 | 2,494 | 3,736 | 6,230 | 2,494 | 3,736 |
| | | | | | | | |
| Vegetables(String bean) | | Baht/rai | Baht/rai | Baht/rai | Baht/rai | Baht/rai | Baht/rai |
| | | 1,800 | 720 | 1,080 | 1,800 | 720 | 1,080 |
| | | 6,230 | 2,494 | 3,736 | 6,230 | 2,494 | 3,736 |
| | | | | | | | |
| Vegetables(Chilli) | | Baht/rai | Baht/rai | Baht/rai | Baht/rai | Baht/rai | Baht/rai |
| | | 1,800 | 720 | 1,080 | 1,800 | 720 | 1,080 |
| | | 6,230 | 2,494 | 3,736 | 6,230 | 2,494 | 3,736 |
| | | | | | | | |
| Acacia(Eucalyptus) | | Baht/rai | Baht/rai | Baht/rai | Baht/rai | Baht/rai | Baht/rai |
| | | 1,800 | 720 | 1,080 | 1,800 | 720 | 1,080 |
| | | 6,230 | 2,494 | 3,736 | 6,230 | 2,494 | 3,736 |
| | | | | | | | |
| Tilapia | | Baht/head | Baht/head | Baht/head | Baht/head | Baht/head | Baht/head |
| | | 4,000 | 1,963 | 2,037 | 4,000 | 1,963 | 2,037 |
| | | 7,000 | 2,189 | 4,811 | 7,000 | 2,189 | 4,811 |
| | | 9,200 | 4,448 | 4,752 | 9,200 | 4,448 | 4,752 |

Table G-FB-3 Farm Income on each farming type in each priority area W/O PROJECT

(ral)

| Priority area | ohn Kean | | Maha Sarakham | | Mukudahan | | Sakohn Nakohn | | 6000m3 | |
|---------------|----------|----|---------------|----|-----------|----|---------------|----|--------|----|
| | 1200m3 | WO | 1200m3 | WO | 1200m3 | WO | 1200m3 | WO | 6000m3 | WO |
| | 20 | | 12 | | 13 | | 10 | | 21 | |

Farming at Lowland

| | | No. | Total | | | No. | Total | | | No. | Total | | | No. | Total | | | No. | Total | | |
|-----------------------------------|---------------|-----------|---------------|---------------|---------------|-----------|---------------|--------------|---------------|-----------|---------------|--------------|---------------|-----------|---------------|---------------|---------------|-----------|---------------|---------------|---------------|
| | | | Income | Expense | Profit | | Income | Expense | Profit | | Income | Expense | Profit | | Income | Expense | Profit | | Income | Expense | Profit |
| Paddy | Glutinous | 12 | 16200 | 4,438 | 11,762 | 5 | 5,950 | 1,870 | 4,080 | 8 | 9,000 | 2,992 | 6,008 | 6 | 9,450 | 2,274 | 7,176 | 8 | 10,380 | 2,916 | 7,464 |
| | Non-glutinous | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Cassava | | 7 | 11,811 | 5,201 | 6,610 | 8 | 10,152 | 4,438 | 5,714 | 5 | 8,480 | 3,715 | 4,765 | 3 | 11,840 | 6,756 | 5,084 | 6 | 13,536 | 5,914 | 7,622 |
| Sugarcane | | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Soybeans | | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Groundnuts | | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Mango | | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Papaya (Banana) (intercropping) | | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Chicken (Duck) | | 60 | 2,340 | 1,380 | 960 | 60 | 2,340 | 1,380 | 960 | 60 | 2,340 | 1,380 | 960 | 100 | 3,900 | 2,300 | 1,600 | 100 | 3,900 | 2,300 | 1,600 |
| Beef Cattle | | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Vegetables(String bean) | | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Vegetables(Chik) | | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Acacia(Eucalyptus) | | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Tiapia | | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Grass | | | - | - | - | | - | - | - | | - | - | - | | - | - | - | | - | - | - |
| Fallow | | | - | - | - | | - | - | - | | - | - | - | | - | - | - | | - | - | - |
| Pond | | | - | - | - | | - | - | - | | - | - | - | | - | - | - | | - | - | - |
| Non-cropped area (Livestock yard) | | 1 | - | - | - | 1 | - | - | - | 1 | - | - | - | 1 | - | - | - | 1 | - | - | - |
| Sub total | | 20 | 30,384 | 11,069 | 19,315 | 12 | 18,342 | 7,688 | 10,654 | 14 | 19,800 | 8,047 | 11,753 | 10 | 25,230 | 11,330 | 13,900 | 22 | 51,776 | 24,732 | 26,544 |

The Sub total excludes the required area for feeding fish and for intercropping
 Unit of livestock refers to the number. Non-cropped area includes Road, Livestock yard etc.
 Soybeans and Groundnuts are planted after rice harvesting.
 Chicken is fed two times for a year and Vegetables are harvested three times for a year.

Farming at Upland

| | | No. | Total | | | No. | Total | | | No. | Total | | | No. | Total | | | | | | |
|-----------------------------------|---------------|-----------|---------------|---------------|---------------|-----------|---------------|--------------|---------------|-----------|---------------|--------------|---------------|-----------|---------------|---------------|---------------|---|---|---|---|
| | | | Income | Expense | Profit | | Income | Expense | Profit | | Income | Expense | Profit | | Income | Expense | Profit | | | | |
| Paddy | Glutinous | | 0 | 0 | 0 | 3 | 3,510 | 1,110 | 2,400 | 6 | 6,750 | 2,214 | 4,536 | 3 | 4,125 | 1,177 | 2,948 | | | | |
| | Non-glutinous | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Cassava | | 7 | 11,811 | 5,201 | 6,610 | 8 | 13,536 | 5,914 | 7,622 | 6 | 10,152 | 4,438 | 5,714 | 3 | 5,076 | 2,229 | 2,847 | | | | |
| Sugarcane | | 12 | 47,500 | 27,024 | 20,476 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Soybeans | | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Groundnuts | | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Mango | | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Papaya (Banana) (intercropping) | | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Chicken (Duck) | | 60 | 2,340 | 1,380 | 960 | 60 | 2,340 | 1,380 | 960 | 60 | 2,340 | 1,380 | 960 | 100 | 3,900 | 2,300 | 1,600 | | | | |
| Beef Cattle | | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Vegetables(String bean) | | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Vegetables(Chik) | | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Acacia(Eucalyptus) | | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Tiapia | | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Grass | | | - | - | - | | - | - | - | | - | - | - | | - | - | - | | - | - | - |
| Fallow | | | - | - | - | | - | - | - | | - | - | - | | - | - | - | | - | - | - |
| Pond | | | - | - | - | | - | - | - | | - | - | - | | - | - | - | | - | - | - |
| Non-cropped area (Livestock yard) | | 1 | - | - | - | 1 | - | - | - | 1 | - | - | - | 1 | - | - | - | 1 | - | - | - |
| Sub total | | 20 | 61,704 | 33,605 | 28,099 | 12 | 19,366 | 8,434 | 10,932 | 13 | 19,242 | 8,052 | 11,190 | 10 | 25,561 | 12,422 | 13,139 | | | | |

The Sub total excludes the required area for feeding fish and for intercropping
 Unit of livestock refers to the number. Non-cropped area includes Road, Livestock yard etc.
 Chicken is fed two times for a year and Vegetables are harvested three times for a year.

Farming at mixture of Lowland and Upland

| | | No. | Total | | | No. | Total | | |
|-----------------------------------|---------------|-----------|---------------|---------------|---------------|-----------|---------------|--------------|---------------|
| | | | Income | Expense | Profit | | Income | Expense | Profit |
| Paddy | Glutinous | 5 | 8,750 | 1,870 | 4,080 | 5 | 5,950 | 1,870 | 4,080 |
| | Non-glutinous | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Cassava | | 4 | 6,768 | 2,572 | 3,796 | 6 | 10,152 | 4,438 | 5,714 |
| Sugarcane | | 10 | 39,600 | 21,520 | 17,980 | | 0 | 0 | 0 |
| Soybeans | | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Groundnuts | | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Mango | | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Papaya (Banana) (intercropping) | | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Chicken (Duck) | | 60 | 2,340 | 1,380 | 960 | 60 | 2,340 | 1,380 | 960 |
| Beef Cattle | | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Vegetables(String bean) | | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Vegetables(Chik) | | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Acacia(Eucalyptus) | | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Tiapia | | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Grass | | | - | - | - | | - | - | - |
| Fallow | | | - | - | - | | - | - | - |
| Pond | | | - | - | - | | - | - | - |
| Non-cropped area (Livestock yard) | | 1 | - | - | - | 1 | - | - | - |
| Sub total | | 20 | 55,458 | 28,742 | 26,716 | 12 | 18,342 | 7,688 | 10,654 |

The Sub total excludes the required area for feeding fish and for intercropping
 Unit of livestock refers to the number. Non-cropped area includes Road, Livestock yard etc.
 Chicken is fed two times for a year and Vegetables are harvested three times for a year.

Table G-FB-4 Farm Income on farming type in each priority area W/ PROJECT

(rai)

| Priority area | ohn Keen | | Mahasarakham | | Mukdahan | | Salohn Nakohn | |
|---------------|----------|---|--------------|---|----------|---|---------------|---|
| | 1200m3 | | 1200m3 | | 1200m3 | | 1200m3 | |
| | W | M | W | M | W | M | W | M |
| Pond size | 20 | | 12 | | 13 | | 10 | |

Farming at Lowland

| | ALPO area | Total | | | ALPO area | Total | | | ALPO area | Total | | | ALPO area | Total | | |
|-----------------------------------|-----------|--------|---------|--------|-----------|--------|---------|--------|-----------|--------|---------|--------|-----------|--------|---------|--------|
| | | income | Expense | Profit | | income | Expense | Profit | | income | Expense | Profit | | income | Expense | Profit |
| Paddy | 12 | 15770 | 9344 | 6426 | 5 | 8743 | 2045 | 4738 | 8 | 10800 | 3240 | 7560 | 5 | 9000 | 2045 | 6955 |
| Glutinous | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Non-glutinous | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Cassava | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Sugarcane | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Soybeans | | 0 | 0 | 0 | | 0 | 0 | 0 | 0.5 | 1258 | 463 | 895 | 0.5 | 1258 | 463 | 895 |
| Groundnuts | | 0 | 0 | 0 | | 0 | 0 | 0 | 0.5 | 1350 | 518 | 832 | 2.5 | 18923 | 2153 | 16770 |
| Mango | 5 | 3745 | 4305 | 3140 | | 0 | 0 | 0 | 2.5 | 18923 | 2153 | 16770 | 2.5 | 18923 | 2153 | 16770 |
| Papaya (Banana) (Intercropping) | 0.5 | 470 | 431 | 39 | 0.16 | 1440 | 361 | 1079 | 0.25 | 2250 | 546 | 1694 | 0.25 | 2250 | 536 | 1814 |
| Chicken (Duck) | 150 | 5950 | 3400 | 2450 | 150 | 5950 | 3400 | 2450 | 200 | 7800 | 4300 | 3500 | 200 | 7800 | 4300 | 3500 |
| Beef Cattle | | 0 | 0 | 0 | 5 | 20000 | 8000 | 12000 | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Vegetables (String bean) | 1.5 | 10700 | 3284 | 7416 | 1.5 | 10700 | 3284 | 7416 | 0.75 | 5350 | 1642 | 3608 | 0.75 | 5350 | 1642 | 3608 |
| Vegetables (ChW) | 1.5 | 13800 | 6772 | 7128 | 1.5 | 13800 | 6772 | 7128 | 0.75 | 6300 | 3336 | 2964 | 0.75 | 6300 | 3336 | 2964 |
| Acacia/Eucalyptus | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Tilapia | 0.2 | 6200 | 2494 | 3706 | 0.2 | 6200 | 2494 | 3706 | 0.2 | 6200 | 2494 | 3706 | 0.2 | 6200 | 2494 | 3706 |
| Grass | | - | - | - | | - | - | - | | - | - | - | | - | - | - |
| Fallow | | - | - | - | | - | - | - | | - | - | - | | - | - | - |
| Pond | 1 | - | - | - | 1 | - | - | - | 1 | - | - | - | 1 | - | - | - |
| Non-cropped area (Livestock yard) | 1 | - | - | - | 1 | - | - | - | 1 | - | - | - | 1 | - | - | - |
| Sub total | 22 | 97455 | 26340 | 71086 | 14 | 64570 | 28116 | 36454 | 15 | 60499 | 18996 | 41503 | 11 | 57549 | 17307 | 40241 |

The Sub total excludes the required area for feeding fish and for intercropping.
 Unit of livestock refers to the number. Non-cropped area includes Road, Livestock yard etc.
 Soybeans and Groundnuts are planted after rice-harvesting.
 Chicken is fed two times for a year and Vegetables are harvested three times for a year.

Farming at Upland

| | ALPO area | Total | | | ALPO area | Total | | | ALPO area | Total | | | ALPO area | Total | | |
|-----------------------------------|-----------|--------|---------|--------|-----------|--------|---------|--------|-----------|--------|---------|--------|-----------|--------|---------|--------|
| | | income | Expense | Profit | | income | Expense | Profit | | income | Expense | Profit | | income | Expense | Profit |
| Paddy | | 0 | 0 | 0 | | 0 | 0 | 0 | 3.5 | 4175 | 1445 | 2730 | 3 | 5400 | 1251 | 4149 |
| Glutinous | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Non-glutinous | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Cassava | | 0 | 0 | 0 | 5 | 11350 | 5705 | 6545 | 3 | 7050 | 3123 | 3927 | | 0 | 0 | 0 |
| Sugarcane | 12 | 41500 | 21624 | 20496 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Soybeans | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Groundnuts | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Mango | 5 | 3745 | 4305 | 3140 | | 0 | 0 | 0 | 2 | 15078 | 1322 | 13756 | 2.5 | 18923 | 2153 | 16770 |
| Papaya (Banana) (Intercropping) | 0.35 | 3450 | 894 | 2556 | 0.25 | 2250 | 536 | 1694 | 0.35 | 3350 | 814 | 2536 | 0.25 | 2250 | 536 | 1694 |
| Chicken (Duck) | 150 | 5950 | 3400 | 2450 | 150 | 5950 | 3400 | 2450 | 200 | 7800 | 4300 | 3500 | 200 | 7800 | 4300 | 3500 |
| Beef Cattle | | 0 | 0 | 0 | 5 | 20000 | 8000 | 12000 | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Vegetables (String bean) | 1.5 | 10700 | 3284 | 7416 | 1.5 | 10700 | 3284 | 7416 | 0.75 | 5350 | 1642 | 3608 | 0.75 | 5350 | 1642 | 3608 |
| Vegetables (ChW) | 1.5 | 13800 | 6772 | 7128 | 1.5 | 13800 | 6772 | 7128 | 0.75 | 6300 | 3336 | 2964 | 0.75 | 6300 | 3336 | 2964 |
| Acacia/Eucalyptus | | 0 | 0 | 0 | | 0 | 0 | 0 | 2 | 3600 | 1440 | 2160 | 2 | 3600 | 1440 | 2160 |
| Tilapia | 0.2 | 6200 | 2494 | 3706 | 0.2 | 6200 | 2494 | 3706 | 0.2 | 6200 | 2494 | 3706 | 0.2 | 6200 | 2494 | 3706 |
| Grass | | - | - | - | | - | - | - | | - | - | - | | - | - | - |
| Fallow | | - | - | - | | - | - | - | | - | - | - | | - | - | - |
| Pond | 1 | - | - | - | 1 | - | - | - | 1 | - | - | - | 1 | - | - | - |
| Non-cropped area (Livestock yard) | 1 | - | - | - | 1 | - | - | - | 1 | - | - | - | 1 | - | - | - |
| Sub total | 22 | 124695 | 48062 | 76633 | 14 | 70360 | 31515 | 38865 | 14 | 59763 | 20615 | 39148 | 11 | 56253 | 17511 | 38742 |

The Sub total excludes the required area for feeding fish and for intercropping.
 Unit of livestock refers to the number. Non-cropped area includes Road, Livestock yard etc.
 Chicken is fed two times for a year and Vegetables are harvested three times for a year.

Farming at mixture of Lowland and Upland

| | ALPO area | Total | | | ALPO area | Total | | |
|-----------------------------------|-----------|--------|---------|--------|-----------|--------|---------|--------|
| | | income | Expense | Profit | | income | Expense | Profit |
| Paddy | 5 | 1975 | 2390 | 585 | 5 | 8750 | 2045 | 4738 |
| Glutinous | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Non-glutinous | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Cassava | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sugarcane | 10 | 78500 | 22520 | 55980 | | 0 | 0 | 0 |
| Soybeans | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Groundnuts | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Mango | 0.125 | 391 | 438 | 834 | | 0 | 0 | 0 |
| Papaya (Banana) (Intercropping) | 0.1 | 900 | 228 | 672 | 0.16 | 1440 | 361 | 1079 |
| Chicken (Duck) | 150 | 5950 | 3400 | 2450 | 150 | 5950 | 3400 | 2450 |
| Beef Cattle | 5 | 20740 | 8115 | 12625 | 5 | 20000 | 8000 | 12000 |
| Vegetables (String bean) | 1.5 | 10700 | 3284 | 7416 | 1.5 | 10700 | 3284 | 7416 |
| Vegetables (ChW) | 1.5 | 13800 | 6772 | 7128 | 1.5 | 13800 | 6772 | 7128 |
| Acacia/Eucalyptus | | 0 | 0 | 0 | | 0 | 0 | 0 |
| Tilapia | 0.2 | 6200 | 2494 | 3706 | 0.2 | 6200 | 2494 | 3706 |
| Grass | 2 | - | - | - | 4 | - | - | - |
| Fallow | | - | - | - | | - | - | - |
| Pond | 1 | - | - | - | 1 | - | - | - |
| Non-cropped area (Livestock yard) | 1 | - | - | - | 1 | - | - | - |
| Sub total | 22 | 106696 | 50640 | 55056 | 14 | 64570 | 28131 | 36439 |

The Sub total excludes the required area for feeding fish and for intercropping.
 Unit of livestock refers to the number. Non-cropped area includes Road, Livestock yard etc.