

#### 4.6.4 Anticipated Effects

By implementing its Detailed Plan for Activation of the KUD, the following sorts of things can be expected, as effects on benefits to the members and the regional economy. At the stage of KUD development, it is thought that this KUD is presently in the mid-middle class. By implementing the detailed plan, it will be possible to enhance the level of service provided to the members, as well as to raise the class of the KUD.

Since this KUD is very similar to KUD Sipatuwo, both as far as the geographical location of the region and the farming environment are concerned, it would be appropriate for this KUD to implement the concrete measures for its Detailed Plan in basically the same way that KUD Sipatuwo has. Accordingly, the anticipated effects it would have on the members in the region and the regional economy are about the same. The presidents both of these KUD have a common enthusiasm for KUD activities, but in this KUD there is a big difference in the importance of employing a general manager and the importance of the membership rate. Accordingly, in this KUD, as a precondition for creating an effect which can be anticipated by devising and implementing the above-mentioned plan, it is thought that it will be important to first of all employ a general manager who is young and able.

##### (1) Organization and Management Plan

###### 1) Five-year Plan to Increase the Membership Rate

By doubling the present low membership rate, and utilizing members who have strong bonds among them, the KUD will increase its profitability in the areas of sales, purchases and credit among the members of the region.

###### 2) Increasing Membership Fees and the Required Monthly Amount of Compulsory Savings

Due to a shortage of capital, the KUD lags behind private business in the shipping and sales of rice, resulting in disadvantages to the sales and the prices among members from households engaged in farming. If the KUD could save just a little more money for owned collection capital, this would result in profitable sales.

###### 3) Cultivating the Organization of a Production Group

By organizing a Production Group among members who are engaged in poultry farming, and taking advance orders for assorted and individual feed, the KUD will be able to reduce costs for the members, stabilize quality, and secure stable provision. It will become possible to secure stability of customers to purchase their products.

#### 4) Establishing a Council of KUDs in the Sub-district

By establishing a council of KUDs in the sub-district with such KUDs as KUD Sipatuwo, which is close by and which resembles this KUD in its farming environment, and by holding deliberations with that council, the KUD will be able to cooperate with other small KUDs in its business affairs, through the exchange of information with such KUD and the unification of their awareness of problems, and in the future, by effective mergers, it will also be possible for the KUD to increase the profits of the members of the other KUD.

#### (2) Economic Business Plan

##### 1) Effects of Remedying the Rate of Loss of Products through Replenished and Renovated Rice-milling Facilities

By improving and renovating rice-milling facilities so that they will be equipped with the total function of an area for drying paddy and a warehouse for raw materials, it is expected that there will be an increase in the amount of paddy which is received during the rainy season, and that the income of the members will increase due to the decrease in losses at harvest time. It is reported that there are losses of about 10% at harvest time during the rainy season.

##### 2) Profitable Sales Due to an Increase in the Amount of Rice Collected and Processed, through the Improvement and Renovation of the Entire Rice-milling Facility

The KUD can triple its present capability to collect and process paddy, from 800 tons a year to 2,400 tons a year for the time being. By so doing, the KUD would increase the amount of paddy that it collects and sells, and, with the increase in its share, improve its organizational negotiating ability, and so increase the possibility for more profitable sales for the members as well.

##### 3) Effects of Increasing Profits by Setting Up Facilities for Processing Minor Grains, and Increasing the Opportunity to Hire New People

As the business for processing broken rice and green beans is a new added value business, it can be expected that this will increase the KUD's profits through the sales of the raw materials for the manufacture of confectionery products and the sales of confectionery products, as well as increase the profits of the members.

The KUD will also have increased opportunities to hire employees, which come with conducting the rice processing business. It is expected that the KUD will hire between approximately 25 and 30 new employees, for this new rice-related business and the related new facilities to be set up.

#### 4) Establishing a Repair Center for Farming Machinery and Utensils

Since it is anticipated that it would be difficult to make commercial profits on its own, it is desirable for the KUD to operate this business over a wide area. However, since the newly established repair center for farming machinery and utensils will be equipped with machinery which will develop at a rapid pace, it is expected that this will enable the KUD to provide quick support to the farmers of the region.

#### (3) Credit Business Plan

##### 1) Encouraging paddy Savings among the Members

Not only does having savings in kind contribute to the constitution of the property of the members, but it also contributes to the assets of the KUD, and allows for smooth business activities among the members.

#### (4) Plan for the Human Resources Development and guidance Business

##### 1) Improving Ability by Training Employees Involved in Clerical Affairs and Farm Advisors

Improving ability by training employees involved in clerical affairs and farm advisors would result in the KUD becoming a management organization which the members can trust, and would enable the members to receive guidance from the KUD which would help them to increase their profits.

## **KUD Matutu**



## 4.7 KUD Matutu

### 4.7.1 Present Situation and Evaluation

#### (1) Present Situation

##### 1) Natural Environmental Conditions and Agricultural Production

This KUD is situated in a region categorized as irrigated area in the agro-ecosystem. It covers six villages in Sub-District Dua Pitue with a relatively large agricultural land area of 19,280 hectare, in District Sidrap. The total irrigated area of 3,869 hectare is large compared to those of neighboring KUD. Rice is the principal product, but other major sectors include rearing ducks and beef cattle, and growing rattan. The average area of each farm's rice fields is about 2 hectares. About 11,000 cattle were fattened in the Kecamatan in 1996. The Division of Livestock Development in the District Sidrap designated the Kecamatan as a priority beef cattle area to promote beef cattle farming. There is a state-owned large beef cattle breeding farm in the District which provides economical and technical support to livestock farmers in the area.

##### 2) History of the KUD and Stockbreeding Business

KUD Matutu was registered as a KUD in July 1982, and received approval to become an independent KUD in July 1990.

Membership has soared since it was established, from 170 members in 1980 increasing to 3,514 members in 1990 with a current membership of 3,551, which is 36% of the population of the area (9,967). Ninety-one percent (3,213) of the farming population of 3,587 are KUD members. The proportion of female members is relatively high at 900. The major occupations of the members are farming, trading, livestock farming and government administration.

The principal KUD operations are purchasing rice to sell to the BULOG, supplying fertilizers, selling cloves to PUSKUD, and administrative work for institutional loans. KUD Matutu does not participate in supplying feed (for ducks or cattle) or livestock. There are about 7,000 beef cattle owned by approximately 100 farming members, but the beef cattle are not sold through the KUD. The farmers put the cattle out to pasture and sell them to traders when they require cash.

These farmers do not have the basic skills required for cattle fattening although this area has been designated as a priority beef cattle promotion area by the Dinas Peternakan. The KUD's active involvement in beef cattle farming in ways such as securing funds to purchase calves and supplying feed, is expected to become an important part of their program.

### 3) Economic Business

The KUD's principal program is purchasing polished rice and paddy, processing products, selling the processed products, and supplying fertilizer. Other potential KUD operations include areas connected with cooperative stores (kios), rattan, cattle fattening and poultry farming.

KUD Matutu owns RMUs in two locations, but makes little use of them. The KUD purchased rice valued at Rp 3,832,400,000 in 1996, earning revenues of Rp 50,300,000.

Financial turnover amounted to Rp 2,109 million including rice sales of Rp 1,266 million, which indicates this KUD's focus on rice. Sales of cloves came to Rp 561 million and sales of fertilizer totaled Rp 243 million. In the services sector commissions from transportation services amounted to Rp 33 million.

The sale of cloves realized profits of Rp 15.1 million, but this was just one fifth of the 1994 profit, due to a fall in clove prices and farmers' declining interest in clove growing. Cooperative store sales were Rp 6 million.

Although the KUD is a member of PUSKUD, there are no collaborative programs between the KUD and PUSKUD, other than the clove business. PUSKUD has one large rice mill which the KUD is allowed to use until it has its own, to polish rice grown by farming members.

### 4) Credit Business

In 1995 the total holding of membership fees was Rp 3.3 million and the balance of compulsory savings was Rp 51.6 million. Voluntary savings totaled Rp 26.5 million in 1995, which was about half of the Rp51.1 million recorded in 1994. This drop was caused by members withdrawing voluntary savings for household spending. The KUD does not pay interest on membership fees or compulsory savings, but applies a rate of 1% per annum on voluntary savings. However, because this interest rate is far lower than the market rate of 16%, saving with the KUD is not attractive for the members.

The balance of the KUD's borrowing from financial institutions was Rp 90 million, accounted for by a loan from BRI, with a term of one year at 14% per annum, deposited in the fund to purchase rice and paddy rice for the rice milling program (for partner members).

KUD Matutu directly lent Rp 16 million to 200 of its members in 1996. The average term of the loans was one month at an average interest rate of 2% per month. There is a limit of Rp 200,000 per loan. The average loan amounted to Rp 80,000. The interest rate of the KUD loans is so low that it does not even cover general administration work.

The total balance of institutional loans handled by the KUD totaled Rp371 million in 1996, lent by BRI, comprising 80 loans totaling Rp 1 million to KCK traders and Rp 370 million for 550 KUT loans for rice production. The average loan was Rp 672,727. The term of the loans was one year at an interest rate of 14% per annum with a limit of Rp 600,000 per loan.

Many members are denied new loans because they have not repaid loans from BRI.

#### 5) Organization and Management

Residents aged seventeen years or older are eligible for membership. The membership fee is Rp 2,500 and the contribution to the compulsory savings program is Rp 500 per month. Membership benefits include:

- (1) cheap purchases of fertilizers and agricultural chemicals, and
- (2) loans procurement.

KUD Matutu has five directors, comprising a former village mayor, two former elementary school principals and two farmers, and three inspectors who inspect the KUD four times a year. Two of the inspectors are former elementary school principals and one is a farmer.

The general meeting to discuss the accounts settlements for the year 1996 was held in April 1997 and was attended by 65 people, comprising 43 representatives of Kelompok Tani and 22 other representatives. Preparatory meetings for the general meetings (explanatory meetings) were not held in the areas. Representatives attending general meetings were expected to convene subsequent meetings to report to other members in the villages the issues determined at the general meetings.

There are four departments under the general manager: accounts, production, sales and administration (including collection of electricity fees). The KUD employs one general manager, eight full-time staff (three men and five women) and thirty nine part-timers.

One full-time worker is responsible for cash transactions, accounts, management, accounts for rice and the rice mill, collecting electricity fees, accounts for production materials, savings & loans and KCK transactions, and accounts for cloves. All full-time staff are high school graduates. Although there are insufficient full-time staff considering the programs the KUD operates, part-timers carry out work which full-time staff cannot cover. Salaries and allowances are often delayed and are not paid every month.

The average transaction handled by KUD Matutu is only three-quarters of the average for the province.

The total profit from sales was Rp 154.6 million, with the largest share of Rp 75 million derived from cloves, Rp 15 million from rice and Rp 14 million from fertilizer. Total business revenue



was Rp 21.6 million.

The current surplus for the fiscal year at Rp 23.5 million was 2.4 times greater than the average for the province. This KUD's total assets amounted to Rp 8.23 million, including a short term credit to PUSKUD of Rp 2.94 million (35.8% of the total), a proportion of which was savings derived from PUSKUD's savings-based loans. Fixed assets totaled Rp 170 million. External capital subscription included membership fees and compulsory savings paid to the federation. Regarding funds raised by the KUD, borrowing connected to institutional fund loans was Rp 436 million, which is half of total assets and includes funding for the KUT loans of Rp 340 million. Long term loans were borrowed from PUSKUD to pay for equipment such as trucks, irrigation pumps and cooperative stores. Forty-eight percent of KUD Matutu's capital of Rp 247 million was internal reserves, with just 22% consisting of membership fees and members' compulsory savings. The own capital ratio was low at 30.0%.

Turnover for the fiscal year yielded a profit rate of 1.1%, and the profit rate from total assets for the fiscal year at 2.8% was standard. Transactions per member at Rp 605,000 were less than the province average and the member's utilization of the KUD was poor.

Total salaries and allowances booked in the operation costs were Rp 4,612,000. The average payment to staff, including bonuses paid from the appropriation account of the surplus, amounted to Rp 886,000.

#### 6) Human Resources Development and Guidance Activities

The general manager and the staff of KUD Matutu are well-educated and the average age of the full-time staff is low, ranging between 19 and 26 years old. Although the education fund held Rp 4.5 million, this was not sufficient to train all the staff. The KUD dispatched staff to three training courses in 1996. However, it is not clear who is in charge of the in-service training and there are no systematic training programs.

As part of its training program, KUD Matutu teaches 3,800 members the legal aspects of cooperative associations and the rights and obligations of members to promote participation in the KUD at BALATKOP, DEKOPINDA and the KUD once or twice a year.

The KUD directors act as farm advisors in addition to their ordinary duties as directors. KUD Matutu has no plans to employ farm advisors. PPL provide technical advice to local farmers including the members of the KUD. It is vital for KUD Matutu to establish a farm guidance system to promote the beef cattle sector. Commodity-wise producer groups, etc., targeted for group guidance have not been set up yet. The KUD does not operate a better living guidance service and has no staff responsible for this service. Despite the fact that 40% of its members are women, the

KUD does not have women's groups. However, there is a growing realization of the need for women's groups.

## (2) Evaluation

### 1) Livestock Business

The demand for beef cattle is expected to rise due to the decline in the number of water buffaloes. Although there have been plans to start beef cattle fattening in the area for quite some time, no progress has been made. This is due to the fact that the KUD lacks the staff capable of realizing the plan and teaching beef cattle fattening skills to members, and also despite the fact that farmers considering beef cattle business require long term funding, the KUD has not implemented a suitable scheme.

If the KUD directors and members' leaders were to devise lucrative schemes, secure institutional loans to members, and establish a farm guidance system, then the KUD's livestock program may develop.

### 2) Economic Business

Although KUD Matutu's turnover is high, improvements in program management are required. The poor efficiency of cooperative stores hinders their financial success. The utilization rate of the two RMUs which are capable of processing four tons of rice per hour is only 5% and the KUD's external drying areas and drying machines are not used. One of the principal reasons for this is that the KUD is insufficiently funded to purchase rice and polish rice, and another reason is that twenty "partner members" started participating in the rice milling business.

### 3) Credit Business

KUD Matutu's borrowing capability is limited because their profit rate is low (only 1.1% in 1995) and past borrowings have not been repaid because their operations are sluggish. This means that The KUD must raise its own capital and so it is essential to receive more savings from members. It must expend Rp 1.8 billion on the purchase of harvested rice if it is to continue participating in the rice milling business. Collecting members savings would contribute significantly to the working capital.

Although KUD Matutu booked very little profit from its channeling loans for members, calculations based on the amount of the loans show that commissions should be Rp 30 million a year. The KUD must perform its operations with proper accounting procedures and avoid losing income due. If possible, KUD Matutu should borrow sufficient funds to replace its members'

agricultural production loans from BRI, and lend directly to the members, with the aim of persuading farmers to sell their rice to the KUD rather than to other traders. The loans recovery rate will improve if indebted farmers sell rice to the KUD, and the KUD's income from loan commissions will increase.

#### 4) Organization and Management

KUD Matutu has no cooperative groups of members, partly because of its weak involvement outside of rice, cloves and fertilizer, but also because of low awareness of the specifics of the KUD's programs.

Diverse agricultural products are produced in the area in addition to rice and cloves, such as beef cattle and cashew nuts. So if KUD Matutu were to provide places where members producing the same crops can exchange information, members' mutual relationships would strengthen, resulting in more groups setting up.

#### 5) Human Resources Development and Guidance Activities

KUD Matutu has no advisory staff and so the farm guidance and the marketing programs are not linked out effectively. It is vital to have staff in charge of the farm guidance to implement future programs. Young, motivated staff should be employed and trained.

## 4.7.2 Detailed Plan for Activation of KUD

### (1) Principal Concepts

This KUD Matutu is situated in a region categorized as an irrigated area in an agro-ecosystem. The area has rice fields and hilly areas with wild grass. Although KUD Matutu has been active in rice and cloves, these crops are performing poorly. The KUD should prepare plans to promote the production of cash crops such as cocoa and rattan which have attracted high selling prices in recent years, and beef cattle to meet the increasing demand, and sell these products. The KUD should improve their current systems with the aim of raising members' incomes and also investigate the future operation of the rice milling program which is currently stalled again.

#### 1) Cattle Fattening and Marketing Business

- \* Perform initial processing on cash crops such as cocoa, cashew nuts and rattan produced by the members.
- \* Prepare a project to establish a beef cattle farming center in response to the increasing demand for beef. KUD Matutu should construct a cattle fattening ranch and operate the project in collaboration with its members.
- \* Establish a system in which the KUD is involved, from the purchasing of the cattle and the provision of feed, through to sales of the fattened cattle, in collaboration with the neighboring PT Berdikari and enhance the KUD's purchasing and selling program.
- \* Improve communications to make progress in feed provisioning, collaborative programs, and technical tie-ups with PUSKUD.

#### 2) Rice Milling and Rice Sales

- \* To promote the sale and control of rice shipment, KUD Matutu should participate in DEPKOP dan's PMU rice program which positions PUSKUD as the rice center in control of collecting, milling and storing rice.
- \* KUD Matutu should transfer its underused rice milling facilities and equipment and use efficient facilities and equipment located elsewhere. This would free up the current building for use as storage. KUD Matutu should also construct paddy collection centers near farming members for their convenience.

#### 3) Joint Marketing of Cash Crops

Farming members currently sell cash crops such as rattan, cashew nuts, cocoa and cloves individually and not through the KUD. KUD Matutu should organize commodity-wise product

producer groups and establish a joint grading, packaging center with PUSKUD to boost members' incomes.

## (2) Plan for Strengthening of Economic Business

### 1) Establish Multi-purpose Rice Center

The KUD's rice center should have comprehensive facilities, including efficient rice mills, rice polishers, drying areas for paddy, a packing facility, storage for paddy, polished rice, rice bran, cloves and fertilizers and appropriate means of transportation. KUD Matutu should collaborate with PUSKUD to have a closer relationship with PMU. (The KUD may use PUSKUD's large rice mill.) It should relocate its current RMUs and utilize facilities and equipment with good capabilities elsewhere, and convert the current building into a storage area. KUD Matutu should construct unhulled rice collection centers near farming members so that members no longer have to carry rice to the KUD or the RUM. The KUD should also establish a marketing system for rice in cooperation with PUSKUD/ PT Goro.

### 2) Beef Cattle Rearing and Fattening Facility

Although many farming members rear beef cattle, cattle fattening has not been organized. KUD Matutu can establish rearing and fattening facilities for beef cattle using existing farming resources. (PT Berdikari, a large government operated corporation situated in the area is ready to advise and support the KUD.) It should set up a concentrated feed plant to supply feed to the cattle rearing and fattening facility and other farms.

### 3) Processing Facility for Cash Crops

Although cash crops such as rattan, cashew nuts, cocoa and cloves are produced in the area, their production has not been organized and they are grown on an individual farmer basis. KUD Matutu should establish a cashew nuts processing facility where cashew nuts are sorted manually and packed for joint marketing with PUSKUD. To ensure the success of the facility, product quality must be guaranteed.

### 4) Agricultural Service Center

The KUD should establish an agricultural service center which supplies maintenance services for agricultural machinery and vehicles, improved quality seed, chemical fertilizers, agricultural chemicals and training and advice on farming.

### 5) Establishment of Settlement Accounts for Members

Large cash transactions should be avoided. Payments to members should be made into individual members' accounts with the KUD. This will promote the savings of members with the KUD, while at the same time, contribute to the working capital of the KUD.

### (3) Plan for Strengthening of Credit Business

#### 1) Promotion of Savings

It is vital that the KUD increases its internal funds in order to boost its borrowing capability. To do this, the KUD should consider requesting the members for their cooperation, conducting membership drives and accept preferred funds from public and private institutions. KUD Matutu lacks the working capital, and therefore it should promote savings by its members.

To increase savings quickly, the management of the KUD should promote savings in every area connected to project development. KUD Matutu should consider implementing crop-based compulsory savings systems in which all members must save one bag of rice per hectare harvested. The KUD also should consider promoting savings by organizing contests and presenting awards such as TVs, motorbikes, audio equipment, and scholarships, etc. to individuals or groups who win the savings contests. KUD Matutu should also apply interest rates in line with market rates to members' savings.

#### 2) Re-consideration of Loan Conditions

The interest rate of USP loans should be raised to 3% per month and the total amount of USP should be raised to at least Rp50 million which is three times greater than the current level. This would allow KUD Matutu to receive sufficient income to cover loans administration costs and make a profit.

The KUD should operate its savings and loans program independently, and the savings and loans accounts should be maintained separately. Loan procedures should be standardized and simplified to speed up administration work. Loans should be granted within three months of the application.

The interest rates of channeling loans to the KUD members must be high enough to cover loans administration costs and return a profit to the KUD. Not only the production loans for members, but also the channeling loans should be arranged so that they can contribute to the working capital of the KUD and the purchase of facilities and equipment required by members. If possible, bank loans to members should be converted so that the KUD takes out loans and then provides channeling loans to its members. In the channeling loans process, the KUD should participate in the management and lending risk. To carry out appropriate loans management, the KUD must

improve its capability to select borrowers, and control and recover loans. The KUD should provide comprehensive loans training to the staff in charge of loans. Banks such as BRI should play a positive role in this training and the KUD should bear the costs.

#### (4) Plan for Strengthening of Organization and Management

The level of members' transactions through the KUD is low. This is probably due to a lack of awareness of the specifics of the KUD's operations. Members require different information and assistance from the KUD depending upon the crops they grow, so single product producer groups should be set up and strong collaborative relationships between the groups and the KUD fostered.

Members' enthusiasm to participate in KUD projects is weak, partly because few of them are allowed to attend general meetings, but also because preparatory meetings for general meetings and subsequent reporting meetings are convened infrequently. Preparatory meetings are an important means of incorporating member's opinions as much as possible into the KUD's activities.

The payments of salaries and allowances to the KUD staff are irregular. This situation diverts staff from their duties and cuts motivation in the KUD projects. Salaries and allowances should be paid regularly for the development of the KUD activities.

At least four of the six the KUD in the two Kecamatan are suffering from shortages of staff and funding, and have poor project implementation capabilities. The six KUD should establish forums where common issues can be discussed to promote cooperation in areas where mutual collaboration is possible, with the purpose of improving all six of the KUD.

The savings and loans business is functioning poorly, with the total balance of loans for members running low and the amount of voluntary savings decreasing. Administration procedures to operate the savings and loans have not been properly established, allowing unfairness and errors to enter the system. The KUD must improve its administration procedures and increase the members' compulsory savings and loans to members, and at the same time, implement internal auditing systems to prevent misappropriation.

##### 1) Setting up of Members' Producer Groups

Set up members' producer groups for sectors such as beef cattle and cashew nuts to provide product specific information to the groups, fulfil members' requirements of the KUD, and then maintain close contact with the groups.

With the cooperation of PPL, PUSKUD and the more capable members, the KUD should provide information on the market, prices, production materials and skills to the groups, and set up places

where members can exchange information. If the KUD becomes aware of new areas of participation during members' discussions, then the KUD should set up projects for them.

## 2) Democratic Operation of General Meetings

Preparatory meetings for the general meetings should be held locally to explain and discuss the agenda of general meetings to maximize input of a greater number of members into KUD operations. The KUD should request the collaboration of Kelompok Tani to hold preparatory meetings for the general meetings.

## 3) Staff Salaries and Allowances

The KUD should employ capable staff working exclusively for the KUD to operate KUD business more actively. Staff salaries and allowances should be paid monthly on a fixed date so that staff are motivated to perform their duties in KUD operations. KUD staff with other employment interests should be treated as part-timers and not be allowed to participate in the core work of the KUD.

## 4) Establishing of KUD Discussion Forum in the Sub-district

Set up discussion forums of the six KUD in the two Sub-districts with the aim of promoting KUD activities in the Sub-district by discussing issues related to loan, marketing, facilities, the starting up of collaboration work wherever possible.

Obtain the cooperation of DEPKOP, PPL, DEKOPINDA and other relevant governmental agencies to establish the discussion forum.

## 5) Improvement of Credit Business

The KUD should employ more than one staff member to be responsible for monetary transactions to increase the trust of members, to secure assets for members, to improve operations and to strengthen monetary transactions procedures. The KUD should upgrade its internal audit systems to include stringent inspections by the general manager. The KUD should also improve its administration by training staff to carry out the work required in accepting savings, to investigate loan requests, and to place and recover loans, etc., and teach staff the importance of accurate management and speedy operation.

Establish an objective voluntary savings for children's education, or the purchase of electrical products, and hold Islamic festivals to promote voluntary savings more actively. It is particularly important to set up women's savings groups to spread the concept of savings. Establish a small



loans operations to provide required funding to members.

(5) Plan for Strengthening Human Resources Development and Guidance activities

1) Staff Training

KUD Matutu employs only eight full-timers, supported by thirty-nine part-timers. The KUD must secure education funds for intensive outside training to improve the capabilities of both the full-time and the part-time staff. The KUD should prepare and implement a staff skills improvement program according to work type. The KUD should also establish annual in-service training programs led by the general manager. A performance-related salary structure is important to secure capable staff and promote staff motivation.

2) Securing Fund for Farm Guidance

KUD Matutu should budget to provide farm guidance services for its members. It is of particular importance to secure funds to employ farm advisors with veterinary qualifications for the promotion of beef cattle fattening. Farm advisors should receive training in cooperation with the livestock experiment station, the PT Berdikari and the post harvest training center. The KUD should establish a collaboration system with these institutions to exchange information and train beef cattle fattening farmers, etc.

3) Plan for Strengthening and Promoting of Better Living Guidance

Establish a center to promote better living activities in the same place as the agricultural product processing facility. A training facility for the processing operations is required in province level. The KUD should collaborate with women's groups and income improvement groups organized by the government and provide advice to member families on matters such as health control, commodity knowledge and life planning to improve their standard of living. To materialize these plans, better living advisors should be employed and undergo training offered by relevant organizations.

(6) Other Business

The KUD has plans to investigate the possibilities of operating programs such as collecting and processing rattan, establishing repair workshop and providing hand held tractors.

### 4.7.3 Facilities Plan and Project Evaluation

#### (1) Facilities Plan

##### Plan for Establishment of Cattle Fattening Facilities

##### 1) Objectives

The demand for beef in the urban areas in Indonesia shows a tendency to increase recently. This nationwide tendency will supposedly be toward higher level.

Because this region includes the heights which are suitable for cattle rearing and it is also abundant in the rice leaves that are used for cattle's roughage, cattle rearing business has been carried out by many farmers. In the KUD Matutu's covering area, 100 farmers of KUD member are rearing 5,200 cattle approximately. But their rearing style depends upon the traditional one, and it doesn't include the concept of confined fattening where significant value added business can be realized. In addition, cattle are marketed only in the case that farmers need cash. Their cattle rearing is not an industry, therefore they have no operation / management schedule.

To activate the beef cattle production and increase the incomes of KUD member farmers, it is possible for KUD to promote the cattle fattening project. In this project, KUD purchases periodically some part of the feeder cattle from existing cattle-rearing farmers, and entrusts the other farmers with the cattle fattening works in the KUD's facilities, and sell the cattle to the market after fattening period. Regarding the main destination, it is possible for the public corporation's stock farm in the neighborhood of KUD to accept the fattened cattle.

To realize this project, it is necessary for KUD to construct the facilities for cattle fattening.

##### 2) Project Outline

###### a. Planned Handling Volume

Planned handling number of cattle is 720 heads / year in the normal operation stage.

###### b. Operation Schedule

Main items about the operation schedule are shown as follows.

- a) Condition of cattle to be purchased : from 2.0 to 2.5 years of age  
250 kg weight

- b) Fattening period      6 months
- c) Condition of cattle to be marketed :      410 kg weight
- d) Number of cattle to be purchased :      60 head / month
- e) Total number of cattle in one time :      360 heads

### 3)            Operation and Maintenance of Facilities

#### a. Roles of KUD and its Farmer Members

KUD will construct the cattle fattening facilities at its own investment, and KUD will also carry out all of the total management works of the cattle fattening business and the maintenance works for the facilities.

Before the implementation stage, KUD will select 18 volunteer farmers, who have no experience in cattle fattening works, from the KUD farmer members. KUD will divided these 18 farmers into 6 farmer groups (3 members per each group), and entrust each farmer group with all of the cattle fattening works.

KUD will purchase the cattles from existing cattle stock farmers (KUD members), and sell them to the public corporation s breeding stock farm (Pt. Berdikari) after fattening period.

Farmer groups mentioned above have full responsibilities to KUD for the daily cattle fattening works.

#### b. Personnel

Number	
1	Manager
2	Sub manager
1	Veterinarian
4	General affairs / Accounting
18	Fattening operators / workers
	(volunteer farmers / incl. recorders)
4	Guards

### 4)            Condition of Facilities Design

#### a. Required Capacity of Facilities

The number of cattles to be accommodated in one time is 360 heads in this project.

KUD is now preparing 2 sites for this project (refer to iii.). Therefore 3 farmer groups will be allocated to the one site (Site A), and other 3 farmer groups will be to another (Site B).

The fattening facilities on both sites will accommodate 180 cattle in one time respectively.

## b. Rearing Style

Herd rearing in stall will be adopted in this project (approx. 10 cattle for each herd)

## c. Project Site

KUD Matutu prepares 2 sites for this project. One site (Site A) is approx. 8 km north of the KUD office, and the other (Site B) is approx. 7 km west of the KUD office. Existing condition of each site are shown below.

### [ Site A ]

This site is located approx. 8 km north of the KUD office. KUD prepared this site (approx. 2 ha) as the project site, and they also prepared a pasture (approx. 48 ha) 1 km east of the site. Detailed site information are shown as follows.

Location : Bilarias, Matutu (8 km north of the KUD office)  
Land owner : KUD Matutu  
Land area : approx. 2 ha (pasture : approx. 48 ha / total approx. 50 ha)  
Surface condition : partially covered with grass / large scale undulation  
Access road : non-paved / width : approx. 4 m  
Neighboring main road :  
district road - Poros Sarawatu-Bila / approx. 1 km west of the site  
Electricity : no / 1 km to the nearest main line (220 V / 50 Hz / 1,300 Watt)  
Water source : neighboring river : approx. 160 m east of the site center  
level difference - river surface to the site center : approx. 20 m  
Existing building : rice mill processing building (floor area : approx. 180 m<sup>2</sup> )  
storage (floor area : approx. 50 m<sup>2</sup> )  
Both buildings shall be demolished.

### [ Site B ]

This site is located approx. 7 km west of the KUD office, its land area is approx. 50 ha. Detailed site information are shown as follows.

Location : Botto, Matutu (7 km west of the KUD office)  
Land owner : KUD Matutu  
Land area : approx. 50 ha  
Surface condition : fully covered with grass / gently slope from east to west  
Access road : non-paved / width : approx. 4 m  
Neighboring main road :

district road - Poros Sarawatu-Bila / approx. 7 km east of the site  
Electricity : no / 5 km to the nearest main line (220 V / 50 Hz / 1,300 Watt)  
Water source : neighboring river : approx. 50 m west of the west-side boundary  
level difference - river surface to the site center : approx. 10 m  
Existing building : no

#### 5) Preliminary Design of Facilities and Equipment

Required items of the facilities and equipment are shown in Table-4.7.3.1.1 with facilities scale (no. of stories, total floor area), types of foundation, and types of structure. Furthermore, layout plan of this facilities is shown in Fig.-4.7.3.1.1 and Fig.- 4.7.3.1.2.

[ Legal restrictions pertaining to the existing road and others ]

Local regulations restricts the distance from the center line of adjacent road to the building front. In case that the site faces to a Provincial Road, there must be a distance of 25 meters minimum between the road center line and the face of the building. In case of District Road, limitation of this distance has to be 12 meters. There is no regulations for the building height in this district. Layout plan must incorporate these regulations.

On the other hand, Sidrap Province Government has been restricting the building roof style from 1995, therefore, all of the building roof have to be designed in the traditional mansard style in this region. It is necessary to take this restriction into consideration on the implementation design stage.

#### 6) Project Cost and Implementation Schedule

A summary of the cost estimate about this project is shown in Table-4.7.3.1.2. Table-4.7.3.1.3 shows implementation schedule for this project. Construction cost is estimated taking account of the BAPPENAS standard unit rate of construction cost 1997/ 98, the results of actual construction cost research, the functions / finishing grades of facilities.

#### 7) Staff Training Program for Facilities Operation

As the first step towards establishing a beef cattle fattening facility, the KUD should employ new agricultural advisors with veterinary qualifications. The training required by these staff will differ according to their work experience, but because it is essential that they possess beef cattle

fattening skills, general training of about one year at the neighboring stockbreeding research center and PT Berdikari will be needed. After the completion of their training, the advisors should provide one month's training to eighteen farmers chosen to be stockbreeding managers to improve their cattle fattening skills. These farmers should form three rearing groups and receive constant advice from the advisors. PT Berdikari will provide skills advice on demand if the KUD sells beef cattle to them.

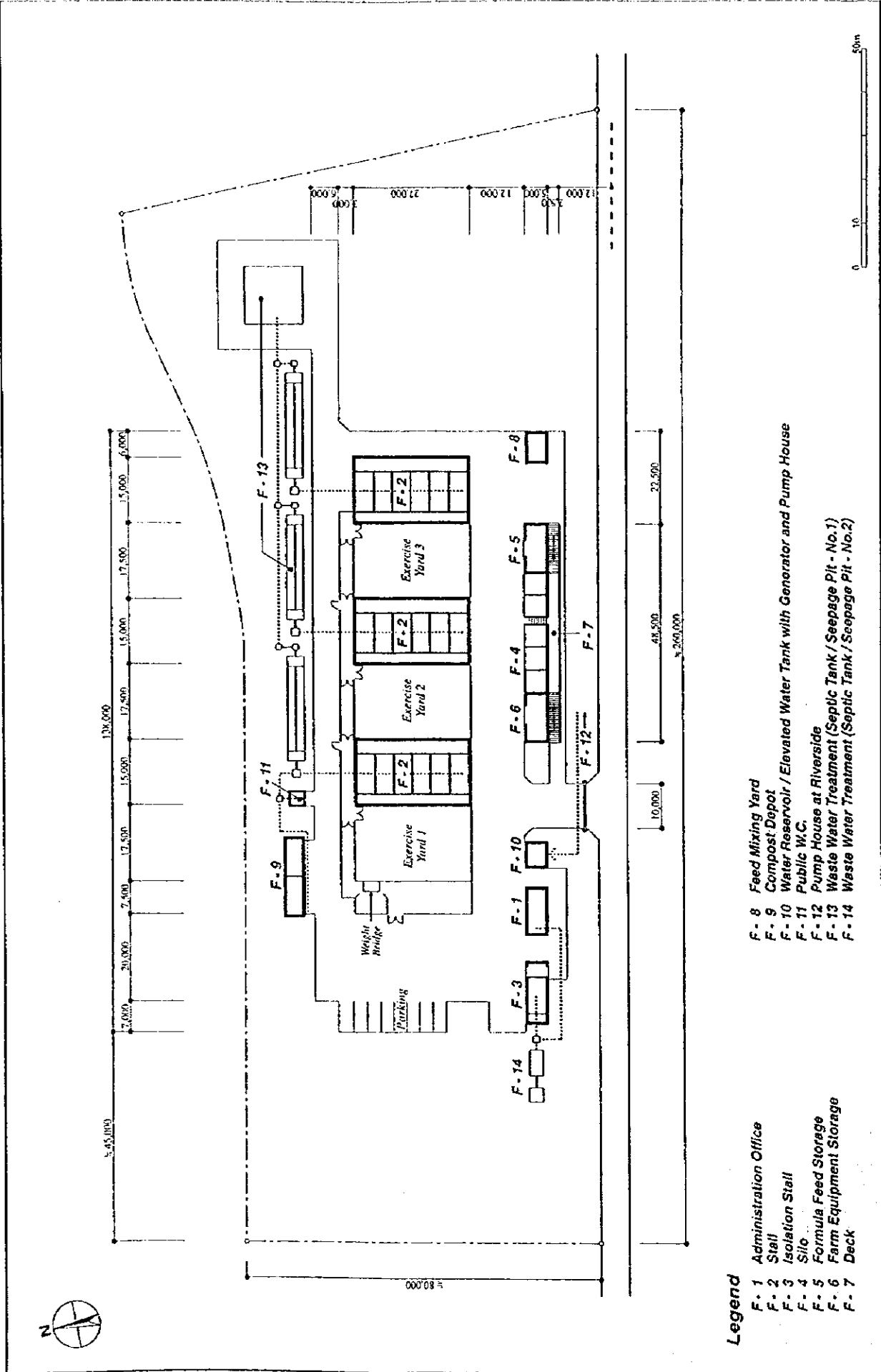
#### 8) Result on the Survey for Intentions of KUD Members on Improvement of Facilities/Equipment

Date : 1997.07.14

Venue : KUD Matutu, Desa Bila, Kecamatan Sidrap, South Sulawesi Province.

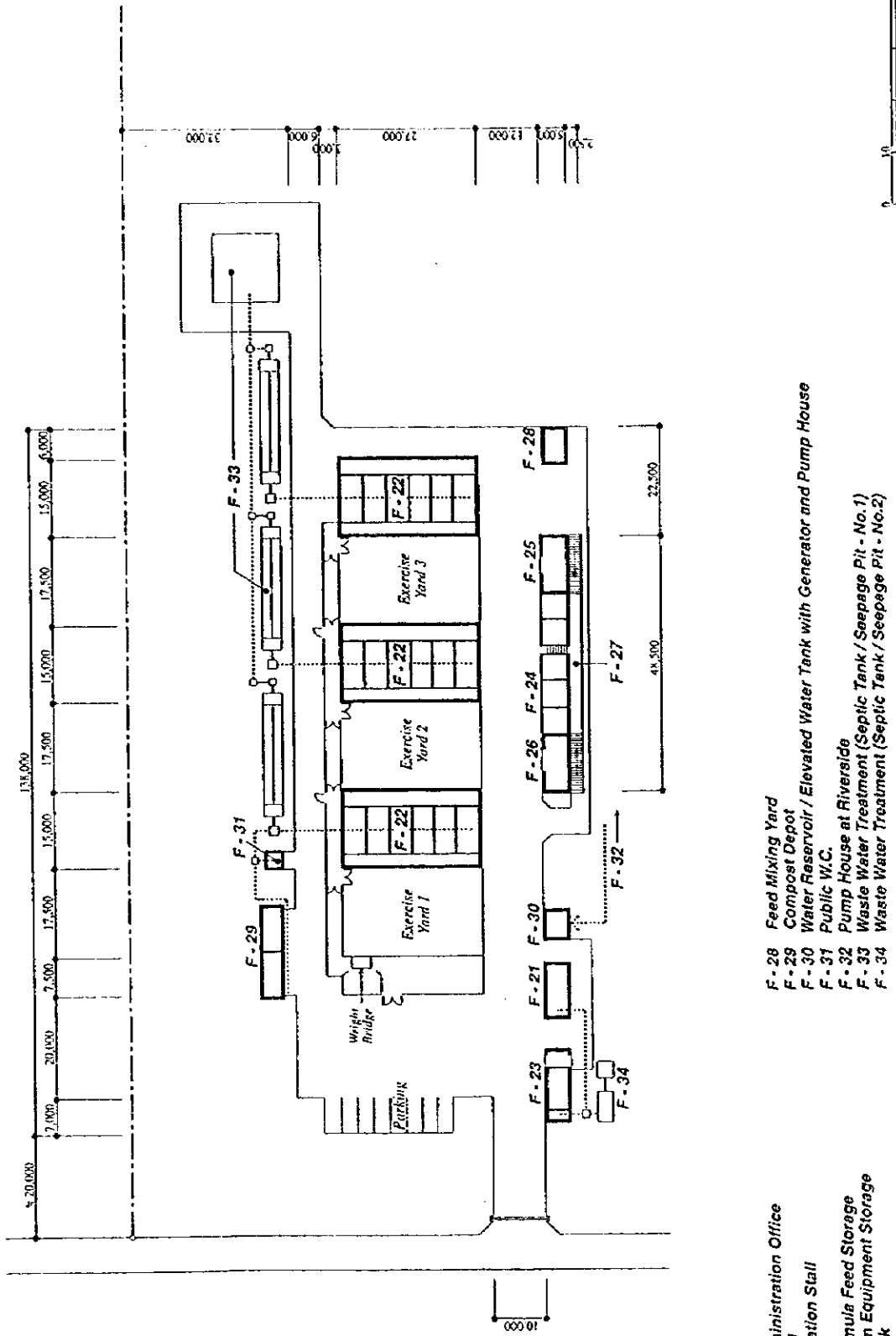
#### Survey Result :

- 1) Person Surveyed : A list of attendants is attached herewith. The number was 26, all of whom attended is the member of KUD. Professions of the members are not limited to farmers but other business including a rice miller and small merchant, etc.
- 2) As to information on the Study currently on the way are well aware by 24 attendants.
- 3) Twenty-two (22) attendants have known the preliminary idea on the facility improvement plan for cattle fattening. They also supported such an idea.
- 4) As to the question on whether the attendants wish to utilize such a facility under KUD, all of them expressed a willingness to utilize it. In relation to this inquiry, a member pointed out that because KUD is not provided with such a facility, it has become unattractive.
- 5) Question on a possibility to expand their production for materials necessary to such facilities. The attendants responded positively.
- 6) On the point that the preparedness for the possibility of financial responsibility or contribution to that kind of program, attendants expressed their strong wish to support KUD.
- 7) It should be worth-noted that majority of attendants complained that a shortage of a fund in KUD. An attendant member submitted to us a written statement to great needs to obtain several numbers of two-wheel tractors. The statement was handed it over to a staff of Kanwilkop.



- Legend**
- F-1 Administration Office
  - F-2 Stall
  - F-3 Isolation Stall
  - F-4 Silo
  - F-5 Formula Feed Storage
  - F-6 Farm Equipment Storage
  - F-7 Deck
  - F-8 Feed Mixing Yard
  - F-9 Compost Depot
  - F-10 Water Reservoir / Elevated Water Tank with Generator and Pump House
  - F-11 Public W.C.
  - F-12 Pump House at Riverside
  - F-13 Waste Water Treatment (Septic Tank / Seepage Pit - No.1)
  - F-14 Waste Water Treatment (Septic Tank / Seepage Pit - No.2)

Fig4.7.3.1.1 KUD - Matutu Cattle Fattening Facilities / Site No.A Layout Plan



**Legend**

- F - 21 Administration Office
- F - 22 Stall
- F - 23 Isolation Stall
- F - 24 Silo
- F - 25 Formula Feed Storage
- F - 26 Farm Equipment Storage
- F - 27 Deck
- F - 28 Feed Mixing Yard
- F - 29 Compost Depot
- F - 30 Water Reservoir / Elevated Water Tank with Generator and Pump House
- F - 31 Public W.C.
- F - 32 Pump House at Riverside
- F - 33 Waste Water Treatment (Septic Tank / Seepage Pit - No. 1)
- F - 34 Waste Water Treatment (Septic Tank / Seepage Pit - No. 2)

Fig. 4. 7. 3. 1. 2KUD - Matutu Cattle Fattening Facilities / Site No.B

Layout Plan

Scale = 1 : 1,200



Table. 4.7.3.1.1 Facilities Outline- KUD Matutu / Cattle Fattening Facilities

Facilities Item	No. of Facilities	No. of Story	Total Floor Area (sq.m)	Type of Foundation	Structure	Special Equipment
1 Administration Office	2	1	50 x 2	Spread	R.C. / Steel	
2 Stall (Cattle Rearing Shed)	6	1	405 x 6	Spread	Steel	Steam cleaner / Pesticide sprayer / Weight bridge
3 Isolation Stall	2	1	65 x 2	Spread	Steel	
4 Silo (Silage Store)	2	1	125 x 2	Spread	R.C. / Steel	Hand cart for meadow
5 Formula Feed Storage	2	1	55 x 2	Spread	R.C. / Steel	
6 Farm Equipment Storage	2	1	55 x 2	Spread	R.C. / Steel	Cutting tools for meadow / Truck (3 ton-type)
7 Elevated Deck (Elevated Pedestrian Deck)	2	1	121 x 2	Spread	R.C.	
8 Feed Mixing Yard	2	1	38 x 2	Spread	R.C. / Steel	Chopper
9 Compost Depot	2	1	90 x 2	Spread	R.C. / Steel	Hand cart for compost
10 Water Reservoir / Elevated Water Tank	2	-	-	Spread	R.C.	Generator / Pump
11 Public W.C.	2	-	11 x 2	Spread	R.C. / Wood	
12 Pump House at Riverside	2	-	4 x 2	Spread	R.C. / Wood	
13 Waste Water Treatment	4	-	-	Spread	R.C.	

Table. 4.7.3.1.2 Construction Cost of Facilities - KUD Matutu / Cattle Fatten Facilities

(unit : 1,000 Rupiah)

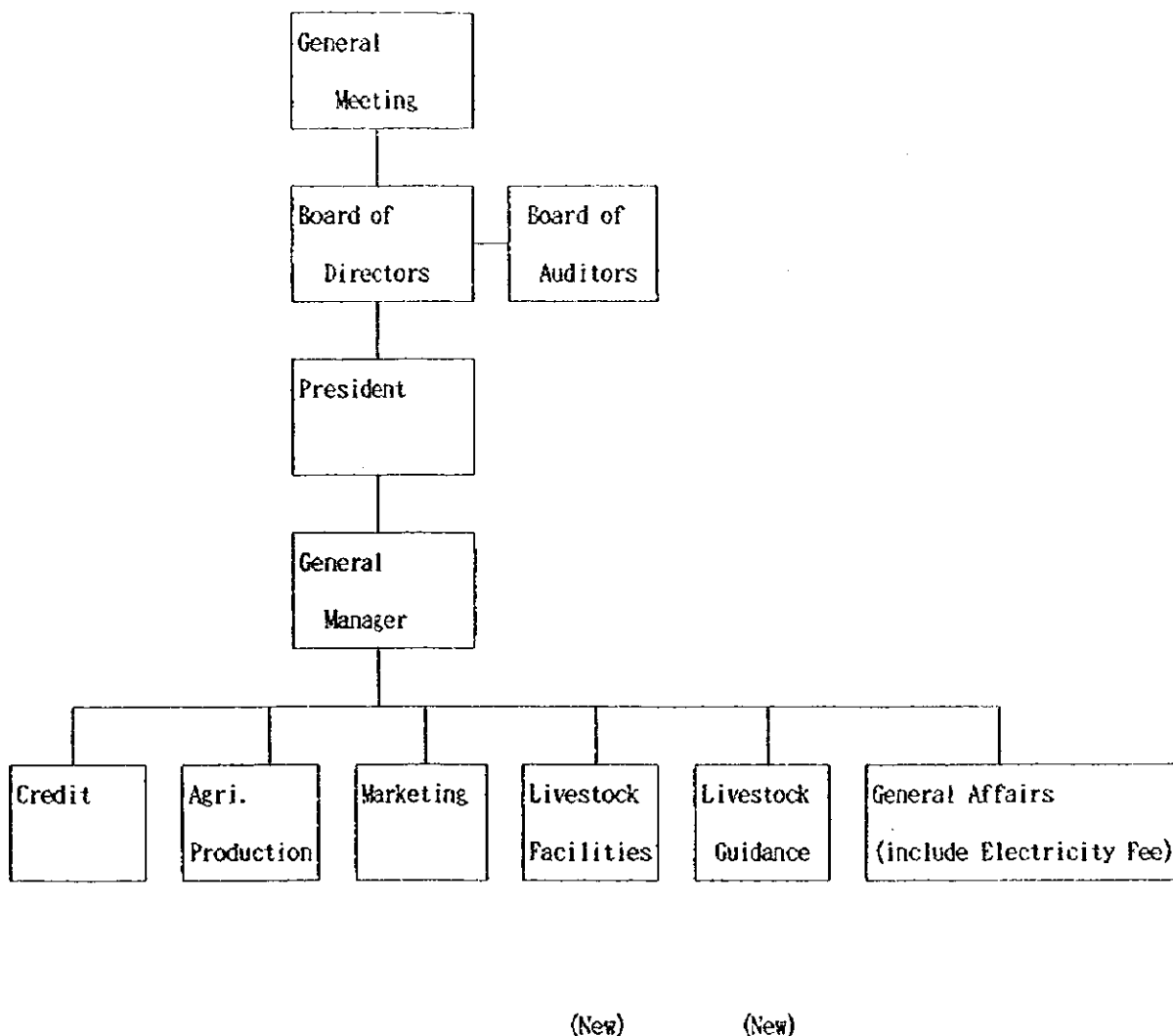
Item	Total floor area (sqm)	Total Cost	Foreign Currency	Local Currency
<b>1. Facilities</b>				
1.1 Administration Office	100	50,000	-	50,000
1.2 Sla1 (Cattle Rearing Shed)	2,430	867,809	34,667	833,143
1.3 Isolation Stall	130	43,286	-	43,286
1.4 Silo (Silage Store)	250	101,625	6,037	95,588
1.5 Formula Feed Storage	110	62,857	-	62,857
1.6 Farm Equipment Storage	110	218,430	174,430	44,000
1.7 Elevated Deck (Elevated Pedestrian Deck)	242	30,250	-	30,250
1.8 Feed Mixing Yard	76	54,665	26,436	28,229
1.9 Compost Depot	180	74,661	6,037	68,624
1.10 Water Reservoir / Elevated Water Tank	-	142,640	-	142,640
1.11 Public W.C.	22	16,534	-	16,534
1.12 Pump House at Riverside	8	7,704	-	7,704
1.13 Waste Water Treatment	-	288,200	-	288,200
Sub-total		1,963,861	247,607	1,716,254
1.14 Detailed Design and Engineering Service		147,290		
1.15 Overhead and Profit		343,676		
Total - 1		2,454,826		
<b>2. External Works and Infrastructure</b>				
2.1 External Works and Infrastructure		595,798	-	595,798
Sub-Total		595,798	-	595,798
2.2 Detailed Design and Engineering Service		44,685		
2.3 Overhead and Profit		104,265		
Total - 2		744,748		
<b>3. Land Acquisition</b>				
3.1 Total - 3		-		
<b>Total (excluding VAT 10%)</b>		<b>3,199,574</b>		

Remarks :

- Cost of all items are estimated as of August in 1997. The exchange rate as of the month is applied between Indonesian Rupiah and US\$. 1US\$ = Rp. 2,576.
- Cost of local currency portion of Item "1. Facilities" comprises building work cost with electrical, plumbing, and ventilation works cost.
- Cost of foreign currency portion of Item "1. Facilities" comprises plant equipment cost.
- Cost of Item "2. External Works and Infrastructure" comprises external works (demolish work of existing building, excavation/back-fill, land adjustment, crushed stone pavement, rain-water drainage ditch/pit, fence, gate, and street light), main electricity/water distribution works, and main line work of drainage within the site.
- The foreign portion of Item 1.2 comprises steam-cleaner, pesticide sprayer, and weight-bridge.
- The foreign portion of Item 1.4 comprises hand-cart for meadow.
- The foreign portion of Item 1.6 comprises cutting-tools for meadow, truck (3 ton-type x 1).
- The foreign portion of Item 1.8 comprises feed chopper.
- The foreign portion of Item 1.9 comprises hand-cart for compost.
- The local portion of Item 1.10 includes generator.



Chart—4.7.3.1.3 KUD Matutu Internal Structure for Management of Facilities



(2) Project Evaluation

1) Basic Evaluation Policy

The facility improvement plan for the KUD MATUTU is proposed the cattle fattening facility. The basic evaluation policy of the facility is same as the KUD TANI MUKUTI mentioned earlier.

2) Preliminary items in the evaluation

The preliminary items in the evaluation are shown as follows:

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① Fund procurement

- a) Initial investment: The construction would be financed by following low-interest loans:
- Annual interest: 3 %
  - Grace period for repayment of the capital: 5 years
  - Repayment period: 20 years
- b) Replacement investment: Own financing resources and government subsidies.

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② Revenue and expenditure

Revenue	Expenditure
-sales of cow	-cow purchase -operation cost (personnel expenses,utilities,bags etc.) -depreciation -interest

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③ Unit price

Sales price	Expenditure price
-sales of cow: RP1,640,000/head (RP 4,000/410kg/head)	-cow purchase:RP937,000/head (RP 3,750/250kg/head)

---

\*details of the operation costs as shown in Appendix Table 5.2.

3) Analysis and review of evaluation results

a) Revenue and operation costs

The revenue and operation costs are shown as follows:

unit:RP1,000

Revenue	1 st. year	On and after 2 nd.. year	Expenses	1 st. year	On and after 2 nd. year
a) sales of cow	590,400	1,180,800	a) cow purchase	674,640	674,640
			b) operation cost	225,720	225,720
<b>Total</b>	<b>590,400</b>	<b>1,180,800</b>	<b>Total</b>	<b>900,360</b>	<b>900,360</b>

(b) Calculation of profit and loss and balance of cash flow

A statement of profit and loss, and table of cash position is shown in Table 3.4.6.7.1. The following results the obtained.

a) During the initial fiscal year of project operations, revenue generated from actual operations of the fattening plan for cattle will be 50 percent. As a result, depreciation and interest payments before profits will both be in the deficit for the first fiscal year and will be in the black from the second year.

b) Due to the large deficit for the first fiscal year, the supply of cash funds will be tight and the balance of income and expenditures will be inadequate throughout the entire period of project operations. Therefore, it is necessary to procure about 8 percent of the investment amount or an equivalent of 420 million RP at the initial start of the project. This will ensure that the cash fund problems will not arise throughout the project period and will allow equipment renewal costs to be paid by project revenue reserves.

(c) Financial Inter Rate of Return (FIRR)

Results of the FIRR is shown in Table 3.4.6.7.2. FIRR has been calculated at 3.0 percent, its ratio is same as the low interest loans indicated (3 percent) in the preconditions of the evaluation.

(d) Sensitivity analysis

The sensitivity analysis has been carried out based on the following various cases:

- Case 1 : 5 percent increased of the investment cost
- Case 2 : 5 percent decreased of the revenue
- Case 3 : Combined case of case 1 and case 2

The results of the sensitivity analysis is shown below. If there is a slight decrease in revenue and increase in investment, the interest becomes lower than the figure stipulated in the

preconditions and financially maintaining the project becomes difficult. Details results of the sensitivity analysis is shown in Appendix Table 5.3.

	Investment cost (%)	Revenue (%)	FIRR (%)
Basic case	-	-	3.0
Case 1	+ 5	-	2.3
Case 2	-	- 5	2.3
Case 3	+ 5	- 5	1.8

(c) Comprehensive evaluation

In order to ensure the financial viability of the project, low interest loans combined with a government subsidy to supplement operating costs are required as pointed out in the preconditions of the evaluation. However, KUD Matutu which is located in the district targeted by the project is the major rice culture region of the country and it is surrounded by many hilly areas suited for livestock farming where animal husbandry has been traditionally carried out. It is blessed by both natural grassland suited for raising beef cattle and abundant rice straw suited for livestock feed.

Despite the low profit earning ratio of the investment amount, the following indirect benefits are anticipated from the environmental farming conditions that surround cooperative farms as explained above. It has been concluded that this project is essential, in order to by break away from the hitherto one crop rice culture and to improve and raise farming income from diversified farming by cooperative members and to achieve stable KUD management.

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a) National level :  Contribution for stable supply of the cattle beef and support the national livestock production policy due to the beef cattle production

b) Regional level:  Accelerated activity and diversification of regional farming due to promotion of beef cattle production

c) KUD/Members:  Improved the management condition of the KUD and increase the agricultural income of the farming household  
 Stabilized operation of farms due to farming operations combined with rice paddy cultivation

d) No. of beneficiary farmers:  Cooperative members 3,551

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#### 4) Financial analysis of farming household

##### 1) Farm household condition

The financial analysis of farm households a comparison of existing conditions in beef cattle farm income (farms directly related to this project) and changes in this income when the project is implemented. The model farm households that were used in this analysis were selected from the data collected from 9 households which participated in the survey of farm households in KUD Mtutu. Present farm households income are as shown in Table 3.4.6.7.3. The principle beef cattle farmer is combination with rice production. The feeds for the beef cattle is mainly apply of the natural grassland and abundant rice straw.

##### 2) Analysis of farm household income

The current net profit of farm households is anticipated to increase 1.3 times of the gross income and 1.8 times for the net income, through the increase of the sales of beef cattle.

	Present	Project
1. Agricultural gross income		
-sales of rice	5,950	5,950
-sales of beef cattle	1,750	3,375
sub total	7,700	9,325
2. Production cost		
-seeds	28	28
-fertilizers	450	450
-chemicals	45	45
-others (water charge, etc.)	102	102
-labor cost	720	720
sub total	1,345	1,345
3. Agricultural net income (1-2)	6,355	7,980

##### 5) Environmental assessment

Min impact on the environment by the project implementation are considered to be stench, river water pollution, and pollution of underground water from flow out of urine from beef cattle. The installation and use of simple waste disposal equipment and other related equipment in the facility plan is anticipated to be sufficiently capable of coping with the this environmental problem.

The deterioration of the environment caused during the construction works of the project, the executing body of the project will control the contractor during the course of construction.



Table 4.7.3.2.3 Paddy + Cattle Complex Farming Type : KUD MATUTU

Index	Farm scale	
	Paddy field (1.45ha)	Cattle fattening
1. Land holding area (ha)	2.08 ha	
2. No. of family (family labor)	5 (2)	
3. Farm machinery/ No.of livestock	pomp, tractor, sprayer	27 head of cattle
4. Cropping pattern / Cattle farming system	·Two cultivation per year ·Plant period: Jul.-Aug., Oct.-Nov. ·Harvest period: Jan.-Feb. Apr.-May	open grazing (pasturage)
Income :		
1. Yield (ton/ha)	7.0	-
2. Production (ton/year)	14.0	-
3. Farm gate price (ton/RP1,000)	425.0	-
4. Gross income (RP1,000)	sales of paddy 5,950	sales of cattle 1,750
Total (RP1,000)	7,700	
Expenditure :		
1. Production cost (RP1,000)	523	-
seeds	28	-
fertilizer	450	-
chemical	45	-
2. Water charge (others) (RP1,000)	22	80.0
3. Part time worker (RP1,000)	720	-
Total (1+2+3) (RP1,000)	1,265	80.0
4. Living expenses (RP1,000)	4,200	
Balance of household :		
1. Net income by paddy (RP1,000)	4,685	sales of cow 1,670
2. Balance (RP1,000)	2,155	
3. % of agricultural income	78 %	-
4. Production cost per ton (RP1,000)	90.3	-
Banking loan		
1. Balance (RP1,000)	523	
2. Total debt (RP1,000)	523	
3. Banking institute, interest	KUD, 14%	
4. Objectives	purchase of fertilizer	

Source: Household Field Survey, JICA 1997

#### 4.7.4 Anticipated Effects

By implementing the specified projects, the KUD will provide its members with the following benefits and enhance local economic activity. The current ranking of KUD Matutu is lower intermediate. Implementing the specified projects will boost services to members and raise the ranking.

##### (1) Organization and Management Plan

###### 1) Convene local preparatory meetings for general meetings

KUD Matutu communicates poorly with its members. Evidence of this lack of communication is the fact that the existing KUD rice polishing facilities, located in inappropriate locations, are not used. The KUD should convene general meeting preparatory meetings so that the opinions of members can be incorporated into the operations of the KUD in a democratic way and KUD assets can be used effectively for the benefit of members.

###### 2) Setting up of Commodity-wise Producer Groups

Establishing commodity-wise producer groups such as beef cattle, cashew nuts, cocoa and rattan would allow these products to be sold in bulk, improve quality, establish the local area as a specialized production zone and gain sales benefits for its members.

###### 3) Tie-up with PUSKUD

Collaborating in operations and skills with PUSKUD in the sales of rice and cash crops and providing feed would allow the KUD to transfer information about the prices of agricultural products, materials and quality to members and influence the local economy in a positive way.

##### (2) Economic Business Plan

###### 1) Beef cattle

By utilizing rice straw which is a by-product of rice farming and unused land, cattle fattening is expected to bring new business opportunities to the local farmers in the future, although trial business calculations indicate difficulties in making profits at the moment. The area may be developed as a specialized beef cattle farming area.

The KUD should provide comprehensive benefits to its members by purchasing cattle, providing

feed, selling fattened cattle and making loans available, etc.

Implementing livestock raising may be expected to lead to improvement of the land in the long term, providing the opportunity for the area to become a production area of high quality agricultural products.

## 2) Rice Sales Business

Collaborating with PUSKUD in rice operations could increase cooperative sales of rice in the free market, thereby boosting the income of farming members.

## 3) Cash Crop Sales Business

The KUD should actively participate in providing farm guidance and collecting highland area cash crops such as cocoa, cashew nuts and rattan, so that crop quality can be standardized, and the crops can be sold in bulk regularly and steadily with the aim of boosting member's incomes.

## 4) Establishing of Agricultural Services Center

It would be difficult for the KUD to operate an agricultural services center alone, so collaboration with other institutes in a wider area is desirable. Maintenance centers for agricultural equipment are necessary to respond to the rapid advance of farm mechanization and are expected to provide prompt services to local farmers.

## (3) Credit Business Plan

### 1) Encouragement of Objective Voluntary Savings

Make efforts to appeal to non-members as well as members to make savings for special purposes such as education and the purchase of electrical equipment to improve standards of living. This would allow members to make improvements in the life planning of their families.

### 2) Improving of Capabilities of Credit Staff

Designate exclusive staff for the savings and loans business and provide intensive training to the staff so that the KUD gains members' trust and becomes indispensable to the members. This would activate the savings and loans business.

## (4) Plan for Strengthening Human Resources Development and Guidance Activities

1) Employment of veterinarians to improve the farm guidance

Veterinarians are required to disseminate skills and advise the latest techniques to livestock members to reduce risks of sickness to cattle and to improve rearing control in breeding large numbers of cattle successfully. This would allow the KUD to contribute to the stability of the livestock business.

2) Establishment of Better Living Center

Establishing a center to promote better living activities would improve not only the health and living standards of members in the women's groups in the villages, but of the entire membership, and improve the quality of everyday life.

#### 4.8 Points to Consider Concerning the Establishment and Operation of Agricultural Production Facilities and Distribution Facilities

If more than one KUD uses production and distribution facilities, special consideration should be given to the following points, depending upon the owners of the facilities.

Facility owner	Problems	Points to consider
1. Owned by the principal KUD which uses the facility more than any other KUD. In this case, KUD should conclude user contracts with the principal KUD.	Difficulty in incorporating the requirements of the other user KUD in operational planning. When losses arise, it is difficult to apportion the losses to each KUD.	a) The KUD which owns facilities * Designate and train staff responsible for operating the facilities. * Hold regular discussions with user KUD. * Calculate appropriate utilization charges. (The charges should be calculated on strict accounting principles.)
2. Owned by PUSKUD. In this case, KUD should conclude user contracts with PUSKUD.	PUSKUD would require a long time to establish facilities because PUSKUD operates on the principle of equality to all areas.	* Designate and train staff to be in charge of equipment, maintenance and repairs. * Receive special funding from members who receive benefit. * Set up specific product member producer groups.
3. Owned by a facility federation and used only by the KUD. In this case, the KUD should conclude user contracts with the federation.	Federation begins to consider just its own profits and makes less allowance for its KUD users.	b) User KUD * Train and drill user KUD staff. * Hold regular discussions with the owner KUD. * Prepare facility utilization plan for members. * Encourage special savings from members who receive benefit.
4. Owned by one large KUD formed by the merger of KUD.	It will take a long time for a large KUD to establish facilities because many problems are expected.	* Set up specific product member producer groups.

As a conclusion, the most desirable way to establish facilities for shared use is (4). However, it will take a long time to materialize this method and so it is more practical that while method (1) above is used, KUD should cooperate, establish responsible systems and strive towards the goal of materializing method (4).

## **Chapter 5**



## Chapter 5 Recommendations

### 1. Government Measures to Support KUD Development

#### 1) Law and guideline

a) From the perspective of making use of organizational size in generating profits, mergers should take place between KUD in order to improve the quality of KUD that have expanded the size of their business operations. Therefore, legislation should be established to support such mergers (basic merger law, law to assist mergers, etc.)

b) Regulations governing financial dealings should be established to provide guidelines for the proper financial management of KUD. (In order to clarify financial relations between KUD and cooperative members and to protect the profits of cooperative members, criteria concerning the appropriate use of finances are needed. For example, there is a need for loan criteria and fund management standards, including owned capital ratios, reserve ratios for deposits, and loans to non-cooperative members.)

c) Reference should be made to "Policy to Support Credit Business of KUD"(3.3.2(2)) to enable greater access by KUD to financial institutions and guidelines concerning the eligibility of KUD to receive credit should be established. In addition, loan conditions such as interest rates should be revised from time to time taking into account the circumstances prevailing in each province and market conditions.

d) KUD need to take into account the importance of introducing, expanding and strengthening their better living guidance activities, which should be common to services for both farmers and residents. Staff in charge of better living guidance should be successively appointed at the Ministry of Cooperatives and Small Enterprises and its affiliated organizations while departments responsible for this function should be successively established and strengthened.

#### 2) Credit, guidance businesses and auditing of KUD

a) Attempts should be made to expand the functions of the Post-Harvest Training Center to respond to the business diversification of KUD.

b) With regard to institutional finance for KUD and KUD members, loan limits applying to the use of funds should be reconsidered and external support should be investigated concerning cases where it is difficult to meet domestic conditions for raising finance and preferential loans.



c) Measures to enlighten KUD on the importance of external audit to keep and increase credibility of KUD should be considered. And also measures to reduce audit fee of KJA paid by KUD, which are suffering from financial burden in this respect, should be introduced.

d) To add support to the accumulation of education funds by KUD, incentive policies, such as making transactions tax-free, should be carried out.

## 2. Leading Actions of the Government to Vitalize KUD

### 1) Organization

With a target participation rate of 60% of the adult population, the KUD will formulate and execute a five-year plan aimed at encouraging people to join the KUD. To strengthen communication between cooperative members and the KUD, the KUD will hold village meetings etc. and encourage a consolidation of opinions from members by publishing information bulletin and so on. In addition it will provide members with market-related information. The KUD will also take steps to nurture and strengthen organizations affiliated with it, such as producer organizations, women's groups, etc.

### 2) Management

Steps will be taken to increase internal reserves from current surpluses, and to increase the membership fees and deposits that result from improved rates of membership in the KUD. The KUD will also pursue the establishment of farm management transaction of members accounts as a means of heightening the awareness of members regarding savings and of strengthening the link between the KUD's credit and economic businesses.

Where there are plural KUD within the same district, KUD should set up District Council to discuss such common problems as how to procure funds necessary for business activities, thus promoting merger at the most appropriate time.

### 3) Businesses

Based on the agro-eco system of each area, there is a need to activate the KUD in the following ways: by having model KUD encourage the introduction, dissemination and expansion of new activities in horticulture, dairy farming and livestock farming among member farms, and by generating direct improvements in members' farm incomes through improvements in farm management; by developing and strengthening activities related to the marketing of the farm and livestock products, and by enhancing value addition through the execution of food processing businesses; and by developing and strengthening retailing businesses, such as those selling related farm materials. Moreover, in rice-producing areas, it will be important to generate improved

efficiencies in rice milling and more active use of rice by-products in the promotion of livestock farming.

In order to generate the effective use of facilities, the KUD must obviously seek to improve their abilities and technologies in collection of raw materials, marketing of products, settlement of accounts, and over-all business management, education and training in the broad sense of the term should be reinforced.

Attention should also be paid to previous proposals made regarding to the joint use of facilities by multiple KUDs. (4.8)

### 3. Promotion and Dissemination of Activation Plan for Model KUD

Given that these KUD are models, it is conceivable that such facilities could be developed through full subsidization of required amounts, and in this way to attempt to illustrate the potential impact of such activities. However, even in that case, it should be stressed to KUD managers, employees and members that such measures were exceptions and that the rule is that the KUD and members were responsible for funding their capital needs on their own. Moreover, in the case of such subsidies, the KUD should be made to assume that the funds had come in the form of low-interest rate loans, and be required to formulate repayment plans--and in this way be made to endeavor to generate the funds required for repayments.

In order to generate the effective use of facilities, the KUD must obviously seek to improve their abilities and technologies in collection of raw materials, marketing of products, settlement of accounts, and one-all business management, and education and training in the broad sense of the term should be reinforced.

Model KUD were selected not only to activate their own activities but also with the view toward disseminating the results of this activation plan to nearby KUD or to KUD possessing similar agro-eco system. Consequently, when the Indonesian Ministry of Cooperatives and Small Enterprises carries out measures aimed at activating model KUD hereafter, it should record and analyze the process by which the measures are carried out, and note what is achieved through the process and in the aftermath of implementation (if no results are achieved, then the reasons for this lack of results should be noted). Measures should then be devised to enable the compilation of such analysis into manuals for KUD activation and the dissemination of such manuals nationwide through regional training centers, etc., thus making it possible for the experiences to be helpful to other KUD planning similar projects.



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Table 4.2.3.2.1 Income Statement and Cash Flow: KUD TANI MUKUTI(Total Evaluation 1/2)

	0	1	2	3	4	5	6	7	8	9	10
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>Income Statement</b>											
1.Revenue	0	5,320,800	6,985,800	6,985,800	6,985,800	6,985,800	6,985,800	6,985,800	6,985,800	6,985,800	6,985,800
2.Expense	0	6,152,031	6,915,060	6,915,060	6,915,060	6,915,060	6,899,047	6,883,034	6,867,021	6,851,008	6,834,995
a. Operation cost	0	5,497,866	6,260,895	6,260,895	6,260,895	6,260,895	6,260,895	6,260,895	6,260,895	6,260,895	6,260,895
b. Others	0	0	0	0	0	0	0	0	0	0	0
c. Depreciation	0	333,906	333,906	333,906	333,906	333,906	333,906	333,906	333,906	333,906	333,906
e. Interest	0	320,259	320,259	320,259	320,259	320,259	304,246	288,233	272,220	256,207	240,194
3. Income before depre. and interest	0	-177,066	724,905	724,905	724,905	724,905	724,905	724,905	724,905	724,905	724,905
4.Net income	0	-831,231	70,740	70,740	70,740	70,740	86,752	102,766	118,779	134,792	150,805
<b>Cash Flow</b>											
1.Source of fund	6,405,180	15,089	404,646	404,646	404,646	404,646	420,659	436,672	452,685	468,698	484,711
a. Government subsidy	0	512,414	0	0	0	0	0	0	0	0	0
b. Government credit	0	0	0	0	0	0	0	0	0	0	0
c. Loan	6,405,180	0	0	0	0	0	0	0	0	0	0
d. Depreciation	0	333,906	333,906	333,906	333,906	333,906	333,906	333,906	333,906	333,906	333,906
e. Net income	0	-831,231	70,740	70,740	70,740	70,740	86,753	102,766	118,779	134,792	150,805
2.Use of funds	6,405,180	0	0	0	0	320,259	515,259	320,259	320,259	320,259	320,259
a. Investment	6,405,180	0	0	0	0	0	0	0	0	0	0
b. Re-investmen	0	0	0	0	0	0	195,000	0	0	0	0
c. Repayment of government credit	0	0	0	0	0	0	0	0	0	0	0
d. Repayment of loan	0	0	0	0	0	320,259	320,259	320,259	320,259	320,259	320,259
3. Balance of government credit	0	0	0	0	0	0	0	0	0	0	0
4. Balance of loan	6,405,180	6,405,180	6,405,180	6,405,180	6,405,180	6,084,921	5,764,662	5,444,403	5,124,144	4,803,885	4,483,626
5.Balance of cash flow	0	15,089	419,735	824,381	1,229,027	1,313,414	1,218,814	1,335,227	1,467,653	1,616,092	1,780,544

Interest           5%  
 Grace perioc     5 year  
 Repayment       20 year  
 period

Table 4.2.3.2.1 Income Statement and Cash Flow: KUD TANI MUKUTI(Total Evaluation 2/2)

	11	12	13	14	15	16	17	18	19	20	21	22	23	24
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<b>Income Statement</b>														
1.Revenue	6,985,800	6,985,800	6,985,800	6,985,800	6,985,800	6,985,800	6,985,800	6,985,800	6,985,800	6,985,800	6,985,800	6,985,800	6,985,800	6,985,800
2.Expense	6,818,982	6,802,969	6,786,956	6,770,943	6,754,931	6,738,918	6,722,905	6,706,892	6,690,879	6,674,866	6,658,853	6,642,840	6,626,827	6,610,814
a. Operation cost	6,260,895	6,260,895	6,260,895	6,260,895	6,260,895	6,260,895	6,260,895	6,260,895	6,260,895	6,260,895	6,260,895	6,260,895	6,260,895	6,260,895
b. Others	0	0	0	0	0	0	0	0	0	0	0	0	0	0
c. Depreciation	333,906	333,906	333,906	333,906	333,906	333,906	333,906	333,906	333,906	333,906	333,906	333,906	333,906	333,906
e. Interest	224,181	208,168	192,155	176,142	160,130	144,117	128,104	112,091	96,078	80,065	64,052	48,039	32,026	16,013
3. Income before depre.	724,905	724,905	724,905	724,905	724,905	724,905	724,905	724,905	724,905	724,905	724,905	724,905	724,905	724,905
4.Net income	166,818	182,831	198,844	214,857	230,870	246,882	262,895	278,908	294,921	310,934	326,947	342,960	358,973	374,986
<b>Cash Flow</b>														
1.Source of fund	500,724	516,737	532,750	548,763	564,776	580,788	596,801	612,814	628,827	644,840	660,853	676,866	692,879	708,892
a. Government subsidy	0	0	0	0	0	0	0	0	0	0	0	0	0	0
b. Government credit	0	0	0	0	0	0	0	0	0	0	0	0	0	0
c. Loan	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d. Depreciation	333,906	333,906	333,906	333,906	333,906	333,906	333,906	333,906	333,906	333,906	333,906	333,906	333,906	333,906
e. Net income	166,818	182,831	198,844	214,857	230,870	246,882	262,895	278,908	294,921	310,934	326,947	342,960	358,973	374,986
2.Use of funds	320,259	515,259	320,259	320,259	2,619,296	320,259	320,259	515,259	320,259	320,259	320,259	320,259	320,259	320,259
a. Investment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
b. Re-investmen	0	195,000	0	0	2,299,037	0	0	195,000	0	0	0	0	0	0
c. Repayment of government	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d. Repayment of loan	320,259	320,259	320,259	320,259	320,259	320,259	320,259	320,259	320,259	320,259	320,259	320,259	320,259	320,259
3. Balance of govern. credit	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4. Balance of loan	4,163,367	3,843,108	3,522,849	3,202,590	2,882,331	2,562,072	2,241,813	1,921,554	1,601,295	1,281,036	960,777	640,518	320,259	0
5.Balance of cash flow	1,961,008	1,962,486	2,174,977	2,403,480	348,960	609,489	886,032	983,587	1,292,155	1,616,736	1,957,331	2,313,938	2,686,558	3,075,191

Table 4.2.3.2.2 Income Statement and Cash Flow : KUD TANI MUKUTI Small Scale Dairy Products Facility (1/2)

unit:RP1,000

	0	1	2	3	4	5	6	7	8	9	10
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>Income Statement</b>											
1.Revenue	0	885,600	885,600	885,600	885,600	885,600	885,600	885,600	885,600	885,600	885,600
2.Expense	0	896,867	896,867	896,867	896,867	896,867	891,622	886,277	881,132	875,887	870,642
a. Operation cost	0	285,600	285,600	285,600	285,600	285,600	285,600	285,600	285,600	285,600	285,600
b. Purchase	0	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000
c. Others	0	0	0	0	0	0	0	0	0	0	0
d. Depreciation	0	146,367	146,367	146,367	146,367	146,367	146,367	146,367	146,367	146,367	146,367
e. Interest	0	104,900	104,900	104,900	104,900	104,900	99,655	94,410	89,165	83,920	78,675
3.Income before depre. and interest	0	240,000	240,000	240,000	240,000	240,000	240,000	240,000	240,000	240,000	240,000
4.Net income	0	-11,267	-11,267	-11,267	-11,267	-11,267	-6,022	-777	4,468	9,713	14,958
<b>Cash Flow</b>											
1.Source of fund	2,098,000	135,100	135,100	135,100	135,100	135,100	140,345	145,590	150,835	156,080	161,325
a. Government subsidy	0	0	0	0	0	0	0	0	0	0	0
b. Government credit	0	0	0	0	0	0	0	0	0	0	0
c. Loan	2,098,000	0	0	0	0	0	0	0	0	0	0
d. Depreciation	0	146,367	146,367	146,367	146,367	146,367	146,367	146,367	146,367	146,367	146,367
e. Net income	0	-11,267	-11,267	-11,267	-11,267	-11,267	-6,022	-777	4,468	9,713	14,958
2.Use of fund	2,098,000	0	0	0	0	104,900	179,900	104,900	104,900	104,900	104,900
a. Investment	2,098,000	0	0	0	0	0	0	0	0	0	0
b. Re-investment	0	0	0	0	0	0	75,000	0	0	0	0
c. Repayment of government credit	0	0	0	0	0	0	0	0	0	0	0
d. Repayment of loan	0	0	0	0	0	104,900	104,900	104,900	104,900	104,900	104,900
3. Balance of government credit	0	0	0	0	0	0	0	0	0	0	0
4.Balance of loan	2,098,000	2,098,000	2,098,000	2,098,000	2,098,000	1,993,100	1,888,200	1,783,300	1,678,400	1,573,500	1,468,600
5.Balance of cash flow	0	135,100	270,200	405,300	540,400	570,600	531,045	571,735	617,670	668,850	725,275

Interest 5%  
 Grace of period 5 年  
 Repayment period 20 年



Table 4.2.3.2.2 Income Statement and Cash Flow : KUD TANI MUKUTI Small Scale Dairy Products Facility (2/2)

	11	12	13	14	15	16	17	18	19	20	21	22	23	24
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<b>Income Statement</b>														
1.Revenue	885,600	885,600	885,600	885,600	885,600	885,600	885,600	885,600	885,600	885,600	885,600	885,600	885,600	885,600
2.Expense	865,397	860,152	854,907	849,662	844,417	839,172	833,927	828,682	823,437	818,192	812,947	807,702	802,457	797,212
a. Operation cost	285,600	285,600	285,600	285,600	285,600	285,600	285,600	285,600	285,600	285,600	285,600	285,600	285,600	285,600
b. Purchase	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000
c. Others	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d. Depreciation	146,367	146,367	146,367	146,367	146,367	146,367	146,367	146,367	146,367	146,367	146,367	146,367	146,367	146,367
e. Interest	73,430	68,185	62,940	57,695	52,450	47,205	41,960	36,715	31,470	26,225	20,980	15,735	10,490	5,245
3.Income before depre.	240,000	240,000	240,000	240,000	240,000	240,000	240,000	240,000	240,000	240,000	240,000	240,000	240,000	240,000
4.Net income	20,203	25,448	30,693	35,938	41,183	46,428	51,673	56,918	62,163	67,408	72,653	77,898	83,143	88,388
<b>Cash Flow</b>														
1.Source of fund	166,570	171,815	177,060	182,305	1,003,400	192,795	198,040	203,285	208,530	213,775	219,020	224,265	229,510	234,755
a. Government subsidy	0	0	0	0	815,850	0	0	0	0	0	0	0	0	0
b. Government credit	0	0	0	0	0	0	0	0	0	0	0	0	0	0
c. Loan	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d. Depreciation	146,367	146,367	146,367	146,367	146,367	146,367	146,367	146,367	146,367	146,367	146,367	146,367	146,367	146,367
e. Net income	20,203	25,448	30,693	35,938	41,183	46,428	51,673	56,918	62,163	67,408	72,653	77,898	83,143	88,388
2.Use of fund	104,900	179,900	104,900	104,900	1,917,900	104,900	104,900	179,900	104,900	104,900	104,900	104,900	104,900	104,900
a. Investment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
b. Re-investment	0	75,000	0	0	1,813,000	0	0	75,000	0	0	0	0	0	0
c. Repayment of gov. credit	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d. Repayment of loan	104,900	104,900	104,900	104,900	104,900	104,900	104,900	104,900	104,900	104,900	104,900	104,900	104,900	104,900
3. Balance of gov. credit	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4. Balance of loan	1,363,700	1,258,800	1,153,900	1,049,000	944,100	839,200	734,300	629,400	524,500	419,600	314,700	209,800	104,900	0
5. Balance of cash flow	786,945	778,860	851,020	928,425	13,925	101,820	194,960	218,345	321,975	430,850	544,970	664,335	788,945	918,800

Interest           5%  
Grace of p       5 年  
Repaymer       20 年

Table 4.2.3.2.3 Income Statement and Cash Flow: KUD TANI MUKUTI Dairy cow and dairy steer calf fattening facility(1/2)

	unit:RP1,000										
	0	1	2	3	4	5	6	7	8	9	10
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>Income Statement</b>											
1.Revenue	0	0	1,665,000	1,665,000	1,665,000	1,665,000	1,665,000	1,665,000	1,665,000	1,665,000	1,665,000
2.Expense	0	802,343	1,565,372	1,565,372	1,565,372	1,557,099	1,548,827	1,540,554	1,532,282	1,524,009	1,515,737
a. Operation cost	0	209,226	659,755	659,755	659,755	659,755	659,755	659,755	659,755	659,755	659,755
b. Purchase	0	300,000	612,500	612,500	612,500	612,500	612,500	612,500	612,500	612,500	612,500
c. Others	0	0	0	0	0	0	0	0	0	0	0
d. Depreciation	0	127,667	127,667	127,667	127,667	127,667	127,667	127,667	127,667	127,667	127,667
e. Interest	0	165,450	165,450	165,450	165,450	157,178	148,905	140,633	132,360	124,088	115,815
3. Income before depre. and interest	0	-509,226	392,745	392,745	392,745	392,745	392,745	392,745	392,745	392,745	392,745
4. Net income	0	-802,343	99,628	99,628	99,628	107,901	116,173	124,446	132,718	140,991	149,263
<b>Cash Flow</b>											
1. Source of fund	3,309,000	20,214	227,295	227,295	227,295	235,567	243,840	252,112	260,385	268,657	276,930
a. Government subsidy	0	694,890	0	0	0	0	0	0	0	0	0
b. Government credit	0	0	0	0	0	0	0	0	0	0	0
c. Loan	3,309,000	0	0	0	0	0	0	0	0	0	0
d. Depreciation	0	127,667	127,667	127,667	127,667	127,667	127,667	127,667	127,667	127,667	127,667
e. Net income	0	-802,343	99,628	99,628	99,628	107,901	116,173	124,446	132,718	140,991	149,263
2. Use of fund	3,309,000	0	0	0	0	165,450	240,450	165,450	165,450	165,450	165,450
a. Investment	3,309,000	0	0	0	0	0	0	0	0	0	0
b. Re-investment	0	0	0	0	0	0	75,000	0	0	0	0
c. Repayment of government credit	0	0	0	0	0	0	0	0	0	0	0
d. Repayment of loan	0	0	0	0	0	165,450	165,450	165,450	165,450	165,450	165,450
3. Balance of government credit	0	0	0	0	0	0	0	0	0	0	0
4. Balance of loan	3,309,000	3,309,000	3,309,000	3,309,000	3,309,000	3,143,550	2,978,100	2,812,650	2,647,200	2,481,750	2,316,300
5. Balance of cash flow	0	20,214	247,509	474,804	702,099	772,216	775,606	862,269	957,203	1,060,411	1,171,891

Interest ... 5%  
 Grace period 5 year  
 Repayment 20 year  
 period

Table 4.2.3.2.3 Income Statement and Cash Flow: KUD TANI MUKUTI Dairy cow and dairy steer calf fattening facility(2/2)

unit: RP1,000

	11	12	13	14	15	16	17	18	19	20	21	22	23	24
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<b>Income Statement</b>														
1. Revenue	1,665,000	1,665,000	1,665,000	1,665,000	1,665,000	1,665,000	1,665,000	1,665,000	1,665,000	1,665,000	1,665,000	1,665,000	1,665,000	1,665,000
2. Expense	1,507,464	1,499,192	1,490,919	1,482,647	1,474,374	1,466,102	1,457,829	1,449,557	1,441,284	1,433,012	1,424,739	1,416,467	1,408,194	1,399,922
a. Operation cost	659,755	659,755	659,755	659,755	659,755	659,755	659,755	659,755	659,755	659,755	659,755	659,755	659,755	659,755
b. Purchase	612,500	612,500	612,500	612,500	612,500	612,500	612,500	612,500	612,500	612,500	612,500	612,500	612,500	612,500
c. Others	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d. Depreciation	127,667	127,667	127,667	127,667	127,667	127,667	127,667	127,667	127,667	127,667	127,667	127,667	127,667	127,667
e. Interest	107,543	99,270	90,998	82,725	74,453	66,180	57,908	49,635	41,363	33,090	24,818	16,545	8,273	0
3. Income before depre.	392,745	392,745	392,745	392,745	392,745	392,745	392,745	392,745	392,745	392,745	392,745	392,745	392,745	392,745
4. Net income	157,536	165,808	174,081	182,353	190,626	198,898	207,171	215,443	223,716	231,988	240,261	248,533	256,806	265,078
<b>Cash Flow</b>														
1. Source of fund	285,202	293,475	301,747	310,020	318,292	326,565	334,837	343,110	351,382	359,655	367,927	376,200	384,472	392,745
a. Government subsidy	0	0	0	0	0	0	0	0	0	0	0	0	0	0
b. Government credit	0	0	0	0	0	0	0	0	0	0	0	0	0	0
c. Loan	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d. Depreciation	127,667	127,667	127,667	127,667	127,667	127,667	127,667	127,667	127,667	127,667	127,667	127,667	127,667	127,667
e. Net income	157,536	165,808	174,081	182,353	190,626	198,898	207,171	215,443	223,716	231,988	240,261	248,533	256,806	265,078
2. Use of fund	165,450	240,450	165,450	165,450	175,450	165,450	165,450	165,450	240,450	165,450	165,450	165,450	165,450	165,450
a. Investment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
b. Re-investment	0	75,000	0	0	10,000	0	0	0	75,000	0	0	0	0	0
c. Repayment of credit	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d. Repayment of loan	165,450	165,450	165,450	165,450	165,450	165,450	165,450	165,450	165,450	165,450	165,450	165,450	165,450	165,450
3. Balance of credit	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4. Balance of loan	2,150,850	1,985,400	1,819,950	1,654,500	1,489,050	1,323,600	1,158,150	992,700	827,250	661,800	496,350	330,900	165,450	0
5. Balance of cash flow	1,291,643	1,344,668	1,480,966	1,625,536	1,768,378	1,929,493	2,098,880	2,276,540	2,387,473	2,581,678	2,784,155	2,994,905	3,213,927	3,441,222

Table 4.2.3.2.4 Income Statement and Cash Flow: KUD TANI MUKUTI Feed Mixing Facility (1/2)

unit:RP1,000

	0	1	2	3	4	5	6	7	8	9	10
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>Income Statement</b>											
1.Revenue	0	4,435,200	4,435,200	4,435,200	4,435,200	4,435,200	4,435,200	4,435,200	4,435,200	4,435,200	4,435,200
2.Expense	0	4,452,821	4,452,821	4,452,821	4,452,821	4,450,325	4,447,830	4,445,334	4,442,839	4,440,343	4,437,848
a. Operation cost	0	763,200	763,200	763,200	763,200	763,200	763,200	763,200	763,200	763,200	763,200
b. Purchase	0	3,579,840	3,579,840	3,579,840	3,579,840	3,579,840	3,579,840	3,579,840	3,579,840	3,579,840	3,579,840
c. Others	0	0	0	0	0	0	0	0	0	0	0
d. Depreciation	0	59,872	59,872	59,872	59,872	59,872	59,872	59,872	59,872	59,872	59,872
e. Interest	0	49,909	49,909	49,909	49,909	47,414	44,918	42,423	39,927	37,432	34,936
3.Income before depre. and interest	0	92,160	92,160	92,160	92,160	92,160	92,160	92,160	92,160	92,160	92,160
4.Net income	0	-17,621	-17,621	-17,621	-17,621	-15,125	-12,630	-10,134	-7,639	-5,143	-2,648
<b>Cash Flow</b>											
1.Source of fund	998,180	42,251	42,251	42,251	42,251	44,746	47,242	49,737	52,233	54,728	57,224
a. Government subsidy	0	0	0	0	0	0	0	0	0	0	0
b. Government credit	0	0	0	0	0	0	0	0	0	0	0
c. Loan	998,180	0	0	0	0	0	0	0	0	0	0
d. Depreciation	0	59,872	59,872	59,872	59,872	59,872	59,872	59,872	59,872	59,872	59,872
e. Net income	0	-17,621	-17,621	-17,621	-17,621	-15,125	-12,630	-10,134	-7,639	-5,143	-2,648
2.Use of fund	998,180	0	0	0	0	49,909	94,909	49,909	49,909	49,909	49,909
a. Investment	998,180	0	0	0	0	0	0	0	0	0	0
b. Re-investment	0	0	0	0	0	0	45,000	0	0	0	0
c. Repayment of government credit	0	0	0	0	0	0	0	0	0	0	0
d. Repayment of loan	0	0	0	0	0	49,909	49,909	49,909	49,909	49,909	49,909
3.Balance of government credit	0	0	0	0	0	0	0	0	0	0	0
4.Balance of loan	998,180	998,180	998,180	998,180	998,180	948,271	898,362	848,453	798,544	748,635	698,726
5.Balance of cash flow	0	42,251	84,502	126,753	169,004	163,841	116,174	116,003	118,327	123,146	130,460

Interest           5%  
 Grace period     5 year  
 Repayment       20 year  
 period

Table 4.2.3.2.4 Income Statement and Cash Flow: KUD TANI MUKUTI Feed Mixing Facility (2/2)

	11	12	13	14	15	16	17	18	19	20	21	22	23	24
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<b>Income Statement</b>														
1.Revenue	4,435,200	4,435,200	4,435,200	4,435,200	4,435,200	4,435,200	4,435,200	4,435,200	4,435,200	4,435,200	4,435,200	4,435,200	4,435,200	4,435,200
2.Expense	4,435,352	4,432,857	4,430,361	4,427,866	4,425,371	4,422,875	4,420,380	4,417,884	4,415,389	4,412,893	4,410,398	4,407,902	4,405,407	4,402,912
a. Operation cost	763,200	763,200	763,200	763,200	763,200	763,200	763,200	763,200	763,200	763,200	763,200	763,200	763,200	763,200
b. Purchase	3,579,840	3,579,840	3,579,840	3,579,840	3,579,840	3,579,840	3,579,840	3,579,840	3,579,840	3,579,840	3,579,840	3,579,840	3,579,840	3,579,840
c. Others	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d. Depreciation	59,872	59,872	59,872	59,872	59,872	59,872	59,872	59,872	59,872	59,872	59,872	59,872	59,872	59,872
e. Interest	32,441	29,945	27,450	24,955	22,459	19,964	17,468	14,973	12,477	9,982	7,486	4,991	2,495	0
3.Income before depreciation	92,160	92,160	92,160	92,160	92,160	92,160	92,160	92,160	92,160	92,160	92,160	92,160	92,160	92,160
4.Net income	-152	2,343	4,839	7,334	9,829	12,325	14,820	17,316	19,811	22,307	24,802	27,298	29,793	32,289
<b>Cash Flow</b>														
1.Source of fund	59,719	62,215	64,710	67,206	402,927	72,196	74,692	77,187	79,683	82,178	84,674	87,169	89,665	92,160
a. Government subsidy	0	0	0	0	333,226	0	0	0	0	0	0	0	0	0
b. Government credit	0	0	0	0	0	0	0	0	0	0	0	0	0	0
c. Loan	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d. Depreciation	59,872	59,872	59,872	59,872	59,872	59,872	59,872	59,872	59,872	59,872	59,872	59,872	59,872	59,872
e. Net income	-152	2,343	4,839	7,334	9,829	12,325	14,820	17,316	19,811	22,307	24,802	27,298	29,793	32,289
2.Use of fund	49,909	94,909	49,909	49,909	525,946	49,909	49,909	94,909	49,909	49,909	49,909	49,909	49,909	49,909
a. Investment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
b. Re-investment	0	45,000	0	0	476,037	0	0	45,000	0	0	0	0	0	0
c. Repayment of government	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d. Repayment of loan	49,909	49,909	49,909	49,909	49,909	49,909	49,909	49,909	49,909	49,909	49,909	49,909	49,909	49,909
3.Balance of govern. credit	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4.Balance of loan	648,817	598,908	548,999	499,090	449,181	399,272	349,363	299,454	249,545	199,636	149,727	99,818	49,909	0
5.Balance of cash flow	140,271	107,576	122,377	139,674	16,655	38,942	63,725	46,003	75,777	108,046	142,811	180,071	219,826	262,077

Table 4.2.3.2.5 FIRR (Overall Plan)

Unit: RPI,000

Year	Investment	Re-investment	Income before depre. & interest	Net income
0 1999	6,405,180	0	0	-6,405,180
1 2000	0	0	- 177,066	- 177,066
2 2001	0	0	724,905	724,905
3 2002	0	0	724,905	724,905
4 2003	0	0	724,905	724,905
5 2004	0	0	724,905	724,905
6 2005	0	195,000	724,905	529,905
7 2006	0	0	724,905	724,905
8 2007	0	0	724,905	724,905
9 2008	0	0	724,905	724,905
10 2009	0	0	724,905	724,905
11 2010	0	0	724,905	724,905
12 2011	0	195,000	724,905	529,905
13 2012	0	0	724,905	724,905
14 2013	0	0	724,905	724,905
15 2014	0	2,299,037	724,905	-1,574,132
16 2015	0	0	724,905	724,905
17 2016	0	0	724,905	724,905
18 2017	0	195,000	724,905	529,905
19 2018	0	0	724,905	724,905
20 2019	0	0	724,905	724,905
			FIRR=	5.6%

Table 4.2.3.2.6 FIRR (Small-scale dairy products facility)

Unit: RPI,000

Year	Investment	Re-investment	Income before depre. & interest	Net income
0 1999	2,098,000	0	0	-2,098,000
1 2000	0	0	240,000	240,000
2 2001	0	0	240,000	240,000
3 2002	0	0	240,000	240,000
4 2003	0	0	240,000	240,000
5 2004	0	0	240,000	240,000
6 2005	0	75,000	240,000	165,000
7 2006	0	0	240,000	240,000
8 2007	0	0	240,000	240,000
9 2008	0	0	240,000	240,000
10 2009	0	0	240,000	240,000
11 2010	0	0	240,000	240,000
12 2011	0	75,000	240,000	165,000
13 2012	0	0	240,000	240,000
14 2013	0	0	240,000	240,000
15 2014	0	1,813,000	240,000	-1,573,000
16 2015	0	0	240,000	240,000
17 2016	0	0	240,000	240,000
18 2017	0	75,000	240,000	165,000
19 2018	0	0	240,000	240,000
20 2019	0	0	240,000	240,000
			FIRR=	4.1%

Table 4.2.3.2.7 FIRR (Dairy cow and diary steer calf fattening facility)

Unit:RP1,000

Year	Investment	Re-investment	Income before depre. & interest	Net income
0 1999	3,309,000	0	0	-3,309,000
1 2000	0	0	- 509,226	- 509,226
2 2001	0	0	392,745	392,745
3 2002	0	0	392,745	392,745
4 2003	0	0	392,745	392,745
5 2004	0	0	392,745	392,745
6 2005	0	75,000	392,745	317,745
7 2006	0	0	392,745	392,745
8 2007	0	0	392,745	392,745
9 2008	0	0	392,745	392,745
10 2009	0	0	392,745	392,745
11 2010	0	0	392,745	392,745
12 2011	0	75,000	392,745	317,745
13 2012	0	0	392,745	392,745
14 2013	0	0	392,745	392,745
15 2014	0	10,000	392,745	382,745
16 2015	0	0	392,745	392,745
17 2016	0	0	392,745	392,745
18 2017	0	75,000	392,745	317,745
19 2018	0	0	392,745	392,745
20 2019	0	0	392,745	392,745
FIRR=				6.7%

Table 4.2.3.2.8 FIRR (Feed mixing facility)

Unit:RP1,000

Year	Investment	Re-investment	Income before depre. & interest	Net income
0 1999	998,180	0	0	- 998,180
1 2000	0	0	92,160	92,160
2 2001	0	0	92,160	92,160
3 2002	0	0	92,160	92,160
4 2003	0	0	92,160	92,160
5 2004	0	0	92,160	92,160
6 2005	0	45,000	92,160	47,160
7 2006	0	0	92,160	92,160
8 2007	0	0	92,160	92,160
9 2008	0	0	92,160	92,160
10 2009	0	0	92,160	92,160
11 2010	0	0	92,160	92,160
12 2011	0	45,000	92,160	92,160
13 2012	0	0	92,160	92,160
14 2013	0	0	92,160	92,160
15 2014	0	476,037	92,160	- 383,877
16 2015	0	0	92,160	92,160
17 2016	0	0	92,160	92,160
18 2017	0	45,000	92,160	47,160
19 2018	0	0	92,160	92,160
20 2019	0	0	92,160	92,160
FIRR=				2.6%

Table 4.3.3.2.1 Income Statement and Cash Flow: KUD Pasir Jambu Dairy Cow Rearing Facility(1/2)

unit: RP1,000

	0	1	2	3	4	5	6	7	8	9	10
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>Income Statement</b>											
1.Revenue	0	4,435,200	4,435,200	4,845,200	4,845,200	4,845,200	4,845,200	4,845,200	4,845,200	4,845,200	4,845,200
2.Expense	0	4,820,804	4,820,804	4,820,804	4,820,804	4,820,804	4,816,479	4,812,153	4,807,828	4,803,502	4,799,177
a. Operation cost	0	4,638,040	4,638,040	4,638,040	4,638,040	4,638,040	4,638,040	4,638,040	4,638,040	4,638,040	4,638,040
d. Depreciation	0	96,255	96,255	96,255	96,255	96,255	96,255	96,255	96,255	96,255	96,255
e. Interest	0	86,509	86,509	86,509	86,509	86,509	82,184	77,858	73,533	69,207	64,882
3. Income before depre. and interest	0	-202,840	-202,840	207,160	207,160	207,160	207,160	207,160	207,160	207,160	207,160
4.Net income	0	-385,604	-385,604	24,396	24,396	24,396	28,721	33,047	37,372	41,698	46,023
<b>Cash Flow</b>											
1.Source of fund	1,730,180	298,912	-289,349	120,651	120,651	120,651	124,976	129,302	133,627	137,953	142,278
a. Government subsidy	0	588,261	0	0	0	0	0	0	0	0	0
b. Government credit	0	0	0	0	0	0	0	0	0	0	0
c. Loan	1,730,180	0	0	0	0	0	0	0	0	0	0
d. Depreciation	0	96,255	96,255	96,255	96,255	96,255	96,255	96,255	96,255	96,255	96,255
e. Net income	0	-385,604	-385,604	24,396	24,396	24,396	28,721	33,047	37,372	41,698	46,023
2.Source of fund	1,730,180	0	0	0	0	86,509	131,509	86,509	86,509	86,509	86,509
a. Investment	1,730,180	0	0	0	0	0	0	0	0	0	0
b. Re-investment	0	0	0	0	0	0	45,000	0	0	0	0
c. Repayment of government credit	0	0	0	0	0	0	0	0	0	0	0
d. Repayment of loan	0	0	0	0	0	86,509	86,509	86,509	86,509	86,509	86,509
3.Balance of government credit	0	0	0	0	0	0	0	0	0	0	0
4.Balance of loan	1,730,180	1,730,180	1,730,180	1,730,180	1,730,180	1,643,671	1,557,162	1,470,653	1,384,144	1,297,635	1,211,126
5.Balance of cash flow	0	298,912	9,563	130,214	250,865	285,007	278,475	321,268	368,386	419,830	475,599

Interest 5%  
 Grace period 5 year  
 Repayment period 20 year



Table 4.3.3.2.1 Income Statement and Cash Flow: KUD Pasir Jambu Dairy Cow Rearing Facility(2/2)

	unit: RP 1,000													
	11	12	13	14	15	16	17	18	19	20	21	22	23	24
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<b>Income Statement</b>														
1. Revenue	4,845,200	4,845,200	4,845,200	4,845,200	4,845,200	4,845,200	4,845,200	4,845,200	4,845,200	4,845,200	4,845,200	4,845,200	4,845,200	4,845,200
2. Expense	4,794,851	4,790,526	4,786,200	4,781,875	4,777,550	4,773,224	4,768,899	4,764,573	4,760,248	4,755,922	4,751,597	4,747,271	4,742,946	4,738,620
a. Operation cost	4,638,040	4,638,040	4,638,040	4,638,040	4,638,040	4,638,040	4,638,040	4,638,040	4,638,040	4,638,040	4,638,040	4,638,040	4,638,040	4,638,040
d. Depreciation	96,255	96,255	96,255	96,255	96,255	96,255	96,255	96,255	96,255	96,255	96,255	96,255	96,255	96,255
e. Interest	60,556	56,231	51,905	47,580	43,255	38,929	34,604	30,278	25,953	21,627	17,302	12,976	8,651	4,325
3. Income before depreciation	207,160	207,160	207,160	207,160	207,160	207,160	207,160	207,160	207,160	207,160	207,160	207,160	207,160	207,160
4. Net income	50,349	54,674	59,000	63,325	67,651	71,976	76,301	80,627	84,952	89,278	93,603	97,929	102,254	106,580
<b>Cash Flow</b>														
1. Source of fund	146,604	150,929	155,255	159,580	163,906	168,231	172,556	176,882	181,207	185,533	189,858	194,184	198,509	202,835
a. Government subsidy	0	0	0	0	0	0	0	0	0	0	0	0	0	0
b. Government credit	0	0	0	0	0	0	0	0	0	0	0	0	0	0
c. Loan	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d. Depreciation	96,255	96,255	96,255	96,255	96,255	96,255	96,255	96,255	96,255	96,255	96,255	96,255	96,255	96,255
e. Net income	50,349	54,674	59,000	63,325	67,651	71,976	76,301	80,627	84,952	89,278	93,603	97,929	102,254	106,580
2. Source of fund	86,509	131,509	86,509	86,509	567,546	86,509	86,509	131,509	86,509	86,509	86,509	86,509	86,509	86,509
a. Investment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
b. Re-investment	0	45,000	0	0	481,037	0	0	45,000	0	0	0	0	0	0
c. Repayment of credit	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d. Repayment of loan	86,509	86,509	86,509	86,509	86,509	86,509	86,509	86,509	86,509	86,509	86,509	86,509	86,509	86,509
3. Balance of govern. credit	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4. Balance of loan	1,124,617	1,038,108	951,599	865,090	778,581	692,072	605,563	519,054	432,545	346,036	259,527	173,018	86,509	0
5. Balance of cash flow	535,694	555,114	623,859	696,930	293,290	375,012	461,059	506,432	601,130	700,154	803,503	911,178	1,023,178	1,139,504

Table 4.3.3.2.2 Income Statement and Cash Flow: KUD PASIR JAMBU Dairy Cow Rearing Facility(1/2)

unit: RP1,000

	0	1	2	3	4	5	6	7	8	9	10
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>Income Statement</b>											
1.Revenue	0	0	0	410,000	410,000	410,000	410,000	410,000	410,000	410,000	410,000
2.Expense	0	367,983	367,983	367,983	367,983	366,153	364,323	362,493	360,663	358,833	357,003
a. Operation cost	0	170,000	170,000	170,000	170,000	170,000	170,000	170,000	170,000	170,000	170,000
b. Purchase	0	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000
c. Others	0	0	0	0	0	0	0	0	0	0	0
d. Depreciation	0	36,383	36,383	36,383	36,383	36,383	36,383	36,383	36,383	36,383	36,383
e. Interest	0	36,600	36,600	36,600	36,600	34,770	32,940	31,110	29,280	27,450	25,620
3. Income before depre. and interest	0	-295,000	-295,000	115,000	115,000	115,000	115,000	115,000	115,000	115,000	115,000
4.Net income	0	-367,983	-367,983	42,017	42,017	43,847	45,677	47,507	49,337	51,167	52,997
<b>Cash Flow</b>											
1.Source of fund	732,000	1,460	1,460	78,400	78,400	80,230	82,060	83,890	85,720	87,550	89,380
a. Government subsidy	0	333,060	333,060	0	0	0	0	0	0	0	0
b. Government credit	0	0	0	0	0	0	0	0	0	0	0
c. Loan	732,000	0	0	0	0	0	0	0	0	0	0
d. Depreciation	0	36,383	36,383	36,383	36,383	36,383	36,383	36,383	36,383	36,383	36,383
e. Net income	0	-367,983	-367,983	42,017	42,017	43,847	45,677	47,507	49,337	51,167	52,997
2.Use of fund	732,000	0	0	0	0	36,600	36,600	36,600	36,600	36,600	36,600
a. Investment	732,000	0	0	0	0	0	0	0	0	0	0
b. Re-investment	0	0	0	0	0	0	0	0	0	0	0
c. Repayment of government credit	0	0	0	0	0	0	0	0	0	0	0
d. Repayment of loan	0	0	0	0	0	36,600	36,600	36,600	36,600	36,600	36,600
3.Balance of government credit	0	0	0	0	0	0	0	0	0	0	0
4.Balance of loan	732,000	732,000	732,000	732,000	732,000	695,400	658,800	622,200	585,600	549,000	512,400
5.Balance of cash flow	0	1,460	2,920	81,320	159,720	203,350	248,810	296,100	345,220	396,170	448,950

Interest           5%  
 Grace period     5 year  
 Repayment       20 year  
 period

Table 4.3.3.2.2 Income Statement and Cash Flow: KUD PASIR JAMBU Dairy Cow Rearing Facility(2/2)

	11	12	13	14	15	16	17	18	19	20	21	22	23	24
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<b>Income Statement</b>														
1. Revenue	410,000	410,000	410,000	410,000	410,000	410,000	410,000	410,000	410,000	410,000	410,000	410,000	410,000	410,000
2. Expense	355,173	353,343	351,513	349,683	347,853	346,023	344,193	342,363	340,533	338,703	336,873	335,043	333,213	331,383
a. Operation cost	170,000	170,000	170,000	170,000	170,000	170,000	170,000	170,000	170,000	170,000	170,000	170,000	170,000	170,000
b. Purchase	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000
c. Others	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d. Depreciation	36,383	36,383	36,383	36,383	36,383	36,383	36,383	36,383	36,383	36,383	36,383	36,383	36,383	36,383
e. Interest	23,790	21,960	20,130	18,300	16,470	14,640	12,810	10,980	9,150	7,320	5,490	3,660	1,830	0
3. Income before depreciation	115,000	115,000	115,000	115,000	115,000	115,000	115,000	115,000	115,000	115,000	115,000	115,000	115,000	115,000
4. Net income	54,827	56,657	58,487	60,317	62,147	63,977	65,807	67,637	69,467	71,297	73,127	74,957	76,787	78,617
<b>Cash Flow</b>														
1. Source of fund	91,210	93,040	94,870	96,700	98,530	100,360	102,190	104,020	105,850	107,680	109,510	111,340	113,170	115,000
a. Government subsidy	0	0	0	0	0	0	0	0	0	0	0	0	0	0
b. Government credit	0	0	0	0	0	0	0	0	0	0	0	0	0	0
c. Loan	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d. Depreciation	36,383	36,383	36,383	36,383	36,383	36,383	36,383	36,383	36,383	36,383	36,383	36,383	36,383	36,383
e. Net income	54,827	56,657	58,487	60,317	62,147	63,977	65,807	67,637	69,467	71,297	73,127	74,957	76,787	78,617
2. Use of fund	36,600	36,600	36,600	41,600	36,600	36,600	36,600	36,600	36,600	36,600	36,600	36,600	36,600	36,600
a. Investment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
b. Re-investment	0	0	0	5,000	0	0	0	0	0	0	0	0	0	0
c. Repayment of government	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d. Repayment of loan	36,600	36,600	36,600	36,600	36,600	36,600	36,600	36,600	36,600	36,600	36,600	36,600	36,600	36,600
3. Balance of credit	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4. Balance of loan	475,800	439,200	402,600	366,000	329,400	292,800	256,200	219,600	183,000	146,400	109,800	73,200	36,600	0
5. Balance of cash flow	503,560	560,000	618,270	673,370	735,300	799,060	864,650	932,070	1,001,320	1,072,400	1,145,310	1,220,050	1,296,620	1,375,020

Table 4.3.3.2.3 Income Statement and Cash Flow: KUD PASIR JAMBU Feed Mixing Facility(1/2)

unit:RP1,000

	0	1	2	3	4	5	6	7	8	9	10
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>Income Statement</b>											
1.Revenue	0	4,435,200	4,435,200	4,435,200	4,435,200	4,435,200	4,435,200	4,435,200	4,435,200	4,435,200	4,435,200
2.Expense	0	4,452,821	4,452,821	4,452,821	4,452,821	4,450,325	4,447,830	4,445,334	4,442,839	4,440,343	4,437,848
a. Operation cost	0	763,200	763,200	763,200	763,200	763,200	763,200	763,200	763,200	763,200	763,200
b. Purchase	0	3,579,840	3,579,840	3,579,840	3,579,840	3,579,840	3,579,840	3,579,840	3,579,840	3,579,840	3,579,840
c. Others	0	0	0	0	0	0	0	0	0	0	0
d. Depreciation	0	59,872	59,872	59,872	59,872	59,872	59,872	59,872	59,872	59,872	59,872
e. Interest	0	49,909	49,909	49,909	49,909	47,414	44,918	42,423	39,927	37,432	34,936
3.Income before depre. and interest	0	92,160	92,160	92,160	92,160	92,160	92,160	92,160	92,160	92,160	92,160
4.Net income	0	-17,621	-17,621	-17,621	-17,621	-15,125	-12,630	-10,134	-7,639	-5,143	-2,648
<b>Cash Flow</b>											
1.Source of fund	998,180	42,251	42,251	42,251	42,251	44,746	47,242	49,737	52,233	54,728	57,224
a. Government subsidy	0	0	0	0	0	0	0	0	0	0	0
b. Government credit	0	0	0	0	0	0	0	0	0	0	0
c. Loan	998,180	0	0	0	0	0	0	0	0	0	0
d. Depreciation	0	59,872	59,872	59,872	59,872	59,872	59,872	59,872	59,872	59,872	59,872
e.Net income	0	-17,621	-17,621	-17,621	-17,621	-15,125	-12,630	-10,134	-7,639	-5,143	-2,648
2.Use of fund	998,180	0	0	0	0	49,909	94,909	49,909	49,909	49,909	49,909
a. Investment	998,180	0	0	0	0	0	0	0	0	0	0
b. Re-investment	0	0	0	0	0	0	45,000	0	0	0	0
c. Repayment government credit	0	0	0	0	0	0	0	0	0	0	0
d. Repayment of loan	0	0	0	0	0	49,909	49,909	49,909	49,909	49,909	49,909
3.Balance of government credit	0	0	0	0	0	0	0	0	0	0	0
4.Balance of loan	998,180	998,180	998,180	998,180	998,180	948,271	898,362	848,453	798,544	748,635	698,726
5.Balance of cash flow	0	42,251	84,502	126,753	169,004	163,841	116,174	116,003	118,327	123,146	130,460

Interest           5%  
Grace period       5 year  
Repayment         20 year  
period

Table 4.3.3.2.3 Income Statement and Cash Flow: KUD PASIR JAMBU Feed Mixing Facility(2/2)

	11	12	13	14	15	16	17	18	19	20	21	22	23	24
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<b>Income Statement</b>														
1. Revenue	4,435,200	4,435,200	4,435,200	4,435,200	4,435,200	4,435,200	4,435,200	4,435,200	4,435,200	4,435,200	4,435,200	4,435,200	4,435,200	4,435,200
2. Expense	4,435,352	4,432,857	4,430,361	4,427,866	4,425,371	4,422,875	4,420,380	4,417,884	4,415,389	4,412,893	4,410,398	4,407,902	4,405,407	4,402,912
a. Operation cost	763,200	763,200	763,200	763,200	763,200	763,200	763,200	763,200	763,200	763,200	763,200	763,200	763,200	763,200
b. Purchase	3,579,840	3,579,840	3,579,840	3,579,840	3,579,840	3,579,840	3,579,840	3,579,840	3,579,840	3,579,840	3,579,840	3,579,840	3,579,840	3,579,840
c. Others	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d. Depreciation	59,872	59,872	59,872	59,872	59,872	59,872	59,872	59,872	59,872	59,872	59,872	59,872	59,872	59,872
e. Interest	32,441	29,945	27,450	24,955	22,459	19,964	17,468	14,973	12,477	9,982	7,486	4,991	2,495	0
3. Income before depreciation	92,160	92,160	92,160	92,160	92,160	92,160	92,160	92,160	92,160	92,160	92,160	92,160	92,160	92,160
4. Net income	-152	2,343	4,839	7,334	9,829	12,325	14,820	17,316	19,811	22,307	24,802	27,298	29,793	32,289
<b>Cash Flow</b>														
1. Source of fund	59,719	62,215	64,710	67,206	402,927	72,196	74,692	77,187	79,683	82,178	84,674	87,169	89,665	92,160
a. Government subsidy	0	0	0	0	333,226	0	0	0	0	0	0	0	0	0
b. Government credit	0	0	0	0	0	0	0	0	0	0	0	0	0	0
c. Loan	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d. Depreciation	59,872	59,872	59,872	59,872	59,872	59,872	59,872	59,872	59,872	59,872	59,872	59,872	59,872	59,872
e. Net income	-152	2,343	4,839	7,334	9,829	12,325	14,820	17,316	19,811	22,307	24,802	27,298	29,793	32,289
2. Use of fund	49,909	94,909	49,909	49,909	525,946	49,909	49,909	94,909	49,909	49,909	49,909	49,909	49,909	49,909
a. Investment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
b. Re-investment	0	45,000	0	0	476,037	0	0	45,000	0	0	0	0	0	0
c. Repayment govern. credit	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d. Repayment of loan	49,909	49,909	49,909	49,909	49,909	49,909	49,909	49,909	49,909	49,909	49,909	49,909	49,909	49,909
3. Balance of govern. credit	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4. Balance of loan	648,817	598,908	548,999	499,090	449,181	399,272	349,363	299,454	249,545	199,636	149,727	99,818	49,909	0
5. Balance of cash flow	140,271	107,576	122,377	139,674	16,655	38,942	63,725	46,003	75,777	108,046	142,811	180,071	219,827	262,078

Table 4.3.3.2.4 FIRR (Overall Plan)

Unit:RP1,000

Year	Investment	Re-investment	Income before depre. & interest	Net income
0 1999	1,730,180	0	0	- 1,730,180
1 2000	0	0	- 202,840	- 202,840
2 2001	0	0	- 202,840	- 202,840
3 2002	0	0	207,160	207,160
4 2003	0	0	207,160	207,160
5 2004	0	0	207,160	207,160
6 2005	0	45,000	207,160	162,160
7 2006	0	0	207,160	207,160
8 2007	0	0	207,160	207,160
9 2008	0	0	207,160	207,160
10 2009	0	0	207,160	207,160
11 2010	0	0	207,160	207,160
12 2011	0	45,000	207,160	162,160
13 2012	0	0	207,160	207,160
14 2013	0	0	207,160	207,160
15 2014	0	481,037	207,160	273,877
16 2015	0	0	207,160	207,160
17 2016	0	0	207,160	207,160
18 2017	0	45,000	207,160	162,160
19 2018	0	0	207,160	207,160
20 2019	0	0	207,160	207,160
FIRR=				3.8%

Table 4.3.3.2.5 FIRR (Dairy cow rearing facility)

Unit:RP1,000

Year	Investment	Re-investment	Income before depre. & interest	Net income
0 1999	732,000	0	0	- 732,000
1 2000	0	0	- 295,000	- 295,000
2 2001	0	0	- 295,000	- 295,000
3 2002	0	0	115,000	115,000
4 2003	0	0	115,000	115,000
5 2004	0	0	115,000	115,000
6 2005	0	0	115,000	115,000
7 2006	0	0	115,000	115,000
8 2007	0	0	115,000	115,000
9 2008	0	0	115,000	115,000
10 2009	0	0	115,000	115,000
11 2010	0	0	115,000	115,000
12 2011	0	0	115,000	115,000
13 2012	0	0	115,000	115,000
14 2013	0	0	115,000	115,000
15 2014	0	5,000	115,000	110,000
16 2015	0	0	115,000	115,000
17 2016	0	0	115,000	115,000
18 2017	0	0	115,000	115,000
19 2018	0	0	115,000	115,000
20 2019	0	0	115,000	115,000
FIRR=				4.4%

Table 4.3.3.2.6 FIRR (Feed mixing facility)

Unit:Rp1,000

Year	Investment	Re-investment	Income before depre. & interest	Net income
0 1999	998,180	0	0	- 998,180
1 2000	0	0	92,160	92,160
2 2001	0	0	92,160	92,160
3 2002	0	0	92,160	92,160
4 2003	0	0	92,160	92,160
5 2004	0	0	92,160	92,160
6 2005	0	45,000	92,160	47,160
7 2006	0	0	92,160	92,160
8 2007	0	0	92,160	92,160
9 2008	0	0	92,160	92,160
10 2009	0	0	92,160	92,160
11 2010	0	0	92,160	92,160
12 2011	0	45,000	92,160	47,160
13 2012	0	0	92,160	92,160
14 2013	0	0	92,160	92,160
15 2014	0	476,030	92,160	- 383,877
16 2015	0	0	92,160	92,160
17 2016	0	0	92,160	92,160
18 2017	0	45,000	92,160	92,160
19 2018	0	0	92,160	92,160
20 2019	0	0	92,160	92,160
			FIRR=	2.6%

Table 4.4.3.2.1 Income Statement and Cash Flow: KUD WALATRA Potato Processing Facility(1/2)

unit:RP1,000

	0	1	2	3	4	5	6	7	8	9	10
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>Income Statement</b>											
1.Revenue	0	20,589,390	22,877,100	22,877,100	22,877,100	22,877,100	22,877,100	22,877,100	22,877,100	22,877,100	22,877,100
2.Expense	0	22,891,073	22,891,073	22,691,073	22,691,073	22,673,366	22,655,658	22,637,951	22,620,243	22,602,536	22,584,828
a. Operation cost	0	12,573,850	12,573,850	12,573,850	12,573,850	12,573,850	12,573,850	12,573,850	12,573,850	12,573,850	12,573,850
b. Purchase	0	9,450,000	9,450,000	9,450,000	9,450,000	9,450,000	9,450,000	9,450,000	9,450,000	9,450,000	9,450,000
c. Others	0	0	0	0	0	0	0	0	0	0	0
d. Depreciation	0	313,073	313,073	313,073	313,073	313,073	313,073	313,073	313,073	313,073	313,073
e. Interest	0	354,150	354,150	354,150	354,150	336,443	318,735	301,028	283,320	265,613	247,905
3.Income before depre. and interest	0	-1,434,460	853,250	853,250	853,250	853,250	853,250	853,250	853,250	853,250	853,250
4.Net income	0	-2,101,683	186,027	186,027	186,027	203,735	221,442	239,150	256,857	274,565	292,272
<b>Cash Flow</b>											
1.Source of fund	7,083,000	52,970	499,100	499,100	499,100	516,808	534,515	552,223	569,930	587,638	605,345
a. Government subsidy	0	1,841,580	0	0	0	0	0	0	0	0	0
b. Government credit	0	0	0	0	0	0	0	0	0	0	0
c. Loan	7,083,000	0	0	0	0	0	0	0	0	0	0
d. Depreciation	0	313,073	313,073	313,073	313,073	313,073	313,073	313,073	313,073	313,073	313,073
e. Net income	0	-2,101,683	186,027	186,027	186,027	203,735	221,442	239,150	256,857	274,565	292,272
2.Use of fund	7,083,000	0	0	0	0	354,150	399,150	354,150	354,150	354,150	354,150
a. Investment	7,083,000	0	0	0	0	0	0	0	0	0	0
b. Re-investment	0	0	0	0	0	0	45,000	0	0	0	0
c. Repayment of govern. credit	0	0	0	0	0	0	0	0	0	0	0
d. Repayment of loan	0	0	0	0	0	354,150	354,150	354,150	354,150	354,150	354,150
3.Balance of government credit	0	0	0	0	0	0	0	0	0	0	0
4.Balance of loan	7,083,000	7,083,000	7,083,000	7,083,000	7,083,000	6,728,850	6,374,700	6,020,550	5,666,400	5,312,250	4,958,100
5.Balance of cash flow	0	52,970	552,070	1,051,170	1,550,270	1,712,928	1,848,293	2,046,365	2,262,145	2,495,633	2,746,828

Interest 5%  
 Grace peri. 5 year  
 Repayment 20 year  
 period



Table 4.4.3.2.1 Income Statement and Cash Flow: KUD WALATRA Potato Processing Facility(2/2)

	11	12	13	14	15	16	17	18	19	20	21	22	23	24
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<b>Income Statement</b>														
1.Revenue	22,877,100	22,877,100	22,877,100	22,877,100	22,877,100	22,877,100	22,877,100	22,877,100	22,877,100	22,877,100	22,877,100	22,877,100	22,877,100	22,877,100
2.Expense	22,567,121	22,549,413	22,531,706	22,513,998	22,496,291	22,478,583	22,460,876	22,443,168	22,425,461	22,407,753	22,390,046	22,372,338	22,354,631	22,336,923
a. Operation cost	12,573,850	12,573,850	12,573,850	12,573,850	12,573,850	12,573,850	12,573,850	12,573,850	12,573,850	12,573,850	12,573,850	12,573,850	12,573,850	12,573,850
b. Purchase	9,450,000	9,450,000	9,450,000	9,450,000	9,450,000	9,450,000	9,450,000	9,450,000	9,450,000	9,450,000	9,450,000	9,450,000	9,450,000	9,450,000
c. Others	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d. Depreciation	313,073	313,073	313,073	313,073	313,073	313,073	313,073	313,073	313,073	313,073	313,073	313,073	313,073	313,073
e. Interest	230,198	212,490	194,783	177,075	159,368	141,660	123,953	106,245	88,538	70,830	53,123	35,415	17,708	0
3.Income before depre. and inter	853,250	853,250	853,250	853,250	853,250	853,250	853,250	853,250	853,250	853,250	853,250	853,250	853,250	853,250
4.Net income	309,980	327,687	345,395	363,102	380,810	398,517	416,225	433,932	451,640	469,347	487,055	504,762	522,470	540,177
<b>Cash Flow</b>														
1.Source of fund	823,053	640,760	658,468	676,175	693,883	711,590	729,298	747,005	764,713	782,420	800,128	817,835	835,543	853,250
a. Government subsidy	0	0	0	0	0	0	0	0	0	0	0	0	0	0
b. Government credit	0	0	0	0	0	0	0	0	0	0	0	0	0	0
c. Loan	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d. Depreciation	313,073	313,073	313,073	313,073	313,073	313,073	313,073	313,073	313,073	313,073	313,073	313,073	313,073	313,073
e. Net income	309,980	327,687	345,395	363,102	380,810	398,517	416,225	433,932	451,640	469,347	487,055	504,762	522,470	540,177
2.Use of fund	354,150	399,150	354,150	354,150	2,550,150	354,150	354,150	399,150	354,150	354,150	354,150	354,150	354,150	354,150
a. Investment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
b. Re-investment	0	45,000	0	0	2,196,000	0	0	45,000	0	0	0	0	0	0
c. Repayment of govern. credit	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d. Repayment of loan	354,150	354,150	354,150	354,150	354,150	354,150	354,150	354,150	354,150	354,150	354,150	354,150	354,150	354,150
3.Balance of government credit	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4.Balance of loan	4,603,950	4,249,800	3,895,650	3,541,500	3,187,350	2,833,200	2,479,050	2,124,900	1,770,750	1,416,600	1,062,450	708,300	354,150	0
5.Balance of cash flow	3,015,730	3,257,340	3,561,858	3,883,883	2,027,415	2,384,855	2,780,003	3,107,858	3,518,420	3,946,690	4,392,668	4,856,353	5,337,745	5,836,845

Table 4.4.3.2.2 FIRR

Unit: RP1,000

Year	Investment	Re-investment	Income before depre. & interest	Net income
0 1999	7,083,000	0	0	- 7,083,000
1 2000	0	0	-1,434,460	-1,434,460
2 2001	0	0	853,250	853,250
3 2002	0	0	853,250	853,250
4 2003	0	0	853,250	853,250
5 2004	0	0	853,250	853,250
6 2005	0	45,000	853,250	808,250
7 2006	0	0	853,250	853,250
8 2007	0	0	853,250	853,250
9 2008	0	0	853,250	853,250
10 2009	0	0	853,250	853,250
11 2010	0	0	853,250	853,250
12 2011	0	45,000	853,250	808,250
13 2012	0	0	853,250	853,250
14 2013	0	0	853,250	853,250
15 2014	0	2,196,000	853,250	-1,342,750
16 2015	0	0	853,250	853,250
17 2016	0	0	853,250	853,250
18 2017	0	45,000	853,250	808,250
19 2018	0	0	853,250	853,250
20 2019	0	0	853,250	853,250
FIRR=				5.3%

Table 4.5.3.2.1 Income Statement and Cash Flow: KUD SIPATUWO Rice Mill Plant + Mini Grain Processing Facility(1/2)

unit:RP1,000

	0	1	2	3	4	5	6	7	8	9	10
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>Income Statement</b>											
1.Revenue	0	1,762,500	1,762,500	1,762,500	1,762,500	1,762,500	1,762,500	1,762,500	1,762,500	1,762,500	1,762,500
2.Expense	0	1,694,989	1,694,989	1,694,989	1,694,989	1,683,523	1,672,057	1,660,591	1,649,125	1,637,659	1,626,194
a. Operation cost	0	261,931	261,931	261,931	261,931	261,931	261,931	261,931	261,931	261,931	261,931
b. Purchase	0	1,023,940	1,023,940	1,023,940	1,023,940	1,023,940	1,023,940	1,023,940	1,023,940	1,023,940	1,023,940
c. Others	0	0	0	0	0	0	0	0	0	0	0
d. Depreciation	0	179,801	179,801	179,801	179,801	179,801	179,801	179,801	179,801	179,801	179,801
e. Interest	0	229,317	229,317	229,317	229,317	217,851	206,385	194,919	183,453	171,988	160,522
3.Income before depr. and interest	0	476,629	476,629	476,629	476,629	476,629	476,629	476,629	476,629	476,629	476,629
4.Net income	0	67,511	67,511	67,511	67,511	78,977	90,443	101,909	113,375	124,841	136,306
<b>Cash Flow</b>											
1.Source of fund	4,586,335	247,312	247,312	247,312	247,312	258,778	270,244	281,710	293,176	304,641	316,107
a. Government subsidy	0	0	0	0	0	0	0	0	0	0	0
b. Government credit	0	0	0	0	0	0	0	0	0	0	0
c. Loan	4,586,335	0	0	0	0	0	0	0	0	0	0
d. Depreciation	0	179,801	179,801	179,801	179,801	179,801	179,801	179,801	179,801	179,801	179,801
e. Net income	0	67,511	67,511	67,511	67,511	78,977	90,443	101,909	113,375	124,841	136,306
2.Use of fund	4,586,335	0	0	0	0	229,317	487,317	229,317	229,317	229,317	229,317
a. Investment	4,586,335	0	0	0	0	0	0	0	0	0	0
b. Re-investment	0	0	0	0	0	0	258,000	0	0	0	0
c. Repayment of government credit	0	0	0	0	0	0	0	0	0	0	0
d. Repayment of loan	0	0	0	0	0	229,317	229,317	229,317	229,317	229,317	229,317
3.Balance of government credit	0	0	0	0	0	0	0	0	0	0	0
4.Balance of loan	4,586,335	4,586,335	4,586,335	4,586,335	4,586,335	4,357,018	4,127,702	3,898,385	3,669,068	3,439,751	3,210,435
5.Balance of cash flow	0	247,312	494,625	741,937	989,249	1,018,710	801,638	854,031	917,889	993,214	1,080,005

Interest : 5%  
 Grace period : 5 year  
 Repayment period : 20 year

Table 4.5.3.2.1 Income Statement and Cash Flow: KUD SIPATUWO Rice Mill Plant + Mini Grain Processing Facility(2/2)

	11	12	13	14	15	16	17	18	19	20	21	22	23	24
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<b>Income Statement</b>														
1.Revenue	1,762,500	1,762,500	1,762,500	1,762,500	1,762,500	1,762,500	1,762,500	1,762,500	1,762,500	1,762,500	1,762,500	1,762,500	1,762,500	1,762,500
2.Expense	1,614,728	1,603,262	1,591,796	1,580,330	1,568,864	1,557,399	1,545,933	1,534,467	1,523,001	1,511,535	1,500,069	1,488,603	1,477,138	1,465,672
a. Operation cost	261,931	261,931	261,931	261,931	261,931	261,931	261,931	261,931	261,931	261,931	261,931	261,931	261,931	261,931
b. Purchase	1,023,940	1,023,940	1,023,940	1,023,940	1,023,940	1,023,940	1,023,940	1,023,940	1,023,940	1,023,940	1,023,940	1,023,940	1,023,940	1,023,940
c. Others	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d. Depreciation	179,801	179,801	179,801	179,801	179,801	179,801	179,801	179,801	179,801	179,801	179,801	179,801	179,801	179,801
e. Interest	149,056	137,590	126,124	114,658	103,193	91,727	80,261	68,795	57,329	45,863	34,398	22,932	11,466	0
3.Income before depreciation	476,629	476,629	476,629	476,629	476,629	476,629	476,629	476,629	476,629	476,629	476,629	476,629	476,629	476,629
4.Net income	147,772	159,238	170,704	182,170	193,636	205,101	216,567	228,033	239,499	250,965	262,431	273,897	285,362	296,828
<b>Cash Flow</b>														
1.Source of fund	327,573	339,039	350,505	361,971	373,436	384,902	396,368	407,834	419,300	430,766	442,231	453,697	465,163	476,629
a. Government subsidy	0	0	0	0	0	0	0	0	0	0	0	0	0	0
b. Government credit	0	0	0	0	0	0	0	0	0	0	0	0	0	0
c. Loan	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d. Depreciation	179,801	179,801	179,801	179,801	179,801	179,801	179,801	179,801	179,801	179,801	179,801	179,801	179,801	179,801
e. Net income	147,772	159,238	170,704	182,170	193,636	205,101	216,567	228,033	239,499	250,965	262,431	273,897	285,362	296,828
2.Use of fund	229,317	487,317	229,317	229,317	1,304,317	229,317	229,317	487,317	229,317	229,317	229,317	229,317	229,317	229,317
a. Investment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
b. Re-investment	0	258,000	0	0	1,075,000	0	0	258,000	0	0	0	0	0	0
c. Repayment of credit	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d. Repayment of loan	229,317	229,317	229,317	229,317	229,317	229,317	229,317	229,317	229,317	229,317	229,317	229,317	229,317	229,317
3.Balance of govern. credit	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4.Balance of loan	2,981,118	2,751,801	2,522,484	2,293,168	2,063,851	1,834,534	1,605,217	1,375,901	1,146,584	917,267	687,950	458,634	229,317	0
5.Balance of cash flow	1,178,261	1,029,933	1,151,171	1,283,825	352,945	508,530	675,582	596,099	786,082	987,531	1,200,446	1,424,826	1,660,673	1,907,935

Table 4.5.3.2.2 FIRR

Unit:RP1,000

Year	Investment	Re-investment	Income before depre. & interest	Net income
0 1999	4,586,335	0	0	- 4,586,335
1 2000	0	0	476,629	476,629
2 2001	0	0	476,629	476,629
3 2002	0	0	476,629	476,629
4 2003	0	0	476,629	476,629
5 2004	0	0	476,629	476,629
6 2005	0	258,000	476,629	218,629
7 2006	0	0	476,629	476,629
8 2007	0	0	476,629	476,629
9 2008	0	0	476,629	476,629
10 2009	0	0	476,629	476,629
11 2010	0	0	476,629	476,629
12 2011	0	258,000	476,629	218,629
13 2012	0	0	476,629	476,629
14 2013	0	0	476,629	476,629
15 2014	0	1,075,000	476,629	-598,371
16 2015	0	0	476,629	476,629
17 2016	0	0	476,629	476,629
18 2017	0	258,000	476,629	218,629
19 2018	0	0	476,629	476,629
20 2019	0	0	476,629	476,629
			FIRR=	6.1%

Table 4.6.3.2.1 Income Statement and Cash Flow: KUD SEMANGAT Rice Mill Plant + Mini Grain Processing Facility (1/2)

unit:RP1,000

	0	1	2	3	4	5	6	7	8	9	10
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>Income Statement</b>											
1.Revenue	0	1,762,500	1,762,500	1,762,500	1,762,500	1,762,500	1,762,500	1,762,500	1,762,500	1,762,500	1,762,500
2.Expense	0	1,680,997	1,680,997	1,680,997	1,680,997	1,670,024	1,659,051	1,648,078	1,637,105	1,626,132	1,615,159
a. Operation cost	0	261,931	261,931	261,931	261,931	261,931	261,931	261,931	261,931	261,931	261,931
b. Purchase	0	1,023,940	1,023,940	1,023,940	1,023,940	1,023,940	1,023,940	1,023,940	1,023,940	1,023,940	1,023,940
c. Others	0	0	0	0	0	0	0	0	0	0	0
d. Depreciation	0	175,667	175,667	175,667	175,667	175,667	175,667	175,667	175,667	175,667	175,667
e. Interest	0	219,458	219,458	219,458	219,458	208,485	197,512	186,539	175,566	164,594	153,621
3.Income before depre. and interest	0	476,629	476,629	476,629	476,629	476,629	476,629	476,629	476,629	476,629	476,629
4.Net income	0	81,503	81,503	81,503	81,503	92,476	103,449	114,422	125,395	136,368	147,341
<b>Cash Flow</b>											
1.Source of fund	4,389,161	257,171	257,171	257,171	257,171	268,144	279,117	290,090	301,063	312,035	323,008
a. Government subsidy	0	0	0	0	0	0	0	0	0	0	0
b. Government credit	0	0	0	0	0	0	0	0	0	0	0
c. Loan	4,389,161	0	0	0	0	0	0	0	0	0	0
d. Depreciation	0	175,667	175,667	175,667	175,667	175,667	175,667	175,667	175,667	175,667	175,667
e. Net income	0	81,503	81,503	81,503	81,503	92,476	103,449	114,422	125,395	136,368	147,341
2.Use of fund	4,389,161	0	0	0	0	219,458	477,458	219,458	219,458	219,458	219,458
a. Investment	4,389,161	0	0	0	0	0	0	0	0	0	0
b. Re-investment	0	0	0	0	0	0	258,000	0	0	0	0
c. Repayment of government credit	0	0	0	0	0	0	0	0	0	0	0
d. Repayment of loan	0	0	0	0	0	219,458	219,458	219,458	219,458	219,458	219,458
3.Balance of government credit	0	0	0	0	0	0	0	0	0	0	0
4.Balance of loan	4,389,161	4,389,161	4,389,161	4,389,161	4,389,161	4,169,703	3,950,245	3,730,787	3,511,329	3,291,871	3,072,413
5.Balance cash flow	0	257,171	514,342	771,513	1,028,634	1,077,370	879,028	949,660	1,031,264	1,123,842	1,227,392

Interest           5%  
 Grace period     5 year  
 Repayment       20 year  
 period

Table 4.6.3.2.1 Income Statement and Cash Flow: KUD SEMANGAT Rice Mill Plant + Mini Grain Processing Facility (2/2)

	11	12	13	14	15	16	17	18	19	20	21	22	23	24
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<b>Income Statement</b>														
1. Revenue	1,762,500	1,762,500	1,762,500	1,762,500	1,762,500	1,762,500	1,762,500	1,762,500	1,762,500	1,762,500	1,762,500	1,762,500	1,762,500	1,762,500
2. Expense	1,604,186	1,593,213	1,582,240	1,571,267	1,560,295	1,549,322	1,538,349	1,527,376	1,516,403	1,505,430	1,494,457	1,483,484	1,472,511	1,461,538
a. Operation cost	261,931	261,931	261,931	261,931	261,931	261,931	261,931	261,931	261,931	261,931	261,931	261,931	261,931	261,931
b. Purchase	1,023,940	1,023,940	1,023,940	1,023,940	1,023,940	1,023,940	1,023,940	1,023,940	1,023,940	1,023,940	1,023,940	1,023,940	1,023,940	1,023,940
c. Others	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d. Depreciation	175,667	175,667	175,667	175,667	175,667	175,667	175,667	175,667	175,667	175,667	175,667	175,667	175,667	175,667
e. Interest	142,648	131,675	120,702	109,729	98,756	87,783	76,810	65,837	54,865	43,892	32,919	21,946	10,973	0
3. Income before depreciation	476,629	476,629	476,629	476,629	476,629	476,629	476,629	476,629	476,629	476,629	476,629	476,629	476,629	476,629
4. Net income	158,314	169,287	180,260	191,233	202,205	213,178	224,151	235,124	246,097	257,070	268,043	279,016	289,989	300,962
<b>Cash Flow</b>														
1. Source of fund	333,981	344,954	355,927	366,900	377,873	388,846	399,819	410,792	421,764	432,737	443,710	454,683	465,656	476,629
a. Government subsidy	0	0	0	0	0	0	0	0	0	0	0	0	0	0
b. Government credit	0	0	0	0	0	0	0	0	0	0	0	0	0	0
c. Loan	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d. Depreciation	175,667	175,667	175,667	175,667	175,667	175,667	175,667	175,667	175,667	175,667	175,667	175,667	175,667	175,667
e. Net income	158,314	169,287	180,260	191,233	202,205	213,178	224,151	235,124	246,097	257,070	268,043	279,016	289,989	300,962
2. Use of fund	219,458	477,458	219,458	219,458	1,294,458	219,458	219,458	477,458	219,458	219,458	219,458	219,458	219,458	219,458
a. Investment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
b. Re-investment	0	258,000	0	0	1,075,000	0	0	258,000	0	0	0	0	0	0
c. Repayment of credit	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d. Repayment of loan	219,458	219,458	219,458	219,458	219,458	219,458	219,458	219,458	219,458	219,458	219,458	219,458	219,458	219,458
3. Balance of govern. credit	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4. Balance of loan	2,852,955	2,633,497	2,414,039	2,194,581	1,975,122	1,755,664	1,536,206	1,316,748	1,097,290	877,832	658,374	438,916	219,458	0
5. Balance cash flow	1,341,915	1,209,411	1,345,881	1,493,322	576,737	746,125	926,486	859,819	1,062,126	1,275,405	1,499,657	1,734,882	1,981,080	2,238,251

Table 4.6.3.2.2 FIRR

Unit:RP1,000

Year	Investment	Re-investment	Income before depre. & interest	Net income
0 1999	4,389,161	0	0	- 4,389,161
1 2000	0	0	476,629	476,629
2 2001	0	0	476,629	476,629
3 2002	0	0	476,629	476,629
4 2003	0	0	476,629	476,629
5 2004	0	0	476,629	476,629
6 2005	0	258,000	476,629	218,629
7 2006	0	0	476,629	476,629
8 2007	0	0	476,629	476,629
9 2008	0	0	476,629	476,629
10 2009	0	0	476,629	476,629
11 2010	0	0	476,629	476,629
12 2011	0	258,000	476,629	218,629
13 2012	0	0	476,629	476,629
14 2013	0	0	476,629	476,629
15 2014	0	1,075,000	476,629	-598,371
16 2015	0	0	476,629	476,629
17 2016	0	0	476,629	476,629
18 2017	0	258,000	476,629	218,629
19 2018	0	0	476,629	476,629
20 2019	0	0	476,629	476,629
			FIRR=	6.7%



Table 4.7.3.2.1 Income Statement and Cash Flow: KUD MATUTU Cattle Fattening Facility(1/2)

	unit:RP1,000										
	0	1	2	3	4	5	6	7	8	9	10
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
<b>Income Statement</b>											
1.Revenue	0	590,400	1,180,800	1,180,800	1,180,800	1,180,800	1,180,800	1,180,800	1,180,800	1,180,800	1,180,800
2.Expense	0	1,123,880	1,123,880	1,123,880	1,123,880	1,119,081	1,114,282	1,109,482	1,104,683	1,099,884	1,095,084
a. Operation cost	0	225,720	225,720	225,720	225,720	225,720	225,720	225,720	225,720	225,720	225,720
b. Purchase	0	674,640	674,640	674,640	674,640	674,640	674,640	674,640	674,640	674,640	674,640
c. Others	0	2,280	2,280	2,280	2,280	2,280	2,280	2,280	2,280	2,280	2,280
d. Depreciation	0	125,253	125,253	125,253	125,253	125,253	125,253	125,253	125,253	125,253	125,253
e. Interest	0	95,987	95,987	95,987	95,987	91,188	86,388	81,589	76,790	71,990	67,191
3.Income before depre. and interest	0	-312,240	278,160	278,160	278,160	278,160	278,160	278,160	278,160	278,160	278,160
4.Net income	0	-533,480	56,920	56,920	56,920	61,719	66,518	71,318	76,117	80,916	85,716
<b>Cash Flow</b>											
1.Source of fund	3,199,574	7,717	182,173	182,173	182,173	186,972	191,772	196,571	201,370	206,170	210,969
a. Government subsidy	0	415,945	0	0	0	0	0	0	0	0	0
b. Government credit	0	0	0	0	0	0	0	0	0	0	0
c. Loan	3,199,574	0	0	0	0	0	0	0	0	0	0
d. Depreciation	0	125,253	125,253	125,253	125,253	125,253	125,253	125,253	125,253	125,253	125,253
e.Net income	0	-533,480	56,920	56,920	56,920	61,719	66,518	71,318	76,117	80,916	85,716
2.Use of fund	3,199,574	0	0	0	0	159,979	331,979	159,979	159,979	159,979	159,979
a. Investment	3,199,574	0	0	0	0	0	0	0	0	0	0
b. Re-investment	0	0	0	0	0	0	172,000	0	0	0	0
c. Repayment of govern. credit	0	0	0	0	0	0	0	0	0	0	0
d. Repayment of loan	0	0	0	0	0	159,979	159,979	159,979	159,979	159,979	159,979
3.Balance of govern. credit	0	0	0	0	0	0	0	0	0	0	0
4.Balance of loan	3,199,574	3,199,574	3,199,574	3,199,574	3,199,574	3,039,595	2,879,617	2,719,638	2,559,659	2,399,681	2,239,702
5.Balance of cash flow	0	7,717	189,890	372,063	554,236	581,229	441,022	477,614	519,006	565,197	616,187
Interest	3%										
Grace period	5 year										
Repayment period	20 year										

Table 4.7.3.2.1 Income Statement and Cash Flow: KUD MATUTU Cattle Fattening Facility(2/2)

	11	12	13	14	15	16	17	18	19	20	21	22	23	24
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<b>Income Statement</b>														
1.Revenue	1,180,800	1,180,800	1,180,800	1,180,800	1,180,800	1,180,800	1,180,800	1,180,800	1,180,800	1,180,800	1,180,800	1,180,800	1,180,800	1,180,800
2.Expense	1,090,285	1,085,485	1,080,686	1,075,887	1,071,087	1,066,288	1,061,489	1,056,689	1,051,890	1,047,091	1,042,291	1,037,492	1,032,692	1,027,893
a. Operation cost	225,720	225,720	225,720	225,720	225,720	225,720	225,720	225,720	225,720	225,720	225,720	225,720	225,720	225,720
b. Purchase	674,640	674,640	674,640	674,640	674,640	674,640	674,640	674,640	674,640	674,640	674,640	674,640	674,640	674,640
c. Others	2,280	2,280	2,280	2,280	2,280	2,280	2,280	2,280	2,280	2,280	2,280	2,280	2,280	2,280
d. Depreciation	125,253	125,253	125,253	125,253	125,253	125,253	125,253	125,253	125,253	125,253	125,253	125,253	125,253	125,253
e. Interest	62,392	57,592	52,793	47,994	43,194	38,395	33,596	28,796	23,997	19,197	14,398	9,599	4,799	0
3.Income before depre. & interest	278,160	278,160	278,160	278,160	278,160	278,160	278,160	278,160	278,160	278,160	278,160	278,160	278,160	278,160
4.Net income	90,515	95,315	100,114	104,913	109,713	114,512	119,311	124,111	128,910	133,709	138,509	143,308	148,108	152,907
<b>Cash Flow</b>														
1.Source of fund	215,768	220,568	225,367	230,166	234,966	239,765	244,564	249,364	254,163	258,963	263,762	268,561	273,361	278,160
a. Government subsidy	0	0	0	0	0	0	0	0	0	0	0	0	0	0
b. Government credit	0	0	0	0	0	0	0	0	0	0	0	0	0	0
c. Loan	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d. Depreciation	125,253	125,253	125,253	125,253	125,253	125,253	125,253	125,253	125,253	125,253	125,253	125,253	125,253	125,253
e.Net income	90,515	95,315	100,114	104,913	109,713	114,512	119,311	124,111	128,910	133,709	138,509	143,308	148,108	152,907
2.Use of fund	159,979	331,979	159,979	159,979	235,586	159,979	159,979	331,979	159,979	159,979	159,979	159,979	159,979	159,979
a. Investment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
b. Re-investment	0	172,000	0	0	75,607	0	0	172,000	0	0	0	0	0	0
c. Repayment of govern. credit	0	0	0	0	0	0	0	0	0	0	0	0	0	0
d. Repayment of loan	159,979	159,979	159,979	159,979	159,979	159,979	159,979	159,979	159,979	159,979	159,979	159,979	159,979	159,979
3.Balance of govern. credit	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4.Balance of loan	2,079,723	1,919,744	1,759,766	1,599,787	1,439,808	1,279,830	1,119,851	959,872	799,893	639,915	479,936	319,957	159,979	0
5.Balance of cash flow	671,976	560,565	625,954	696,141	695,521	775,308	859,894	777,279	871,463	970,447	1,074,230	1,182,813	1,296,195	1,414,376

Table 4.7.3.2.2 FIRR

Unit: RP1,000

Year	Investment	Re-investment	Income before depre. & interest	Net income
0 1999	3,199,574	0	0	- 3,199,574
1 2000	0	0	- 312,240	-312,240
2 2001	0	0	278,160	278,160
3 2002	0	0	278,160	278,160
4 2003	0	0	278,160	278,160
5 2004	0	0	278,160	278,160
6 2005	0	172,000	278,160	106,160
7 2006	0	0	278,160	278,160
8 2007	0	0	278,160	278,160
9 2008	0	0	278,160	278,160
10 2009	0	0	278,160	278,160
11 2010	0	0	278,160	278,160
12 2011	0	172,000	278,160	106,160
13 2012	0	0	278,160	278,160
14 2013	0	0	278,160	278,160
15 2014	0	75,607	278,160	202,553
16 2015	0	0	278,160	278,160
17 2016	0	0	278,160	278,160
18 2017	0	172,000	278,160	106,160
19 2018	0	0	278,160	278,160
20 2019	0	0	278,160	278,160
			FIRR=	3.0%