

3.4.9. South Kalimantan Province

(1) Present Situation and Evaluation of South Kalimantan Province KUD

1) General Situation in South Kalimantan Province

As an agroecosystem, South Kalimantan Province's position makes it a damp region. The land area is about 36,500 square kilometers and consists of forests and plains (7.7%), farmlands (6.3%) and paddy rice fields (11.3%). The climate consists of two seasons: a dry season and a rainy season with an annual rainfall of 2,000 to 2,700 mm. Since the Bariro Kuala sub-district, which was surveyed, is a low-lying damp region and is often flooded during the rainy season, rice is grown only once a year during the dry season. The population is 2,780,000 (1993) and the capital is Banjarmasin city.

In the 6th Five-Year Plan, the growth rate of the total yield of the province is targeted at 7.7% and in agricultural areas at 3.5%. The main growth areas are manufacturing, which is targeted at 10.4%, exporting at 10.1% and construction at 9.9%, which means the growth rate of agricultural areas is low. In agricultural areas, more importance is put on plantation products (6.28%) and livestock (6.11%) and the growth rate for rice is set low (2.74%), which shows that expansion of a single crop of rice has almost reached its limits and the growth of agricultural areas based on produce diversification seems to be expected. The yield of rice was 1.12 million tons in 1994, ranking eleventh out of the 27 provinces in the country. However, the yield per plant stayed at 68% of the national average, reflecting the poor soil and geographical conditions.

On the other hand, the ratio of the agricultural population to the total population increased from 60% in 1994 to 68% in 1995. The annual income of farm households ranges from Rp 1.0 million to Rp 3.47 million and many farmers work away from home during the rainy season when they cannot grow rice. In farm villages, there is still a lack of telephone lines and the means of communication and transportation are insufficient. In damp regions, boats are an effective means of transportation.

2) Organization and Management

The number of KUD in the province is 289 and 215 of these are KUD Mandiri, which is well above the national average. One KUD Mandiri INTI has been established in each city and in each of the nine districts. The main business of these KUD is centered on the supply of fertilizer, the sale of rice, rice polishing and the handling of plantation products. In addition, among the aforementioned KUD, businesses which the KUD handle are as follows; 213 KUD are managing cooperative retail shops (Waserda), 79 KUD are running savings and loan businesses, 98 KUD

are collecting electricity fees and 9 KUD are handling coal.

Looking at the size of the KUD, the membership rate is 5.9% of the adult population and the average number of members per KUD was 343, which is too small at one quarter of the national average. Adding to the small average number of the employees, which is 2.3 per KUD, there is also a lack of funds, which means there are many KUD that cannot provide sufficient services to their cooperative members.

Looking at the management situation of the KUD, all figures are low; for example, the current surplus is Rp 5.6 million, which is about 80% of the national average, total business turnover is Rp 1,552 million, which is one quarter of the national average, total assets are Rp 85.2 million, which is one third of the national average and owned capital is Rp 36.7 million, which is one third of the national average. The owned capital in migrant settlements consists mainly of donated land and buildings and not much was accumulated by the KUD themselves. They do not have much in the way of voluntary savings. For compulsory savings, rather than collect money from the cooperative members periodically, the KUD often allot a dividend from the current surplus at the end of the fiscal year.

Problems concerning the management of cooperatives are:

Planning and administration functions are weak and it is therefore impossible to carry out the KUD's plans.

*Insufficient owned capital and a lack of institutional funds, which inhibit the KUD's provision of necessary facilities and equipment and responses to cooperative members' needs.

*An insufficient number of employees, which inhibits the establishment of internal checking systems. Therefore, cases of corruption involving managers have occurred at some KUD.

*Accounting standards for financial statements included in business reports are not thoroughly complied with, which makes management comparisons and diagnosis difficult and lowers the efficiency of external audits.

3) Economic Business

The main sales product of the KUD in this province is fertilizer. In 1995, they supplied 29,839 tons of urea fertilizer to members. Moreover, 213 KUD have 221 retail shops (Waserda) and supply daily necessities, clothing, simple production materials, fuel and so forth. The main item marketed is rice and 54 KUD purchased and sold 4,396 tons of rice in 1995. The main customers are the markets inside Banjarmasin city.

The KUD have 29 RMUs (rice milling units), 70 dryers and 33 agricultural warehouses with rice

drying areas. There are some KUD which possess drying areas and warehouses for cloves, peanuts, coconuts, rubber and coffee beans.

All of these cash crops are shipped outside the province for processing and sale except for peanuts, coconuts, cassava, rubber and coffee beans, for which primary processing is performed locally by private companies. The KUD handle a large amount of cloves. In 1994, the KUD purchased 6,823 tons of cloves, which was the total yield of the province, and sold them through PUSKUD to the National Cloves Buffer Stock.

The main activity of the KUD is the supply of fertilizer, which is 50.1% of the total business turnover. The KUD have no processing businesses other than rice and they do not make any efforts in activities to add value to raw products. Also, in the case of sales activities, payment is mainly via cash transactions and there is no link with the KUD's credit business. There are no cooperative member organizations such as farmers groups, so business operations which can make use of cooperatives, such as joint marketing and joint purchasing, are not carried out. Consequently, there is no advantage in selling products through the KUD. The KUD do not have any means of transportation for products. These are some of the problems relating to economic activities.

4) Credit Business

The balance of savings and loans business operations in South Kalimantan at the end of 1995 was only Rp 449.5 million (79 KUD), which was only 1.0% of the total KUD business in the whole province. None of the five surveyed KUD seemed to be actually operating savings and loans businesses. The factors restricting business expansion are:

- *Funds to support savings and loans business are not accessible.
- *Cooperative members' savings are not increasing.
- *Loan procedures and loans take a long time to come through
- *Management of loan funds is inadequate.

The following are the required conditions for members in South Kalimantan to increase their voluntary savings and to improve the savings and loan system of the KUD:

- *Inducements should be offered to encourage savings by paying interest rates equivalent to those in the competitive market on all the savings of cooperative members.
- *Members should be taught the importance of savings.
- *Restrictions which inhibit timely loan procedures should be removed.

In the last few years, the total amount of loans to farmers from banks in South Kalimantan Province has decreased, reflecting the effect of frequent failure to repay loans. The main factors restricting an increase in the income of KUD from this business are:

*An undeveloped financial market.

*A lack of KUD employees and managers who can handle loan management appropriately.

*A lack of ability by the KUD to supply manufacturing input appropriately to cooperative members, as well as to collect, process and market members' products.

The conditions necessary for the KUD in South Kalimantan to increase income from the loans system for the members are:

*Members should be encouraged to obey the loan rules through the provision of education about the loans system.

*The KUD staff's ability to manage loans should be enhanced through the provision of training.

*The working capital of the KUD should be increased by the members' savings as well as official and unofficial loans in order to supply business necessities and marketing services in a timely manner.

5) Human Resource Development and Guidance Activities

A system of government educational and training organizations, and cooperative organizations has been established in South Kalimantan Province and each type of organization provides training. BALATKOP has trained 92 auditors, 85 directors, 43 general managers, 26 staff members and 26 cooperative members from the KUD. PUSKUD has trained 44 staff members who are in charge of clove accounting, and DEKOPINWIL has provided training for leaders of district-level cooperatives. Three DEKOPINDA out of 10 have provided training for 120 people.

According to the BALATKOP of South Kalimantan, the needs of the KUD managers in training are management prescriptions for reducing clerical mistakes, KUD business and related law, and internal checking systems. They said that, in particular, training for general managers such as, improvement of business knowledge, management techniques, case studies and observation of advanced regions is important. For staff members, training in credit business systems and marketing is needed.

Concerning the educational activities of the five surveyed KUD, the characteristic point is that every KUD had put aside educational funds and their commitment to training is strong in spite of the small number of staff. Also, KUD Mandiri INTI have provided practical training to KUD staff members within the district budget, and the educational effects of this type of training are high so it is hoped that more opportunities will be provided.

Looking at guidance activities for the members, the KUD in South Kalimantan Province have not included farming guidance or better living guidance. Also, there are no staff members at the KUD who are in charge of guidance for the members. However, it was reported that there are

cases at 13 KUD where Agricultural Extension Officers in active service are working as directors of the KUD. The average number of KUD staff members per KUD in South Kalimantan Province is two and 25% of all KUD have no staff. At the KUD with few staff members, it is difficult to assign staff to take charge of farming guidance, even when this is concurrent with other duties. No KUD are providing educational guidance and it seems that this is because they do not have enough staff.

6) PUSKUD

The main business activities of PUSKUD are the transportation of fertilizer and sugar as well as the sale of cloves, rubber and coal. Moreover, they do not handle fertilizer directly but only deal with its transportation as agents.

The PUSKUD membership rate of the 289 KUD inside the province is 55.4%. PUSKUD's sales turnover was only 5.6% of the total business turnover and they had a Rp 570 million loss.

(2) Analysis of Needs of Farm Households and the Need for Activation of KUD

Respondents: 60 persons (48 cooperative members, 12 non-cooperative members)
(57 persons were engaged in agriculture.)

KUD Surveyed: KUD Tungrung Pandang, KUD Hidup Baru, KUD Harapan Pertama

An overview of the results of the farmer survey is presented in Appendix II in the Appendices volume. However, the relationship between the results collected from the survey and the basic plans for activation of village cooperatives is described below.

1) Plan for Strengthening of Organization and Management

The average number of members per household is 2.18, which shows some houses have more than one member. But there were still 12 non-member farm houses and it is necessary to encourage those farmers to join the cooperative.

Of the members who responded to the questionnaire, 98% answered that the membership fees were priced at a suitable level. As for compulsory savings, 44 out of 48 members answered that the amount was appropriate and three said that it was small, which means it is possible to increase owned capital by reviewing the amount of compulsory savings. Concerning KUD activities, 88% of the members answered that they were beneficial and expressed a strong sense of trust and satisfaction. Nine out of 12 non-members wanted to use the KUD for loans and sharing facilities, which means it is possible to encourage them to join the cooperative.

2) Plan for Strengthening of Economic Business

The proportion of rice sold to the KUD is 66%. Many members use Waserda to purchase clothing and other necessities of life and they are strongly expecting improvements in the shops (83%). In answer to a question on which products to promote, most of the respondents suggested poultry (55 people), followed by vegetables (18 people), beef cattle (16 people), parawija (12 people), and fruit trees (12 people). Also, there was a strong desire for the provision of shared facilities (rice polishing units and warehouses) and it will be necessary to respond to this demand in the future.

3) Plan for Strengthening of Credit Business

The average savings of members questioned in the survey are Rp 250,000 and out of this amount, the average amount of voluntary savings at the KUD is Rp 200,000, which shows the members' high usage of the KUD but a small total amount of savings.

Concerning loans, the average balance of loans is Rp 180,000 and that of members who use KUD is Rp 210,000, which shows that although the amount is small, the KUD is used a lot. The demand from the members for a larger variety of loans and an increase in loan limits is high (88%). Concerning the repayment of loans, 9.3% answered that they could not make the repayments even when they became due, which shows that reinforcement of loan qualification procedures and guidance in the management and collection of loans are required.

4) Plan for Strengthening of Human Resource Development and Guidance Activities

Concerning KUD staff members, 90% of members said the KUD staff work hard and evaluated their accuracy and speed as very good. As for agricultural technical advice, the PPL (Agriculture Extension Officers) are the main sources of information followed by neighboring farmers. The members expect the KUD to provide advice on agricultural production (48%), collection and packaging of fruits (46%) and fertilizer (41%). The KUD are not providing practical educational guidance and 20% answered that reinforcement is required in the future. There is a need for the KUD to consider what type of efforts they should make in educational guidance as they enhance the cooperative members' understanding in this area in the future.

(3) Plan for Strengthening of Organization and Management

1) In order to reinforce the business functions of small KUD, sub-district KUD conferences should be set up, the conference members should discuss increasing the membership as well as improving business and services from the viewpoint of the whole sub-district and cooperate in carrying out possible plans.

2) In order to maintain the means of communication with members, the cooperation of the KUD in the installation of wireless telephones should be considered.

3) In order to prevent injustice, unfairness and errors, directors and general managers should learn methods for checking accounting figures, encourage KUD employees to check accounting figures and increase the frequency of audits by auditors and the KJA.

(4) Plan for Strengthening of Economic Business

1) In order to obtain working capital for businesses such as the purchasing, handling and primary processing of oranges, cane, coffee, limestone, coal and so forth, joint ventures or business cooperation should be initiated.

2) Joint businesses for handling livestock or poultry should be initiated. (The provincial government mentioned broilers as one of the "strategic products."). Also, the production of fodder should be initiated by making use of raw materials that can be obtained locally.

3) In order to improve KUD business, the leaders, managers and members of the KUD should be educated and trained and basic business concepts such as, joint marketing, joint purchasing, the sharing of facilities, sharing of capital, and so forth, should be introduced and well understood.

(5) Plan for Strengthening of Credit Business

1) The KUD in South Kalimantan are having difficulties borrowing working capital and investment funds for business facilities from the banks. Three out of five KUD surveyed did not make use of institutional funds to support general business activities. Only BRI actively offers loans to the KUD in this province. Faced with such difficult financing conditions, the KUD in South Kalimantan should forge closer cooperative relationships with PUSKUD and other joint venture partner companies who are capable of supplying funds to support the KUD's production, supply, storing, processing and marketing activities.

2) The average amount of savings per KUD member farm household was Rp 11,000, which ranks as the second highest level in the seven provinces. The number of members per KUD in South Kalimantan is the lowest among the seven provinces, which means that savings per member's household are large. However, the total amount of savings achieved by the 289 KUD in this province is Rp 1.1 billion, which is still small. The KUD should therefore concentrate more energy on savings plans for cooperative members.

3) Savings and loan operations conducted by the South Kalimantan Province KUD are equivalent to 1.0% of total business turnover, which ranks as the sixth highest level in the 7 provinces

surveyed. It would be desirable for the KUD in this province to considerably expand their savings and loans business using loan funds.

4) The investment yield on the capital of South Kalimantan KUD members' investments is 15.1%, which ranks second out of the 7 provinces. Generally, the KUD in this province can only earn a yield slightly lower than the current yield on one year term deposits from the banks. According to management analysis, the KUD of this province should increase sales, expand the use of loan funds and improve investment returns as far as possible.

5) The KUD have opportunities to expand their loan services related to the collection of electricity and telephone charges. The funds produced by these services are important for expansion of the KUD's capital and reinforcement of business cash flow. Therefore, the KUD in this province should take active steps to expand such businesses.

(6) Plan for Strengthening of Human Resource Development and Guidance Activities

In South Kalimantan, education activities of DEKOPINDA is not active and depending on training courses in BALATKOP. However, DEKOPINWIL has a plan to buy the old training facility of BALATKOP and strengthen their own training activities. It is necessary to strengthen the function of DEKOPINDA at this occasion by grappling with a middle term plan. The number of employees are generally small with the average of 2.1, KUD are not operating farm guidance and better living guidance. The followings are the additional plan for South Kalimantan to the common plan for 7 provinces.

1) Strengthening activities of DEKOPINDA and accumulation of education fund in KUD

In DEKOPINDA which has no employees, headed by directors, it is necessary to play the roles of district level educational institution for KUD and grapple with a three year plan for strengthening of DEKOPINDA to boost business budget, business contents and recruit employees. As a first step, the KUD education committee consists of KUD Mandiri-Inti, DEKOPINDA, KANDEPKOP and representatives of KUD in the District shall be established.

2) Establishment of Farm Guidance Section at KUD MANDIRI INTI

For the first stage, establishment of farm guidance section can be started at KUD MANDIRI INTI at District level as a model for guidance activities. As employees of KUD are not experienced in farm guidance activities, KUD which start farm guidance need to recruit candidate PPL or retired PPL as farm advisor of KUD. Regarding the establishment of farm management

technical training centre, as the needs are not matured yet, the liaison meeting between Ministry of Agriculture District Office and PPI shall be organized as a place of exchange of information.

3) Organizing women's group in KUD

In South Kalimantan, the ratio of women members in KUD is very high as the result of promotion of plural participation from one households. In the five KUD the ratio of women members was 20 - 60%. These women shall be organized for promotion of better living activities as a supporting organization to KUD. If such women's group is organized in KUD, linked with business of KUD, women's group of KUD can cooperate in saving promotion or joint purchasing of daily necessities in KUD in future. At KUD, even though the number of employees is small, it is necessary to decide staff in charge of promotion of better living activities by fostering women's organization.

3.4.10 Common Basic Plan for 7 Provinces

(1) Organization and Management

1) Management of organization

a. Formulating and implementing plans to increase the rate of cooperative membership to at least 60%

KUD are organizations designed to pursue profits for cooperative members but when they have few members and cooperation among them is weak, they are unable to achieve this aim. To make them sufficiently effective, it will therefore be necessary to ensure that at least more than half of all adults are members of cooperatives and to decide on and implement plans to raise the adult membership rate to 60%.

(i) A five-year plan to increase cooperative membership with established target increases for each Desa should be formulated and implemented

(ii) Pamphlets and newsletters introducing KUD businesses and the state of their activities should be issued and they should be distributed not only to cooperative members, but also to village residents and particularly farmers. In cases where individual KUD are unable to do this, all KUD in the Kecamatan or Kabupaten should issue pamphlets and newsletters jointly.

(iii) Suitable executives should be chosen by emphasizing Desa where there are no cooperative

members or only few of them. They should attend Kelompok Tani meetings and encourage people to join KUD.

(iv) A membership promotion campaign period focusing on data concerning cooperatives and the anniversary of KUD establishment should be determined and all executives should join together in simultaneously carrying out the membership promotion campaign. Promotion campaigns should include activities such as visiting households, holding anniversary meetings, distributing anniversary products to cooperative members, and displaying banners. However, in cases where there is a shortage of executives, these activities should be carried out with cooperation from active cooperative members.

b. The cultivation and reinforcement of cooperative member organizations

To increase the use of KUD businesses, it is important that conditions are created where cooperative members play an active and responsible role in managing business operations. To achieve this, cooperative member organizations should be cultivated and strengthened.

(i) Producer organizations based on different types of products should be formed with the aim of carrying out joint marketing activities in the future. KUD should select leaders, ask for their cooperation and provide necessary assistance. However, they should basically manage KUD independently. KUD should make efforts to fulfill the wishes of the organization and should seek specific cooperation from producer organizations. When produce is handled as a KUD marketing operation, producer organizations should be made to guarantee to supply KUD with produce continuously for a period of five years.

(ii) KUD should cultivate women's handicraft groups and credit business groups. They should also provide assistance by sharing workshops, marketing products in their region and employing savings and loan businesses.

c. Maintaining and cultivating competent staff

Competent staff that are active in carrying out their work and making proposals to improve their work should be maintained while attempts should be made to enhance the ability of existing employees through education and training. Employees should be paid on a regular basis and motivation to work should be strengthened.

(i) In order to maintain competent employees, new recruits should have graduated from high school at least whenever possible.

(ii) Competent general managers should be hired to fulfill the role of management specialist. The authority of general managers to carry out their work should be investigated and they should be given authority to carry out their work as far as is possible. In addition, a performance-based remuneration system, such as paying a fixed percentage of the current surplus as a bonus, should be introduced for general managers.

d. Merger of small KUD

As most small KUD are unable to offer sufficient businesses and services, they fail to win the trust of their members. As a result, they have stuck in a vicious circle where funds and business operations do not expand and are unable to boost their membership. Such KUD should be encouraged to merge. By concentrating their personnel, facilities and funds, their business capability will be enhanced. Moreover, as Kecamatan are administrative units with a population generally ranging from 50,000 to 60,000, they should at present be considered the most appropriate areas for KUD to operate in.

(i) In cases where there are several KUD within a Kecamatan including large KUD that are functioning adequately, the large KUD should be encouraged to absorb the operations of other KUD.

(ii) Setting up Kecamatan-based councils

When there are several KUD in one Kecamatan and each of them are small, a council should be set up for all the KUD in the Kecamatan and measures should be considered to improve the businesses and services for cooperative members based on the viewpoint of the whole Kecamatan. In cases where KUD can cooperate with each other by sharing facilities or other means, this should be encouraged and when this is difficult to achieve, mergers on an equal basis should be promoted.

(iii) Government assistance should be sought when it is difficult to deal with poorly performing assets as a result of mergers.

2) Management and Administration

a. Strengthening planning and administrative functions

The lack of planning and administrative functions that enable plans to be formulated and continuously pursued is a cause of stagnant business activity. Departments in charge of planning

and administration should be clearly identified and planning and administrative functions should be strengthened.

(i) Setting up planning and administration departments

Planning and administration departments should be set up as independent departments under the direction of general managers. KUD that find it difficult to set up independent departments should put any of their general affairs and administration-related departments in charge of this function and at least clearly identify those staff responsible.

(ii) Planning and administration departments should devise three-year plans to improve business operations and develop new businesses as well as prepare business plans at the end of each financial year. In accordance with these plans, they should also formulate facility and equipment plans, funding plans, and staff budgets. Moreover, they should check the progress of these plans and provide appropriate guidance to each department.

(iii) formulating plans to promote regional agricultural activity

KUD should cooperate, when possible, with Kabupaten and Kecamatan to formulate plans to promote regional agricultural activity within their districts. These regional agricultural promotion plans should provide forecasts for the region over the next ten years approximately. When devising these regional agricultural promotion plans, there should be sufficient discussion between cooperative members and groups such as producer organizations and the desires of cooperative members should be integrated into the plans. This will improve the motivation of cooperative members.

b. Building up equity capital

In order to alleviate a shortage of funds, the KUD's most stable source of funds, namely, equity capital should be built up.

(i) Three-year plans, such as specific business plans and facility and equipment plans, should be presented to cooperative members; corresponding 3-year plans to increase capital should be formulated and presented; and after sufficient discussion has been carried out, these plans should be implemented.

(ii) Efforts should be made to ensure that all cooperative members pay compulsory savings deposits and that these are collected. A simple payment method, such as annual lump sum payments and the appropriation of part of sales proceeds and dividends, should be adopted. In addition, the amount paid per person should be raised and KUD should ensure that executives collect money every month, when this is possible.

(iii) Besides membership fees and compulsory savings deposits, KUD should establish a system whereby cooperative members can freely contribute "financing capital" to the KUD as a means of boosting equity capital.

(iv) Current surpluses should be boosted by means of active business efforts and cost cutting and surpluses should be used to increase internal savings. KUD with internal savings rates should raise their savings rates.

c. Establishing funds for the joint use of facilities

If KUD cooperated with each other, they could provide the facilities they lack and use them efficiently. Institutional funds should be organized for facilities that could be used jointly by several KUD and the provision of jointly used facilities should be promoted.

d. Conducting internal audits

To prevent corruption, improper behavior and mistakes occurring, KUD should conduct internal audits when this is possible. (Internal audits means those conducted by staff in charge of this function at the KUD, not audits by auditors.)

e. Establishing the widespread adoption of a standardized accounting system

In order to speed up accounting procedures and make them more accurate as well as to evaluate departmental profits and losses in a precise manner, organizations should be set up by DEKOPINWIL, PUSKUD and KJA. The standard accounting system prescribed by the Ministry of Cooperatives and Small Enterprises should be more widely adopted.

f. Audits and management instruction by KJA

The number of KUD audited by KJA should be substantially increased and management instruction should be reinforced. To enhance the capacity to bear the costs involved, KUD should be encouraged to save funds for audit expenses.

(2) Economic Business

The only businesses that many KUD in the seven provinces have been engaged in are marketing rice to Bulog and supplying fertilizer (mainly urea) to cooperative members.

Since 1990, the Indonesian government has adopted a policy of promoting agriculture by making full use of the special features of each region. Although KUD have encouraged participation in the processing and marketing of agricultural and livestock products apart from rice, KUD are still not actively starting up new businesses or handling new products because of the low level of knowledge and awareness among the members. Consequently, while bearing in mind this situation, we have decided on additional specific basic plans that integrate the particular agricultural characteristics of each province. These individual plans are based on the concepts in the common basic plan outlined below.

- 1) Spreading the basic concept that advantages can be gained from KUD engaging in joint marketing and purchasing and the joint use of facilities

The concept that joint marketing and purchasing and the joint use of facilities by cooperative members through their KUD leads to advantageous marketing, cost reductions, and an improved life-style should be spread more widely. (This appears in the basic plan for education and guidance).

- 2) Establishing economic, service, and business facilities and introducing distribution equipment

In response to regional needs, new joint marketing and purchasing facilities as well as joint use facilities should be established and distribution equipment should be introduced based on the consensus of related cooperative members and other members. (The issue of the establishment of the main business facilities for each province appears in the individual basic plans for each province.)

- 3) Establishing a joint marketing system that is advantageous for cooperative members

The following methods can be used to establish a joint marketing system. By using these methods, daily connections between KUD and cooperative members will be strengthened.

- a. Establishing more producer organizations (the types of organizations and particular association activities appear in the individual plans for each province)

- b. Carrying out joint marketing using a pool calculation system
 - c. Creating a marketing information system
 - d. Opening agricultural settlement accounts for KUD members
 - e. Gradually establishing a KUD farm guidance system and providing more guidance activities at commodity-wise group meetings
- 4) Responding to the need for new materials and products

New needs arise based on changing conditions in regional societies - for example, agricultural machinery that can cope with very heavy labor such as plowing, and supply of concentrated feeds for livestock production. To meet such demands a comprehensive system of services should be established (materials and other goods that are experiencing new expansion appear in the individual plans for each province).

- 5) Establishment of KUD facility investment funds and working capital

Demand for investment in KUD facilities and for working capital, which are required for new business activities are increasing but many KUD have insufficient own capital and have to depend on external funding. Nevertheless, there is no system of low interest financing for such needs. Therefore, demands should be made to establish a new financing system and this should be introduced at KUD.

- 6) Reinforcing links between KUD and PUSKUD

There are differences between provinces in PUSKUD organizations and management strength but business links between KUD and confederated councils should be strengthened through efforts to gain trading partners, cooperation in promoting the administration of business development, information exchanges concerning purchasing and marketing operations, and so forth. (Actual examples of such links appear in individual plans for each province.)

- 7) Promoting joint ventures with private sectors

KUD are basically agricultural areas that provide raw materials to meet the needs of private companies involved in processing and distribution. They should therefore sign long-term sales contracts and carry out joint-venture processing businesses with private operators as this will encourage the commitment of cooperative members who are agricultural producers. (Examples of products appear in individual plans for each province.)

(3) Credit Business

1) Institutional Borrowing by KUD

In order to improve KUD and member access to and use of institutional credit, the following general directions are recommended :

a. Strengthen KUD Financial Business Concepts

KUD need to be more aware of the importance of using borrowed capital to support business growth and expansion. KUD management also needs to be more aware of working capital (cash flow) requirements to support optimum business volume/production capacity and business turnover capability, based on KUD facility capabilities and member service demand requirements.

b. Increase KUD Capacity to Develop Business and Capital Growth Plan

KUD needs to improve their business planning capacity, including business diversification/growth planning for profit expansion and strategic planning for capital build-up, in order to better qualify and compete for access to conventional lending.

c. Increase KUD Level of Contact with Banks/Sources of External Funds

KUD need increased contact with formal banking institutions and should explore financing arrangement with private joint venture business partners with established bank financing/credit linkages.

2) Institutional Lending to KUD and KUD members

In order to improve institutional credit delivery to KUD and KUD members, the following general credit policy directions are recommended :

a. Expand Range of Financial Products Available to KUD and Members

KUD need access to a wider-range of loan products to support diversified or general business operations, including : short-term credit, for seasonal commodity procurement and storage, and for farmer-member agricultural production ; medium-term credit, for general business working capital, and for savings and loan business on-lending to members ; and medium and long-term investment credit for financing KUD and member equipment needs, machineries, transportation, facilities and other fixed assets.

b. Develop New Policies Covering KUD Loan Guarantee/Insurances Schemes

As the range of financial products available to serve KUD and KUD members expands, new measures needs to be developed to cover loan risk through guarantee and/or insurance schemes (e.g. warehouse storage insurance [bonding] system for commodity/storage loans) which support cost-sharing between borrower and lender.

c. Improve Bank-to-Bank and Bank-to-Informal Credit Network Linkages

For bank-to-bank networking, stronger linkages should be developed between rural-based banks (e.g.BPR, KBPR, BRI, BUKOPIN) and other progressive commercial and development banks, (e.g.BPD). For bank-to-informal credit networking, such linkages will reduce financial transaction costs and expand financial market penetration in rural areas where KUD operate and members reside.

d. Strengthen Bank Internal Capacity and External Resource Linkages

Banks supporting KUD and member lending programs need further internal skills development and better external resource access in areas of technical/financial loan appraisal, KUD business pro-motion, and KUD administration and operational business management.

3) KUD Business : Member Savings and Loans

In order to develop effective KUD savings and loan business the following general directions are recommended :

a. Strengthen Credit Administrative Capability within KUD

By simplifying and/or standardizing procedures for credit planning and loan processing ; bookkeeping ; improving loan supervision ; installing effective credit management information and reporting systems/procedures ; and enforcing credit collection discipline.

b. Create Member Incentives for Savings

By paying competitive market rates of interest on all types of saving ; initiating savings promotion campaigns and award programs for member voluntary savings growth ; incorporating compulsory savings schemes into all member lending programs ; and supporting savings activities involving women and former groups (kelompok) .

c. Improve Loan Recovery and Reduce Saving and Loan Transaction Costs

By adopting progressive policies and procedures which devolve savings and loan administration to the local level and allow women and farmer groups to play a more direct role in savings formation, loan supervision, credit risk and repayment. Loan policies should support market interest rates, loan period not exceeding three months, and frequent and uniform repayment schedules.

d. Support Member Training to Increase Borrower Credit Awareness and Savings Discipline

4) KUD Business : Member Credit Channeling

In order to improve KUD business of agricultural production credit channeling to members the following general directions are recommended :

a. Where feasible, loans from banks for production credit should be made directly to the KUD for periods up to two years, for re-lending by the KUD to KUD members ;

b.KUD administrative re-lending policies and procedures should be simplified, standardized and decentralized ; and

c. Loan program coordination should be improved and functional relationships redefined/strengthened between KUD, member borrowers and borrower groups, participating banks and extension workers.

(4) Human Resource Development And Guidance Activities

1) Education Activities

Education activities for officials and employees of KUD are essential for development of KUD business in response to the demand of KUD members. However, the potential power of each KUD for education activities is different as seen in the gap of number of employees held ranged from zero to several hundreds, as well as the amount of budget to be allocated for education expenses.

Individual KUD has its own needs and problems and it is necessary to establish an education plan to suit the development stage of KUD respectively. The means of promotion of education activities for KUD can be divided into two approaches , one is that to be done at each KUD level and the other is to be promoted with the assistance of the administrations, cooperative unions and federations. In a bid to respond to the specified needs held by each KUD, the precise measures based on identification of the division of functions in different stages and various institutions in charge of promotion of education activities are necessary to be taken at primary level KUD, provincial and district level administrations, cooperative unions and federations.

Looking at 7 provinces surveyed, the education activities in cooperative organizations such as DEKOPINDA (District Union of Cooperatives) and DEKOPINWIL (Provincial Union of Agricultural Cooperatives) in 3 provinces, namely, West Java, East Java and South Sulawesi, are active and they also utilize the training opportunities offered by BALATKOP (Provincial Training Centre for Cooperatives and Small Enterprises) run by the Provincial Office of Ministry of Cooperatives and Small Enterprises. On the other hand, the other 4 provinces, the major training opportunities are offered by BALATKOP and KUD are depending on administrations for promotion of education activities rather than cooperative unions.

At district level, although it has no training facilities, KANDEPKOP (District Office of Ministry of Cooperatives and Small Enterprises Development) has assigned 5 to 10 cooperative extension officers (PKL) and providing guidance to KUD and its members as well as supporting education activities promoted by cooperative unions and KUD Mandiri Inti designated by the Provincial Office (KANWILKOP).

The division of functions in various institutions and the basic plan for education activities for activation of KUD which can be commonly implemented by middle class KUD (having more than 5 employees) in 7 provinces are as follows. The education activities at district level and province level are different according to the degree of involvement of cooperative organizations and the approach for development would be also different. The division of functions given below can be adopted in the provinces where DEKOPINDA and DEKOPINWIL are active and the other provinces needs additional steps to strengthen DEKOPINDA and DEKOPINWIL for several years to commence education activities and to play the role based on the division of functions.

a. Division of functions and plan for education activities in KUD

- For increasing education fund in KUD

Middle class KUD which enroll the current surplus should commence accumulation of the education fund targeting 5 % (maximum) of the current surplus by earmarking it for education activities.

- Formulation of a five year plan for promotion of education activities and its implementation

The target for nurturing capability of officials and employees necessary for expansion of business should be identified at each KUD for formulation of a five year plan for promotion of education activities. The education plan of KUD should be formulated dividing into two categories of internal and external education programs. The necessary expenses should be earmarked with the approval of the general meeting. The plan should include the systematic education plan for individual officials and employees according to their year of service and training experience and also, annual plan should be formulated and implemented based on the five year plan. Also, the plan for effective utilization of training opportunities offered by both administration and cooperative organizations in the district and the province level should be identified in the annual plan.

- For nurturing of specified skills and clerical capabilities of employees

For individual employees, according to the types of job (saving and loan, supply, marketing, retail

shop , etc.), a plan for nurturing of the capability of employees is necessary to be formulated.

In this field, as effective training to be implemented by KUD, for example, is to dispatch employees of KUD to the urban KUD in the province which is advanced in the saving and loan business or to privated banks for on the job training to transfer the advanced technology to the needy KUD. Most of KUD in rural area is not operating saving and loan business with standard market interest rates due to lack of knowledge of employees and the basic training for operation of saving and loan is necessary. For adoption of saving and loan business in KUD, if a certain number of employees in charge of the businesses were obtained, the training for adomtion of computer works would be necessary in the future.

Regarding training for employees in charge of marketing business, as the concept and measures for joint marketing are not widely disseminated in KUD, the training is necessary to introduce merits and measures for joint marketing and measures for fostering of producers groups and their roles to be played in joint marketing operation as well as a strategy for development of marketing channels.

In the training for employees in charge of purchasing (supply) business, as the necessary subjects, joint purchasing system of production materials and consumer goods, commodity knowledge and farm management loan system linked with saving and loan business are necessary to be taken up. However, as this field of business is not well performed by KUD with few experiences, it would be necessary to develop a program at the provincial level training institution (BALATKOP) by inviting experienced general managers of advanced KUD as an instructor based on case study.

- For reinforcement of on the job training

The section in charge of promotion of on the job training or person in charge is necessary to be established at KUD to formulate annual plan for implementation of on the job training and to foster instructors among employees or officials of KUD.

- For precipitating of member participation

Regarding member education, it is imperative for KUD to set up the annual target for lecture meetings and members discussion meeting. Members discussion meetings are to be held regularly at the unit of Kelompok Tani with the possitive promotion of officials and employees. As the proportion of KUD members in Kelompok Tani is more than 50%, it would be possible to take initiatives for the meeting and gradually invite participation of non-members. Periodical publication of KUD bulletin, pamphlet to introduce KUD activities to explain merits to utilize the business of KUD are useful to distribute among members or to be use as textbook at members discussion meetings.

Also, it is important for KUD to foster various objective member organizations such as producers groups (if possible, commodity wise), youth associations and women's associations among members, appeal for patronage of KUD business through fostering leaders and to develop cooperative movement together with members aiming at improvement of service to members and expansion of business.

b. Division of functions and plan for education activities at district level institutions

It would be necessary to identify the division of functions between KANDEPKOP, DEKOPINDA and KUD Mandiri Inti as well as promotion of education activities through cooperation and coordination with these three institutions. KANDEPKOP and KUD Mandiri Inti are established at each district, however, some DEKOPINDA has no employees and inactive in education activities. It is necessary to strengthen inactive DEKOPINDA. The division of functions and plans for education activities at district level are as follows.

KANDEPKOP

KANDEPKOP employees PKL (cooperative extension workers) to develop KUD and other types of cooperatives. Although it has no specified training facilities, KANDEPKOP is dispatching instructors for training programs operated by DEKOPINDA as well as providing financial assistance to support education activities of KUD officials and employees which are carried out by KUD Mandiri Inti. These current functions of KANDEPKOP should be further strengthened and also by establishing a section in charge of supporting education activities of individual KUD to nurture and dispatch instructors needed by KUD. Also, a district level KUD education council shall be organized by KANDEPKOP together with DEKOPINDA and KUD Mandiri Inti to grasp training needs and reflect them to the training program of BALATKOP.

DEKOPINDA

There are some DEKOPINDA which has no employees and not active for education activities. However, the one of the objectives of DEKOPINDA is to provide education activities for the development of KUD and most of KUD are being members of DEKOPINDA. The key for the success of education activities for KUD at district level is depending whether the function of DEKOPINDA is fully played or not. In the districts where DEKOPINDA is inactive, it is imperative to grapple with the middle term plan such as three year plan for strengthening of DEKOPINDA with the level of other districts. In case of North Sumatra, South Kalimantan, Lampung and West Nusa Tenggara, DEKOPINDA in these provinces are mostly inactive and some intensified measures to strengthen DEKOPINDA would be necessary.

The contents of education activities to be carried out by DEKOPINDA are member education and public relation activities for expansion of membership, training for employees of KUD according

to years of services, training for chairman and other officials (directors, supervisors). In the training at DEKOPINDA, to make it efficient, instructors are to be invited from KANDEPKOP, BALATKOP and KANWILKOP. In case of training for supervisors, the use of audit service cooperative (KJA) would be efficient.

KUD Mandiri Inti

KUD Mandiri Inti at district level is also carrying out training of employees of other KUD in the district using the meeting room of the KUD or through on the job training. In other words, KUD which can not conduct on the job training by themselves consigns to KUD Mandiri Inti to nurture capability of their own employees. In case, KUD Mandiri Inti accepts trainees from other KUD, KANDEPKOP provides financial assistance. In order to strengthen the function, it is necessary to foster instructors in KUD Mandiri Inti and it is desirable that KUD which send their employees for training can secure the necessary expenses in addition to the assistance from KANDEPKOP.

The suggested subjects for training handled by KUD Mandiri Inti are as follows:

- Joint marketing activities in the district is necessary to be handled because the commodities produced by KUD are almost same and it would be effective to study the method together with other KUD in the district.
- On the job training for employees who are in charge of saving and loan business.
- Collective training for employees of KUD in the district by inviting instructors from outside sources such as KANDEPKOP and DEKOPINDA etc.

c. Division of functions at provincial level institutions and a plan for education activities

The major provincial level institutions which are carrying out cooperative education are BALATKOP, DEKOPINWIL, KJA and PUSKUD. Cooperative education activities by DEKOPINWIL are active in West Java, East Java and South Sulawesi other 4 provinces are not active. It is essential for cooperative sectors to carry out cooperative education by themselves at the training facilities of cooperative organizations. As the self-reliant KUD (Mandiri) became majority in the KUD movement, to achieve the self-reliant both in names and facts, it is imperative for DEKOPINWIL to establish its own training facilities and promote education activities within cooperative movements in the future and gradually take over a part of functions played by the current BALATKOP. The training program for cooperatives by the government is formulated based on the budget allocated for the Ministry of Cooperatives and Small Enterprises Development. There were some cases that the necessary training subjects in BALATKOP was replaced with the new subjects. For example, cooperative accounting is the necessary subject for newly established KUD and new employees, however, as the other advanced KUD needed another subjects such as marketing and electric utility charge payment service. There were some instructors in the BALATKOP who insisted need for continuance of the accounting course, however, due to

the budget constraints, it was replaced with other new subjects. If cooperatives were depending the education of their staffs to the government only, the budget constraints for selection of training subjects could not be avoided and employees of KUD would lose the chance of necessary training for the development of KUD activities.

Therefore, the division of function between BALATKOP and DEKOPINWIL is necessary to be established to secure continuous inputs for staff of KUD. In three provinces where the DEKOPINWIL are active, it is suggested to establish a middle term plan (5 years) to strengthen DEKOPINWIL to take over a part of the training programs of BALATKOP. Also, it is necessary to increase training opportunities for KUD in BALATKOP as well as development of new training courses or advance training courses needed by KUD. In case of other 4 provinces, the long term views (7 to 10 years) to strengthen DEKOPINWIL would be necessary to establish the division of functions between BALATKOP and DEKOPINWIL.

The division of functions between institutions carrying out education for KUD in the provincial level is suggested as follows.

BALATKOP

- In the training course for directors and supervisors, advanced courses should be carried out which are higher in levels than the training courses conducted by DEKOPINDA or DEKOPINWIL. The subjects to be introduced are advanced business theory, especially giving a focus to savings and loan business and marketing business, organizational management (measures of holding general meetings, methods of member education, fostering of commodity-wise groups and women's groups, personnel administration, preparation of financial statements, internal auditing, decision making role play and other necessary subjects) and various problem solving case studies.
- High level training course for employees according to types of job such as computerization of accounting system, case study for general managers, marketing strategy, savings and loan business.
- Supporting members education conducted by KUD and DEKOPINDA through developing text books and sending instructors.
- Obtaining necessary budget for development of new training programs, obtaining instructors and modernization of education materials such as audio visual aids.
- Training of employees and officials of DEKOPINDA and DEKOPINWIL.

DEKOPINWIL

The function of DEKOPINWIL is basically to support and supplement education activities of DEKOPINDA and the division of function would be established according to the situation of development of education activities at DEKOPINDA according to districts.

- Standardization of text books to be use at DEKOPINDA and fostering of instructors to support training at DEKOPINDA and KUD Mandiri Inti for members education and on the job training.

- Formulation of a five year plan to strengthen education activities of DEKOPINWIL and its implementation through annual action plan. In case DEKOPINWIL has no training facilities, the plan should include establishment of training facilities.
- Training of employees according to the period of service are to be handled by DEKOPINWIL for basic course and middle class employees course including general managers.
- Training of employees in charge of accounting to disseminate the standard accounting system.
- Training of newly appointed directors, supervisors and chairman of KUD.
- Training of employees according to types of job (basic course) including better living activities.
- Training of employees of DEKOPINDA in charge of education activities.
- Training of women members of KUD.

PUSKUD

- Establish a training section in PUSKUD to improve clerical work capability of employees of KUD in charge of marketing and purchasing business.
- To prepare the standard manuals for marketing and purchasing business of KUD and circulate to KUD as well as use them as text books for training.

KJA

- Carrying out training for supervisors, employees in charge of accounting and internal audit to prevent mistakes of clerical works and miss appropriations.
- Preparation of manuals for standardization of accounting system, unification of financial statements and methods of internal audit and use them as text books.

2) A Plan For Promotion of Farm Guidance At KUD

Looking at seven provinces surveyed, many KUD in West Java and East Java are assigning employees in charge of guidance on agricultural production mainly for dairy farming. In South Sulawesi, Lampung and West Nusa Tenggara, employees who are in charge of farm guidance are found in some of KUD although they are not specified in guidance only but they have other duties at KUD. On the other hand, in North Sumatra and South Kalimantan, farm guidance activities are not carrying out by KUD due to shortage of employees. Therefore, the plan for promotion of farm guidance would be different according to the situation of provinces and the plan for KUD is introduced as some common tasks to be adopted in middle class KUD and districts and provinces by spending about 5 years.

- For strengthening of the function of farm guidance at KUD level

Phase in the farm guidance section at KUD starting with KUD Mandiri Inti through organizing

commodity-wise groups and fostering its leaders. In case KUD has no technical staff, the following measures to obtain technical staff are suggested:

- To nominate member farmer who has high technology and consign farm guidance. KUD will pay remunerations for the guidance;
- Recruit retired PPL (Agricultural Extension Worker) or candidate PPL;
- Dispatch employees in charge of farm guidance to the agricultural research institute to gain necessary technology.

Regarding organization of commodity-wise groups, as about 50% of Kelompok Tani members are also members of KUD, it would be possible to start organizing commodity-wise groups headed by KUD members. The commodity wise group will be a place of technical guidance as well as member education on merits and measures for joint marketing as well as improvement and standardization of production technology. Farm guidance of KUD is service to members with free of charge and the expenses are to be derived from surplus fund and commissions for marketing and purchasing business.

- Establishment of farm guidance information centre at district level

The integrated approach to farm households by PPL, PKL and KUD is desirable to be established at District level for major commodities produced in the district. Therefore, with cooperation of Ministry of Agriculture and PPL, farm guidance coordination and information centre to support farm guidance of KUD by providing necessary information shall be established at district level headed by KUD Mandiri Inti.

- Establishment of a structure to support farm guidance at province level

At province level, with the cooperation of BALATKOP, DEKOPINWIL, PUSKUD, KUD and other national level federations, with joint investment by the government and cooperative organizations, a technical training centre is desirable to be established in the provinces which are possible to do so as a training facilities for employees of KUD in charge of farm guidance and leaders of commodity-wise groups to be organized in the future. Instructors are to be invited from Ministry of Agriculture provincial office, PPL, PPS, PUSKUD, National level Federations such as INKUD and GKSI as well as private research institutions. As a first step, the section in charge of facilitating farm guidance should be established at DEKOPINWIL. Then the plan for establishment of training facilities for farm advisors shall be grappled with through formulation of middle-term plan or long-term plan according to the situation of each province.

3) Plan For Strengthening of Better Living Guidance of KUD

Looking at seven provinces surveyed, some of KUD in 5 provinces except South Kalimantan and

North Sumatra are carrying out various better living guidance by employees as additional service to members. The major contents of guidance are rationalization of family expenses, health care, consultation on tax filing and legal affairs, family planning and consumer life. The significance of handling better living guidance for KUD is to provide visible merits for being members of KUD to uplift reliability to KUD. Therefore, it is desirable for KUD to grapple with better living guidance through formulation and implementation of a middle term plan at each stage of organization.

- Strengthening of better living guidance at KUD level

KUD which has an experience for providing better living guidance shall establish a section and assign staff exclusively in charge of better living guidance by formulating a middle term plan to promote better living activities among members. As a propelling force, women members are to be organized in KUD and leaders are to be fostered by KUD. KUD obtains budget for better living guidance. Women members ratio at national average is 21% and the highest was 40% in one of KUD in South Kalimantan. Therefore it would be possible to organize women members. The contents of better living guidance are to cover the following matters:

- Rationalization of family expenses and saving campaign linked with saving and loan business of KUD;
- Health care and family planning with cooperation with Ministry of Welfare;
- Consultation on tax and legal affairs;
- Commodity knowledge and joint purchasing of consumer goods through purchasing business of KUD (retail shop).

- Establishment of Better Living Centre and KUD Women's Committee at District level

In cooperation with advisors of family planning, Department of Social, PKL and KANDEPKOP, better living coordination and information centre shall be established at District level. The office shall be established at DEKOPINDA as additional function of DEKOPINDA and by commencing better living guidance at DEKOPINDA, it would lead activation of DEKOPINDA activities. The function of the centre is to provide training of employees of KUD and members as well as planning better living activities in the District and its implementation.

- Function of supporting better living guidance of KUD at province level

At province level, DEKOPINWIL is the competent organization to support better living guidance by KUD. The better living guidance section shall be established at DEKOPINWIL with a staff who exclusively in charge of giving advise to KUD and facilitate organizing women members and in charge of coordination with administrations. Also, training of better living advisors of KUD and women leaders are to be carried out by DEKOPINWIL. Also, at DEPKOP and

KANWILKOP, the section of better living guidance is to be established to support, supervise and coordinate the activities with relating government organizations.

3.4.11 The Major Problems and Basic Plans in 7 Provinces (Review)

(1) Major Problems and Basic Plans (Review)

Based on an analysis of the results of local surveys of KUD in the 7 provinces, we have proposed common and individual basic plans for the 7 provinces. However, as we have summarized the important problems and basic plans mentioned below, we will take note of these points from hereon and make proposals for the formulation and implementation of specific activation plans by each KUD covering these areas.

1) Organization

(i) Problems

According to our survey of the intentions of farmer cooperative members, the majority of farmers agree with the spirit of joint activities by KUD. However, KUD have insufficient capability to handle "reception services" (working capital and transportation as well as facility handling capability, etc. for buying in goods). Moreover, they either handle only a small amount of the major produce in their region or hold a small share or close to none at all of such markets, which makes it impossible for members to see the specific benefits of joint marketing and purchasing. In addition, members are not strongly organized.

(ii) Proposals

A specific plan should be drawn up to expand joint marketing, joint purchasing and the sharing of facilities by KUD. Concrete advantages, cost savings, and improvements in people's way of life should be widely promoted and explained in conjunction with attempts to increase membership rates.

2) Management

(i) Problems

If we look at the majority of KUD in the 7 provinces, they are often unable to actively formulate their own business plans in which latent growth potential is projected because of a lack of human resources. Furthermore, it is essential for the current directors to seize every business opportunity and to try to improve their ability by means of continued practical training. However, it is difficult for KUD to set up training facilities and implement training plans using their own financial

resources.

(ii) Proposals

a. Securing staff with planning ability

The salary levels of directors should be drastically raised while competent general managers and young employees should be hired and maintained. Plans to establish joint marketing and shared facilities should be devised based on close communication with directors, members, and associated organizations.

b. Encouraging the formulation of business plans

As the need arises, connections and cooperation should be encouraged with relevant PUSKUD, GKSI, and joint venture companies in the areas of technical guidance, marketing contracts, the supply of raw materials, and so forth.

c. Planning of practical local training

KUD directors and young employees should be dispatched for long and short periods to KUD in successful and advanced areas while local and on-site training should be promoted. There is little good training of a practical nature. Comparisons should be made of the strong points and weak points of KUD that are aware of their problems and these should be used to improve the management of KUD.

d. Making full use of post-harvest centers

It would be desirable for PUSKUD and INKUD to set up and operate technical research and training centers for KUD that want to plan rice-related businesses or non-rice agricultural production, horticultural and livestock processing businesses but they are unable to do this immediately because of a lack of owned capital. Consequently, the functions of Ministry of Cooperatives and Small Enterprises' Post Harvest Training Center should be expanded and reinforced and technical training should be provided to KUD employees.

3) Economic Business

(i) Problems

Rice polishing facilities at many KUD in rice growing regions are becoming more and more outworn. As a result, we believe half of the KUD in these regions are operating at low rates which are below capacity or not operating at all. In addition, there is no integration between the drying of raw materials, their storage and processing and transportation systems, which hinders business expansion. Members are engaged in poultry raising but most KUD are lagging behind in becoming involved in new businesses such as the supply of mixed fodder, which has latent growth potential, and they have a negative attitude toward such businesses. Moreover, cooperation with PUSKUD

and other organizations involving existing and new businesses is rare.

(ii) Proposals

a. Improvement of existing businesses

Business plans based on economic, credit and other businesses should be devised and implemented while meetings to examine business results should be held regularly. In addition, meetings involving those in charge of planning should be held and plans for mutual exchanges between trainees for specific businesses should be formulated and carried out.

At many KUD, existing business facilities are operating at low capacity rates mainly because these facilities are outworn and because of an imbalance between processing, storage and distribution. Therefore, facility renewal plans should be devised to eliminate these problems.

b. Dealing with new businesses

Plans to increase production of specialty produce based on regional promotion plans should be devised and implemented with the aim of improving cooperative members' incomes. Alternatively, businesses that make full use of local unused resources should be formulated and carried out.

As regards the supply of materials and the sale of agricultural produce, mutual cooperation between KUD and PUSKUD should be strengthened further.

4) Credit Business

(i) Problems

Savings, which should contribute to asset formation for members, have not been built up sufficiently because KUD systems and business response capability are weak. There is still a strong demand for farming finance and finance aimed at ensuring the smooth operation of KUD business management. In order to attract finance from external institutions, it will be necessary to boost savings and to show that the management of KUD is relied on by members.

(ii) Proposals

a. Accumulation of internal capital such as savings

Most of the KUD surveyed suffer from excessively small amounts of capital. To improve this situation, it would be desirable to raise interest rates on savings to the level of market interest rates but it will be difficult to do this immediately. Accordingly, in-kind savings by such as rice husks should be encouraged and steady efforts need to be made by women's groups and other organizations to continue small savings.

b. Assistance measures such as an external low-interest finance system

Many KUD lack owned capital and therefore have to rely on external finance to renew and replace

their outworn existing facilities as well as to start up new businesses involving produce that can be expected to generate new demand. However, there is no long-term, low-interest finance system, which KUD require. The government therefore needs to take steps to establish such a system.

5) Farming and Educational Guidance Activities

(i) Problems

At present, few KUD have specialist staff in charge of farming guidance, and the businesses and services of many KUD are in a state of stagnation. On the other hand, KUD that are achieving remarkable expansion have appointed competent farming guidance staff.

(ii) Proposals

a. Promotion of farming and better living guidance by KUD

KUD should hire former agricultural extension officers, who are experienced in farming instruction, as well as candidates for agricultural extension officers and develop new activities.

In addition, farming guidance coordination centers should be set up at KUD Mandiri INTI for the purpose of improving the ability of farming instructors at surrounding KUD.

In the case of better living guidance, better living guidance promotion centers should be established at DEKOPINDA (District Union of Cooperatives) and district KUD women's committees should be set up to cultivate and instruct female leaders.

6) Other Service Businesses

KUD should become actively involved in businesses related to various kinds of public services, including collection of telephone usage charges, and attempts should be made to improve services for regional residents.

7) Cooperation between KUD, PUSKUD and Others

(i) Problems

PUSKUD was originally established by KUD for the purpose of providing business support to ensure the business development of KUD. There is a strong relationship between PUSKUD and KUD in terms of the distribution of cloves used to flavor tobacco, which is a special concession granted by the government. However, PUSKUD is busy carrying out its own enterprises, which have little connection with KUD businesses, in order to maintain its own management.

(ii) Proposals

a. Evaluation of KUD needs and establishment of PUSKUD development guidance policies

Setting up facilities, finance, distribution and the provision of technical information are all

essential requirements for carrying out businesses at individual KUD and these are related to raising members' incomes and providing specific services aimed at improving people's way of life. However, PUSKUD should always evaluate the needs of sellers, purchasers and KUD and provide cooperation and development guidance aimed at ensuring the development of mutual businesses.

b. Hiring of PUSKUD development staff

PUSKUD should carry out research on the development of KUD businesses that have growth potential and hire employees for this purpose.

c. The government's role

KUD should compile the desires of members through PUSKUD and put pressure on PUSKUD to fulfill them. Moreover, the government should provide guidance to strengthen cooperation between PUSKUD and KUD.

8) Audits and management guidance through provincial level audit of cooperatives (KJA)

(i) Problems

Although there are differences between provinces, the majority of KUD in some provinces are unable to receive guidance because of the cost burden of audits and management guidance. It is therefore essential to explain the benefits of KUD being audited so that dishonesty and other problems can be quickly revealed.

(ii) Proposals

Attempts should be made to greatly increase the number of KUD that receive audits and management guidance from KJA. For this purpose, it will be necessary to encourage KUD to save funds to pay for the cost of audits but we recommend that the government should provide assistance when KUD are unable to shoulder these costs.

Chapter 4

Chapter 4 Detailed Integrated Development Plan for Model KUD

4.1 Criteria and Result of Selecting Model KUD on the Phase III Study

6 KUD surveyed were selected from among KUDs which were under survey in the Phase III study, in consultation with Indonesian Government Authority.

Criteria for selection

1. Selection should be made in 2 Districts, i.e. Bandung District and Sidrup District in accordance with Inception Report.
2. Model KUD should be KUD Mandiri Inti or KUD Mandiri.
3. Number of model KUD should be 3 in each district, making a total of 6.

In line with the above criteria, following KUD were selected as model KUD to be surveyed during the Phase III Survey.

Bundung District (Highland area)	Tani Mukti Walatra Pasir Jambu
Sidrup District (Irrigated area)	Semangat Matutu Sipatuwo

KUD Tani Mukti

4.2 KUD Tani Mukti

4.2.1 Present Situation and Evaluation

(1) Present Situation

1) Natural Conditions and Agricultural Production

As KUD Tani Mukti is in a cold agricultural region which is located at a high altitude, it is designated in the agro-eco system as a region for promoting the production of vegetables and dairy farming. Due to various conditions, including the fact that it is cold in climate, that it is located in a mountainous region, and that it is near the marketplace of a large city, it is a leading region for vegetable production and dairy farming.

2) Historical Background of the KUD, and the Promotion of Dairy Farming

KUD Tani Mukti was established in 1977, and registered as a KUD in August 1988. In June 1990, it was recognized as an autonomous KUD (Mandiri).

As of 1981 the KUD has been receiving funding for the introduction of dairy cattle, and since then it has been promoting the introduction of dairy cattle, focusing mainly on peasants who only have a small amount of land. Currently, 690 households engaged in dairy farming have 1,300 heads of cattle.

The introduction of dairy cattle has provided peasants with work and income. In addition to greatly contributing to the improvement of the lives of households engaged in farming, it has also resulted in developing dairy farming into a major industry in the region.

As the main business in this KUD is dairy farming, 82% of loans to cooperative members, and 69% of the total assets are constituted by loans for funding the introduction of dairy cattle. Also, half of the employees are involved in dairy farming. The KUD is attempting to triple the number of dairy cattle owned by the KUD in a period of five years. It is possible to achieve this if, rather than selling the female calves which have been born locally, the households engaged in dairy farming raise these cattle themselves. However, due to a need for cash brought on by a shortage of funds to support themselves, there are a lot of people who sell to other regions female calves which have been born to them. For this reason, not being able to provide themselves with choice cattle in their own region, there is a trend rather for a decrease in the number of dairy cattle.

(There has been a recovery since 1997.) Since steer calves are sold while they are still small, and not fattened locally for the purpose of slaughtering them for beef, there is no added value on

these cattle, resulting in low proceeds for households engaged in farming.

The provision of feed represents a big problem in the production of high-quality milk, and in increasing the number of cattle. The compound feed facilities in the KUD are of a low production capacity, and are insufficient for increasing the number of dairy cattle in the future. In order to increase the amount of milk produced per head of cattle, there must be an increase in the production of high-quality compound feed. However, the facilities which are in place at the present time are not sufficient to handle this. Since there is also a shortage of land for growing king grass, which is made into grass feed, this problem must be dealt with.

3) Horticulture and KUD Business

The production of vegetables is thriving within the KUD, and with collection facilities in place in as many as 50 locations (all of these are privately owned), vegetables are shipped every day to such places as Bandung and Jakarta. The KUD, however, does not collect or sell vegetables. The reason for this is because of the tough competition with traders, the large risk involved due to instability of prices, and an insufficiency in purchasing capital. Main products of the field consist of cabbage, celery, potatoes, tomatoes and papayas.

4) Organization and Management

With the entire area of Ciwidey Sub-district as a business district, this KUD has 5,590 cooperative members, with a low membership rate of only 16.9% of the adult population. In addition to this, there are 8,065 people who are potential cooperative members, having expressed a desire to obtain membership in the KUD and having paid a part of their membership fee. When these people are added, the membership rate among the adult population increases to 41.4%. However, there are only 160 female cooperative members. With the exception of households engaged in dairy farming, on the whole there is an insufficient number of cooperative members who take part in KUD activities. There are 3,635 people who use electricity, including many of the cooperative members. However, since these people are not obligated to pay a membership fee or make compulsory savings deposits, aside from paying a monthly electricity charge to the KUD, they are not really involved in KUD activities as cooperative members, nor do they have the right to attend general meetings or to speak at these meetings. Below is a breakdown of the two different types of cooperative members, indicating the number of these cooperative members, their rights and their obligations.

a) Cooperative members from households engaged in farming:

1,956, among whom 1,052 are from households engaged in dairy farming
(There are another 904 from households engaged in farming.)

Obligations: Paying membership fees and making compulsory savings deposits

Rights: Dividends from the current surplus

Obtaining loans

Being able to purchase goods handled by the KUD at a 3% discount

Being able to purchase goods on credit at the shops operated by the KUD (only for households engaged in dairy farming)

Being able to participate in the general meetings (general meetings held in advance in the individual regions)

b) Cooperative members not from households engaged in farming: 3,634

Obligations: Utilizing the KUD's electricity charge collection business

Rights: None in particular

Operation is basically conducted focused on households engaged in dairy farming. However, business activities (savings and loan, health management activities and other activities related to everyday life, the merits of utilizing the shops operated by the KUD and activities for the cooperative purchasing of everyday materials, and others) need to be developed so as to attract other cooperative members, and participation in KUD activities need to be promoted.

Looking at the organizational makeup of the KUD, there are six business divisions (General Affairs, Dairy Farming, Fertilizer, Warehousing, Shops, and Electricity Charge Collection) working under a secretary. There is no division which is in charge of planning and administration.

There is no internal audit division which promote audit of KUD by the employees. There is no employee who is engaged in the credit business on a full-time basis.

As of the end of fiscal 1995, the number of employees included 1 secretary, 40 regular employees and 17 part-time employees. Half of the 40 regular employees, or 19 of them, were assigned to the Dairy Farming Division.

According to the settlement of accounts for fiscal 1996, there has been an increase in the sales of milk, feed and fertilizer. Also, concerning the profits and losses in the electricity charge collection business in the profit and loss statement, since the amount of collection has been calculated as sales and the amount of payment has been calculated as the cost of sales, there has been a big increase in the amount of total dealings of the electricity charge collection business. In addition

to the reserves for bad debts, which accounted for Rp 94 million of the Rp 283 million in business costs, there were Rp 41 million in depreciation costs, and Rp 54 million for salaries and allowances. Interest paid amounts to 25 million.

The current surplus for 1995 was Rp 40,839,000, a large amount which was 2.3 times the average for the province. The breakdown for the current surplus was 42.5% in reserves in the KUD, 40.0% in dividends for the cooperative members, 5.0% each in bonuses for the directors and the employees, and 2.5% in funds for education, social services and repairs on buildings, with efforts being made towards the repletion of owned capital by realizing reserves in the KUD.

Due to an increase in the amount of business in fiscal 1996, the current surplus was Rp 46,360,000, representing a profit increase of 13.5%.

Total assets at the end of fiscal 1995 were Rp 2.208 billion, which was an increase of 24% over the previous year. Business loans to cooperative members accounted for Rp 1.789 billion, or 81% of the assets, representing an increase of 36.2% over the previous year. This was because of the introduction of Rp 450 million for funding the introduction of dairy cattle from BCA. It is believed that there is a great desire for the renewal of the dairy cattle and for the introduction of new dairy cattle among households engaged in dairy farming.

Salaries and allowances come to Rp 1.312 million per person. If the bonus paid to the employees as a result of disposition of profit is included, this comes out to an average of Rp 1.362 million, which is close to the standard amount.

5) Economic Business

Of the approximate Rp 2 billion in total gross sales for 1995, sales of milk accounted for about Rp 1.017 billion, followed by sales at the shops operated by the KUD and the sales of fertilizer in that order. Total profits on sales were Rp 391 million, with the Dairy Farming Division accounting for Rp 313 million. As far as business profits are concerned, the Dairy Farming Division accounted for Rp 63 million of a total of Rp 107 million, with the shops operated by the KUD accounting for Rp 25 million. Rice was not collected or sold in fiscal 1995.

Recently, the shops operated by the KUD have begun using small vans for moving about in order to supply consumer goods, going to milk collection spots. Gross sales for chemical fertilizer in 1996 were Rp 670 million, with commission revenues totaling Rp 7 million.

6) Credit Business

The balance of voluntary savings increased from Rp 34.1 million in 1990 to 83.4 million in 1996.

The interest on voluntary savings is 24%, with the fact that it is close to the market interest providing members with an incentive to have voluntary savings.

The balance of loans for operating farms was Rp 1.524 billion, with funding for the introduction of cattle accounting for Rp 1.456 billion. This is an institutional loan through BUKOPIN, BRI, BULOG and BCA. Reserves for bad loan totaling Rp 226 million (12.6% of the balance) have been set up for loans, for the purpose of stabilizing finances.

A plan is being promoted for creating an independent business organization which will work in conjunction with Bank Danamon, with its credit business separate from the KUD. However, there has not been sufficient consideration given to what ought to be done by the KUD in order to utilize this and to develop KUD business.

7) Human Resources Development and Guidance Activities

The employees are quite educated with high educational profile. They are stationed at those posts which they are suited for, based on their experience. Employees who have graduated from junior high school are engaged in loading at fertilizer factories and in the collection of milk. With a retirement age of sixty, and since there is little opportunity for employment in the region, a lot of employees work until they have reached retirement age. Salaries are determined based on education and the number of years of experience, with the starting pay for university graduates at Rp 140,000, which is just a little bit less than the salary at nearby banks. General Manager get salaries of Rp 300,000.

In addition to conducting educational activities for the cooperative members, including inspections of advanced dairy regions, focusing on households engaged in dairy farming, instructors are invited from outside of the KUD once every month to hold study sessions for 17 dairy farming groups. Fifty percent of the employees receive training at such places as BALATKOP. However, since it is not possible to have training project for each of the employees is not established, there is a trend in allowing certain employees to participate.

The two farm advisors in charge of dairy farming are licensed veterinarians, with each of them providing guidance to 500 households engaged in farming. However, the system of instruction cannot be considered sufficient. As far as better living guidance is concerned, at the present time there is no inclination for any positive action to be taken, nor are there any employees in charge of such activities. There has been no women's group created in the KUD.

(2) Evaluation

1) Dairy Farming

Due to the fact that imported milk cow is high-priced, the fact that a sufficient amount of high-quality feed cannot be distributed because of the shortage of facilities for milling feed, and the fact that raw milk is not processed, the introduction of calves represents a financial burden, and the income of households engaged in dairy farming is top-heavy. If the KUD had facilities, and if it purchased, nurtured and raised female calves, it would be possible to increase the number of superior dairy cattle in the KUD. If feed milling facility were to be set up, it would be possible in the future to deal with plans for increasing the number of cattle. If the KUD had processing facilities, it would be possible to conduct sales, with prices which reflect added value.

Since there is a great deal of trust for the KUD among the members from households engaged in dairy farming, and since there is a great desire to increase the number of cattle, the KUD would be able to deal with the needs of the households engaged in dairy farming by means of demonstrating such plans based on sufficient preparation.

2) Horticulture

The KUD does not collect or sell vegetables, nor does it sufficiently contribute to increasing the income of households which are engaged in vegetable. However, there are some members who engaged in vegetable farming, and the KUD does make loans to these cooperative members. It would therefore be possible for the KUD to deal in vegetables if it were to concentrate those members who are engaged in vegetable, by planning long-term joint market projects and increasing the amount of loans for farm management.

3) Organization and Management

The rate of membership in the KUD is low, and with the exception of households engaged in dairy farming, there is an insufficient level of participation in KUD activities among the members. However, since people have the merit of using the KUD if they become members, the number of members can be increased through positive promotion. Also, it would be possible to develop attractive business by improving the KUD's faculty for planning administration.

4) Credit Business

A plan is being promoted for creating an autonomous business unit (UUO) which will work in conjunction with Bank Danamon, with its savings and loan business separate from the KUD.

If the KUD should no longer conduct the savings and loan business, there would be difficulties in the Plan for the Promotion of Dairy Farming, which depends on loans, and there is the possibility that such cooperative member organizations as the Savings and Loan Business Group would leave

the KUD. Sufficient consideration is therefore necessary in the execution of this plan.

5) Human Resources Development and Guidance Activities

Regarding the education of the employees, there is no division which is clearly in charge of systematically promoting in-service training or through outside training. At the present time, only the Dairy Farming Division is involved in the education of cooperative members. However, educational activities conducted through plans for training and the publication of bulletins are needed for the other cooperative members as well. The KUD will organize vegetable producers, and create a system of joint market for the future. Since the system for providing farm guidance is insufficient, both quality and quantity have to be improved upon. The KUD does not provide better living guidance. However, in order to activate KUD business in the future, including that pertaining to the local residents, the KUD needs to adopt a means for providing better living guidance as well as to conduct joint purchasing activities of everyday necessities.

6) Other Business

Regarding the KUD's electricity charge collection business, by means of conducting all sorts of educational activities as a way to deal directly with the cooperative members, it would be possible to deepen the understanding of KUD activities among households engaged in farming and the local residents. Since introducing a system for withdrawing money from savings accounts would help increase savings, consideration should be given to this matter in the future.

4.2.2 Detailed Plan for Activation of the KUD

(1) Basic Ideas

By promoting the introduction of dairy cattle among the farmers who only own a small amount of land, and helping to secure work for them and to increase their income, not only has the KUD fostered dairy farming as a mainstay business, but it has also fostered dairy farming as a mainstay industry in Ciwidey Sub-district.

The basic strategy for activating the KUD is to further develop dairy farming, thus improving the business foundation of the KUD, and to promote business expansion and increases in the income of the members. Business expansion is something which accompanies the improvement and stabilization of business, and enables the all-around improvement of service functions, including the provision of loans and technical guidance to the members.

(2) For Promoting Dairy Farming and the Production of Livestock

Increasing the number of superior cattle will help to expand the production of milk, and improve the incomes of households engaged in dairy farming. The KUD plans to triple the number of cattle owned by households engaged in dairy farming in a period of five years. Presently, the average number of cattle owned by households engaged in dairy farming is two heads (milk cows), with the profit made per head at Rp 120,000 per month, or Rp 1.2 million 10 months (2 months are dry period). This plan calls for increasing this income to Rp 6 million in five years, by having each household engaged in dairy farming owning an average of 6 head of cattle. Also, these households operate their dairy farms through the labor of their own families, but with an increase in the number of their cattle, they will need to hire dairy farm laborers, roughly paying salaries of Rp 120,000 per month. It is believed that the KUD will play an important role in securing the necessary workers as well as in training these workers. Since producing and raising superior cattle in the KUD will require workers to take care of the calves, the KUD is considering the introduction of facilities for collectively raising cattle. So that the members can obtain the necessary cash at the initial stages, 500 female calves are purchased by the KUD from the members, subsequently raised, then supplied to the members after they have become 6 months of age.

Improving milling facilities for the high-quality compound feed, are essential for the production of high-quality milk. The patronage ratio of members who utilize the KUD is 100%, for both the sales of milk and the purchase of feed. The capacity of the feed mill is 1,200 tons per month. This is based on the needs of feeds by members after 5 years to feed 3,900 milk cattle, 500 beef cattle and 500 female calves. As regards the farm guidance, technical instruction pertaining to dairy farming is provided through two KUD employees. However, there is a big demand among the members for better instruction of farming operations. As a means for creating KUD capital, members are required to make compulsory savings for the amount of Rp 10 for every liter of milk that they sell. However, in order to make up for shortages in both short-term and long-term funding for future business expansion, there are hopes for the introduction of favorable funding from outside the KUD.

Milk processing facilities will be established for the purpose of selling milk produced in the KUD at prices that reflect added value. As regards the price of milk, the price for which milk is sold and delivered to the milk processing plant is about half the retail price of processed milk. Therefore, the KUD can eliminate the middle margin by handling the processing and sales by itself, and as a result it can increase the returns paid to the cooperative members. The processing capacity of the milk plant is 1,000 liters per day, enabling it to produce 800 liters of drinking milk and 200 liters of yogurt daily. This quantity represents 20% of the present 5,000 liters of milk collected per day by the KUD, which is quite small. By purchasing only high-quality milk for processing from among the raw milk that has been collected, the KUD provides the members with

an incentive for improving the quality of milk. This spurs a desire for improved quality. Also, since the KUD doesn't yet have the ability to process and sell all of the milk that is collected, it sells the remaining raw milk to a dairy company through GKSI, by the usual means. In addition to the milk and yogurt processed by the KUD in stores being sold at a lake in the resort area of Ciwidey, these products are also sold directly to the public through such means as antenna shops set up in the city of Bandung, and at milk stands. In Indonesia, raw milk is not generally used as a drink, but rather most of the milk is sold to the public in the form of condensed milk. With the average household not having a refrigerator, the fact that the price of milk is high is the reason that it is not commonly drunk by the public at large. For this reason public relations activities need to be conducted, targeted at people who are not accustomed to drinking milk. This simple experiment with a milk processing plant is one of the processes by which the KUD will be able to conduct the full-scale processing and sales of milk in the future.

The KUD will be engaged in the business of fattening and selling dairy steer calves, improve facilities to fatten calves and purchase the steer calves from members, fatten them, and sell them live. The KUD will handle 500 heads of these cattle per year. In the area, 1,000 calves were born every year and 50% of them is assumed as male.

(3) Plans to Improve Organization and Management

With a low rate of payment of membership fees and of making compulsory savings, which make up the capital of the KUD, the ratio of the KUD's capital remains low. Also, since the rate of membership in the KUD is low, in addition to promoting the complete payments of membership fees and compulsory savings, the KUD will systematically increase the number of cooperative members based on its basic strategy, for the purpose of strengthening the influence that the KUD has in the local area.

Since there is a lack of constructive business development due to an insufficiency in the planning administration faculty, the KUD will improve this, and, assuming responsibility for matters ranging from the drafting of plans to actually carrying out those plans, it will create a system for promoting its planning administration.

Although the KUD has introduced computers, these computers are only put to a narrow range of use. Therefore, in order to promote speed and accuracy of clerical work, the KUD will consider means to utilize these computers and put these means into practice.

1) Five-year Plan for Realizing the Complete Payments of Membership Fees and Compulsory Savings

The KUD intends to have 100% of the membership fees completely paid in five years, increasing the percentage of people who make complete payments by 20% each year. In addition to being sure to collect membership fees from new members, the KUD will also have new members make compulsory savings.

The KUD will collect membership fees and compulsory savings from members who use electricity. In order to do so, it will give out "invoices" at booths. Also, having a member visiting day once a month, the KUD will promote payments, with the officials and employees visiting members.

The other members will be visited on member visiting days. The villages to be visited will be decided each month, with the plan calling for all of the members to be visited in one year.

For the compulsory savings, in addition to monthly deposits, there will be a system introduced for making these deposits in one lump payment. Lump payments of these deposits will amount to Rp 12,000, to be made at the beginning or end of the fiscal year, or in a specially designated month, with the members choosing when they will make their payments. Transfers will be admitted from the dividends, for members who are certain to surpass a dividend amount of Rp 12,000 from the current surplus.

2) Five-year Plan for Promoting Cooperative Membership

The KUD needs to contribute to the development of the local economy and to the improvement of the lives of the local residents. However, as there are only a small number of members who do not belong to households engaged in dairy farming, the KUD has been unable to perform this function. Also, with many people not paying their membership fees or making compulsory savings deposits, despite the fact that they are cooperative members, there is only a small concentration of members who do not belong to households engaged in dairy farming. In addition to developing business which is attractive to cooperative members, and increasing the participation of the members, the KUD will promote membership among people who have not yet become members.

The KUD will promote membership, with an objective to have 60% of all adults obtaining membership in five years, for a total number of 17,000 members. The objective for the number of adults who obtain membership in the target year is calculated to be 34,000. As far as promoting membership is concerned, first of all the KUD will attempt to get the 8,065 people who are potential members to actually become cooperative members. The methods which will be used are as explained below:

* Officials in charge of promoting membership among the respective villages will be decided upon. The officials in charge will attend discussion meetings at the Kelompok Tani in

the village in question, where he will explain the purport of the cooperative and the merits of obtaining membership, thus urging people to become members.

* In order to promote membership, pamphlets telling about KUD activities will be produced, and the officials in charge will distribute these pamphlets at the discussion meetings held at the Kelompok Tani.

3) Establishing a Planning Administration

A Planning Administration Division will be established under the general manager. One key member will be chosen from both the General Affairs Division and the Dairy Farming Division. In addition to supervising implementation of plans, the Division will also be in charge of an internal audit of the KUD.

4) Establishing a Division In Charge of Credit Business

Before it works in conjunction with Bank Danamon, the KUD will make the Credit Business Division independent, stationing a person to be in charge of current institutional loans as well as the savings.

Holding discussions focusing on the Planning Administration Division but including the participation of the members, the KUD will examine measures regarding the separation of the credit business. Since this will lead to the KUD losing its profitable division in the future, deep consideration will be given to utilizing the UUU.

5) Utilizing Computers

With the guidance of the DEKOPINWIL, the KJA and the PUSKUD, the KUD will either engage in the joint development of software for the savings and loan business, the calculation of the sales in the milk business and the calculation of salaries, or else it will purchase a software program such as Lotus, which is sold on the market, thus expanding the range of its utilization of computers.

(4) Plan to Improve Economic Business

1) Setting Up Facilities for Raising Dairy Cattle

The KUD will raise calves from the time that they are newborns until they become adults. It will also be engaged in the reproduction of dairy cattle, as well as in the development of dairy cattle

and cattle to be used for beef. It will also be engaged in the development of domestically produced cattle which will be of a relatively low price, and easy for the farmers to own and take care of. It will also produce and sell farmyard manure to horticulture farmers in the area. The details are given in the facility planning.

2) Establishing Marketing System of Milk other than Processed in the KUD

Emphasizing the idea of "producing high quality milk which will bring in big profits, with only a small investment" for the purpose of processing and selling milk, the KUD will accept all of the raw milk brought in by the households engaged in farming. And it will make it so that the households engaged in farming will be able to work for a long time as constant providers of raw materials.

3) Establishing a Feed Mill

The KUD will build an efficient feed milling plant. Mixing the feed will be left to a licensed technician. The farmers will be trained in regard to feeding patterns.

4) Introducing the Horticulture Business

The households engaged in farming get 35% of their income from dairy farming, with their remaining income coming from horticulture and other types of business. Although it is difficult for the households engaged in farming to find advantageous marketing routes for their products on their own, the KUD can promote business talks on behalf of the farm households which produce the products, and sell the products on behalf of those households. The KUD can cooperate with nearby KUD to set up a joint marketing system, and negotiate with buyers.

In order to do that, the KUD will come up with a mid-term vision, promote organization among the households engaged in farming, and foster employees to be in charge of the business and sales activities in a leadership capacity.

5) Opening Members Saving Accounts for Account Settlement on Marketing and Purchasing

In order to be certain that business transactions are clearly and appropriately managed, the KUD will urge people to use computers. Avoiding transactions of large sums of cash, it will be settled to the members through saving accounts in the KUD set up for each individual member. This will also promote increases in savings among the members, while contributing to the working capital of the KUD.

(5) Plan to Improve the Credit Business

1) Expanding the Range of Cooperation with Banks

This KUD has had loans with the BRI. In order to start up new business, the KUD needs to increase the amounts of loans which are used for the purposes of working capital and increasing fixed assets. In addition to the BRI, the KUD should establish a record of transactions with other banks in order to meet demands for future loans.

2) Increasing the KUD's Own Loans for Farm Management of Members

In addition to meeting the demand among members for funding the farm management needs, a system by which the KUD relends funds to the members would also most likely meet the demand among members for funding for operating small businesses, as well as for equipment and machinery. It would be desirable to gradually change the present system of intermediation for funding loans to the KUD's own system for providing loans. If this were realized, the KUD would then directly handle the management and collection for its financing activities, and also assume the risk for loans. In order for the KUD to be more able to directly manage the credit business of the members, the KUD needs to develop know-how in such matters as selecting members who will be receiving financing, loan management, and collection, as well as to produce its own manual on managing the loans and savings of the members. In order to do that, the KUD employees need to be educated and trained in financial matters.

3) Increasing Regular KUD Loans from the KUD's Own Capital

This KUD should move in the direction of extending loans to the cooperative members from its own capital. The KUD should understand just how important it is to increase internal savings through business activities, as well as voluntary savings and compulsory savings among the members. This would be in line with the recent advice from the World Bank that it should increase internal savings (see World Bank Report No. 16433 - IND). An autonomous business organization (UJO), which makes savings loans according to an experimental plan which this KUD is trying to carry through, makes it very possible for the KUD to not only increase its savings, but also for the KUD to manage its finances on its own, keeping more in line with the principles of banking.

4) Securing Operational Capital by Promoting Savings

The KUD should execute a plan to increase the savings of the cooperative members to a level of 30% of the necessary working capital. By so doing, this KUD should be able to create the assets within the KUD which are necessary for supporting business growth, and decrease the use of costly funding sources from outside of the KUD. In order to increase savings, the management

should positively urge people to save money, and introduce a system for utilizing savings accounts for business, including electricity charge collection. The milk savings system of this KUD is a good example of savings in combination with the credit business. In order to promote savings among the members, the KUD should pay interest at market rates for all different types of savings to the members.

5) Promoting an Account Transfer Function

The KUD should make it so that there is a transfer function for savings accounts in the future, strengthening the connection between credit and other KUD business. In situations when institutional loans come into play, this KUD should add a profit margin to the interest on savings, thus securing profits, in order to be able to pay for the operational costs of credit business.

(6) Plan for strengthening of Human Resource Development and Guidance Activities

1) Education activities

In the saving and loan business, the KUD is sending two employees at Bank Danamon for training as preparation for the establishment of autonomous business unit for credit.

As the number of employees is small, the improvement of capability of each employee is quite important. For that purpose, it is imperative to obtain the fund for education to send employees to training courses organized by various training institutions. Also, the systematical training programs for each employees need to be prepared. The annual plan for in-service training for employees is necessary to be formulated centering general manager. Also, the wage system should be revised to pay adequate wage in commensurate with capability of employees.

2) Strengthening of farm guidance

The budget for farm guidance shall be prepared by KUD as service to members. Also, for promotion of joint marketing of vegetables, milk and beef cattle, commodity wise groups are necessary to be organized and their operation regulations are to be prescribed.

The employees in charge of farm guidance are needed to be employed or trained at external training institutions such as livestock experimental station, and agricultural experimental station .

In accordance with the plan to increase the number of milk cow per households,

Also, as beef cattle market will be a new business for the KUD, guidance on cattle feeding management will be important to be provided to farmers.

The radio communication system between farm advisors and leaders of commodity-wise group will also be necessary.

3) Strengthening of better living activities

KUD Tani Mukuti is not providing better living guidance at present and women's group is not established. As the number of women members is small, it is necessary to promote better living activities through organizing women's group. There are 17 dairy farming groups and women in dairy farm households are playing important role such as milking and care of calves. There are 1,000 dairy farm households and it would be possible to organize women as the interests of them might be same. It would be useful to start with joint purchasing of consumer goods linked with the business of WASERDA (cooperative retail shop).

In future, the activities are to be developed to deal with rationalization of family expenses, health care, consultation on law and tax ,family planning and others.

(7) Other business

In the business of collection of electricity charge, it is desirable to combine with Rp. 200 per month of compulsory savings through members' saving account.

4.2.3 Facilities Plan and Project Evaluation

(1) Facilities Plan

Plan for the establishment of Facilities as shown below are based on the present situation, valuation and integrated basic plan of KUD.

A. Plan for the Establishment of Dairy Cattle Rearing and Fattening Facilities

1) Objectives

KUD has a five-year plan to increase three times the numbers of farmers dairy cows.

This plan is proper that, it is possible to increase three times the numbers in five years, if all farmers breed up female calves as dairy cows. However, at present, most of the dairy farmers have sold their calves to buyers, particularly petty dairy farmers sell their precious calves for a cash sale. Therefore, KUD has planned to establish and to develop dairy cow rearing and bull calf fattening facilities for purchasing calves from farmers, selling oxen to market and selling cows to dairy farmers.

2) Project Outline

i. Planned Handling Volume

The planned number of calves for annual purchasing is 1,000, and the planned number of cows and oxen for annual selling is 500 each.

ii. Operation Plan

The operation in the first year will be only purchasing calves. After fattening and rearing for 12 months, selling will begin.

3) Operation and Maintenance of Facilities

i. Role and Function of KUD

KUD shall establish and develop dairy cow rearing and dairy bull calf fattening facilities.

KUD shall purchase dairy calves (cows and bulls) reared and aged six months from dairy farmers who are members of KUD .

KUD shall fatten up oxen for 12 months and sell them to market for meat.

KUD shall rear dairy cows for 12 months and sell them. They will be artificially inseminated and sold to dairy farmers with a low interest loan.

ii. Role of Farmers as Cooperative Members

Dairy farmers who have newborn daily calves rear them to aged six months.

The said farmers sell dairy bulls aged six months to KUD.

Dairy farmers who wish to sell dairy cows aged six months are able to sell them to KUD. Dairy farmers are able to purchase the reared and artificially inseminated cows with a low interest loan from KUD.

iii. Personnel

The personnel who will be assigned to the facilities are shown as follows:

	Numbers
Manager	1
General affairs and accounts administrators	2
Veterinary surgeon	2
Assistant of Veterinary surgeon	2
Recorder	6
Rearing administrators (assistant of Recorder)	100
Guard	2

4) Conditions of Facility Design

i. Fattening and Rearing Number of calves

Fattening and Rearing number of daily calves is 500 each: a total of 1,000 calves aged six months are fattened or reared for 12 months. Cows or oxen are aged 18 months each.

ii. Fattening and Rearing System

System of fattening/rearing: stall rearing, herd rearing (10 to 20 head for each herd)

iii. Scale of Facilities

Stalls: six stalls, total floor area of approximately 3,500m²,

Other facilities (store, administration block etc.) : a total of approximately 700m²

A part of the excretion from the stalls will be used for making compost, and other excretion will be diluted with the waste water of the facilities in a reservoir, it will be used for fertilizing the meadows.

iv. Project Site

KUD will rent one ha² of State land for the project site and 50 ha² for meadow fields, it will undertake a two year agreement with the government. The agreement of land renting will be renewed every two years.

Area:	for facilities	1 ha ²	(lease of two years from the government)
	for meadow	50 ha ²	(lease of two years from the government)
Address:	Desa LB. . Moncang Kecamatan Cwidey		

5) Preliminary Design of Facilities and Equipment

Required items for the facilities and equipment are shown in Table -4.2.3.1.1 with facilities scale (no. of stories, total floor area), type of foundation, and type of structure.

Furthermore, the layout plan of these facilities is shown in Fig. -4. 2. 3. 1. 1.

Table-4. 2. 3. 1. 1 Facilities Outline - KUD Tani Mukuti / Daily Cattle Fattening and Rearing Facilities

Facilities Items	No. of Facilities	No. of Story	Total Floor Area (sq.m)	Type of Foundation	Structure	Special Equipment
1 Administration Office	1	1	50	Spread	R.C. / Steel	Truck (4 ton-type) (2)
2 Stall (Cattle Rearing Shed)	6	1	585 x 6	Spread	Steel	Steam cleaner (2) / Pesticide sprayer / Weight bridge (2)
3 Isolation Stall	1	1	65	Spread	Steel	
4 Silo (Silage Store)	1	1	150	Spread	R.C. / Steel	Hand cart for meadow (6)
5 Formuls Feed Storage	1	1	75	Spread	R.C. / Steel	
6 Farm Equipment Storage	1	1	75	Spread	R.C. / Steel	Cutting tools for meadow (2)
7 Elevated Deck (Elevated Pedestrian Deck)	1	1	120	Spread	R.C.	
8 Feed Mixing Yard	1	1	50	Spread	R.C. / Steel	Chopper
9 Compost Depot	1	1	125	Spread	R.C. / Steel	Hand cart for compost (6)
10 Water Reservoir / Elevated Water Tank	1	-	-	Spread	R.C.	Generator / Pump
11 Public W.C.	1	-	15	Spread	R.C. / Wood	
12 Pump House at Riverside	1	-	6	Spread	R.C. / Wood	
13 Waste Water Treatment	3 + 1	-	-	Spread	R.C.	

6) Implementation Plan

i. Project Cost

A summary of the cost estimation concerning this project is shown in Table -4. 2. 3. 1. 4.

Construction cost is estimated using the BAPPENAS standard unit rate of construction cost 1997/98, and the results of actual construction cost research, the function / finishing grade of facilities.

ii. Construction Schedule

Table-4. 4. 3. 1. 3. indicates the implementation schedule for this project.

B. Plan for the Establishment of Feed Mixing Facility

1) Objectives of Facility Construction

In view of the steady increase of daily cows in KUD, the Project aims to construct a feed plant to respond to the increased needs for better quality feed from daily farmers.

This project will secure the stable supply of low cost and high quality feed to daily farmers, and this project will also contribute to the vitalization of KUD operations.

2) Project Outline

i. Planned handling Volume

The planned handling capacity of the Feed Mixing Facility is 1,200 tons per month. This facility also stores some raw materials for 20 days processing and products.

3) Operation and Maintenance of the Facility

i. Functions and Role of KUD

KUD shall establish and develop feed mixing facilities.

KUD shall inspect raw materials for feed and mixed feed product to improve their quality.

KUD shall supply high quality mixed feed in response to the needs from the daily farmers of KUD members.

KUD shall improve the supply network to ensure the low cost and stable supply of mixed fodder to the local daily farmers.

ii. Role of Dairy Farmers as Cooperative Members

Daily farmers purchase mixed feed from KUD according to plan.

Daily farmers keep in contact with extension specialist of daily cows from KUD to purchase appropriate mixed feed for daily cows condition.

iii. Personnel

The personnel who will be assigned to this facility are shown as follows:

	Numbers
Manager	1
General affairs and accounts administrators	1
Specialist of mixed feed	1
Operators	2
Workers	12
Driver and assistant	2

4) Conditions of Facility Design

i. Raw materials

The raw materials used for this facility are as follows;

Wheat bran, rice bran, corn, soy sauce cake, cacao refuse, coconut oil refuse, vitamins and minerals.

ii. Storage of Raw materials and Products

Raw materials and produced feed shall be packed in bags (75 kg).

Enough space to store raw materials and feed for approximately 20 days supply shall be secured in this facility.

iii. Scale of Facility

Total floor area of the facility shall be approximately 1,000 m².

Processing capacity: 1,200 tons per month

Belt conveyors shall be used to transfer raw materials and feed in the facility.

The processing plant shall be composed of the following lines;

Raw materials cutting line: pre-mixer, screw feeder, bucket elevator, magnet separator,

Crushed raw materials line: crusher, vibration proofing common base, hopper, exhaust and dust collector,

Mixing and packaging line: vertical mixer, automatic cut gate, additive mixer, product tank, simple packer scale, machine for linen bags.

iv. Project Site

KUD intend to construct the facility on there own land (approximately 3,500m²), with small dairy product processing facilities.

Address: Kampung Waluri Lebak Muncang Kecamatan Ciwidey

5) Preliminary Design of Facilities and Equipment

Required items of the facilities and equipment are shown in Table -4.2.3.1.2 with facilities scale (no. of stories, total floor area), type of foundation, and type of structure.

Furthermore, the layout plan of these facilities is shown in Fig. -4.2.3.1.2.

Table-4.2.3.1.2 Facilities Outline - KUD Tani Mukuti / Feed Mixing Facilities

Facilities Items	No. of Facilities	No. of Story	Total Floor Area (sq.m)	Type of Foundation	Structure	Special Equipment
1 Feeding Plant	1	1	1,000	Spread	R.C. / Steel	
(1) Raw materials cutting line	1					pre-mixer, screw feeder, bucket elevator, magnet separator.
(2) Crushed raw materials line	1					Crusher, vibration proofing common base, hopper, exhaust/dust collector
(3) Mixing and packing line	1					Vertical mixer, automatic cut gate, additive mixer, product tank, simple packer scale (2), bag sewing machine (2).

6) Implementation Plan

i. Project Cost

A summary of the cost estimation concerning this project is shown in Table-4.2.3.1.5.

Construction cost is estimated using the BAPPENAS standard unit rate of construction cost 1997/98, and the results of actual construction cost research, the function / finishing grade of facilities.

ii. Construction Schedule

Table-4. 4. 3. 1. 7 shows the implementation schedule for this project.

C. Plan for the Establishment of Small Dairy Product Processing Facility

1) Objectives

Dairy farming is the major operation of KUD, and the production of milk is particularly stable.

However, since KUD does not have any dairy processing facilities, farmers sell all raw milk to GKSI.

In view of this situation, the Project aims to construct a small dairy processing facility for processing and selling some of the raw milk collected from dairy farmers into processed milk and yogurt. The Project also aims to contribute to the vitalization of the operations of the KUD.

2) Project Outline

i. Planned Handling Volume

The planned quantity of daily products from this facility is 1,000 liters per day.

The planned processing volume of products are as follows:

Milk packing:	4,000 cups / day x 200 ml / cup =	800 liters per day
Yogurt packing:	500 cups / day x 200 ml / cup =	100 liters per day
	1,000 cups / day x 100 ml / cup =	100 liters per day.

3) Operation and Maintenance of the Facility

i. Functions and Role of KUD

KUD shall establish and develop small dairy product processing facilities.

KUD shall purchase all of the raw milk from dairy farmers who are the members of KUD and process a part of it into milk packs and yogurt packs.

KUD shall sell the processed dairy products to the general market.

ii. Role of Farmers as Cooperative Members

Members of the dairy farmers produce better quality raw milk on a stable basis.

Members of the dairy farmers sell part of their produced raw milk to KUD.

Members of the Cooperative can buy the dairy products processed by KUD through Waserd.

iii. Personnel

The personnel who will be assigned to this facility are as follows:

	Numbers
Manager	1
General affairs and accounts administrators	1
Specialist of dairy product	1
Workers	5

Salesman	2
Driver and assistant	2

4) Conditions of Facility Design

i. Raw materials

The raw materials processed by this facility are as follows:

Cows milk	:	raw milk, etc.
Yogurt	:	raw milk, starter, spices, etc.

ii. Storage of Raw materials and Products

Fresh raw milk shall be delivered every day, and the maximum storage capacity of raw milk in the refrigerator shall be approximately 1,000 L.

Products shall be shipped every day, and the maximum storage capacity of products in the refrigerator shall be one production day.

The refrigerator shall be jointly used for raw materials and products.

iii. Scale of Facility

Total floor area of the facility shall be approximately 300m².

The facility is composed of the following equipment and others;

Milk Processing:

Storage tank, sanitary pump, sanitary stainless steel pipe, preheating pasteurizer, homogenizer, sterilization pasteurizer, self-recording thermometer, plate cooler, chilled cooling system, service tank, pipe washing tank, packing machine

Yogurt Processing:

High speed mixer tank, pipe strainer, fermenting machine

iv. Project Site

KUD intend to construct the facility on there own land (approximately 3,500m²) with feed mixing facilities.

Address: Kampung Waluri Lebak Muncang Kecamatan Ciwidey

5) Preliminary Design of Facilities and Equipment

Required items for the facilities and equipment are shown in Table -4.2.3.1.3 with facilities scale (no. of stories, total floor area), type of foundation, and type of structure.

Furthermore, the layout plan of these facilities is shown in Fig. -4.2.3.1.3.

Table -4. 2. 3. 1. 3 Facilities Outline - KUD Tani Mukuti / Small Daily Products Processing Facilities

Facilities Items	No. of Facilities	No. of Story	Total Floor Area (sq.m)	Type of Foundation	Structure	Special Equipment
1 Dairy Product Processing Facilities	1	1	300	Spread	R.C. / Steel	
(1) Milk Processing Facility	1					storage tank, sanitary pump, sanitary stainless stp., preheating pasteurizer, homogenizer, sterilization pasteurizer, self-recording thermometer, plate cooler, chilled cooling system, service tank,
(2) Yagurt Processing Facility	1					pipe washing tank, packing machine. high speed mixing tank, fermenting machine.

6) Implementation Plan

i. Project Cost

A summary of the cost estimation concerning this project is shown in Table-4. 2. 3. 1. 6.

Construction cost is estimated using the BAPPENAS standard unit rate of construction cost 1997/98, and the results of actual construction cost research, the function / finishing grade of facilities.

ii. Construction Schedule

Table-4. 4. 3. 1. 7 shown the implementation schedule for this project.

D. Training Essential Personnel

Presently, dairy farming operations are being conducting in the KUD through the instruction on raising and feeding dairy cattle which is provided by farm advisors (veterinarians) of KUD employees.

If the KUD were to improve its facilities for fattening steer dairy cattle and raising female dairy, calves as well as its facilities for compound feed, and if could periodically receive instruction in technical matters from farm advisors who are licensed veterinarians, it would be possible for the KUD to maintain and manage the facilities at their present technical level.

However, in order to utilize more efficient facilities, and to further and efficiently promote the development of the livestock industry in the KUD, it will be important for this KUD to foster technicians who work exclusively for the KUD. In order to do so, it would be effective for the KUD to enhance its technological abilities concerning breeding technology for

the purpose of increasing the rate of artificial fertilization, livestock sanitation technology for the purpose of reducing the rate of trouble in process of raising the animals, and feed management and feeding management technology for the purpose of improving the efficiency of raising the animals.

In order to foster such talent, it would be effective to have veterinarians and assistant veterinarians who are scheduled to be employed for the Plan to Improve the Facilities for Fattening Steer Dairy Cattle and Raising Female Dairy Calves, as well as inspection and blending design technicians, and operators, who are scheduled to be employed for the Plan to Improve Feed Milling Facilities, undergo technical training in technologically advanced countries.

If the KUD were to improve its small facilities for processing milk products, it would need to obtain knowledge in manufacturing technology which is necessary for the manufacture of milk and yogurt, and quality control technology which is necessary for product inspection, quality control and plant sanitation management for raw and milk products.

In order to foster such talent, it would be effective to have technicians, who are scheduled to be employed for the Plan to Improve Small Facilities for Processing Milk, undergo technical training in technologically advanced countries. Also, for product quality control and plant sanitation purchases all of the raw milk producer by this KUD, accepting trainees at a milk processing plant, it would be possible to conduct this training at that plant.

Meanwhile, improving its facilities for fattening steer dairy cattle and raising dairy cattle, as well as its feed milling facilities, and its small milk processing plant, will have a positive effect on the involvement of the KUD in agribusiness outside of the KUD in the future. For this reason, the KUD needs to train management and marketing experts, or hire new talent to perform such functions.

In order to foster such talent, it would be appropriate to use plant foremen, as well as managers in charge of general affairs and accounting who are scheduled to be employed for the Plant to Set up Facilities for Raising Female Dairy Cattle, as well as plant foremen, persons in charge of general affairs, accounting and sales promotion stationed at facilities for processing milk products, who are scheduled to be employed for the Plan to Set up Facilities for Feed Mill. It thought that this training will be effective for fostering talent through a domestic training system which is in line with the development of the agribusiness which the Indonesian national government is involved in.

The subject, objectives, training period, places and cost are given in the Attachment 6.

E. Result on the Survey for Intentions of KUD Members on Improvement of Facilities/Equipment

KUD Tani Mukuti

Date: 1997. 07. 15 Interviews and discussion with 30 dairy farming members

Survey Result:

- 1) All 30 attendants have a strong will to increase the holdings of number of milk cattle based on the plant of the KUD from current 2 cattle per household to 10 cattle.
- 2) The patronage rate of KUD business in marketing of milk as well as purchasing of feed-stuff was 100%. The quality of feed-stuff supplied by KUD is highly trusted by members.
- 3) All attendants expressed positive will to bear financial burden to borrow loan for increasing number of cattle holding and strong will to repay the loan as they have a confidence for successful management after increasing number of milk cattle.
- 4) Most of attendants have an intention to recruit dairy helper in case the number of cattle become 10. One of dairy farmers who has 5 cattle is working 6 hours per day with family members and when the number of cattle become 10 he needs one additional labor power. The monthly payment for additional labor is Rp120,000 and they think it is possible to pay the cost.
- 5) All attendants wish to breed cattle within the home town area as the imported cattle is expensive.
- 6) All attendants wish the realization of the KUDs facility plan and express strong will to support KUD.

Table-4.2.3.1.4 Construction Cost - KUD Tani Mukuti / Daily Cattle Fattening and Rearing Facilities

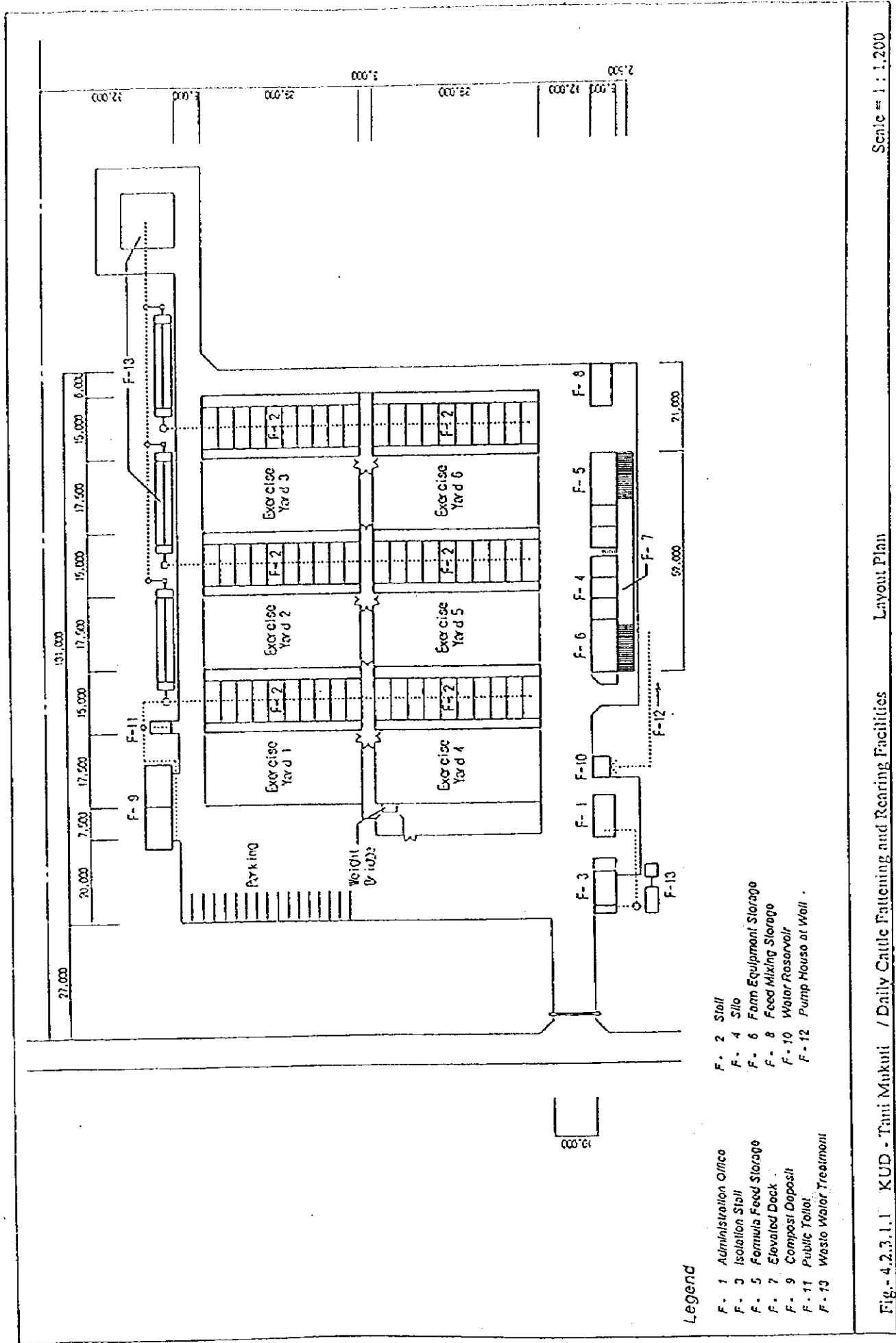
Item	Total floor area (sqm)	Total Cost	(unit : 1,000 Rupiah)	
			Foreign Currency	Local Currency
1. Facilities				
1 Administration Office	50	240,000	215,000	25,000
2 Stall (Cattle Rearing Shed)	3,510	1,236,590	33,162	1,203,429
3 Isolation Stall	65	24,143	-	24,143
4 Silo (Silage Store)	150	63,390	6,037	57,353
5 Formula Feed Storage	75	42,857	-	42,857
6 Farm Equipment Storage	75	31,216	1,215	30,000
7 Elevated Deck (Elevated Pedestrian Deck)	120	15,000	-	15,000
8 Feed Mixing Yard	50	31,790	13,218	18,571
9 Compost Depot	125	53,831	6,037	47,794
10 Water Reservoir / Elevated Water Tank	-	71,320	-	71,320
11 Public W.C.	15	10,359	-	10,359
12 Pump House at Riverside	6	5,778	-	5,778
13 Waste Water Treatment	-	144,100	-	144,100
Sub-total		1,970,37	274,669	1,695,704
		3		
14 Detailed Design and Engineering Service		127,178		127,178
15 Overhead and Profit		30,449	8,240	22,209
Total - 1		2,128,000	282,909	1,845,09
				1
2. External Works and Infrastructure				
1 External Works and Infrastructure		945,035	-	945,035
Sub-Total		945,035	-	945,035
2 Detailed Design and Engineering Service		70,878		
3 Overhead and Profit		165,087		
Total - 2		1,181,000		
3. Land Acquisition				
Total - 3		-	-	-
Total (excluding VAT 10%)		3,309,000		

Table-4.2.3.1.5 Construction Cost - KUD Tani Mukuti / Feed Mixing Facility

Item	Total floor area (sqm)	Total Cost	(unit : 1,000 Rupiah)	
			Foreign Currency	Local Currency
1. Facilities				
1 Feed Mixing Plant	1,000	325,714	-	325,714
2 Raw Material Cutting Line	-	79,765	79,765	-
3 Crushed Material Line	-	121,905	121,905	-
4 Mixing and Packing Line	-	268,900	268,900	-
5 Truck(6 ton)	-	45,000	-	45,000
6 Sub-total		811,284	470,570	370,714
7 Detailed Design and Engineering Service		24,429	-	24,429
8 Overhead and Profit		72,467	14,117	58,350
Total - 1		938,180	484,687	453,493
2. External Works and Infrastructure				
1 External Works and Infrastructure		48,000	-	48,000
Sub-Total		48,000	-	48,000
2 Detailed Design and Engineering Service		3,600	-	-
3 Overhead and Profit		8,400	-	-
Total - 2		60,000	-	-
3. Land Acquisition				
Total - 3		-	-	-
Total (excluding VAT 10%)		938,180		

Table-4.2.3.1.6 Construction Cost - KUD Tani Mukuti / Small Daily Products Processing Facility

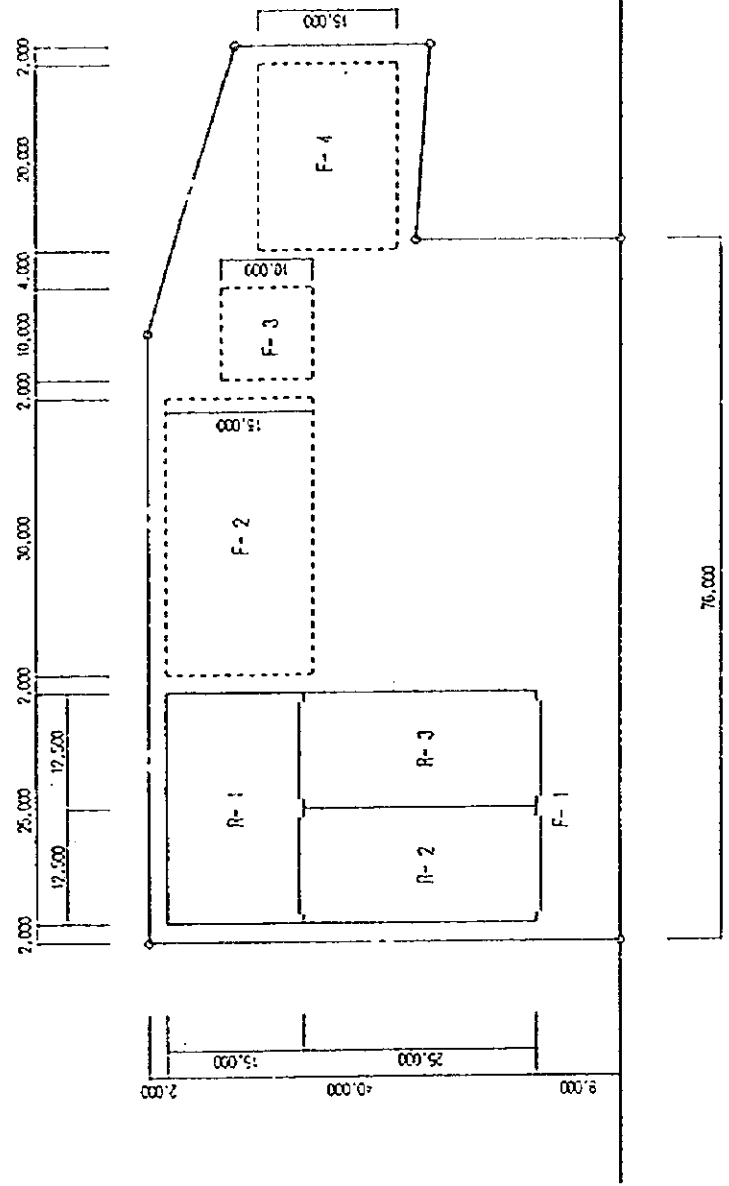
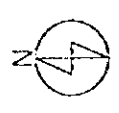
Item	Total floor area (sqm)	Total Cost	(unit : 1,000 Rupiah)	
			Foreign Currency	Local Currency
1. Facilities				
1 Milk Processing Building	300	176,000	-	176,000
2 Milk Processing Plant	-	1,052,100	1,052,100	-
3 Yogurt Processing Plant	-	240,800	240,800	-
4 Other Equipment	-	382,700	382,700	-
4 Other Equipment	-	75,000	75,000	-
4 Waste Water Treatment	-	31,350	-	31,350
5 Sub-total		1,967,950	1,760,600	207,350
6 Detailed Design and Engineering Service		15,550	-	15,550
7 Overhead and Profit		88,650	52,400	36,250
Total - 1		2,072,150	1,813,000	259,150
2. External Works and Infrastructure				
1 External Works and Infrastructure		20,750	-	20,750
Sub-Total		20,750	-	20,750
2 Detailed Design and Engineering Service		1,500	-	-
3 Overhead and Profit		3,600	-	-
Total - 2		25,850	-	-
3. Land Acquisition				
Total - 3		-	-	-
Total (excluding VAT 10%)		2,098,000		



Scale = 1 : 1,200

Layout Plan

Fig.- 4.2.3.1.1 KUD - Tami Mukuli / Daily Cattle Fattening and Rearing Facilities



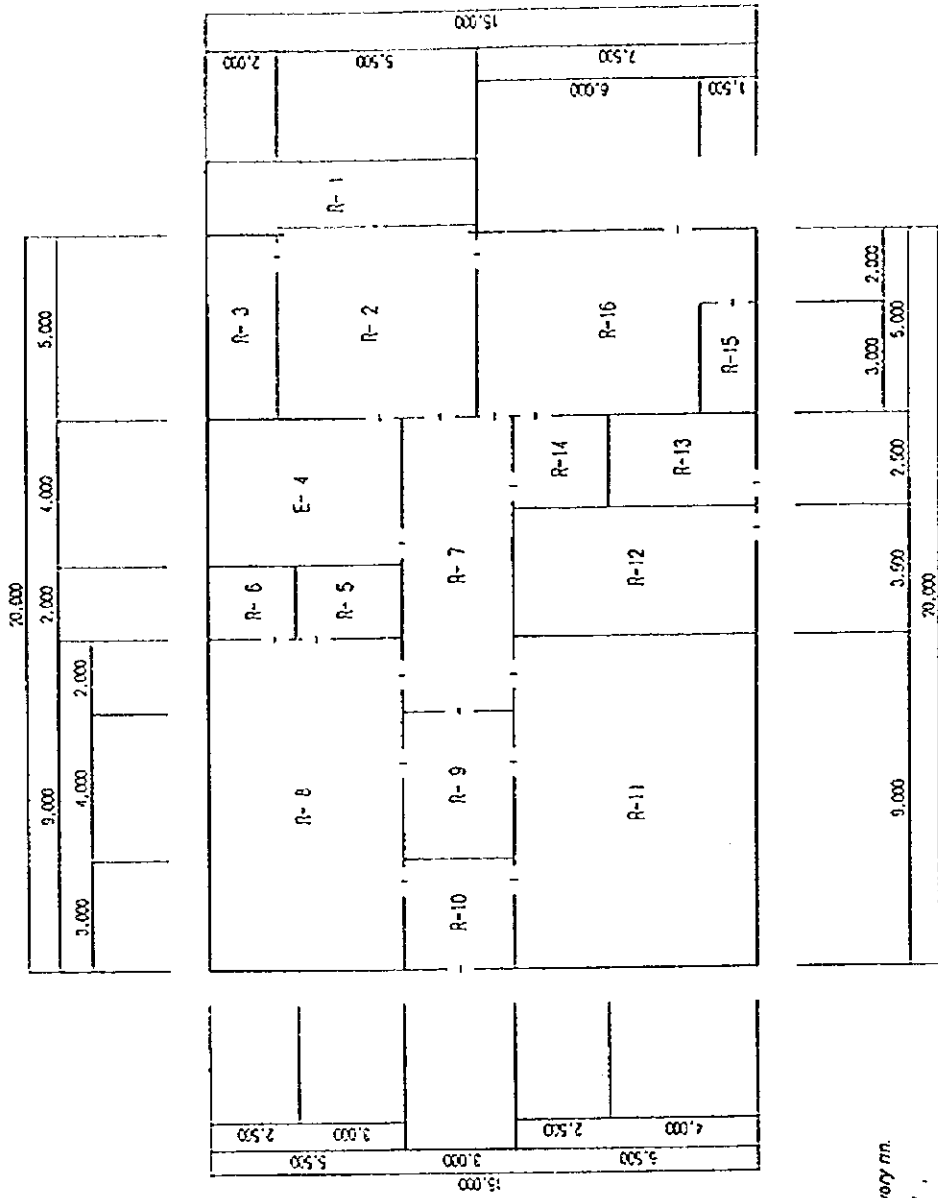
Legend

- F - 1 Feed Mixing Facility
- R - 1 Feed Mixing Plant
- R - 2 Raw Materials Storage
- R - 3 Products Storage
- F - 2 KUD office
- F - 3 Milk cleaning unit
- F - 4 Milk processing facility

Fig- 4.2.3.1.2 KUD - Tani Mukuli / Feed Mixing Facility

Layout Plan

Scale = 1 : 800

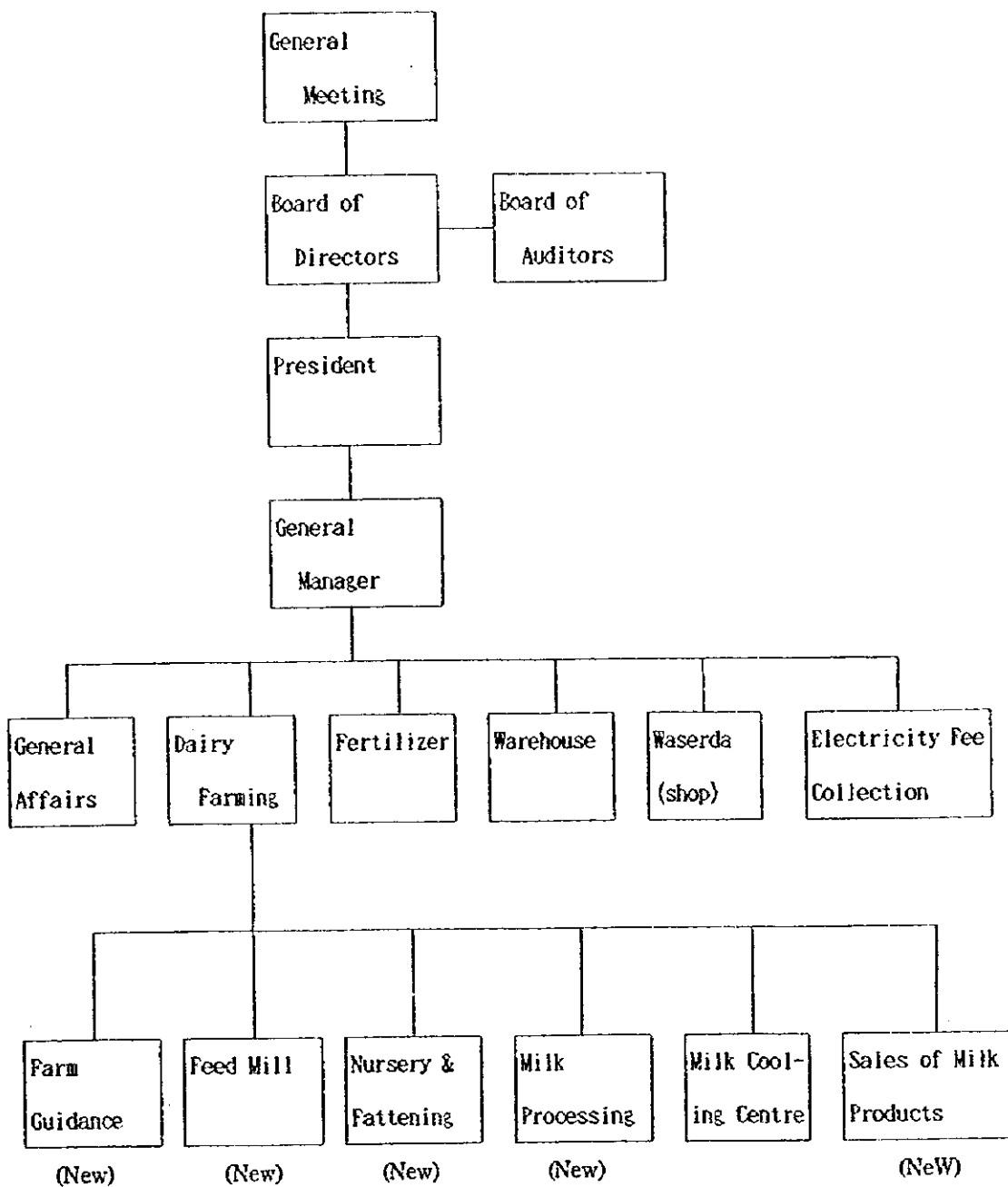


Scale = 1 : 200

Layout Plan

Fig. 4.2.3.1.3 KUD - Tani Mukuti / Small Daily Products Processing Facility

Chart--4.2.3.1.4 KUD Tani Mukti Internal Structure for Management of Facilities



(2) Project Evaluation

1) Basic Evaluation Policy

(a) Evaluation indicator

The facility plan for the KUD TANI MUKUTI consists of three facilities improvements plan, such as Small-scale dairy products facility, Dairy cow and dairy steer calf fattening facility, and Feed mixing facility. The appropriateness of the project was reviewed in the project evaluation, based on the calculation of Financial Inter Rate of Return(FIRR) that is associated with the construction of mentioned above of the three facilities.

(b) Establishing cost

A firm price list is prepared for all costs and profits pertaining to construction of facilities in rupiahs(RP)as of August 1997. As the foreign exchange rate, 1 US\$ = RP 2,576 is applied.

The contents of the all facilities and equipment, and its expenses are given in preceding Chapter.

(c) Evaluation period

The evaluation period is decided 20 years, based on the construction schedule, planned facilities, and the durable years of the materials utilities.

(d) Depreciation costs

Depreciation costs was calculated according to the fixed installment method based on the physical durable years of the facilities. The physical durable years of the facilities 20 years, equipment 15 years, and vehicles 5 years are established respectively. Depreciation period and cost of the each facilities are shown in the Appendix -IV Table .1.

(e) Funding (source of capital)

In this study, the content and scope of facility improvements differ according to each model KUD. As a result, the source of revenue and factors related to expenditures differ accordingly and there is a difference in the amount of revenue for each project.

Thus, loans, government subsidies, and low interest international financing (including international institutions), and other forms of capital funding needed to implement the projects were reviewed and proposed for each model KUD project.

2) Preliminary items in the evaluation

The preliminary items in the evaluation are shown as follows.

① Fund procurement

a) Initial investment: The construction would be financed by following low interest loans:

- Annual interest: 5 %
- Grace period for repayment of the capital: 5 years
- Repayment period: 20 years

b) Replacement investment: Own financing resources and government subsidies.

② Revenue and expenditure

	Revenue	Expenditure
a) Small-scale dairy products facility	<input type="checkbox"/> sales of dairy products - fresh milk - yogurt	<input type="checkbox"/> milk purchase - operation cost (personnel expenses, utilities, feed etc.) - depreciation - interest
b) Dairy cow and dairy steer calf fattening facility	<input type="checkbox"/> sales of dairy cow and - dairy steer calf	<input type="checkbox"/> cow purchase - operation cost (personnel expenses, utilities, feed etc.) - depreciation - interest
c) Feed mixing facility	<input type="checkbox"/> sales of feed mixing	<input type="checkbox"/> feed purchase - operation cost (personnel expenses, utilities, bags etc.) - depreciation - interest

③ Unit price

	Sales price	Expenditure price
a) Small-scale dairy products	- fresh milk: RP 2,200/L - yogurt : RP 3,500/L	- purchase: RP 1,000/L - purchase: RP 1,000/L
b) Dairy cow and dairy steer calf fattening facility	- cow : RP 1,580,000/head - calf : RP 1,750,000/head	- purchase: RP 600,000/head - purchase: RP 625,000/head
c) Feed mixing facility	- feed mixing : RP 308/kg	- purchase: RP 248.6/kg

*details of the operation costs as shown in Appendix - IV Table 2.

3) Analysis and review of evaluation results

(a) Revenue and operation costs

The results of revenue and operation costs for each facilities improvement plan are shown as follows:

① Small-scale dairy products facility						unit:RP1,000
Revenue	Ist. year	On and after 2 nd. year	Expenses	Ist. year 2nd. year	On and after	
a)sales of fresh milk	633,600	633,600	a)purchase	360,000	360,000	
b)sales of yogurt	252,000	252,000	b)operation costs	285,600	285,600	
sub-total	885,600	885,600	sub-total	645,600	645,600	
② Dairy cow and dairy steer calf fattening						unit:RP1,000
Revenue	Ist. year	On and after 2 nd. year	Expenses	Ist. year	On and after 2nd. year	
a)sales of dairy cow	0	790,000	a)purchase	300,000	612,500	
b)dairy steer calf	0	875,000	b)operation costs	209,226	659,755	
sub-total	0	1,665,000	sub-total	509,226	1,272,255	
③ Feed mixing						unit:RP1,000
Revenue	Ist. year	On and after 2nd. year	Expenses	I st. year	On and after 2nd. year	
a)sales of feed mixing	4,435,200	4,435,200	a)purchase	3,579,840	3,579,840	
			b)operation costs	763,200	763,200	
sub-total	4,435,200	4,435,200	sub-total	4,343,040	4,343,040	
④ Overall (①+②+③)						unit:RP1,000
Revenue	Ist. year 2nd. year	On and after	Expenses	I st. year	On and after 2nd. year	
Total	5,320,000	6,985,800	Total	5,497,866	6,260,895	

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

A statement of profit and loss, and table of cash position of the overall facility plan for all three facilities provision plan in the KUD TANI MUKUTI was prepared in Table 4.2.3.2.1. Results of

the calculation for each three facilities improvements plan are shown in Table 4.2.3.2.2, 4.2.3.2.3 and 4.2.3.2.4 respectively. The following results the obtained.

a) In case of small-scale dairy products facility and feed mixing facility improvement plan, the depreciation and interest payment before profits were in the black from the first year and regular operations continued without any problems. However, due to the high share of the cost of reprovisioning processing equipment in both facility plans and in the investment amount for equipment costs, it is difficult to make ends meet from solely on project revenue reserves. Therefore, it is necessary to apply for either a government subsidy or to cover 45 percent of the equipment replacement cost for small-scale dairy products facility and 70 percent of the equipment replacement cost for feed mixing facility using their own financial resources.

b) Depreciation, interest payment before profits, and net profits are anticipated to be in the red for the first year of the dairy cow and dairy steer calf fattening facility since revenue from the sales of fattened cattle will not be available until the second year. They are anticipated to be in the black from the second year, but the income and expenditures of the current deposit will be in deficit and cash reserved will be tight. As a results, a fund of about 700 million RP for operation costs will be needed when the project begins under this facility plan.

c) In reviewing the overall plan for all three equipment provision plans, 13 percent of the total investment amount of the equivalent of 510 million RP should be obtained as operating funds through own capital or government subsidy at the initial start of the project. This will allow the cost of reprovisioning equipment in each facility plan to be met from the project revenue and difficulties concerning cash position will be avoided during the entire period. In addition, this will allow the investment capital to be recovered in the last fiscal year.

(C) Financial Inter Rate of Return(FIRR)

Results of the FIRR of the overall facility plan for all three facilities provision plan is shown in Table 4.2.3.2.5. Results of the FIRR for each three facilities improvements plan are shown in Table 4.2.3.2.6, 4.2.3.2.7 and 4.2.3.2.6. The FIRR for the small-scale dairy products facility plan has been calculated at 4.1 percent, dairy cow and dairy steer calf fattening facility has been calculated at 6.7%, and feed mixing facility has been calculate at 2.6 percent, respectively.

The FIRR of the entire project which is comprised of three facility plans is 5.6 percent and it is difficult to begin the project on loans from government banks (16 to 18 percent) and private banks (25 to 35 percent). But if low interest financing (5 percent interest rate) can be obtained, as explained in the preconditions of the evaluation, the project becomes financing viable.

(d) Sensitivity analysis

The sensitivity analysis carried out based on the following 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 in case of the overall plan(FIRR 5.6) is shown as below. If there is a slight decrease in revenue and an increase in investment, the interest becomes lower than the figure stipulated in the preconditions and financially maintaining the project becomes difficult. Results of the sensitivity analysis of each facilities improvement plan are shown in Appendix-IV Table 3.

	Investment cost(%)	Revenue(%)	FIRR(%)
Basic case	-	-	5.6
Case 1	+ 5	-	4.9
Case 2	-	- 5	4.8
Case 3	+ 5	- 5	4.1

(e) Comprehensive evaluation

As explained earlier, if this project is able to obtain financial assistance in the form of a low interest loan and government subsidy, it becomes financially viable.

KUD TANI MUKUTI which is the major target of this project has more than 20 years experience in dairy farming as a cooperative. As a result, its existing organization and structural system as a cooperative will be strengthened with organizational management measures and plans to foster human resources, etc. which will be formulated separately to mobilize the KUD.

In view of these circumstances, no difficulties are foreseen in the maintenance and control of the equipment and facilities that are planned. In addition, with the implementation of the facility improvement plan, following the indirect benefits which the regional society, economy and KUD's members farmers can be generated adding to the measurable direct benefits mentioned above.

-
- a) National level : Contribution for the national demand of the fresh milk and dairy products through the production of dairy products
 Contribution for the national livestock promotion policy
-

- b) Regional level: Stable supply of fresh milk and dairy products to the major cities such as Jakarta and Bandung
 An improved nutrition balance of the inhabitants due to expanded distribution of dairy products
 Improvement of the productivity of the livestock products through the expanded distribution of formula feed
-

- c) KUD/Members: Accumulation of dairy processing technology and accelerated dissemination of technical skills to cooperative members
 Improvement of the cooperatives members income and KUD's management condition through the increase of the products and quality of the dairy products
 Expanded employment opportunities for rural women involved in milk collection

d) No. of beneficiary farmers: cooperative members 5,590

(4) Financial analysis of farming household

1) Farm household condition

The financial analysis of farm households a comparison of existing conditions in dairy 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 69 households which participated in the survey of farm households in KUD Tani Mukuti and KUD Pasir Jambu. Summary of the present farm households income condition are as shown in Table 4.2.3.2.9. There are distributed 700 and 1,242 dairy farm household in KUD Tani Mukuti and KUD Pasir Jambu, respectively. The dairy farm households are divide to full-time dairy households type and complex farming type by rice and vegetable. More than 70 percent of the overall income of complex farming is generated from the sale of raw milk and male and female cattle. The average heads of cattle per farm households is 10 to 17 for full-time dairy households and 4 to 5 heads of cattle for part-time farm households. Milk cows comprise about 80 percent of this number for both types of farm households and the remaining 20 percent is sold as beef or draft cattle.

2) Analysis of farm household income

The following benefits have been pointed out for dairy farm households if the project is implemented in both of the KUD.

- Increase in the annual milk volume per head and improved milk quality
- Increase in the number of milk cows
- Increase in the number of cattle sold as beef cattle and improved meat quality

The following are improvements in the average dairy farm households income based on the benefits listed above. The current net profit of farm households is anticipated to increase 1.8 times.

unit: RP1,000

	Present	Project
1. Agricultural gross income		
-sales of fresh milk	12,960	25,300
-sales of dairy calf	1,500	2,200
sub-total	14,460	27,500
2. Production cost		
-feeds	4,104	10,800
-fertilizers & chemicals	-	-
-labor cost	2,880	2,880
sub-total	6,984	6,984
3. Agricultural net income(1-2)	7,476	13,820

3) Environmental assessment

Main impacts on the environment by the project implementation are considered to be as follows:

- Pollution of rivers due to the flow out of processed waste water produced by the expanded production of processed dairy products
- Stench, river water pollution, and pollution of underground water from the flow out of urine from dairy cows and beef cattle

The installation and use of simple waste disposal equipment and other related equipment in the facility plan are anticipated to be sufficiently capable of coping with the mentioned above problems. 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 4.2.3.2.9 Dairy Household Type (Dairy household, Dairy household + Paddy production) : KUD TANI MUKUTI, KUD PASIR JAMBU

Index	Farm Household Type			
	TANI MUKUTI		PASIR JUMBU	
	Dairy	Dairy+Paddy	Dairy	Dairy+Paddy
1. Land holding area (ha)	2.5 ha	-	-	1 ha
2. No. of family (family labor)	4 (2)	3 (4)	8(3)	9(2)
3. No. of milk cattle/ No. of livestock	12 head	6 head (5 chicken)	17 head (23 chicken)	3 head
Income:				
1. Sales of milk	12,960	6,480	21,600	6,000
2. Sales of other livestock	1,500	1,400	2,500	1,000
3. Sales of rice and vegetables	-	2,150	-	3,000
4. Gross income (RP1,000)	14,460	10,030	24,100	9,000
Expenditure:				
1. Production cost (RP1,000)	4,104	2,316	11,135	3,050
seeds	-	175	-	1,200
fertilizer	-	150	350	200
chemical	-	350	-	100
feed	4,104	1,641	10,560	1,200
others (water charge, etc.)	-	-	225	350
2. Part time worker	2,880	2,160	600	700
Total (1+2) (RP1,000)	6,984	4,476	11,735	3,750
3. Living expenses (RP1,000)	3,328	3,340	8,490	5,800
Balance of household				
1. Net agri. income (RP1,000)	7,476	5,554	12,365	5,250
2. Non-agri. income (RP1,000)	1,800	120	-	1,000
3. Balance (RP1,000)	5,948	2,334	3,875	450
4. % of agricultural income	48 %	55 %	51 %	58 %
Banking Loan				
1. Balance of loan (RP1,000)	-	-	-	-
2. Total debt (RP1,000)	-	-	-	-
3. Banking institute, interest	-	-	-	-
4. Objectives	-	-	-	-

Source: Household Field Survey, JICA 1997