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MID - TERM EVALUATION
COOPERATIVE AGROBUSINESS ENTERPRISE
DEVELOPMENT PROJECT

17



NATIONAL COOPERATIVE BUSINESS ASSOCIATION
DEPARTMENT OF COOPERATIVES - GOVERNMENT OF INDONESIA
UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT
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TABLE OF CONTENTS

EXECUTIVE SUMMARY.....	i
1. INTRODUCTION.....	1
1.1 Background.....	1
1.2 Cooperative Agrobusiness Enterprise Development Project.....	2
1.3 Project Evaluation-Purpose and Methodology.....	5
2. EVALUATION FINDINGS.....	8
2.1 Project Organization and Management.....	8
2.2 Project Financing.....	10
2.2.1 GOI Financing.....	10
2.2.2 Title II Financing.....	11
2.2.3 Other Donors.....	11
2.2.4 Revenue Producing Enterprises.....	13
2.3 Project Input Progress.....	15
2.3.1 Revised Input Plan.....	16
2.3.2 Technical Assistance.....	20
2.4 Project Output Progress.....	23
2.4.1 PUSPETA Klaten, Central Java.....	24
.1 Organization and Management.....	24
.2 Financial Management.....	26
.3 Economic and Social Assessment of Service and Business Activities.....	30
.1 General Trade Division.....	30
.2 Milk and Complete Feed.....	34
.3 Feed Mill Division.....	42
.4 Corn Division.....	44
.5 Rice Milling and Marketing Division.....	48
.6 Research and Development Division.....	49
.7 Garment Division.....	54
.8 Furniture Production.....	56
2.4.2 PUSPETA Luwu, South Sulawesi.....	59
.1 Organizational Structure.....	59
.2 Financial Management.....	60
.3 Economic and Social Assessment of Business Activities.....	64
.1 General Trade.....	64
.2 Tractor Hire Service.....	65
.3 Integrated Poultry Development.....	65
.4 Tiger Prawn Production and Marketing.....	69
.5 Tuna Fishery.....	72
.6 Proposed New Business Activities.....	73

3.	PROJECT OPERATIONAL PLANNING AND IMPLEMENTATION ASSESSMENT.....	78
3.1	Selection of Business Activities.....	78
3.2	Involvement of KUDs.....	81
3.3	The Role of Subsidies.....	83
3.4	Benefits Accrued.....	87
3.5	Establishment of Project Benchmarks.....	91
4.	FINANCIAL ANALYSIS.....	94
4.1	PUSPETA Klaten Financial Ratio Analysis.....	94
4.2	PUSPETA Luwu Financial Ratio Analysis.....	95
4.3	PUSPETA Klaten Financial Viability Assessment..	97
4.4	PUSPETA Luwu Financial Viability Assessment....	100
5.	NATIONAL COOPERATIVE IMPACT AND IMPLICATIONS.....	105
6.	LESSONS LEARNED.....	109
7.	RECOMMENDATIONS.....	116

REFERENCES

- APPENDIX A: Scope of Work CAEDP Evaluation
- APPENDIX B: Title II Original and Revised Budgets
- APPENDIX C: PUSPETA Klaten Financial Projections: 1987-2001
- APPENDIX D: PUSPETA Luwu Financial Projections: 1987-2001
- APPENDIX E: Comparative Balance Sheets PUSPETA Klaten
- APPENDIX F: Comparative Balance Sheets PUSPETA Luwu

EXECUTIVE SUMMARY

1. PURPOSE OF THE PROJECT

The purpose of this project is to develop the capacity within the Indonesian cooperative system to plan, organize and implement programs which will provide comprehensive production and marketing services for food crop, livestock and fishery production to small farmers. This is to be achieved through the transformation of seven existing district-level cooperative service centers into organizations providing effective, viable agro-business service to smallholders through their primary cooperatives. The project is experimental, applying the experience from the PUSPETA Klaten project carried out by the Cooperative League of USA (CLUSA) in Central Java in 1981 - 1985 and testing its replicability to other areas.

2. PURPOSE OF THE EVALUATION AND METHODOLOGY

This is the first of two mid-term evaluations called for in the Project Document. Its purpose is to review the organization and management of the project and progress made toward project objectives; to identify problems in design and implementation, and to make recommendations for any modifications.

The evaluation is based on information obtained from published reports, interviews with project staff, extensive field visits to sites of project activities and visits to villages for discussions with primary cooperative members and officers. Information on costs, returns and volumes of business were obtained for major business activities. The team spent 10 days in Klaten district and one week in Luwu district collecting information used in the evaluation. Preliminary conclusions were reviewed with project staff, GOI and USAID officials.

3. FINDINGS AND CONCLUSIONS

The project is well managed and making good progress in meeting its objectives. Technical assistance positions have been filled with well qualified personnel and on a timely basis.

The inability, up to now, to obtain any of the \$6 million of Pl 480 Title I funds planned, the fact that the Ministry of Finance has determined that only \$ 2.3 million (equivalent local currency) of this will be realized and the initial shortfall of 30% in planned financing from the Title II grant delayed investment in infrastructure and reduced the amount of working capital available to the project for both the Klaten and Luwu locations.

Because of these circumstances, and for the sake of efficiency in management, the Project Steering Committee decided to combine the activities planned for Boyolali District with those for Klaten District into a single PUSPETA at Klaten. The Project Management Unit also is considering withdrawing the planned program for Malang District in East Java.

Another consideration in deleting the Malang program is the fact that the USAID/IBRD Uplands Agricultural Conservation Project has not developed as expected. There was a delay in starting implementation, and revisions in operations plans indicate that the CAEDP will not be expected to provide the project's seed production, input supply and secondary crop marketing components, as had been assumed, and indeed, had been the main determinant as to where the project would be located (Boyolali and Malang) and what types of activities would be undertaken.

Changes in the economic environment as a result of declining oil export revenues altered GOI priorities. The project has been urged to enter into export oriented, labor intensive ventures and experiment in joint working relationships with private sector firms. This has resulted in CAEDP undertaking several business ventures not foreseen in the project design, including a profitable furniture making operation in Central Java employing 240 cabinet

makers and wood carvers. PUSPETA Klaten operates the factory for a management fee and shares in the profits on the basis of 32 percent share ownership.

The project was also instrumental in arranging for a joint venture between a large milk processor from the Indonesian private sector and a major US Cooperative (Land-O-Lakes) for a dairy nucleus estate that will import about 20,000 dairy cows from the United States over the next few years. The cows will be provided to small farmers as part of a credit package that will include 6 cows and supporting facilities. The nucleus estate will provide supporting services, including feed supplies, milk collection and marketing services for up to 3000 small farmers. The CAEDP role now is to provide concentrate feeds and corn silage to the enterprise. The corn silage activity is now involving 1000 farmers on 200 hectares in profitable production of silage corn.

The CAEDP has identified several other agrobusiness activities with potential for increasing income and employment in the area. These include broiler and egg production, fish and shrimp production in brackish water, production and processing of high quality vegetables and spices for export and a rattan processing and furniture manufacturing joint venture. The project has made good use of technical specialists from many sources to solve

technical and marketing problems for these activities to insure there is a technically sound and economically viable system for production and marketing other products before promoting expansion of participation by farmers.

4. PRINCIPAL RECOMMENDATIONS

- (1) Disbursement of Title I funds should be made immediately,
- (2) Establishment of PUSPETA Malang should be eliminated from the scope of the project,
- (3) Transition from the current project management structure to secondary cooperative status should be carefully and gradually undertaken so as to insure maintenance of existing achievements.

5. LESSONS LEARNED

- (1) Joint private sector/cooperative working relationships can have mutual benefits to both sectors.
- (2) Diversification from government sponsored activities is necessary for the long term viability of the project.

- (3) Substantial research is essential before large scale implementation of new economic activities at the farmer level.
- (4) Strict control over granting of credit to member cooperatives as well as non members is essential to long term financial solvency.
- (5) Replication of the project model to other areas on a uniform basis will fail; the main element of the project that is replicable broadly is the establishment of a secondary cooperative organization at the district rather than the provincial level and providing it with managerial and financial autonomy to implement business operations outside normal government cooperative activities.

1. INTRODUCTION

1.1. BACKGROUND

The Cooperative League of the United States of America (CLUSA) was involved in cooperative planning and development in Indonesia since late in the 1970s. For several years it worked with the Directorate General of Cooperatives in implementing projects in the Klaten District of Central Java and in the Luwu District of South Sulawesi. These projects were designed to test and demonstrate alternative organizational and management arrangements for providing services at the district level to landless and small landholders through their primary cooperatives.

The PUSPETA Klaten project was established in July, 1981 through a PL 480 Title II grant and GOI capital credit assistance. By the end of the project in December, 1985, it was financially self-sufficient and providing a wide range of services to members through operation of a variety of business enterprises and research and training activities. The project had demonstrated the need for the services of a secondary cooperative nearer to and more responsive to the primary societies (KUDs) than the provincial PUSKUDs. The district level Cooperative Service Centers (PPK), acting as agencies of the provincial level PUSKUDs, did not have the autonomy and flexibility to

provide these services effectively and have since been discontinued.

Based on the Klaten experience, the Ministry of Cooperatives proposed replication of the PUSPETA system in other areas of Indonesia. In November, 1985, USAID, the Government of Indonesia and the National Cooperative Business Association (NCBA), formerly known as CLUSA, entered into an agreement for the Cooperative Agrobusiness Enterprise Development Project (CAEDP), a project extending the PUSPETA Klaten experience.

1.2 THE COOPERATIVE AGROBUSINESS ENTERPRISES DEVELOPMENT PROJECT (CAEDP)

The stated objective of CAEDP is "to develop the capacity within the cooperative system to plan, organize and implement programs which will provide comprehensive production and marketing services for food crops, livestock and fishery production to small farmers who have potential for increasing their production but have not previously benefitted from such services". The project was to accomplish this through replication of the PUSPETA Klaten system in seven selected existing Cooperative Service Centers (PPK). These would be pilot operations to further test and demonstrate the system and determine the features that are replicable under various circumstances.

The strategy for project implementation was to draw on the PUSPETA Klaten experience, which suggested three main conditions essential for a district level cooperative unit to be responsive to the needs of the primary societies and their members:

(a) It must have the managerial and administrative capacity and entrepreneurial skills to plan and implement a wide range of activities.

(b) It must have sufficient short and long-term capital available to initiate planned business activities and develop the facilities needed for implementation.

(c) The membership of the primary cooperatives must be broadly based and educated in their appropriate role and function.

The strategy for project implementation was to develop training and business activities within each of the targeted development areas around a three level cooperative structure consisting of :

(a) Member groups (kelompoks) of 15 to 30 individuals organized around a common economic activity;

(b) Primary cooperatives (KUD) at the village level; and

(c) The Cooperative Service Center (PPK-PUSPETA) to act as a pre-secondary organization providing assistance to the primary cooperatives and their members.

The project document (page 22) proposes that activities will be designed around the development of cooperative business activities that will ensure close relationships between important aspects of management training and membership education. Priority, initially, would be placed on enhancing, through more efficient administration, the services already being performed by some of the primary cooperatives, such as: the supply of consumer goods through primary cooperative stores; assistance in processing, transport and marketing of rice and secondary crops; and production and marketing of livestock feeds.

Thereafter, according to the project document, "project management would research plans for specific sub-projects and their viability and relevance to the proposed project areas. It will then initiate the implementation of capital asset acquisition and construction activities as planned by this document and reinforced through further study, field trial and economic circumstances. As management capabilities are increased and new technologies are tested in pilot areas, and as farmer participation and service adoption increase, additional project activities will be defined and developed into viable business".

Implementation of the project began in January, 1986, and is scheduled to continue for 5 years, to the end of 1990.

1.3 PROJECT EVALUATION - PURPOSE AND METHODOLOGY

The CAEDP document and the Transfer Authorization Agreement call for annual internal evaluations of the project by USAID/I and the NCBA to : (a) review the financial situation in the project, (b) report project performance in meeting objectives and benchmarks, (c) identify problems encountered in implementation; and (d) propose courses of action to resolve problems noted.

The documents also call for two mid-term evaluations. The first of these was to be done by external evaluators early in the third year of the project and was to focus on project inputs, the organization and management of the program and progress made toward establishing a delivery system. Since the proposed annual evaluation has not so far been undertaken, it was decided to conduct the first of the two external mid-term evaluations early and combine it with the annual evaluation as a single exercise. A recent amendment in the project's Transfer Authorization has since formally replaced the undertaking of the annual internal evaluation with that currently conducted. The detailed scope of work for the evaluation is included in Appendix A.

The evaluation was conducted from October 5 to November 10, 1987 by a team of three consultants with specialties in Rural Sociology, Agricultural Economics and Finance. The team had discussions with officials of the

Directorate General of Cooperative Business Promotion and the Body for Cooperative Research and Development of the Ministry of Cooperatives and with officials of USAID and NCBA in Jakarta before going to Klaten in Central Java. The team spent 10 days in Klaten District, much of it at PUSPETA headquarters. Several meetings were held with the General Manager of PUSPETA and heads of PUSPETA operating divisions and with the NCBA advisors. The team was provided with detailed information on all aspects of the PUSPETA operation. The team also observed the various business enterprises with which PUSPETA Klaten is involved and made visits to several KUDs in the district for discussions with members and KUD board members and managers.

The Evaluation Team visited project activities in Luwu District of South Sulawesi from October 18 to 23. Discussions were held with the Director of Cooperatives for South Sulawesi Province in Ujung Pandang before going to Palopo. In Palopo team members met with the General Manager and senior staff, including the managers of the 4 sub-district stations, on October 20th and again on October 23rd. In the meantime, three of the 4 sub-district stations were visited. KUD members and officers were interviewed in each of the sub-districts and business activities were observed.

The team returned to Klaten on October 24th to prepare a draft report which was reviewed in Jakarta with GOI and USAID officials on November 5th. This, the final draft report, takes into account useful suggestions made at that meeting.

2. EVALUATION FINDINGS

2.1 PROJECT ORGANIZATION AND MANAGEMENT

The National Cooperative Business Association of the United States and the Research and Development Division of the Department of Cooperatives (DCRD) share responsibility for management and coordination of the project. Project management and administration for Title II funded expenditures is with NCBA. Administrative and reporting requirement for disbursement of Title I funding is the responsibility of the Department of Cooperative's appointed Project Management Unit (PMU).

An Inter-Directorate General Coordinating Committee, made up of (1) the Director General of Cooperatives Business Affairs, (2) the Director General of Cooperatives Organizational Guidance and (3) the Head of the Cooperatives Research and Development Division, or their designees, is responsible for establishing general project policies, coordinating activities and reviewing progress. This Project Steering Committee was established by Ministerial Decree at the project's onset in January, 1986.

The executive arm of the Committee is a Project Management Unit composed of the NCBA Resident Representative, the Department of Cooperatives Foreign Project Coordinator, and the Project Development Officer.

The PMU is responsible for coordinating the implementation of all project related activities occurring at the national level on a day to day basis.

At the provincial level, the Provincial Cooperative Officer assists the Project Management Unit with project related problems that involve areas beyond district jurisdiction.

A Temporary Advisory Board (TAB) has been established for each of the two district PUSPETAs; PUSPETA Klaten and PUSPETA Luwu. The composition of each is as follows:

The Project Development Officer
The District Cooperative Officer
The Head of the Local Government Economic Section
The Chairman of the Local Cooperative Council
The NCBA Representative

The Board meets approximately once each two months, with the Project Development Officer serving as Chairman. The Board acts as a local advisory body and will have organizational and management authority for each of the two PUSPETA until they achieve Secondary Cooperative Status. At that time, locally elected cooperative leaders will act as PUSPETA boards of directors and liaise with the ex-officio TAB as necessary.

2.2 PROJECT FINANCING

Financing for the project is provided primarily through a combination of monetized Title II Food for Peace granted to NCBA, and GOI financing with funds generated from Title I sales. The project also received some support from various other donors and the project itself generated funds through some of its business activities that help to finance its operations.

2.2.1 GOI FINANCING

The project document budgeted \$ 6,000,000, as the GOI contribution to the project. This was the amount the Department of Cooperatives and the National Development Agency (BAPPENAS) had committed for Fy 85 Title I funding for implementation of this project. These funds were intended for local currency funding for all the project's construction, land procurement, working capital, training requirement, and creation of a Cooperative Rural Enterprise Development Fund.

Until now, none of the Title I generated funds have been made available to the project. While the GOI has assured that the funds will be forthcoming, the amount of rupiah funding, from the sale of the \$ 6,000,000 of wheat, approved by the Department of Finance will be only Rp 3,9 billion (equivalent to approximately only US.\$ 2,3 million, somewhat due to a recently devalued Rupiah).

The GOI however has provided the projects with a significant amount of land, buildings, equipment, machinery and working capital, mostly, but not all, through the previous Klaten and Luwu projects, that continue to be utilized under the current CAEDP.

2.2.2 TITLE II FINANCING

The project document budgeted US.\$ 2,691,000 from the monetization of the Title II grant for NCBA use on financing technical assistance, part of local salary subsidies and other support activities. The full amount of the Title II funding has so far not been realized, because of differences between USAID/Jakarta and AID/Washington over shipping charges. This issue has now been resolved and the 30% shortfall will be made up with the arrival of the final wheat shipment in November, 1987.

2.2.3 OTHER DONORS

The project has accumulated a large and important amount of equipment and machinery mainly through the reallocation of hardware from other foreign donor projects and other areas of Indonesia to Klaten and Luwu. This has mostly occurred where the equipment was delivered to a cooperative organization in another province, was found to be not utilized after several years on-site, and was offered to the CAEDP PUSPETAS for utilization.

The major donors have included the Governments of Japan, the Netherlands and New Zealand. From the Japanese Kennedy Round program the project has received a complete large capacity rice mill with corresponding refinery and rotary sifter, several pieces of mini-workshop equipment, and two large tractors. The Dutch Government has provided a large amount of the wood working machinery that PUSPETA Klaten hypothecated as its initial share in the furniture operation as well as a milk transport tank, while the New Zealand Government has provided a milk chilling tank. The terms of this equipments' provision have varied, some being on a grant, but almost all on a loan basis.

The CAEDP is currently negotiating with other foreign donors for the utilization of equipment also already in country and not utilized.

In the initial stages of the project, where Title I funds have yet to be forthcoming, other donors have played an important part in increasing the PUSPETAs' ability to procure necessary equipment and machinery without a source of capital.

Heifer Projects International (HPI) made an especially valuable contribution to this project. It has been heavily involved since 1952 in assisting PUSPETA Klaten on research and training for the dairy and feed activities. It continues to be a source for funding of a variety of research and training activities as well as

special supplies and equipment at Klaten for dairy, poultry and fish activities and has contributed funds for the Luwu Aquaculture Development Project. Since the start of CAEDP, expenditures by HPI have been Rp 100,411,636 for Klaten activities and Rp 41,541,314 for activities at Luwu.

2.2.4 REVENUE PRODUCING ENTERPRISES

Priority emphasis is on service and business activities which will improve input supply, credit, processing and marketing to support smallholder production where these services are inadequate. Project documents also provide for development of a Cooperative Enterprise Innovation Development Fund (CEIDF), to be managed by the Project Management Unit, to be financed through Title I funds, and used to provide "regenerative seed capital for financing cooperative or joint ventures". Criteria for selection of these ventures include among others, (1) potential for generation of employment, (2) export generation or input substitution capability (3) availability of input and market linkage and (4) ability to provide a positive return on invested capital.

Because of the declining oil and commodity revenues of the last few years the GOI and the Department of Cooperatives have encouraged the CAEDP to involve itself in export oriented/employment intensive businesses. A joint Ministerial decree issued in February, 1986, between the Minister of Cooperatives and the Head of the Indonesian

Investment Coordinating Board encouraged, and provided guidelines for, cooperative sector joint business activities. The types of activities proposed were, in general, along the lines proposed in Section IX of the Project Document for the CEIDF.

Although the GOI has not yet released the Title I funds which were to fund the establishment of CEIDF, many of its functions are in fact being carried out by the CAEDP's project management unit. The CAEDP has, together with the Indonesian Cooperative Council (DEKOPIN) and the Indonesian National Federation of Rural Cooperatives (INKUD), undertaken several major ventures, including,

- (1) Establishment of a trade liaison office in Jakarta to assist cooperatives in producing and marketing export oriented goods and conducting joint ventures with the private sector.
- (2) Establishment and operation of a large furniture manufacturing joint venture in PUSPETA Klaten and Jepara (Northern Central Java) with another cooperative and a private firm that has exported nearly \$ 1 million of furniture since its inception.
- (3) Work with an Indonesian private firm to develop a joint venture with U.S Cooperatives (Land-O-Lakes/CBI) and Indonesian Cooperatives (GKSI) for a dairy production enterprise that will import 20,000 U.S dairy cows in the next two years.

- (4) Development of an arrangement for PUSPETA Klaten to work with Pioneer Seed Company of the U.S and two Indonesian private sector firms in the production of hybrid corn seed.
- (5) Plan for the operation of an integrated cooperative rattan pole processing operation in Sulawesi and furniture in Klaten.
- (6) Planning of a joint operation between PUSPETA Klaten and a private Indonesian firm for the production of baby corn for canning.
- (7) Assistance to a fisherman's cooperative in East Java for obtaining financing to procure a shrimp processing facility for brackish water production, and securing a market for their production from the Union of Japanese Consumer Cooperatives.
- (8) Assistance to the Bali Provincial Cooperative Union (PUSKUD Bali) in production and export to the U.S of high quality, member produced vanilla.

2.3 PROJECT INPUT PROGRESS

The project document states that project activities are to be carried out with PPKs at 7 locations: at Klaten and Boyolali in Central Java, at Malang in East Java, and at the following four PPKs in Luwu District in

South Sulawesi: Mangkutana, Bone-Bone, Walenrang, and Luwu Selatan.

2.3.1 REVISED INPUT PLAN

As mentioned in paragraph 2.2.1 above, the recently approved levels of funding for the Title I component of the project, the greatly revised implementation plan of the Uplands Project, and the CAEDP's expansion and replication into several other areas and operations requires that the projects implementation will have to be revised in scope. The Project Management Unit, along with the Department of Cooperatives CAEDP Steering Committee, decided, because of current circumstances and for the sake of efficiency, to combine the neighboring districts of Boyolali and Klaten into one secondary cooperative PUSPETA and are considering the withdrawal of Malang as a project location.

Following are the main considerations in the decision to combine Boyolali with Klaten:

- (a) The evolution of PUSPETA Klaten into an organization both managerially and financially capable of handling both the Klaten and Boyolali districts. In the past year, PUSPETA Klaten has initiated activities in the Boyolali district in its corn forage production program with farmers.

(b) The recent closure of the Boyolali PPK organization due to lack of financing from both the GOI budget and the Central Java PUSKUD.

(c) The proximity and relative similarity between the agricultural and economic activities undertaken by farmers within both districts. Boyolali is a major dairy farming and secondary crop production.

(d) The late implementation and apparent large revision in the eventual operations plan of the Uplands Agricultural Conservation Project, which was the major determinant in locating a PUSPETA in Boyolali, as the cooperative organization that would cater to the project's seed production/supply and secondary crop marketing components.

(e) The unavailability of PL 480 Title I funds to date which were planned to finance the PUSPETA Boyolali's land procurement, construction, machinery and equipment and working capital requirements.

(f) The project's current great emphasis upon its cooperative enterprise development fund activities, as described in detail in paragraph 2.2.4 above.

The considerations for dropping Malang are the following:

(a) The lack of Title I funds due the eventual realization of only approximately \$ 2,3 million (equivalent local currency) out the originally planned \$ 6 million.

The Malang operation required Title I funds for its land procurement, building construction, equipment, machinery and vehicles and working capital expenditures.

(b) Also its initial relationship with the Uplands Agricultural Conservation Project (as described above) which, again was the major determinant in locating a PUSPETA in Malang, and, which now plans no formal working relationship with the CAEDP.

(c) The original 30% shortfall in the Title II funds provided which were to finance the project's technical assistance and part of its salary subsidy allocations. According to the original plan, a consultant was planned in the first year to initiate Malang activities. As this shortfall was only very recently resolved, and the project management was unsure until now whether the funding would be sufficient to provide a consultant and the necessary salary subsidies for Malang (along with Title I funds financed operation), no preliminary implementation activity was possible during the first two years of the project's implementation.

(d) The length of time required for the project startup until its operational maturity will not now be sufficient as the project is nearing its third year of implementation of a planned for five year project.

While finding it necessary to consolidate, the CAEDP has undertaken cooperative agro-business and enterprise development activities far beyond what was originally envisioned within the project, as described in Section 2.2.4 above. These activities, which come within the framework of the CAEDP's Cooperative Enterprise Innovation Development activities, have provided substantial return on investment while fulfilling the original project objectives and current priorities of the GOI. The CAEDP Project Management Unit has prepared for the Departments of Cooperatives and Finance revised Title I and Title II budgets that will provide what they feel will be the most effective utilization of the limited Title I funds within the PUSPETA's Klaten and Boyolali and Luwu, and of the Title II funds for the same locations. The revised budgets reflect the increasing emphasis on the Cooperative Enterprise Innovation Development activity. The original and revised budgets for Title II funds are included in Appendix B.1 and B.2. Appendix Table B.3 shows amounts of Title II funds actually spent from the start of the project in January, 1986 to June 30, 1987. Thirty percent of the \$ 2,691,000 budgeted had been spent by that date.

The Title I funds will be disbursed as loans at 4% interest, with repayment over 15 years, with a 5 year grace period. According to the revised budgets, PUSPETA Klaten will receive an initial loan of Rp 1,900 million, of

which Rp 487,451,000 would be used to refinance debt to DDI, the agency also responsible for the Title I funds disbursement. Another disbursement would be made to PUSPETA Klaten a year later in the amount of Rp 250 million. The initial distribution to PUSPETA Luwu would be Rp 650 million, of which Rp 165,000 would also be used to refinance its existing debt to DDI. Luwu would receive another disbursement the first year of Rp 200 million and Rp 50,000,000 in the second year. The remaining Rp 750 million would be available for other activities such as the proposed Cooperative Enterprise Innovation Development Fund (CEIDF).

2.3.2 TECHNICAL ASSISTANCE

The project document provides for 4 long term core staff to be provided by NCBA. These include the Chief of Party and Advisors at the three other proposed PUSPETA locations; Malang, Luwu and Boyolali. All except the Malang position have been filled from January, 1986, the start-up date of the project. As mentioned earlier, for a number of reasons no steps have been taken to develop a program at Malang and deletion of this position is being considered.

The location for the Boyolali advisor position was changed to Klaten as it was decided by the Project Management Unit to combine Klaten District and Boyolali District into a single PUSPETA. The core staff is highly

qualified and well adapted to work in the Indonesian rural environment.

The project document provides for two long term technicians to be assigned from the start-up of the project. The Livestock Advisor is in place and has been since January 1986. The Hatchery Advisory position is still vacant but a well qualified expert, who has assisted the project in the past as a short term consultant, has been recruited and will take up a 2 year assignment in March, 1988.

The main reason for the delay in filling the hatchery advisory position was the initial shortage in realization of Title II financed technical assistance funds and delayed disbursement of Title I funds for development of the Luwu shrimp hatchery infrastructure.

The project document made provision for local consultants to carry out a baseline survey in the first and second years of the project. This was partially implemented in the Klaten dairy, Luwu shrimp and Klaten furniture operations. In other areas of operation, baselines will be undertaken at the start of the activity where feasible.

Additional unscheduled short term consultancies were used by PUSPETA Klaten. A furniture design and quality control position was financed for 9 months through Title II funds. After that period, the PUSPETA Klaten

furniture operation has been able to finance the position internally.

The project has benefitted significantly from technical assistance provided at no cost to the project by several organizations. These include:

- (a) The Volunteer in Overseas Cooperative Assistance (VOCA) provided a retired livestock feeding advisor to the project for 3 weeks in February, 1986. He assisted in improving livestock and poultry feeding rations and in increasing feed mill efficiency.
- (b) Services of an expert from the University of Hawaii on rumanant nutrition for 10 days under the auspice of the VOCA (Farmer to Farmer Program).
- (c) Services of an expert from Chieng Hseng University, Taiwan, for one week, advising on food processing/packaging relative to PUSPETA's experimental program on vegetables and spices.
- (d) Services of two specialists on Aquaculture from the International Centre for Aquaculture, Auburn University and AID's Water Harvesting and Aquaculture Project (WHAP)
- (e) The Republic of China Technical Assistance Mission to Indonesia, headquartered in Yogyakarta, has provided services of specialists in aquaculture, vegetables and spices. Their experts trained PUSPETA staff in vegetable

and spice culture and visit the project each month to review the program. One of the experts has assisted the Luwu program in aquaculture.

(f) An expert from Hershey Foods Cooperation is scheduled to spend 3 weeks on the project, beginning in November, 1987, for design and planning of the Luwu cocoa processing and marketing operation. He is provided under the auspices of the VOCA.

These short-term advisors have made valuable contributions to the project's program for development of technically sound and economically feasible new activities. The project management is commended for its initiative in tapping these important sources of assistance.

2.4 PROJECT OUTPUT PROGRESS

Progress in implementation of the project in Central Java and South Sulawesi is discussed separately in the following sections. In each case progress in development of a functional organizational structure will be discussed and followed by a discussion of the financial management and financial soundness of each organization. This will be followed by a review of the activities of each operating division, assessment of the economic viability of individual business activities and their impact of employment and incomes on small farmers.

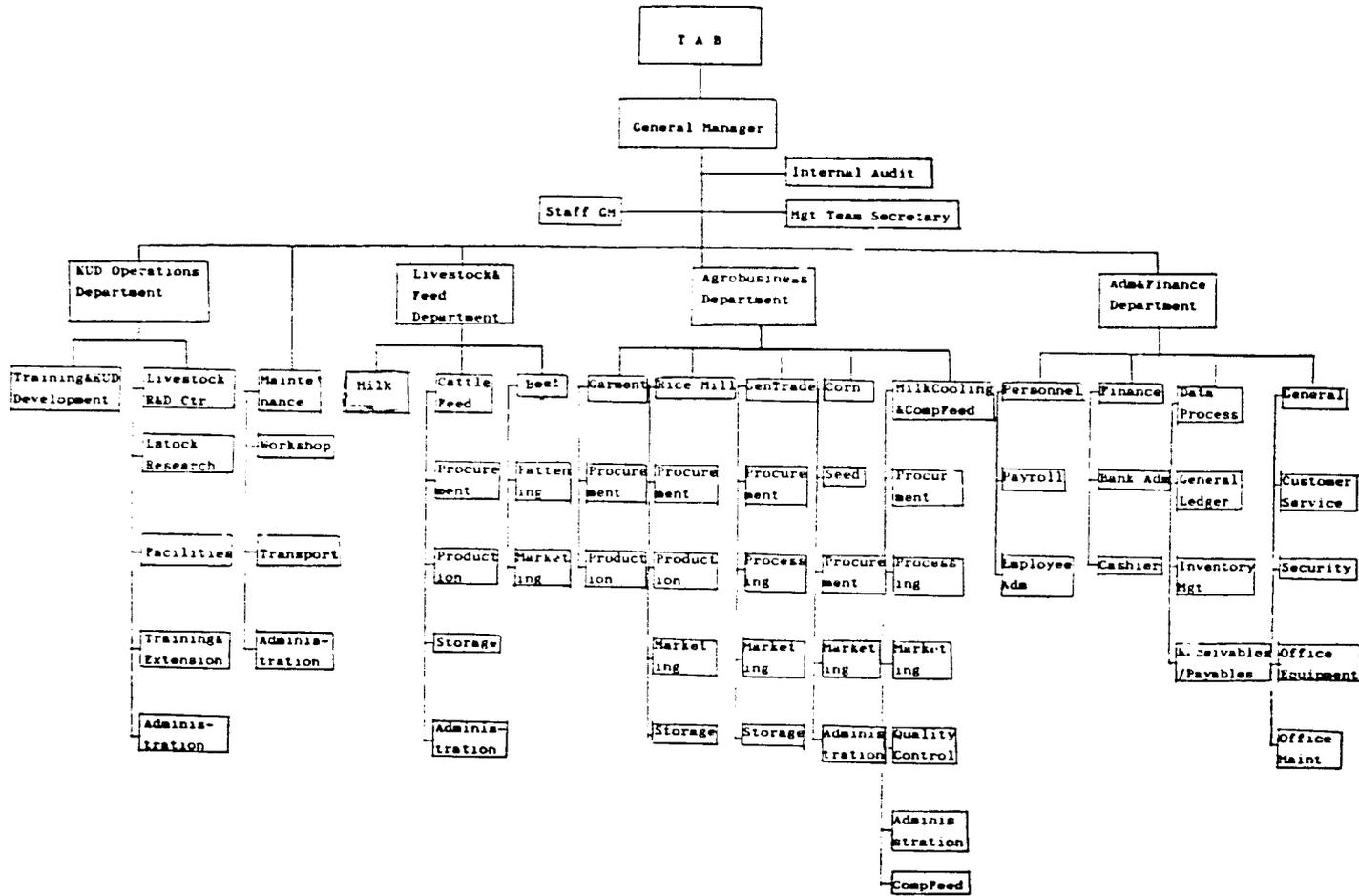
2.4.1 PUSPETA KLATEN, CENTRAL JAVA

.1 Organization and Management

Since its inception in January 1980, PUSPETA Klaten has been a Pre-Secondary Cooperative with operational autonomy and managerial authority vested in its Temporary Advisory Board (TAB). Operational Guidelines for this project (Appendix E, Project Document), agreed to by the NCBA Resident Representative and the Head of the Research and Development Division Ministry of Cooperatives on January 31, 1986 states that PUSPETA Klaten will undergo a one year organizational transition from the current status of a Project Management Unit (PMU) with authority vested in its TAB to that of a secondary cooperative with authority vested in its membership through a Board of Directors elected by its member KUDs. This change in status has not yet taken place but it has been agreed to by the Department of Cooperatives pending development of guidelines for operation of the PUSPETA to the termination of the GOI and NCEA Budget contributions.

The TAB gives the General Manager broad authority and responsibility for planning and day-to-day operation. The General Manager is assisted by a senior staff of 4 Department Managers, constituting the "Management Team". There are 9 major operating divisions and divisions for training, personnel, finance, etc,. See Figure 1.

Figure 1: Organization Chart PUSPETA Klaten



The Management Team meets with heads of divisions, usually every two weeks, to discuss performance. Normally the Management Team meets with its TAB every three months.

The General Manager and many of the Department Managers and Division Heads have been on the PUSPETA staff for several years. They are knowledgeable about their areas of responsibility and display a sense of commitment to PUSPETA. In two meetings with the entire senior staff the evaluation team was impressed by the frankness and confidence with which all participated.

.2 Financial Management

PUSPETA Klaten has a well designed and computerized accounting system providing management information on all PUSPETA service and business activities. Quarterly financial reports are available within 15 days after the end of each quarter, including income statements for each of the operating divisions and combined income statements and balance sheets for PUSPETA. The system also maintains inventories for all activities and accounts receivable and payable.

PUSPETA has shown marked improvement in volume of business and net earnings, particularly in 1987. Net profit this year is estimated at more than Rp 100,000,000, after net losses in each of the two previous years.

Already it has earned Rp 79,459,000 through September 30th (Table 1).

Income statements for each of the operating divisions are shown in Table 2. Each division is considered as a profit center. Transactions among the division are costed and priced so that each division will, to the extent possible, be self-financing. However, some of the divisions such as Milk and Complete Feed and the Feed Mill Divisions have been obliged to provide services to members on narrow margins and have been marginally profitable. This year, however, both divisions are showing a marked increase in sales and profits, due primarily to a greatly expanded market for their feeds. This will be discussed more fully in following sections, in which the activities of each of the 7 divisions shown in Table 2 and the two new divisions, Poultry and Beef Production, are evaluated.

Appendix C presents projections over each of the next 15 years of (1) The Volume of Sales/Revenues, (2) Cash Flows, (3) Income Statements and (4) Balance Sheets. The Projections of Sales/Revenues Volumes provide benchmarks of annual achievements for the various business activities and are the basis for the other three projections.

The projections assumed a liquid balance of Rp 57,979,000 at the time that Title I funds become available. Of the Rp 2,150,000,000 budgeted for PUSPETA

Table 1. The Income Statement, 1985 through September 1987

Description	1985 (1000 Rp.)	1986 (1000 Rp.)	1987 (1000 Rp.)
Total Sales of :			
Goods	2,128,921	2,716,372	2,871,518
Services	93,464	83,498	125,110
Total Sales	2,222,385	2,799,870	2,996,628
Cost of Goods Sold			
Goods	2,060,128	2,553,439	2,601,610
Services	23,249	19,710	3,890
Total CGOS	2,083,377	2,573,149	2,605,500
Gross Margin	139,008	226,721	391,128
Operating Expenses :			
Sales & Dist Exp	187,580	193,291	235,084
General Adm. Exp	125,868	166,047	158,514
Total Operating Expenses	313,448	359,338	393,598
Gross Profit/ (Loss)	(174,440)	(132,617)	(2,470)
Other Income / (Exp) (*)	78,866	112,056	81,930
Net Profit / (Loss)	(95,574)	(20,561)	79,460

*) Break Down of Other Income :

	1986	1987
.Income from Furniture	37,477,071	21,706,646
.Interest Income	13,880,616	2,527,692
.Subsidy from GOI	8,288,500	310,250
.Subsidy from NCEA	1,200,000	1,821,750
.Subsidy from HPI	24,588,490	14,766,255
.Rent	12,000,000	
.Others	14,620,899	40,797,054
Total Other Income	112,055,576	81,929,647

Table 2: The Income Statement for each Divisions

Divisions	1986		1987	
	Sales (1000 Rp)	Net Profit	Sales (1000 Rp)	Net Profit (1000 Rp)
1. General Trade	1,518,914	27,399	924,028	21,792
2. Milk & Comp.Feed	693,517	6,869	892,742	22,583
3. Feed Mill	300,452	(14,951)	757,581	52,133
4. Rice Mill & Mktng	111,620	(17,689)	88,304	(10,561)
5. Research & Dev.	70,064	12,236	71,811	(3,434)
6. Corn	66,389	1,655	173,014	611
7. Garment	5,667	(3,658)	19,669	(3,664)

Table 3. Number of Personnel in Puspeta

1. Management Team	4 persons
2. Adm & Finance Department	23
3. Livestock Department	21
4. Agrobusiness Department	49
5. Kud Operational Department	21
6. Internal Auditor	2
Total	----- 120

Total Salary per month Rp.	11,085,700
Average Salary	92,380
Maximum Salary	750,000
Minimum Salary	25,000

Klaten/Boyolali, it is planned that Rp 1,900,000,000 will be made available immediately and that, of this. Rp 487,451,000 will be used to refinance old debt to the Directorate of Investment Capital (DDI) in the Department of Finance, which will also disburse Title I funds. The remaining Rp 250,000,000 budgeted for PUSPETA Klaten/Boyolali will be distributed within a year. The terms of the arrangement provide that the Title I funds will be loaned at 4% interest with repayment over 15 years, with a 5 year grace period. The projections indicate growth that will assure ability to meet debt obligations and repay the Title I loan by the end of the period.

.3 Economic and Social Assessment of Service and Business Activities

A wide range of service and business activities are carried out by the 9 operating divisions. These are described and evaluated for each division in the following sections.

.31 General Trade Division The General Trade Division is the largest of the operating divisions. In 1986 it produced about 55% of PUSPETA's total revenue and earned net profit of Rp 27,399,000. In 1987, through September, net profits were Rp 21,792,000. The principal commodities handled by the division are sugar, fertilizer and molasses.

In 1986 and until February, 1987, PUSPETA received an allocation of 100 tons of sugar per month. This was increased to 150 tons per month on March 1st of 1987. Demand for this commodity is strong and stable and the entire allocation is easily disposed of through the 35 KUDs. Table 4 shows the volume of sales and revenue for 1986 and 1987. Sugar has been an important, high Rupiah volume commodity for the KUDs enabling them to both enhance their fledgeling consumer toko activities and establish a non-seasonally dependent and stable source of income.

Table 4: Sales of Sugar 1986 & 1987

	Sales (Ton)		Sales (Rupiah)		Gross Prof. (Rp.000)	
	1986	1987	1986	1987	1986	1987
Jan	120.10	90.50	56,365	51,669	1,862	1,174
February	89.00	60.70	51,810	34,767	1,380	787
March	52.30	116.80	26,160	65,436	811	1,171
April	136.00	134.50	77,572	76,758	2,108	1,349
May	110.60	224.50	62,929	128,676	1,714	2,251
June	63.10	169.50	35,927	101,174	978	1,978
July	70.70	54.00	40,275	33,403	1,096	540
August	106.80	173.50	55,724	104,180	1,655	1,735
September	127.40	148.00	78,403	91,135	2,130	1,595
October	106.00		66,509		1,643	
November	75.00		42,830		1,163	
December	127.00		72,440		1,969	
Total	1,194.00	1,172.00	666,944	687,198	18,507	12,580

PUSPETA purchases fertilizer from an association of 6 KUDs which are licensed fertilizer distributors of PUSRI, the national fertilizer production company. PUSPETA provides credit to the 6 KUDs for procurement of the fertilizer and sells most of it to 10 other KUDs on consignment and another 5 KUDs for cash. Fertilizer sales have been an important source of income for PUSPETA and the KUDs. PUSPETA operates on a gross margin of Rp 8/kg. Transportation and handling costs amount to Rp 2,5, leaving a net return of Rp 5,5/kg. In 1986 PUSPETA sold much of its fertilizer through the TRI (sugar cane) program. In that year PUSPETA sold 5,000 tons of fertilizer to 25 of the KUDs and earned net profits of Rp 3,641,000. Sales in 1987 were reduced as PUSPETA is no longer involved in sales under the GOI TRI program. The Provincial Director of Agriculture decreed that from the beginning of 1987 all TRI fertilizer distribution will be done solely by PUSKUD and PT. Pertani.

PUSPETA distributes an increasing amount of fertilizer through the corn silage program, in which inputs, including fertilizer, are provided on three months credit to farmers who participate in the program. Fertilizer sales for 1986 and 1987 are shown in Table 5.

Aside from the corn silage credit and the previous TRI programs, an increasing amount of the fertilizer business is in the form of repacked 25kg sacks sold in the free market through the KUDs. As small

Table 5: Fertilizer Distribution 1986 & Jan - Sept 1987

Month	Kg		Rupiah	
	1986	1987	1986	1987
January	163,559	403,016	15,106,385	46,672,684
February	215,613	362,420	19,238,449	41,783,481
March	221,950	265,888	19,792,575	28,497,188
April	165,251	123,976	19,281,721	14,756,900
May	135,444	51,500	20,357,028	6,030,250
June	532,861	114,890	66,531,964	13,691,170
July	856,223	129,495	106,689,624	15,401,310
August	707,792	89,100	38,240,884	10,709,450
September	396,732	100,750	49,353,786	11,724,550
October	319,319		39,016,780	
November	783,366		90,989,506	
December	423,112		49,089,948	
Total	4,921,223	1,640,025	583,748,650	199,266,982

landholdings limit amounts marketable to farmers in any one application and the Indonesian fertilizer industry packs in 50kg sacks, PUSPETA repacking of fertilizer provides the KUDs with a source of fertilizer more appropriate to the small farmer market.

Trade in molasses is mostly internal. The commodity is procured from the sugar factory and sold primarily to the Feed Mill Division and the Milk and Complete Feeds Division for use in livestock feeds. In 1987 PT. NAA has also been purchasing molasses from PUSPETA. Total sales in 1987, through September, were 2,632 tons, valued at Rp 63,1 million. Of these, sales to PT. NAA were 484 tons, worth Rp 30,6 million.

With drought conditions developing in Klaten district in September and October this year water shortages for livestock and human use became a serious problem. PUSPETA has used its molasses transport tanks to supply water to villages in need, charging only the cost of transportation fuel.

.32 Milk and Complete Feed Division Dairying is an important source of employment and income in 4 KUDs in Klaten district. It is a relatively new industry for the area, arising out of the national program for importation of Friesian heifers from Australia or New Zealand, which began in 1978-1981. The cattle were distributed in this district primarily under the GKSI Credit Aid for Cooperative Project in 1981. Cattle were distributed only to cooperative members of 4 eligible KUDs.

Under the previous CLUSA assisted PUSPETA project, PUSPETA assumed responsibility for providing a range of services to help make dairying a profitable enterprise. The services included production and distribution of a complete feed, research to develop economical concentrate feeds, training in dairy management for farmers and collection and marketing of milk.

PUSPETA remains committed to supporting the dairy industry. Nine hundred farmers owning milk cows, in 4 KUDs, sell their milk through PUSPETA. A collection and

cooling center has been set up at Karangnongko. Farmers deliver their milk to their group, where it is tested and forwarded to the KUD, where it is again tested. If it meets the standards it is forwarded to PUSPETA, where it is again tested and placed in the cooling unit for delivery to PT TAA at Salatiga, the sole buyer.

Testing at each level of the cooperative organization is done to insure a high quality product that will be accepted by the milk processor and to fix responsibility for adulterated or sub-standard milk.

Early in the program PUSPETA experienced considerable difficulty in providing a reliable, profitable market. Often milk would be rejected without cause or because of limited capacity of the processor. Since arranging to market milk through PT. TAA these difficulties have been largely overcome, though at first the stricter standard and more sophisticated testing of PT. TAA resulted in rejection of some shipments of milk which did not meet their standards. Education and more careful testing at the kelompok, KUD and PUSPETA have improved this situation.

Under current arrangements, PT TAA pays Rp 375 per litre for milk. Farmers receive Rp 285 per litre from PUSPETA after the following deductions:

KUD repayment for cow purchase credit	= Rp 43/1
PUSPETA cooling unit, testing, external transport	= Rp 25/1
Margin for farmers group, KUD and internal transport	= Rp 22/1
Total deductions	<u>= Rp 90/1</u>

PUSPETA is the only organization in the area with a cooling unit and the sole buyer of milk produced in the participating KUDs. PUSPETA is highly dependent on PT. TAA for marketing the milk. Currently there is no difficulty in this marketing arrangement as PT. TAA has the capacity for 120,000 litres/day and could double its capacity to 240,000 litres/day with the addition of a second shift. Total production in Central Java is only about 40,000 litres per day. However, in a joint venture with Land-O-Lakes Inc, nearly 20,000 cows with high production potential will be imported from the United States for the nucleus estate at Salatiga over the next few years. It is expected that PT. TAA will increase its processing capacity to accommodate the additional production once necessary. Milk received and marketed by PUSPETA in 1986 and 1987 are reported in Tables 6 and 7.

PUSPETA services to the dairy industry have made dairying an attractive option for many farmers, especially in the areas of the 4 KUDs with poor farming resources and few production alternatives. Officials in the participating KUDs told the team that it was the best opportunity for

Table 6 :Sales of Milk 1986

Month	Karang- Nongko	Kema- Lang	Jatinom	Manis - 3 Renggo	R & D Div.	Total
January	40,037	41,284	60,361	21,985	2,446	166,113
February	37,440	35,780	56,655	19,741	2,321	151,937
March	42,253	37,870	62,959	19,666	2,414	165,162
April	40,276	33,527	58,954	18,947	2,880	154,584
May	39,015	31,908	58,680	19,899	3,365	152,867
June	38,554	30,600	55,964	20,000	3,365	148,483
July	43,913	36,021	61,807	22,344	3,484	167,569
August	44,751	40,461	63,592	24,573	4,042	177,419
September	44,756	39,703	25,023	64,037	3,416	176,935
October	47,480	41,183	70,302	26,710	4,040	189,715
November	44,904	38,256	69,527	25,522	4,772	182,981
December	45,214	39,199	71,513	25,241	4,173	185,340
Total	508,593	445,792	715,337	308,665	40,718	2,019,105

Table 7: Sales of Milk 1937

Month	Karang - Nongko	Kema- lang	Jatinom	Manis- Renggo	R & D Div.	Total
January	40,384	36,425	67,972	21,819	4,273	170,873
February	33,180	30,812	57,442	20,834	3,656	145,924
March	35,035	31,003	20,975	64,623	3,633	155,259
April	35,162	29,925	63,203	19,480	3,042	150,792
May	36,289	33,343	67,476	20,845	2,916	160,869
June	35,464	27,679	67,590	19,451	2,954	162,538
July	37,209	41,422	70,796	22,898	3,379	175,704
August	36,753	45,229	74,997	24,981	3,997	185,957
Sept	37,436	44,883	78,747	24,378	3,749	189,193
Total	326,902	330,121	569,198	239,289	31,599	1,497,109

many farmers and there was interest in obtaining additional cows with high production potential. They indicated that there was initially much skepticism and disappointment with dairying due largely to high death losses and low productivity of some of the animals. Many of the imported cows were not pregnant and there were long delays before they began to lactate.

PUSPETA has invested heavily in improving the feed supply and educating farmers in good nutrition and good health care for the animals. Farmers have come to appreciate the importance of good veterinary care and PUSPETA has responded by recruiting and placing qualified veterinarians with each of the 4 KUDs from October 1st of this year. A sample survey of 216 dairy farmers in the 4 KUDs provides information on the cost and returns per cow. While many of the cows included in the survey show high yields and returns there were wide variations in production and production costs for individual cows. Table 8 shows average production, gross revenue, feed costs, and net revenue above feed costs for sample cows in each of the 4 KUDs.

While the milk enterprise has not been a very profitable undertaking for PUSPETA because of the narrow margins, necessary high risks due to perishability, and the costly services required to develop and support the industry, it has provided a needed service to small and landless farmers of the community. Its research and

Table 8
Average Daily Production, Feed Costs and
Revenue for Sample Cows in 4KUDs

KUD	Liters/ lactation	Price/lt Rp	Revenue Rp	Feed Cost Rp	Net Revenue Rp
Jatinom	3683	285	1,049,655	556,990	492,665
Karangnongko	3048	285	868,680	473,040	395,640
Kemalang	3635	285	1,035,975	488,085	550,890
Manisrenggo	2971	285	846,735	544,215	302,520

Source; Volume II, Data-Data Hasil Survey Produksi Susu Sapi Perah Di Kabupaten Klaten.
Tahap III, Proyek PUSPETA Klaten, 31 Juli 1987

training program have addressed the major problems and over time it is expected that improvements in nutrition, improvements in animal care and health and, especially measures to reduce the periods between pregnancies, will result in significant improvements in production and profitability for farmers.

This program, which directly involves 4 of the KUDs in Klaten, has been a major source of income for these KUDs and their members. It has contributed little net income for PUSPETA, though it has been a major part of its total volume of business. Other KUDs benefit indirectly from this activity through their participation in the program for producing corn for the silage program and ingredients for the complete feed and concentrates programs.

PUSPETA initiated a complete feed program to help correct the poor nutrition that was an important cause of low production. At first this was provided on credit and heavily subsidized. Now it is being sold to farmers at Rp 60/kg and PUSPETA provides transportation to the KUDs (Rp 2,00/kg), provides incentive payments of Rp 2,50/kg to farmer groups, and Rp 1,50/kg to the KUD.

The inputs for the complete feed are molasses, concentrate, rice straw, and corn silage. The molasses is provided from the General Trade Division procurements from a local sugar factory. Concentrates are supplied by the Feed Mill Division. Rice straw is obtained from local farmers and corn silage is obtained from the Corn Division. Research to develop and test the complete feed and to provide a nutritious feed at lowest cost is done by the Research and Development Division. Thus the complete feed operation is a highly integrated activity involving several divisions.

Monthly distribution of complete feeds for 1986 and 1987 is shown in Tables 9 and 10. Production and distribution of complete feeds increased sharply from February, 1987 when PT. NAA began purchasing large quantities for the dairy cows at the nucleus estate in Salatiga. At the present time it accounts for about 80% of the complete feed sales volume. The large increase in volume, incidentally, has made these feed enterprise quite profitable for PUSPETA. Most importantly however, the

Table 9 : Distribution of Complete Feed 1986

Month	Karang Nongko	Kema-Lang	Jatinom	Manis-Renggo	R & D Div.	Beef Prod.Div	Total
January	23,860	1,800	26,315	5,855	19,560	2,267	79,657
February	16,810	3,273	20,676	5,850	21,515	2,297	70,421
March	17,620	3,885	19,840	6,850	17,667	3,286	69,148
April	17,090	4,555	14,730	7,525	23,410	4,041	71,351
May	17,885	5,015	14,520	8,110	25,610	4,402	75,542
June	17,750	5,245	15,620	7,875	25,500	4,184	76,174
July	16,625	8,785	17,245	7,745	23,062	5,196	78,658
August	16,380	12,055	18,630	8,735	21,649	2,910	80,359
Sept	20,940	14,095	19,120	8,780	22,055	2,391	87,381
October	26,245	16,533	24,785	9,340	22,700	2,744	102,347
November	27,405	12,260	29,660	10,880	19,815	6,845	106,865
December	28,380	12,330	36,155	10,415	19,331	16,040	122,651
Total	246,990	99,831	257,296	97,960	261,874	56,603	1,020,554

Table 10 : Distribution of Complete Feed 1987

Month	Karang-Nongko	Kema-Lang	Jatinom	Manis-Renggo	R & D Div.	Beef Prod.Div.	PT NAA	Others	Total
January	27,145	14,880	31,245	8,595	19,260	21,060	0		122,185
February	16,355	8,495	18,945	7,685	17,343	20,630	428,750		518,203
March	12,745	6,860	22,025	7,940	17,555	29,485	140,500		237,110
April	10,720	4,465	18,300	6,230	15,745	33,857	0		89,317
May	9,875	4,090	16,530	5,850	15,385	31,250	364,000		446,980
June	11,375	4,855	19,740	7,255	23,962	31,645	561,000		659,832
July	12,864	6,310	21,325	6,695	31,094	27,100	620,000		725,388
August	12,795	9,865	19,710	7,080	27,292	2,400	460,000		539,142
September	17,115	14,950	26,345	10,455	22,973	2,250	393,530	100	487,716
Total	130,989	74,770	194,165	67,785	190,609	199,677	2,967,780	100	3,825,875

several long + costly years of research into initiating silage making in Indonesia and developing other appropriate local feedstuffs for dairy animals has now paid off in large scale adoption by the private sector through their purchase of the feed package from PUSPETA.

.33 Feed Mill Division The Feed Mill Division produces concentrate feeds for chicken, cattle and fish which are sold within PUSPETA to the Milk and Complete Feed, Broiler, and Research and Development Divisions and KUDs, PT. NAA and others. Table 11 shows the tonage and rupiah sales volume of this activity for 1986 and 1987. Sales have increased rapidly since September of 1986. Total sales in 1987 (through September) were nearly 200% above sales for all of 1986. The profit for the division so far in 1987 has been Rp 52,133,000. In contrast, the division had a net loss of Rp 14,951,000 in 1986.

Table 11 : Sales of Feed Mill

Month	1986		1987	
	Ton	Rupiah (1000 Rp)	Ton	Rupiah (1000 Rp)
January	65.80	10,596	133.10	23,625
February	80.40	13,684	201.20	36,238
March	47.80	6,575	306.10	61,538
April	104.30	23,046	295.70	54,511
May	96.50	16,156	512.90	80,940
June	90.40	15,995	618.10	97,822
July	92.20	16,156	622.30	107,998
August	92.30	16,888	654.20	133,951
September	155.80	29,000	685.20	141,976
October	179.10	35,190		
November	184.60	43,986		
December	168.90	36,509		
Total	1,355.10	263,777	4,028.00	738,599

The major factor in this large increase in sales has also been the contract with PT. NAA in Salatiga for dairy cattle feed. Sales to that firm, which increased rapidly since May, 1987, now account for about 80% of total feed concentrate sales.

The losses in previous years were due largely to the low volume of sales and correspondingly high depreciation costs per unit. The unit has a current capacity of around 1,000 tons per month. The Division has been using the power take-off from a stationary tractor for running one half of the grinder/mixer machinery but has invested in additional electric power capacity and is in the process of converting to use of electric motors, which will result in significant savings in energy costs.

The Team observed that employees of the feed mill work in an environment that is hazardous to health and risk injury from the machinery. Only one worker was observed wearing a hard hat and few were using dust masks. It is recommended that improvements be made in safety measures, including educating workers in safety precautions.

The various concentrate feeds now being produced at PUSPETA have proved competitive in quality with the best of alternate feeds in the market. With the addition of the PT. NAA order, PUSPETA is now the largest producer of cattle feed in the country. Feed production costs would be lower if PUSPETA had sufficient working

capital to buy feed raw materials, particularly corn and rice bran, at their seasonally low prices.

It is possible, of course, that PT. NAA will eventually develop its own facilities for feed production. PUSPETA has, so far, been able to meet the expanded demand comfortably with its existing equipment. There would be some risk in trying to satisfy further increases in demand that would require installment of additional feed manufacturing facilities unless assured of a continuing demand through a long term contract.

.34 The Corn Division The Corn Division has engaged in the following enterprises:

- (1) production and processing of hybrid corn seed,
- (2) production of sweet corn and other specialty products, and
- (3) production of corn silage for cattle feed.

PUSPETA began producing hybrid corn seed in 1986 under an agreement with Pioneer Seed Co of USA and an Indonesian private firm. Under the initial arrangement, participating farmers were supplied parent seeds and fertilizer on credit. Plowing and preparation services were also provided on credit if needed. PUSPETA supervised and hired workers for planting, cultivation, detasselling, harvesting, drying and processing. 200 farmers participated in the program, producing 320 tons of wet seed ears on 40 ha. Farmers received Rp 120/kg of wet seed with

ear. Costs for all PUSPETA operations of dried and treated certified seed were Rp 380/kg which were then sold for Rp 580/kg.

Late in 1986 the Pioneer franchise was sold to another firm which negotiated a different, less profitable, arrangement with PUSPETA. Under the new arrangement farmers were paid Rp 85/kg wet ear corn, the Kelompoks received Rp 1,0/kg and the KUDs received Rp 0,5/kg. PUSPETA was reimbursed for its operating costs and given a 10% fee for managing the operation. The new franchisee has since decided to undertake seed production itself in East Java. PUSPETA is not now in the seed corn production activity but is considering arrangements with other U.S hybrid seed companies with operations in Indonesia. The hybrid corn seed production program has been popular with the participating farmers, providing revenues of from Rp 400,000 to Rp 500,000 per hectare. Most of the production costs were incurred by PUSPETA and reimbursed by Pioneer franchisees.

The Corn Division carried out a trial of producing sweet corn for green consumption. The trial was carried out on a small area of PUSPETA's land. The system involved planting a 500 square meter area to sweet corn each week to provide a harvest of 800 kg of sweet corn ears each week. A total area of 6000 square meters would provide a weekly supply of 800 kg through the year. Costs were Rp 700/kg. It was a popular product that sold for Rp

825/kg, giving a profit margin of Rp 125/kg. Annual yield on a per hectare basis would be 16,000 kgs, giving a gross revenue of Rp 13,200,000 and net returns of Rp 2 million per hectare. It proved a profitable crop but difficulty in importing the sweet corn seed from Hawaii prevented promoting this as a feasible crop for farmers. Efforts are being made to procure the male hybrid from the University of Hawaii, which would enable PUSPETA Klaten seed production activity.

PUSPETA has been approached by PT. Dieng Jaya to grow baby corn on up to 100 hectares. The company would provide technical guidance for the production and the product for export. Their trial experience indicates yields of 30 tons of forage and 10 tons of baby corn could be expected. They propose to pay Rp 15 per kg of the combined stover and baby corn (40T x Rp 15/kg). This would yield a gross revenue of Rp 600,000/ha. Production costs are estimated to Rp 292,000/ha, leaving Rp 308,000/ha. net return/ha. PUSPETA management has agreed to arrange for production on 5 ha on a trial basis beginning this season, before promoting this crop on a larger scale with farmers.

The main activity of the Corn Division is the production of corn for silage. This activity began in earnest in November of 1986, when PUSPETA arranged to provide corn forage for the PT. NAA - Land-O-Lakes joint venture at Salatiga. Until then a modest amount of corn

was grown and chopped for the complete feed program of the Milk and Complete Feed Division. The program has since become a major activity of PUSPETA. In 1986 farmers harvested 1,645 tons of corn for silage. This involved about 275 farmers on 55 hectares. Table 12 shows the steady increase in monthly tonnage produced and revenue to farmers in 1987, through September. Another 1,145 tons were harvested in October and another 423 hectares remain to be harvested by January, 1988, adding another estimated 12,688 tons, or a total of over 21,000 tons since the program began in 1986. PUSPETA worked with the KUDs to motivate and organize farmers into groups for producing hybrid corn for forage. PUSPETA provides participating farmers with a package of inputs, including seed and fertilizer on credit. It also provides technical advice and supervision. Under the current contract, PUSPETA guarantees the farmer Rp 25/kg. The KUD is given Rp 0,5/kg, the village government is given Rp 0,5/kg, the farmer groups receive Rp 1.0/kg and the agricultural extension agent (PFL) receives Rp 0,5/kg. Thus the total cost to PUSPETA is Rp 27,5/kg. It is sold to PT. NAA at Rp 30,0, which includes Rp 6,00 for transportation. Thus PUSPETA receive a margin of Rp 2,5/kg.

Table 12: Corn Forage Production

	Jan	Feb	March	April	May	June	July	Aug	Sept	Total
Ton	1248	947	605	401	317	429	661	735	725	5768
1000 Rp	23714	17980	11490	1017	6060	11726	18170	20214	19925	132885

At the present time the herd at Salatiga consists of about 3,150 dairy cows and 1,500 calves but additional shipments are scheduled for November and early next year. Ultimately there will be about 20,000 head. The requirements for forage will therefore continue to expand rapidly. PUSPETA management anticipates a demand for about 20,000 tons in 1988 of which it hopes to produce 12,000 tons, involving 400-500 hectares of land and 2000 farmers. Yields of the fodder have been 25-30 tons per hectare. At Rp 25/kg this is providing an attractive option in uplands and in other areas during the palawija season.

For PUSPETA the operation is attractive as a revenue producing activity that requires little capital investment.

.35 Rice-Milling and Marketing Division This division buys unhulled rice from KUDs and the free market, mills and markets it. Twenty-eight of the KUDs have their own milling equipment and private, local firms are also milling rice. During peak harvest periods, PUSPETA mills rice for the KUDs and delivers the processed rice to Bulog for the National Stabilization Program on their behalf. In non-harvest seasons, only high quality rice is milled and consumer packed for Central Java supermarkets. Since it has acquired rotary sifting and refinery equipment under the Japanese Aid program, it also assists KUDs in refining rice to meet minimum standards of Bulog when their rice is rejected. The Division's milling equipment has the

capacity for milling at the rate of 2,000 kg/hour and polishing/refining at the rate of 3,000 kg/hour. The mill is operating far below capacity. Table 13 provides monthly information on rice sales for 1986 and 1987, through September. If PUSPETA had more working capital it would be profitable to buy rice in the seasonally low price periods, store it and sell at seasonally high prices. This would also ensure a lower cost for rice bran which is an important ingredient in its livestock feeds.

Table 13: Sales of Rice

	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Unit(Kg)	8626	12125	22793	50690	76705	13492	16315	7578	2192	6326	11785	24468	261506
1986													
1000 Rp	3274	15731	4017	14416	20318	3649	2177	2945	918	2714	5296	10976	89809
Unit(Kg)	11447	45121	35603	25041	25171	15794	35067	6113	2208				229631
1987													
1000 Rp	6269	17269	12951	13646	12568	5867	10489	2549	844				82272

.36 Research and Development Division This division conducts research for development of economical and nutritious livestock feeds, carries out training programs for farmers in improved livestock management, and develops and tests technological packages for crop and livestock ventures that have been identified as potentially feasible for farmers in the district.

The training program has been an important feature of PUSPETA's assistance to dairymen in the district. Four hundred and sixty farmers have participated

in these training programs. On October 1st of this year four veterinarians, one for each of the dairy KUDs, were assigned to provide veterinary assistance to dairy farmers. This is in addition to the center's existing veterinarian.

The work of this division on livestock feeds has focused on development of economical feeds, making use of indigenous material to the extent possible. As a result the Feed Mill Division has been able to produce high quality feeds for poultry, fish and cattle at prices competitive with the best commercial feeds in the country.

The Division has recently completed its first demonstration of a feed-lot beef fattening system that is expected to provide a better market for the bull calves produced by the dairy farmers. This activity has now been transferred from Research and Development Division to a new Beef Fattening Division. The operation showed a net loss in this first trial. In part, this was due to the lower price prevailing at the time of sale than at the time of purchase. Operating costs and overhead were high because the number of head in the trial was far below the capacity of the facilities. The PUSPETA Management believes that the trial has demonstrated that the system can produce economical gains and that it is worthwhile to repeat the trials, but on a larger scale, consistent with the capacity of the facilities - around 200 head. Also, purchase of the bull calves at a younger age and lower weight, they believe, would result in more gain per kg of feed. Other

lessons have been learned about the most efficient rations that they expect will result in greater economics. The Evaluation Team does not believe that the beef feed-lot project has yet demonstrated good enough prospects for economical beef fattening operations for encouraging farmers to invest in this enterprise but it is recommended that the experimentation be continued at a scale that fully utilizes facilities and staff and applies lessons learned in this first trial.

The Division has recently begun a broiler production program in cooperation with one of the KUDs. The activity is still experimental but PUSPETA Management considers its experience justifies modest expansion and further experimentation with management systems. They plan to organize the operation as a nucleus system, with PUSPETA providing a credit package of 500 day old chicks and 1,900 kg of feed (total value Rp 622,250) to each of 5 farmers in a group organized in each of 4 KUDs. The KUD would be the nucleus and have responsibility for distributing the credit package to the group, provide supervision, and work with PUSPETA in marketing the broilers. The activity has been taken out of the Research and Development Division and a new Broiler Production Division has been created to manage the program.

Total sales of broilers through September 1987 was 23,272 chickens, weighing 30,404 kg and generating Rp

37,361,050 in revenues. Table 14 shows costs and returns for a batch of day old chickens purchased on April 28th and sold on June 18th, this year.

Table 14
Costs and Returns for Broiler Production Trial
April 28 - June 18, 1987

	Number	Kg	Rupiah
<u>Revenue</u>			
Chickens sold	11,074	13,903	18,441,000
<u>Costs</u>			
Day old chicks	11,901	5,705,800	
Feed		10,941,643	
Medicine, operations, etc		1,549,010	
Depreciation		227,446	
Total			18,423,899
<u>Profit</u>			17,101

The net profit shown for this batch was very small. However, PUSPETA has arranged with a hatchery to become distributor in this area for day-old chicks, and as a result will have significant savings in the cost of purchased chicks. The expanded poultry operation will provide a market for PUSPETA's feed mill products, making fuller use of those facilities. Poultry manure will also become a valuable ingredient for the beef cattle rations.

The Team believes the potential for an economical broiler operation as part of PUSPETA's integrated feed and livestock system is good but recommends that it be cautious in expanding rapidly until it demonstrates better net

returns.

Research and Development has been successful in developing and testing economic systems of freshwater aquaculture. Two systems are being tested: (1) rice paddy pond culture of Tilapia and (2) culture of Carp in clear spring water. The carp culture was only recently started.

The tilapia pond culture experiment has been under way since 1985. A survey of farmers in locations with suitable land and water resources indicates interest in participating in a project for extending the system to farmers' ponds. PUSPETA plans to involve 60 farmers in 20 locations in the program within the next three months. The proposed program will cover 15 hectares and is expected to yield 1,2 tons or more per hectare. At current prices of Rp 800/kg, this will yield returns about 20% above the returns to paddy rice in the area. PUSPETA is now in the process of changing its previous research ponds into tilapia breeding and juvenile production ponds and will provide both inputs and marketing to farmer participants.

The Research and Development Division is exploring opportunities for production and marketing of a variety of vegetables and spices. The emphasis has been on high value, labor intensive crops for export. The experiments have shown that several high value spice crops can be produced efficiently. Foreign importers have shown interest in Indonesia as a source of coriander, spearmint,

sage, dill and basil as well as their seeds for California producers. Samples of these crops, grown and processed (dried) at PUSPETA, have been submitted to an American importer for testing and evaluation. These commodities have good potential for creating employment and high return per unit of land as well as for earning foreign exchange. The Team recommends that PUSPETA continue to develop technology packages suitable for producing export quality products of these crops.

.37 Garment Division In areas such as Central Java, with high density of population and scarce land resources, solving the income and employment problem of the rural areas needs to consider non-farm activities. The previous CLUSA supported PUSPETA project organized a garment production activity in 1983 for producing embroidered garments for export. Rural girls, aged 17-22, from surrounding villages were selected, trained and provided with sewing machines (under credit). The activity worked well for a while, until it became a victim of fickle fashions in ladies wear.

The activity was discontinued in 1985 but reactivated in late 1986 after retraining the girls and modifying their machines so they could do more conventional tailoring and have the flexibility to respond to changes in fashion and demand. Sales in 1987 increased by 190% over 1986. Production and sales, by months, are shown in Table

15. The Division expects a loss of Rp 3,7 million for 1987 but has established contracts with, and received profitable orders from, buyers of fashionable clothes in Europe and the United States. Under one arrangement a French importer does the design and provides the cloth and accessory materials, such as button, zippers, thread, etc. PUSPETA trains the girls, supervises the operations and negotiates contracts with the importers.

Table 15 : Sales of Garment Division

	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
Unit	492	1094	704	356	3481	904	462	321	412	415	205	407	9283
1986 1000 Rp	330	780	373	305	1074	345	300	448	559	600	115	377	6378
Unit	1124	1566	1193	2527	2265	1335	1290	931	567				12854
1987 1000 Rp	2003	1913	2150	3545	3275	1962	2150	461	1028				18459

Recently PUSPETA has begun to deal directly with some foreign importers, taking on responsibility for more of the production process, including procurement of materials and manufacture of complete garments according to design specifications of the foreign importers. This appears to offer opportunities for wider margins.

The 80 young women who work in the activity are members of the village KUD. The KUD provides a suitable building for the operation. The workers are paid on a piece-rate basis, rather than a daily rate, so their

incomes depend on their skills and dilligence. Earnings average about Rp 40,000/month. PUSPETA proposes to gradually equip machines of the more skillful workers with electric motors until all workers are able to use the electric dynamos which come with the machines. It is expected that those persons will be able to double their incomes, and through increased productivity, make the operation again profitable.

While this activity is not generating profit for PUSPETA, Management believe that it will be self-supporting. The income and employment benefits for young village women, who have few alternative employment opportunities, justify continued support for this activity.

.38 Furniture Production PUSPETA is also engaged in a business venture for producing furniture for export. This is a joint venture with PUSKUD and a private company, PT Puspa Jaya Chippendale. PUSPETA became involved in this activity at the request of the Ministry of Cooperatives when a private firm producing furniture for sale in the United Kingdom was unable to continue Indonesia operations. The importance of the employment and foreign exchange generated made continuation of this operation a priority for the GOI. Because of the apparent strong demand for exported, quality furniture, the Ministry also urged PUSKUD to build another factory in Jepara, in northern Central Java.

There were obvious advantages for the two Central Java factories to cooperate and eventually it was decided to consolidate the two factories under one management. Ownership of the joint venture is divided, with PUSPETA owning 32%, PUSKUD owning 50%, and the private company that owned the original factory owning 18%. PUSPETA manages the entire operation for a management fee of 4% of sales. It also shares in the profit on the basis of its 32% ownership share.

Income from this activity has been good, providing funds for financing other services and business activities. Sales of furniture in 1986 (the company's second year) realized Rp 474 million, of which Rp 97 million was profit. PUSPETA's share was 37,5 million. This compares with the first year's sales of Rp 155 million and a loss of Rp 50 million. In 1987 total sales, through September, amounted to Rps 601 million and profits were Rp 107 million. PUSPETA has earned Rp 21,7 million in management fees and Rp 34 million as its share of the profit in 1987. Monthly volume of sales is shown in Table 16.

The furniture activity employs 140 carvers and cabinetmakers in the Klaten factory and 110 workers in the Jepara factory. Workers are members of and supplied by their village KUDs.

Table 16 : Sales of furniture (1000 Rp)

	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1986 Exprt	0	0	53028	40990	34835	0	30891	22476	56772	824	49305	3331	293282
1986 Local	9935	10827	0	11130	21748	13971	12091	30959	8949	13476	16305	30673	181064
Total	9935	10827	53028	52120	56583	13971	42982	53435	66721	14300	65670	34004	474346
1987 Exprt	39727	1517	83032	87452	0	14530	2018	47637	91508				367729
1987 Local	25453	10219	31445	23510	53984	23511	17730	8015	16501				233438
Total	65180	34836	114477	110962	53984	38041	20048	55652	108009				601167

The Team feels workers in the furniture workshop need better protection from accidents. The jigsaw, operated by a woman, was without a finger guard. No pushsticks, although provided, were being used in operating the radial saws or routers. The lacquer section was not well ventilated. According to the General Manager there have been no serious accidents and only two minor injuries in 1987. However, the hazards are apparent and it is recommended that improvements be made in plant layout and precautions and in training of workers in safer working practices.

2.4.2 PUSPETA LUWU SOUTH SULAWESI

.1 Organizational Structure

The former FCCs Mangkutana, Bone-Bone, Walenrang and Luwu Selatan in Luwu District were consolidated into PUSPETA Luwu by the Director General of Cooperatives decree in April, 1986. PUSPETA Luwu is a Project Management Unit (PMU) with operational autonomy and authority vested in a Temporary Advisory Board (TAB) during a transition phase until it receives status as a secondary cooperative.

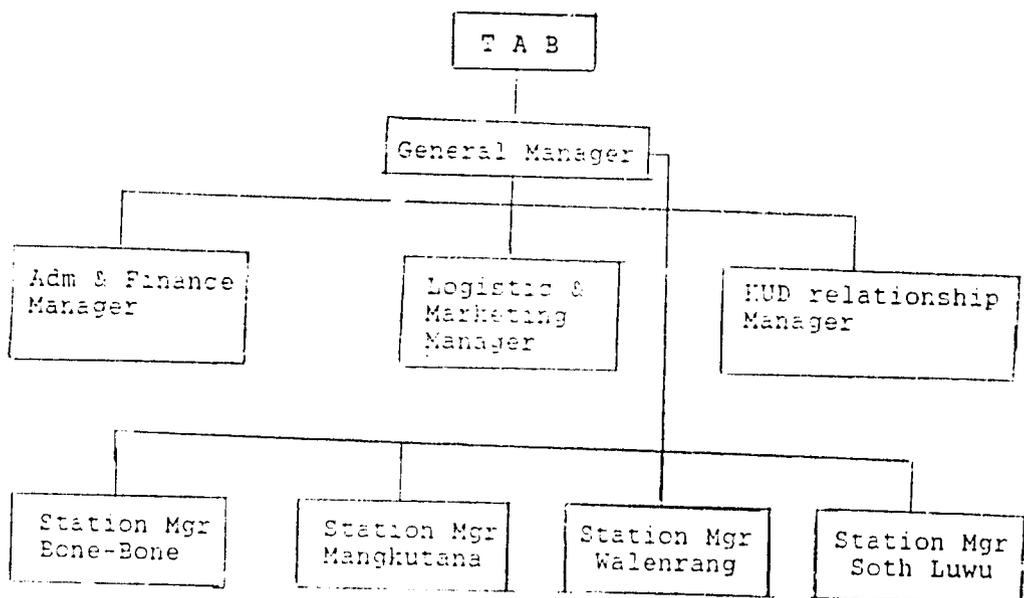
The TAB was formed in January, 1986. It consists of the Project Development Officer as chairman, a District Local Government Division Head, a District Cooperative Movement Leader, the District Cooperative Officer (KKOP-D) and the NCEA/Indonesia Director. The TAB held its first meeting in February, 1986.

New management personnel were recruited, trained at Klaten and assigned to Luwu in May, 1986. They assumed full control by June, 1986.

The General Manager, located at the Headquarters in Palopo, has broad power for operations of PMU PUSPETA Luwu but works under the policy guidance of the TAB. The General Manager is assisted by a senior staff at headquarters consisting of managers for each of the Departments of Administration and Finance, Logistics and Marketing, and RUD Relations. He is also assisted by 4 station managers, located at their respective regional

Figure 2

Organization Chart



Number of employees : 59 persons

Palopo (Head Office) : 22

Bone Bone Station : 8

Mangkutana Station : 8

Walenrang Station : 9

South Luwu Station : 11

stations at Bone-Bone, Mangkutana, Walenrang, and Luwu Selatan. The total number of employees is 59, with 22 located at the head office in Palopo, 8 at Bone-Bone Station, 8 at Mangkutana Station, 10 at Walenrang Station and 11 at Luwu Selatan Station.

Luwu District is a very large district with 45 KUDs (it is not clear whether all of these are registered). Information available to the Team indicated total active membership in 1986 was 16,006. Some of the KUDs are not in a position to participate in the major GOI rice marketing business activity because of their outstanding debts to the BRI. In order to assist some of these KUDs to establish eligibility PUSPETA has paid the debts on their behalf and will recover repayments in installments from future business with them.

.2 Financial Management

The organizational structure is somewhat different from that in Puspeta Klaten and therefore financial procedures and types of financial reports are also somewhat different. Whereas in Klaten the organization is divided into divisions on the basis of economic activity, in Luwu the organization, and financial reporting are on the basis of stations, with each station involved in the complete range of business and service activities.

Station Managers obtain approval for financial transaction directly from the General Manager. The Manager of the Administration / Finance Department, who also acts as cashier, finalizes the transactions. A well designed, computerized accounting system has been put in operation. Quarterly financial statements are consolidated for the entire organization, but separate income statements for each station as well as the land preparation activity are maintained.

Puspeta Luwu was organized only in April, 1986 and did not get fully operational until June 1986 when new management were positioned. The Income Statements, Table 17 are, therefore, for only the last 3 quarters of 1986 and the first 3 quarters of 1987. In this short time business activity has been increasing rapidly.

Total sales of goods and services increased by 60% in 1987 over 1986. Rice marketing and distribution of farm inputs (fertilizer and pesticides) were the principal business activities in 1986 and again in 1987. Rice marketing increased by 43%, but sales of fertilizer and pesticides increased by 127%. Another important activity in both years was tractor hire for land preparation. This activity increased by 102%. The profits increased from Rp. 5,250,000 in 1986 to Rp 11,923,000 in 1987, an increase of 127 %.

Table 17

Income Statement Puspeta Luwu 1986 and 1987

Description	1986				1987			
	Quarter II	Quarter III	Quarter IV	Total	Quarter I	Quarter II	Quarter III	Total
Sales								
Rice	12,683	49,663	58,078	120,424	12,106	80,892	79,089	172,087
Rice Milling	169	212	438	819	313	0	0	313
Rice Bran	63	166	143	372	0	0	159	159
Coffe & Cocoa	0	21,731	0	21,731	0	0	0	0
Fertil,Pestcds,Insec	16,559	90,967	63,958	171,484	121,089	63,248	204,124	388,461
Fertilizer Discount	6,347	446	1,516	8,309	0	17	11,350	11,367
Fertilizer Transport	0	33,518	17,452	50,970	9,216	0	15,788	25,004
Seed	532	1,000	687	2,219	0	0	0	0
Flour & Sugar	0	0	0	0	0	0	9,363	9,363
Cattle	0	11,754	1,785	13,539	0	119	0	119
Cattle Subsidy	0	0	0	0	0	0	827	827
Eggs	0	0	0	0	0	0	2,378	2,378
Fish	0	0	0	0	0	0	8,713	8,713
Construction Materia	0	3,020	7,044	10,064	2,178	1,260	1,889	5,327
Tractor	0	5,445	707	6,152	10,261	1,070	9,448	20,779
Transportation	100	252	1,092	1,444	0	0	1,179	1,179
Interest Income	0	49	224	273	0	23	91	114
Inventory Adjustment	0	0	0	0	0	2,992	0	2,992
Other	0	906	20	926	0	950	2,148	3,098
Total Sales	36,453	219,129	153,144	408,726	155,163	150,571	346,546	652,280
Cost of Goods Sold								
Rice	10,856	44,622	52,253	107,731	8,893	56,314	71,570	136,777
Coffe & Cocoa	0	24,644	0	24,644	0	0	0	0
Fertilizer,Pesticid	14,011	80,781	56,744	151,536	107,918	46,963	191,228	346,109
Flour & Sugar	0	0	0	0	0	0	8,192	8,192
Cattle	0	11,173	1,260	12,433	0	108	0	108
Eggs	0	0	0	0	0	0	1,654	1,654
Fish	0	0	0	0	0	0	6,741	6,741
Construction Materia	0	2631	6368	8,999	1366	1110	1751	4,227
Other	0	567	0	567	0	0	848	848
Total Cost of Goods	24,867	164,418	116,625	305,910	118,177	104,495	281,984	504,656
Operating Cost								
Rice Marketing Cost	210	838	2,625	3,673	2,443	1,942	2,627	7,012
Coffe & Cocoa	0	288	353	641	0	0	0	0
Costruction Material	0	92	272	364	53	0	0	53
Tractor	13	2,487	84	2,584	1,449	1,112	3,930	6,491
Rice mill	2,801	38	89	2,928	801	1,385	2,280	4,466
Seed Production	63	15	1	79	0	0	0	0
Transport	0	0	760	760	0	0	0	0
Cattle	0	593	495	1,088	0	0	0	0
Total Operating Cost	3,087	4,351	4,679	12,117	4,746	4,439	8,837	18,022
Total Overhead & Adm	24,448	29,037	32,581	86,066	24,489	41,679	52,245	118,413
Non Oper. Income	15,087	17,845	17,969	50,901	18,559	18,549	19,769	56,877
Non Operational Cost	14,661	17,975	17,648	50,284	18,426	18,538	19,179	56,143
Profit / Loss	(15,523)	21,193	(420)	5,250	7,884	(31)	4,070	11,923

Income from new activities began to show up only in the last quarter of 1987. The income from the aquaculture program is expected to expand sharply next year, as will as the income from hybrid corn operations.

The new venture into rattan processing and furniture manufacture is also expected to contribute to a strong increase in volume of sales as discussed later within the report in detail.

Appendix D presents projections over each of the 15 years from the time Title I funding is received. The projections include : (1) the volume of sales/revenue, (2) cash flows, (3) income statements, and (4) balance sheets. The projections of sales/revenues volume represent benchmarks of annual achievements for the various business activities and are the basis for the other three projections.

The projections assume a cash balance at the time the Title I funds are first made available of Rp. 56,000,000. Of the Rp.900,000,000 budgeted for Luwu, Rp 650,000,000 is assumed to become available immediately. Of this, Rp. 165,000,000 will be used to refinance the debts owed to DDI for previous working capital credit.

Another Rp.250,000,000 are expected to be disbursed to PUSPETA in the first year and the remaining Rp.50,000,000 in the second year.

The projections for PUSPETA Luwu indicate a rate of growth that will gradually reduce the dependence on subsidies for supplementary staff salaries, eliminating these subsidies entirely within 3 years. The projections also show that the Title I funds, which are provided as loans at 4% interest, will have been fully repaid from PUSPETA's revenues by the end of the 15 year period.

.3 Economic and Social Assessment of Business Activities

.31 General Trade Business activities of PUSPETA Luwu have until now been mainly in general trade with the KUDs. The distribution of agricultural inputs (mainly fertilizer, insecticides and herbicides) has accounted for 55% of all revenue so far in 1987. Fertilizer distribution is entirely through the KUDs. Currently 29 KUDs are involved. Distribution has increased sharply thus far in 1987 to 2,815 tons from 853 tons in all of 1986, an increase of 230%. PUSPETA receives a gross margin of Rp 6/kg and in addition earns substantial income from PUSRI (a net Rp 4-16/kg, depending on distance) as a transportation subsidy. However, the General Manager said they were having difficulty getting PUSRI to pay them the full amount of subsidy they earned (estimated at Rp 58 million).

PUSPETA buys unhulled rice from the KUDs either at the market price or the BULOG floor price if the market price is lower. The rice is milled at three of four stations which have facilities. The Mangkutana Station and

the Bone-Bone Station each have a capacity to mill 7,2 tons per day. The Walenrang Station has a capacity to mill 6 tons of rice per day. All have operated at less than full capacity so far mainly due a lack of working capital. In 1987 they have sold 670 tons of rice, an increase of 100% over sales in 1986. The plan for this harvesting season, through the middle of December, is to handle 3,000 tons of unhulled rice, if they have enough working capital.

.32 Tractor Hire Service The tractor hire service is a popular activity in several of the KUDs. The demand far exceeds the capacity to provide the service. PUSPETA owns 17 tractors, of which 10-12 are working. Most are 6-7 years old and have nearly reached their operational life. Rental charges are Rp 55,000/ha for a single rotary operation and Rp 85,000/ha for a double rotary operation for KUD members. Non-KUD members are charged an additional Rp 2,500/ha. Each of the 25 h.p tractors has a capacity of 1,5 ha/day. The capacity of each 14 h.p tractor is 0,75 ha/day. Revenue from this service was Rp 20,779,000 so far in 1987, compared to Rp 6,152,000 in all of 1986. The gross margin over operating costs was Rp 3,568,000 in 1986 and Rp 14,288,000 in 1987, according to the financial reports.

.33 Integrated Poultry Development This is a new undertaking, in its initial trial phase. The project will integrate the introduction of quality chicken and duck layers for fresh egg production, hybrid corn seed and

production technology for increased yields and incomes for transmigrant farmers, a market for corn enabling profitable production on land suitable for its production, a market for rice bran now a surplus commodity in the area, a supply of chicken manure to local aquaculture ponds for shrimp feed, and a cooperative marketing mechanism for efficiency, guaranteed marketability and price stability for producers and consumers of Luwu.

The first component of this integrated program is the farmer production of hybrid yellow corn introduced by PUSPETA to the area for feed. This program was started about three months ago in Mangkutana. Thirty members from 2 KUDs are involved in corn production on 22 hectares. PUSPETA provided a credit package, without interest, for all inputs through the KUDs to the 30 participating farmers.

PUSPETA has agreed to buy the corn produced at the BULOG floor price or market price, whichever is higher. When we visited farmers fields in mid-October the first crop looked very good and the farmers were excited about the results, which should return at least three times that of traditional local varieties. The costs and returns are conservatively estimated as shown. Some farmers will do much better.

Table 18
 Estimated Costs and Returns to Farmers
 for Hybrid Corn Production, Luwu

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Revenue/ha
    4,000 kg @ Rp 190/kg           =           Rp 760,000

Costs/ha
    seed, 25 kg @ Rp 1500/kg       = Rp   37,500
    fertilizer 550 kg @Rp 114/kg   = Rp   62,700
    pesticides                       = Rp    6,000
    labor
      planting                       = Rp   10,000
      cultivating                     = Rp   30,000
      harvesting/shelling             = Rp   30,000
      -----
    Total costs                       =           Rp 176,200

Net-Income/ha                       =           Rp 583,800
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Another component of the project is poultry-laying hens and ducks. According to information available to us, Luwu's present poultry industry consists of only local variety birds and accounts for only 5% of the total chickens and less than 3% of the total duck population of the province. Traders selling grade eggs in the local markets of Luwu are entirely dependent on commercial egg producers 400-600 km (8 hours) away. Retail prices are said to fluctuate as much as 40% because of irregular delivery schedules. Local feed materials such as rice bran and corn are surplus commodities that must be transported up to 600 kms away to the Ujung Pandang poultry producers.

A 600 hen flock of laying hens has been established in Palopo and is operated by a retired military man, the chairman of KUD Tandi Pau, a non-active poultry

cooperative. This unit is experimental and demonstrational - known, improved practical and balanced feeds are being used and detailed records are kept. The 600 hen flock has had a relatively low death loss, of less than 3%. Complete costs and returns for a full cycle of production for this flock are not available but it appears that the system now being demonstrated will be profitable. At the present time, the flock is producing 480 eggs per day which sell for Rp 70 each, yielding a daily income of Rp 33,600. Feed costs are Rp 19,800 per day. The demonstration flock will be used for training interested farmers in requirements for proper care and feeding of poultry and will also test the feasibility of the system for Luwu's condition. When satisfied that the system can be adopted successfully by local villagers, interested growers will be organized into groups of upto 500 birds for commercial production and sale through the KUD and PUSPETA.

Tambak aquaculture production is the third component of the integrated system. The Department of Fisheries and the existing Tambak Aquaculture Production Project being assisted with HPI funds have concluded that supplemental feeding of expensive pelletized feeds would be uneconomic for Luwu producers and that a more appropriate feeding package would rely on the supply of chicken manure and fertilizer. Brackish water prawn production is increasing in Luwu and this will provide an expanding market for the manure from an expanding egg production

industry.

.34 Tiger Prawn Production and Marketing The CAEDP Project document identified Tiger Prawn fry production, Prawn Production Credit and Marketing as a suitable sub-project for Luwu PUSPETA. Luwu District contains 5,000 hectares of completely constructed shrimp and fish ponds along the Gulf of Bone. There are estimates of a potential for up to 20,000 additional hectares. The project will provide assistance for addressing the problem of a shortage of high quality fry for stocking the Luwu ponds by planning to establish a hatchery in the area. Implementation of this component can proceed with the release of Title I funds for construction of facilities. A long-term technical advisor has been recruited and will begin in March, 1988. A PUSPETA employee with professional expertise in Crustacean Aquaculture is in charge of the program. Beginning in 1985, he has surveyed the coastal tidal areas of Luwu District to identify appropriate pond areas based on soils and tide information. He found most of the ideal sites in Northern Luwu. The major project activity for the past year has been experimentation with alternative production packages of polyculture most appropriate for the current stage of the typical Luwu producer. Stocking rates of 8,000 prawns/ha with 3,000 milk fish/ha have been tried with three systems of production: (1) the traditional low input system, involving no fertilizer and no feed supplement, (2) an intermediate

system with medium inputs including fertilizer but no supplemental feeding, and (3) a higher input system involving fertilizer, feeding low cost ratios of chicken manure and rice bran. The last two trials have been successful and show significant returns to the intermediate system over the traditional input system and additional return to the higher input system over the intermediate system.

In the next phase a third trial is being carried out using only the higher input system but with experimentation on timing the holding of larvae in the nursery until they are upto 40 days post larval stage before stocking fry in the ponds. The staff believe that they will have a refined technology package that can be recommended to growers by the end of February.

Projected costs and returns, based on trials experience, are shown in Table 19. The last two trials have been with treatments # 2, traditional; treatment # 3, low input; and treatment # 4, semi-intensive. The current trial is with treatment # 4 and treatment # 5, the semi-intensive system with PL 40 stocking and an early November harvest will provide further input to the optimal package.

Until the hatchery is ready, which will probably be late in 1988, PUSPETA is trying alternative sources for quality fish and shrimp stock. The best arrangement so far for shrimp has been with a hatchery 700 km from Luwu. This

Table 19: Projected Returns for Luwu Aquaculture Project by Treatment/Hectare

Description	Treatment #1 Traditional Milkfish Stocking	Treatment #2 Traditional With Stocking	Treatment #3 Low Input With Stocking	Treatment #4 Semi-Intensive With Stocking	Treatment #5 Semi-Intensive PL 40 Stocking
Projected Yield:					
Shrimp (kg)	30	70	112	132	211
Shrimp (#)	1050	2000	2000	2000	3200
Mortality		0.75	0.75	0.75	0.6
Size Per (Gram)	20	40	56	66	66
Price Per Kg. (Rp.)	6000	12000	15500	17400	17400
Total Return Shrimp	180000	840000	1736000	2296800	3671400
Milkfish (Kg)	350	400	550	660	660
Milkfish (#)	1980	1980	1980	1980	1980
Mortality	0.1	0.1	0.1	0.1	0.1
Size Per (kg.)	0.22	0.24	0.29	0.34	0.34
Price Per Kg.	750	780	880	960	960
Total Return Milkfish	262500	312000	484000	633600	633600
Total Return	442500	1152000	2220000	2930400	4305000
Production Costs					
Shrimp Fry	0	320000	320000	320000	640000
Milkfish Fry	45128	45128	45128	45128	45128
Inorganic Fert. (kg.)	0	0	300	300	300
Organic Fert. (kg.)	0	0	200	200	200
Fertilizer Cost	0	0	43500	43500	43500
Pesticide Cost	0	8500	8500	8500	8500
Rice Bran Xgs.	0	0	0	350	350
Rice Bran Cost	0	0	0	10500	10500
Total Variable Costs	45128	373628	417128	427628	747628
Projected Return	397372	778372	1802872	2502772	3557372

Assumptions: (1) Stocking 8,000 PL-18s and 2,200 Milkfish fry per hectare Shrimp have 15% and milkfish have 2% mortality during transport and acaptation; Production cycle is 100 days in production pond; mortality in pond is 75% shrimp and 10% milkfish; in traditional system, 50% monocrop, 50% monodow in natural stocking.

will probably be the sole source in Sulawesi until the hatchery is in operation. Once the hatchery is fully operational it will have a planned capacity to provide post larvae to stock up to 600 hectares of ponds at the previously mentioned stocking densities and would serve about 600 prawn producers. For the milk fish, juveniles are transported by prahu from Southeast Sulawesi on a seasonal basis and held in stunting ponds until stocking with the shrimp. Meanwhile the project has been working with two local producers, who have been successful in implementing the package in three hectare ponds. Six other farmers with ponds have secured financing from the BRI and have received stock from PUSPETA and agreed to use the recommended technology package as a condition for the loans. Further integration of PUSPETA's developed aquacultural technologies and its production inputs to farmers with the available World Bank assisted BRI small farmer aquacultural loan program will greatly enhance the prospects and reduce the risks to both organizations.

.35 Tuna Fishery A Development Studies Project begun in 1984 and completed in 1986 entitled: Cooperative Rural Perishable Commodity Marketing Systems Study had as its objectives to determine the effects of the creation of a rural perishable commodity handling and marketing system, operated through a cooperative cold storage facility, on producers, consumers and on production and market prices.

The study identified the existence of a substantial underexploited skipjack tuna fishing ground near the project area. A loan of Rp 17 million was provided to a cooperative group of 16 fishermen and one coordinator from Larompong to operate a pole and line boat in the Gulf of Bone. The fishermen were provided with improved equipment and have been quite successful. They paid off their loan within 21 months and have arranged to buy a second boat.

.36 Proposed New-Business Activities

(a) Cocoa Much of the upland areas of Luwu District which are not well suited to the production of rice and other food crops are quite suitable for production of cocoa. There are now about 17,000 hectares of cocoa growing in the district and the area is expanding, largely replacing cloves, which have suffered from depressed prices lately.

PUSPETA's role in cocoa marketing will be to buy wet cocoa in pod from the KUDs, process it in a central fermentation unit and sell to a U.S. buyer. International markets pay a premium of upto \$ 400/ton for properly fermented and handled cocoa. The project has arranged for an expert from the Hershey Foods Co. in the U.S. to visit Luwu in November to advise on quality standards, efficient fermentation equipment and processing and marketing. Earlier contacts have shown strong U.S. interest in

Indonesia as an important supplier of cocoa in the future.

(b) Soybeans A substantial area of Luwu District is suitable for soybean production and, in fact, the crop is grown extensively as a secondary crop in recently settled transmigration areas. However, yields from the traditional local varieties are low and the potential for significant improvement appears to be good.

Research carried out over the past ten years in Central Java with assistance from the Republic of China Agricultural Technical Mission has led to development of improved, adapted varieties and production technology that could triple yields.

The CAEDP has obtained a small quantity of the improved variety for testing in a 7,000 square meter plot in Luwu District. If the package proves well adapted to the area, a yield of 2,5 to 3 tons per hectare may be expected. In that case the trial plot will produce 1,750 to 2,000 kg, enough for planting 35 - 40 hectares in the following season.

CAEDP proposes to launch an intensification program, along the lines of the hybrid corn production program undertaken in 1987, if the soybean package proves as good as expected. One of the KUDs where soybeans are now being grown extensively will be asked to organize interested farmers into groups for the initial expansion to farmer production. Each farmer will be provided a credit

package of the improved seed, fertilizers, pesticides and instruction on all aspects of the recommended technology. Preliminary estimates of costs and return per acre are as shown in Table 20.

Table 20
Estimated Costs and Returns, Soybeans, Luwu District
=====

<u>Revenue</u>	
Soybean sales 2500 kg @ Rp 550	Rp 1,375,000
<u>Variable Cost</u>	
seed 50 kg @ Rp 1000	= Rp 50,000
fertilizer (75 kg urea, 150 tsp, and 100 kg kcl) @ Rp 135	= Rp 43,875
pesticides	= Rp 6,000
labor: planting	= Rp 10,000
cultivating	= Rp 30,000
harvesting	= Rp 20,000
Total	159,375
<u>Net Income</u>	Rp 1,216,125
=====	

(c) Rattan Furniture At the urging of the Minister and Director General of Cooperatives, the CAEDP has recently undertaken the initial stage of the development of a rattan furniture manufacturing and raw materials operation. Indonesia is the major producer of rattan, most of it exported unfinished for manufacturing of furniture abroad. The Government of Indonesia has decreed that in order to increase value exported and domestic employment only finished rattan articles can be exported starting January 1, 1989. Existing capacity for the manufacture of rattan furniture is very limited and the concern is that

unless this capacity is quickly expanded the demand for rattan poles will drop sharply, creating unemployment for the 4,000 people engaged in cutting and delivering the poles from the forests of Luwu.

The CAEDP program will involve development of an integrated rattan furniture operation, including a raw material processing activity in Luwu and a furniture manufacturing operation in Klaten. This will be a joint venture with PUSPETA Klaten and PUSPETA Luwu each holding 30% of the shares. Luwu KUDs will have 15% of the shares, Klaten KUDs will also have 15%, Koperasi Technis Indonesia will own 5% and the remaining 5% will be owned by PT. Alis Jaya Chippendale, the mahogany furniture operation. In addition to manufacturing the furniture in Klaten, the company plans to also make available high quality rattan poles from the Luwu operation to businesses in Central Java commencing export furniture production.

Initial operation in October consisted of PUSPETA Luwu arranging with a local contractor to supply two shipments of special rattan varieties to a furniture manufacturer in Ujung Pandang. PUSPETA received a 5% margin for shipments of 35,724 tons. Beginning in November, KUDs in Bone-Bone will begin semi-processing (stripping) the poles before shipping them to Ujung Pandang.

Meanwhile CAEDP has begun discussions and negotiations with technical experts from a Philippine furniture manufacturer for assistance in planning, development and startup of the furniture project. Total financing required will be about Rp 1 billion, and if capital is promptly mobilized the facilities should be producing in min-1988.

3. PROJECT OPERATIONAL PLANNING AND IMPLEMENTATION ASSESSMENT

3.1 SELECTION OF BUSINESS ACTIVITIES

The team views the project's business flexibility in both identifying potential operations and terminating those not viable as an essential strength to the model. Basically the CAEDP model, through PUSPETA affiliation with the local agriculturally based KUDs and their farmer membership as well as its origins from the previous projects and their facilities, starts with the simple provision of production input and output services to the rice farming community as its operational fulcrum. Such has also been the GOI's approach since their establishment of the KUDs in the early 1970s and their more recent emphasis upon the provision of storage, drying and milling facilities as well as involvement in the BULOG rice procurement and stabilization program.

At this stage of the program, PUSPETA Klaten has operationally diversified widely from dependence upon the rice economy although it still conducts minor operations in the milling of rice and the provision of inputs. Klaten KUDs and the local rural private sector have long catered well to the needs of the local rice producers and it is doubtful that the organization can provide any positive impact to producers or their KUDs.

The case for Luwu's intervention and initially heavy emphasis into the local rice business differs greatly. Luwu KUDs (especially those recently created in transmigration areas) are much less operationally sophisticated than their counterparts in Klaten, own fewer drying, processing and storage facilities, and previous attempts to enter the rice business have rendered several insolvent and inelligible for further bank financing. Additionally, the area's large surplus rice production, its remoteness to market centers, its uniform planting and harvest seasons, and inadequate roads in several production areas necessitate continued involvement in providing fertilizers and pesticides and working with KUDs in procuring, processing and marketing rice.

Nonetheless, Luwu has also begun to diversify its operations, and although in their initial stages, several are innovative and can impact very positively upon local employment generation, income increases and KUD organizational development as well as guarantee long term project viability.

The team observed basically three systems for identifying new project activities employed by the PUSPETAS. Criteria is similar for all and based upon the CAEDP's main objectives as earlier described. These three methods include:

(1) Bottom-Up Necessity Approach-where the KUDs and their members require a certain production input or output market service, and without either capital or technical input or the involvement of a larger organization to achieve operational economies of scale they will not be able to succeed.

(2) Market/Technical Opportunity Approach-Where the project management or its technical advisors identify opportunities for the production of a non-traditional commodity linked to a specifically identified market or the introduction of a new production technology to a traditionally produced commodity with an existing market. Frequently, private sector firms have approached the project and have entered joint working arrangements mutually beneficial to both parties. Usually this approach involves a lengthy research and development learning curve and poses risks of eventual non-feasibility, but in the long term has the greatest potential for positive impact and the achievement of CAEDP objectives.

(3) Governmental Encouragement and Assistance Approach-Where the GOI has either identified a certain activity for implementation on a national basis, or specified CAEDP involvement on an experimental basis to fulfill a policy objective. The GOI has encouraged project intervention into a variety of business activities and has financially

supported such operations. This has been the case in the furniture and hybrid seed production operations where private sector firms have approached the Department of Cooperatives seeking a cooperative partner and were introduced to the PUSPETAs.

3.2 INVOLVEMENT OF KUDS

To a varying degree, the PUSPETAs have involved KUDs and often their kelompokks in all business operations undertaken. An exception to this rule has been in the initial research phases of some activities where until proven successful and viable for all parties involved, the activities are implemented on an "in house" basis. Such is to avoid the risk of exposing KUDs and their members to financial loss in an activity's trial stage and also to avoid member alienation and distrust by involving them in unproven operations.

The main revenue and employment activities in Klaten include milk marketing, sugar and fertilizer sales, livestock feed production and sales, furniture and ~~garments~~ production, poultry and beef production, and crop production. All milk marketed originates from the farmers through the kelompokks and their KUDs to PUSPETA and eventually the processors. Likewise, in the sugar and fertilizer sales operations, all sales are made to the KUDs-apparently a rarity among existing secondary cooperatives the team was informed. Garments are produced

by KUD Perdu members at a KUD facility under management assistance by PUSPETA Klaten, while beef and poultry operations are conducted in joint ventures between PUSPETA Klaten and the KUDs Jatinom and Trucuk respectively.

Although livestock feed sales during the current quarter were made mostly to the PT NAA dairy joint venture, a majority of their inputs mostly including corn forage and grain were produced by KUDs and members under contract and credit program with PUSPETA. Such dominant external sales have however benefitted local cooperative dairy producer membership in that they have enabled PUSPETA to sell feeds at or below cost to the members while recovering margins from external sales.

The furniture venture has little direct day to day involvement with Klaten KUDs. That involvement is currently restricted to the supply of labor to the venture through KUD Ketandan, which has large membership involvement in the woodworking trade. The venture however is a private company with 32% ownership by PUSPETA Klaten and 50% ownership by PUSKUD Central Java-the KUDs existing secondary cooperative. Indirectly however the KUDs benefit in that 82% of the company's profits will be distributed to cooperative organizations owned by Central Java KUDs, and where not distributed through dividends, the profits help subsidize the several marginal services provided by PUSPETA

to the KUDs without profit.

In Luwu the case is similar. As previously described, the vast majority of businesses are in the supply of fertilizer and pesticides and in the processing and marketing of rice. All of the above are undertaken with KUDs although levels of involvement differ widely.

The CAEDP has placed emphasis mainly upon establishing long term relationships with KUDs by jointly conducting business operations. This has in many cases strained relations between the PUSPETAs, their KUDs and oftentimes GOI officials where perceptions remain prevalent that the PUSEPTAs are a government project and should not seek profit in transactions with the KUDs and other project beneficiaries. The PUSPETAs are attempting to slowly change such perceptions and foster a sense of belonging to the organization that will justify in their minds the establishment of financially strong primary as well as secondary cooperative organizations.

THE ROLE OF SUBSIDIES

As planned and budgeted within the project document, a minimum of direct financial subsidy is provided the PUSPETAs. PUSPETA Klaten receives no direct financial subsidy from the CAEDP as salary and other operational assistance was phased out in the project's initial period. PUSPETA Luwu on the other hand receives a salary subsidy of

approximately Rp. 6 million per month. One third of this subsidy will be phased out in the next month, two-thirds in mid-1988, and the remaining one-third by the end of 1988.

The provision of initial salary subsidies is viewed as essential by the project management. The project plans initially substantial levels of business in order to achieve the ambitious levels of project targets and objectives. The organizations established by the CAEDP (with the exception of Klaten which existed at the CAEDP's onset as a non-governmental institution and has experienced a longer growing cycle) are in their second year of operation and will achieve revenue levels in excess of \$ 1 million. Such short term objectives for a company of this nature preclude an evolutionary growth process enabling initial self sustenance. Without well paid, qualified and experienced private sector senior management from the start, (as an element of the CAEDP model) it is doubtful that the operations could achieve project objectives and eventually become viable.

Through an increased level of operational revenues experienced during the current year and with the availability of Title I working capital to increase revenue levels, the team feels that PUSPETA Luwu will not require further salary subsidy than that originally planned. Quantitative financial plans indicating such can be found in PUSPETA Luwu revenue and expenditure projections included as appendix D.1.

Further types of subsidy permit less objective quantification. Remaining project Title I and Title II funds finance the project's respective working capital/infrastructure and technical assistance requirements. The Title I funds, although not yet disbursed, will be provided on a loan basis with however lower than market rates of interest. The foreign technical assistance is of course provided at no cost to the assisted cooperatives.

The education/promotion and research and development activities of the PUSPETAS are services that are normally the functions of government agencies. The PUSPETAS contribute significant amounts of their own funds for these activities and all of the HPI support funds are for these functions.

The relevance of these inputs to eventual PUSPETA viability on a quantifiably pure business basis becomes even more difficult. Unquestionably, the PUSPETAS undertake any business activity on disadvantageous terms relative to the much less constricted private sector. Every business must firstly as an organizational objective maximize the income of its cooperative and farmer clients rather than itself. Profitability of the client as an objective minimizes the income derived from any activity created. Such social business priorities and objectives (increased beneficiary incomes) will always restrict the

project from entering into businesses where maximizing profits and high capital accumulation will occur. Yet, production and market competition factors will always limit the degree of social accomplishments the project can achieve.

Additionally, the financial and managerial burden placed upon the PUSPETAs in excess of those on normal private businesses due to their government project status is great. Visitors demanding senior management attention from governmental institutions, development agencies and universities are present on a daily basis. Administrative documentation is heavy, due to routine implementation reports not only to the project's management but also to several levels of the GOI. Detailed studies on beneficiary impact are routinely undertaken and, more concretely, the current evaluation has unavoidably involved senior management time for a period of one month.

Aside from the initial salary input to management which undoubtedly enabled the current level of business activity, the team thus concludes that subsidies will not play an instrumental role in the future viability of project businesses nor have they negatively affected existing private sector business activity. Their availability in the past as well as in the future will have much more bearing upon the degree with which the PUSPETAs can provide greater social orientation to their operations and thus increase the returns accrued by the targetted

project beneficiaries.

3.4 BENEFITS ACCRUED

Some of the direct effects of this project on employment and income are indicated by the number of employees of the two PUSPETAs and their payrolls. PUSPETA Klaten has 120 salaried employees and a monthly payroll of over Rp 11 million. PUSPETA Luwu has 59 salaried employees and a monthly payroll of Rp 7 million. In addition, each organization employs casual day and seasonal labor.

An important criterion in selecting new business ventures is their capacity for generating employment. The PUSPETA Klaten mahogany furniture factories employ about 240 fulltime skilled cabinet makers and carvers from the rural areas and several more on a piecework basis. The Garment Activity employs 80 young women who have few alternative employment options.

The rattan pole and furniture enterprise being undertaken in Luwu was selected primarily to secure a future outlet for the 4,000 workers who gather rattan poles from Luwu District forests. Without development of an indigenous processing/manufacturing facility many of those workers would later become unemployed.

A more significant part of the employment and income benefit is that derived by farmers from the various

business activities of the projects, though it is difficult to quantify all of these benefits. The dairy activity is a business enterprise which has involved about 900 farmers in 4 KUDs in areas where land resource offer few good alternatives. In visits to these KUDs the Team was told repeatedly that dairying was their best production opportunity. A survey by PUSPETA Klaten last summer of 216 dairy farmers indicated that costs and returns varied widely but that for many farmers the dairy operations were quite successful. The PUSPETA has invested heavily in improving the feeding and care of the dairy cows and in improving the efficiency of marketing. This should assure that this enterprise will continue to improve production and incomes for the participating farmers.

The Klaten feed production enterprises provide benefits to the dairymen and poultry farmers who use the feeds but many more farmers are involved in producing the materials used in these feeds. The corn silage program, which has become a major activity in PUSPETA Klaten, purchased 700 - 800 tons of corn each month from farmers in Klaten and Boyolali. Farmers in the area have very small farms (averaging 0,2 hectare per family) and have only a small part of that for which corn production is the optimal use. Typically, each farmer will produce corn on only about 0,2 hectare. The 12,000 tons of silage handled by PUSPETA Klaten in 1987 will have involved 400 hectares of land and more than 2,000 farmers. This activity has

provided good income with low risk on land which in many cases has little opportunity cost during the season it is used on the corn crop. Again, although difficult to quantify, the introduction of hybrid corn for silage has accrued returns incrementally 25% higher per crop than rice where and when rice can be grown, while also enabling at least one extra crop per two years. When compared to alternate secondary crops, the returns become more attractive.

The hybrid corn production activity in Luwu is demonstrating on a small number of farms in two KUDs a package of technology that is certain to double yields and net incomes on land that would otherwise grow corn using traditional technology. The initial beneficiaries are the several farmers in the program but, as benchmarks and projections in Appendix Table D show, the area and number of farmers benefitting are expected to expand each year.

The project recognizes that, in Central Java especially, with its high population density and scarce land resources, crops requiring labor intensive cultivation and processing should have a comparative advantage in international trade. The Research and Development Division is therefore focusing on a number of such crops.

In Luwu a major sub-project is fish and prawn production and marketing where the emphasis is on upgrading the production technology and improving the marketing for

existing aquaculturists. The series of trials just concluded show these local fishermen have increased their production and net incomes substantially by using a relatively low input technology but relying on PUSPETA Luwu support for supply of fry, feed inputs and marketing. Two fishermen have participated in and benefitted directly from the trials. Another 6 have obtained bank financing, are following the recommended technology and getting PUSPETA services for fry, feed and marketing. There are thousands of hectares in the coastal areas of the district suitable for brackish water fish and prawn production that can benefit. Appendix Table D.1 gives projections of annual expansion of participation in this program.

Cocoa is an important crop for many farmers in the uplands of Luwu District. It is replacing cloves as an important source of farm income and is potentially an important foreign exchange earner. However, present methods for processing and marketing do not qualify the crop for premium prices in the world market. This project is beginning an operation under which wet cocoa pods will be collected from farmers, fermented by a process that insures premium quality, and marketed directly to foreign firms interested in and prepared to pay premium prices, which at a maximum amount to \$ 400/ton. This could potentially translate into increases in incomes of upto \$ 400/ton for many Luwu farmers. Benchmark in Appendix Table D.1 show targets for area and number of farmers impacted.

3.5 ESTABLISHMENT OF PROJECT BENCHMARKS

The CAEDP's Transfer Authorization in its sections Q-3 and Q-4 describes the annual reporting and evaluation requirements of the project. The TA requires an annual report of the project which describes in narrative form the progress of the project against stated objectives. The TA further states that the report as well as its applicable annual benchmarks would be developed in conjunction with an annual evaluation review of the project. Representatives of CLUSA and USAID were to participate in this annual review and produce a written report on their findings.

For several reasons not clearly comprehended by the team, the annual review was not held, and thus benchmarks as stipulated within the TA have yet to be developed.

Recently however, the CAEDP TA was amended to include an additional shipment of wheat and simultaneously, it revised the project's evaluation requirements. The amendment replaced the requirement for the CAEDP's annual review with the undertaking of the current evaluation.

In view of the amendment and lack of the first annual review, the team felt it necessary to produce together with the project management a set of benchmarks that will most validly measure project performance in terms of meeting predetermined objectives.

Table 21 lists 5 distinct categories of project purposes and goals along with 36 quantitative indicators of progress. The categories include:

- (1) Improved secondary crop production under the project;
- (2) Increased income through diversified production under the project;
- (3) Utilization of services and facilities of project entities and relevance to needs of beneficiaries;
- (4) Development of KUDs to utilize the services and facilities of project entities; and,
- (5) Stimulation of non-agricultural employment generation and enterprise development activities and the development of non-traditional export markets.

The table includes progress to date in achieving such objectives as well as benchmarks for implementation years 3, 4 and 5. The above types of indicators are seen as appropriate in that they directly reflect the activities solely attributable to the operations of the project as well as relate concretely to the project's main objectives of generating employment, increasing rural incomes, creating new business opportunities with and through the member KUDs, and indicating the relevance and utilization of each type of business through its revenue trends over the five year period.

The team and CLUSA decided not to continue the inclusion of several other types of data including KUD membership as such are often not directly attributable to project operations and thus not actually indicative of

Table 21: Benchmarks for CAEDP: 1986-1990

Purpose/Goal	Input	Output	Indicator	Location	Actual Year 1	Actual 9/30/87	Goal Year 2	Goal Year 3	Goal Year 4	Goal Year 5
1. Improved Secondary Crop Production Under Project (Corn, Soybeans)	Research, Demonstration, Training, Credit, Input Supply, Marketing	Production by Number of Families and Hectares	1. Hectareage Luwu	Luwu	0	23	30	120	240	360
			2. Hectareage Klaten	Klaten	66	56	600	600	1000	1200
			3. No. Families Luwu	Luwu	0	35	45	180	360	540
			4. No. Families Klaten	Klaten	330	2830	3000	4000	5000	6000
2. Increased Income Thru Diversified Production Under Project (Seed, Horticulture, Spices, Fisheries)	Research, Demonstration, Training, Credit, Input Supply, Marketing	Production by Number of Families and Hectares	1. Hectareage Luwu	Luwu	0	9	21	60	240	600
			2. Hectareage Klaten	Klaten	36	52	60	80	100	120
			3. No. Families Luwu	Luwu	0	2	9	60	240	600
			4. No. Families Klaten	Klaten	160	260	300	400	500	600
3. Utilization of Services & Facilities of Project Entities and Relevance to Need of Beneficiaries	Management, Technical Assistance, Construction, Equipment, Machinery, Working Capital, Marketing	Volume of Revenues by each PUSPETA and each type of operation	Sales of: (Rp. 000)							
			1. Livestock Feed	Klaten	643291	1274544	1800000	1806400	2610500	2552784
				Luwu	5250	8550	12000	51750	56925	62618
			2. Fertilizer/Pesticide	Klaten	598220	186492	210000	371200	399760	409248
				Luwu	171482	388462	470000	412000	438600	457430
			3. Seeds	Klaten	29549	48534	50000	43550	50000	21000
				Luwu	0	977	1000	4500	6000	7500
			4. Fish/Shrimp Fry	Klaten	0	0	0	0	0	0
				Luwu	0	6172	10000	19200	210000	294000
			5. Tractor Plowing	Luwu	6152	20779	21000	26250	32500	32500
			6. Poultry Products	Klaten	4404	50711	65000	158000	217000	276000
				Luwu	0	2378	5000	10000	12500	15000
			7. Dairy/Beef Products	Klaten	687130	569251	750000	90695	94452	1035567
			8. Aquaculture Products	Klaten	898	440	900	22500	24750	37500
	Luwu	0	8713	12000	32500	45600	58896			
9. Grains/Hort. Crops	Klaten	181050	90001	120000	644000	735900	781355			
	Luwu	120444	172087	250000	765400	830770	896676			
10. Consumption Goods	Klaten	532912	739070	1000000	1035000	1035000	1035000			
	Luwu	0	11511	30000	354000	354000	354000			
11. Handicraft/Small Ind	Klaten	466625	667713	900000	1100000	1250000	1400000			
	Luwu	0	0	22500	125000	200000	270000			
12. Estate Crops	Luwu	21731	0	0	154000	187475	228216			
13. Total Sales	Klaten	3177330	3536640	4700000	6378148	7725007	9036268			
	Luwu	408726	652280	950000	2168700	2420224	2516102			
4. Development of KUDs to Utilize Services and Facilities of Project Entities	Management, Training, Working Capital, Credit Input Supply and Marketing	Number of KUDs Actively Involved in Each Grouping of Business Activities	KUDs Involved in:							
			1. Livestock Feed		5	7	7	9	12	12
			2. Fertilizer/Pesticide		48	53	53	60	60	60
			3. Seeds		1	2	2	3	3	3
			4. Fish/Shrimp Fry		1	1	1	4	6	8
			5. Tractor Plowing		2	3	3	4	4	4
			6. Poultry Products		4	5	5	7	8	9
			7. Dairy Products		4	4	4	4	4	4
			8. Aquaculture Products		1	1	2	5	7	9
			9. Grains/Hort. Crops		10	14	14	18	20	22
			10. Consumption Goods		35	36	36	40	44	48
			11. Handicraft/Small Indu		4	4	4	6	7	8
12. Estate Crops		2	2	2	4	8	12			
5. Stimulation of Non-Agricultural Employment Generation and Enterprise Development Activities and the Development of Non-Traditional Export Market	Management, Technical Assistance, Construction, Equipment, Machinery, Working Capital, Training, Marketing	Income Generated, Employment Generated, Businesses Developed by Location and Activity-Directly Attributable to Employment by Project	1. Wages to Productive Labor (Non-Agriculture) (Rp. 000)		215632	247406	297000	363000	412500	462000
			2. Revenues of Operations (Rp. 000)		466625	667713	900000	1100000	1250000	1400000
			3. Exported Production (Rp. 000)		293282	367731	475000	715000	812500	910000

1/ Luwu 1986 Data Includes May-December, or inception of PUSPETA

2/ Total Sales Figures include the PUSPETAs and their Subsidiary Companies.

3/ All Figures for 1987 Include Data from January-September Only

project achievements on any specific operation.

The basis for establishing quantifiable indicators which fairly depict achievable progress relative to available project resources has mainly included benchmarks, cash flow, profit and loss, and balance sheet projections for the next fifteen years for all project activities. Such are included as Appendices C.1 through C.4 and D.1 through D.4 for the PUSPETAs Klaten/Boyolali and Luwu respectively. The team has reviewed such projections with project management and feel that they are both ambitious yet achievable assuming immediate disbursement of necessary project working capital funds and a continuation of recent project revenue growth patterns.

4. FINANCIAL ANALYSIS

4.1 PUSPETA KLATEN: FINANCIAL RATIO ANALYSIS

PUSPETA Klaten provided complete financial data for 1986 and for 1987 through September 30th from which to construct comparative Balance Sheets and calculate relevant financial analysis ratios (Appendix Table E).

The liquidity ratio (Total Current Assests/Current Liabilities) decreased in 1987 compared to 1986. The decrease was due mainly to an increase in accounts receivable and to a build up in inventory. The Acid Test Ratio [(Total Current Assests Inventories)/Current Liabilities] also decreased in 1987, because of an increase in inventories (68%). Of the liquid assests, around 81% was in Accounts Receivable.

The Leverage (Solvability) Ratios changed only slightly. The Total Debt to Equity Ratio [Current Liabilities + Long Term Debt)/Total Equity] increased from 135% to 153%. But the Long Term Debt to Total Equity Ratio decreased from 100% to 92%. Although Total Debt is larger than the Equity, most of the debt is long term, from the GOI's Department of Finance and the interest and principal are to be paid only after receipt of the Title I funds from the same agency. The increase in Total Debt to Total Equity was due mainly to an increase in the level of

PUSPETA's borrowings from BUKOPIN, from Rp 30,000,000 in 1986 to Rp 150,000,000 in 1987, (and renewable in August, 1988 at that level). As the PUSPETAS are yet to be member owned entities and thus not able to generate equity capital with the exception of retained earnings, growth will have to be financed totally by debt. In view of the great increase in sales volume in 1987 over 1986 and corresponding necessary increases in inventory, an increase in debt relative to equity is understandable.

The Activity Ratio decreased in 1987 relative to 1986. The Receivables Turnover ratio (Total Sales/Average Receivables) declined from 7.1 to 5.6. The Inventory Turnover ratio declined from 23 in 1986 to only 9.6 so far in 1987. This decline has mainly occurred due to an increase in sales requiring agricultural commodity input and a decrease in fertilizer sales which requires a minimal storage period.

Profit ratios made a marked improvement. Gross profit margins (Total Gross Profit/Total Sales) increased from 8% to 13%. The Net Profit Margin increased from -1% to + 3%, while the Rate of Return on Investment increased from 0.00% to 4.40%.

4.2 PUSPETA LUWU: FINANCIAL RATIO ANALYSIS

Complete financial data were available for PUSPETA Luwu only from April 1 to December 31, 1986 and for

1987 only through June 30 for construction of comparative balance sheets and financial ratios (Appendix Table F). Liquidity ratios made large increases from 1986 to 1987. The Current Ratio increased from 286% to 402%. In 1987 around 46% of the Current Assets (Rp 204,695,000) are in Accounts Receivable. But only about 4% of this (Rp 8,624,000) is due to business activities during the PUSPETA period and part of the Accounts Receivable consists of fertilizer discounts due from PUSRI (Rp 60,145,000).

There were small changes in Leverage ratios from 1986 to 1987. The Total Debt to Equity ratio declined slightly in 1987 compared to 1986 due to a decrease in liabilities to non-members for goods (Rp 41,660,000). Of the Rp 110,911,000 liabilities to non-members as of June 30, 1987, Rp 52,000,000 was paid in the 3rd quarter in the form of agricultural equipment returned to the supplier. Of the remaining, Rp 52,000,000 will have to be paid only after PUSPETA receives payments from the KUDs.

Long Term Debt in 1987 consists mainly of the following (1) a loan from the Cooperative Office, Rp 11,200,000; (2) a loan from DDI (Ministry of Finance), of Rp 155,108,000; and (3) a loan from PL 480 Title II funds, Rp 61,000,000. Almost all of the Long Term Debt is to paid only after receipt of Title I funds.

Activity ratios increased from 1986 to 1987. The Receivables Turnover rate increased from 1.9 (or 192 days)

in 1986 to 3.5 (or 104 days) in 1987. The time required to collect receivables is excessive and most receivables are difficult to collect because they stem from the period before PUSPETA was formed and relate to a previous government agricultural credit program where the previous FCC's participation was mandatory. A large amount of these receivables however are secured to a payable to the South Sulawesi PUSKUD which will only fall due once the receivables are collected.

The Inventory Turnover rate increased slightly, from 2.2 (or 166 days) in 1986 to 3.7 (or 99 days) in 1987. Profit Ratios increased from 1986 to 1987. The Gross Profit Margin increased from 25% in 1986 to 35% in 1987. The Net Profit Margin increased from 1.0% to 2.0%. The rate of return on Investment remained at 1.0%.

4.3 PUSPETA KLATEN: FINANCIAL VIABILITY ASSESSMENT

PUSPETA Klaten has experienced impressive growth in sales and earnings over the past three years while undertaking diversification into several newly created operations. Sales during the last three years have increased at an average rate of approximately 29% per annum and are forecasted to increase a healthy 65% in 1987 over 1986. The current year will also be the first that Klaten accrues a significant level of earnings, estimated to exceed Rp. 100 million. This comes after a breakeven year of 1986 and a negative bottom line in 1985.

A review of the level of fixed and overhead costs built into the PUSPETA Klaten operation and typically realized gross margins indicate a breakeven level of sales occurring roughly at Rp. 3 billion per annum. 1987 will be the first year these levels are realized and substantially exceeded. Significant annual fixed overhead includes equipment, building and vehicle depreciation expenses of Rp. 45 million, salaries of Rp. 80 million, and interest costs of Rp. 60 million.

In attempting to forecast the future viability of PUSPETA Klaten, one must review the reasons for the large increase in profitability of 1987 over 1986. The team noted the following:

1. The approximate 60% increase in sales revenues helped greatly to offset fixed costs necessitating an approximate breakeven level of sales of Rp. 3 billion.
2. The introduction of several new activities, products, and customers during the year.
3. Better control by management over operations including the reduction of operating expenses, greater internal financial control, and greater integrity in receivables management.
4. The receipt of a management fee of 4% of sales of the furniture operation; as well as the realization of income from the shares held in the furniture company.

The PUSPETA Klaten operation has prepared financial projections including cash flows, balance sheets and income statements for the next 15 years based upon working capital availability from Title I resources and operational levels the team believes attainable once

sufficient capital is disbursed. The plan, assuming terms already negotiated with the Department of Finance for the Title I working capital loan, will maintain a reasonable level of net profitability over the duration of the project and enable repayment of interest and principal.

The plan appears fairly conservative and projects sales and gross margin levels not much in excess of those achieved in 1987. In view of the growth of the previous year with much less capital, the project should have little difficulty in exceeding those targets, which already enable viable operational levels.

Perhaps at greatest risk to the organization is the loss of a portion of its animal concentrate feed business due to the possible establishment of an in-house feedmill at the PT NAA dairy venture-the project's largest customer. However, sensitivity analysis at forecasted levels less these revenues still maintain profitability. This is mainly due the project's forecasted decrease in sales to the venture after year three within the financial projections and their corresponding increase in local beef and poultry feed operations.

Revenues in other operations appear secure over the long term. When viewing other major income producing activities, PUSPETA's milk, sugar and corn forage operations should maintain at least their current level of revenue generation over the long term, while

diversification into other operations should continue to enhance income over the coming years. The level of furniture sales and their corresponding fixed management fee accruable to PUSPETA Klaten over the coming years also seems secure.

Finally, PUSPETA Klaten seems well leveraged as its major two creditors, BUKOPIN and the DDI (the latter being partially overdue) will not close outstanding debt until the disbursement of Title I funds.

4.4 PUSPETA LUWU: FINANCIAL VIABILITY ASSESSMENT

PUSPETA Luwu is not quite as well along as its more mature counterpart in Klaten. Operations as a non-governmental and consolidated business entity have been underway for only 15 months and much more limited available capital has restricted the organization's ability to achieve a level of sales enabling profitable operation without initial salary subsidy.

As earlier described, the operation and its facilities at the onset of PUSPETA Luwu's establishment was geared to catering to the rice marketing, processing and input supply operations. Newly positioned management and staff have basically mastered these operations in their year on the job while experimentally conducting small transactions in the shrimp, fish, cocoa, coffee, beef, poultry, soybeans and retail sales operations. Of these,

several look attractive while others still require a long learning curve.

The first year of operation has seen steady increases in sales within the seasonally based rice input supply and output marketing operations. Sales of 1987's third quarter, the last operational and first seasonally comparative, were 60% higher than that of 1986's third quarter and occurred during a period the team was told included a failed rice harvest. Major increases were made in the tractor and fertilizer distribution businesses.

Such increases in revenue should be maintained over the next several operational quarters for several reasons. Firstly, the impending harvest looks to be large, and through efforts at PUSPETA logistical mobilization witnessed by the team, the level of rice marketed and milled over the previous harvest should at least double. PUSPETA dominance in the district's fertilizer business should continue and even increase as the KUDs continue to become a more efficient marketing network. Pesticides and herbicides sales levels will also undoubtedly increase as the distribution license previously revoked by P.T. Pertani has now been restored.

Additionally, diversified operations begun in October, 1987 should begin to pay off in the coming months. October was the first month where the project (1) sold

shrimp fry to local farmers in coordination with the BRI; (2) procured and marketed rattan poles; and, (3) sold sugar within the Luwu market. All the above, on an albeit low initial level, were done on a profitable basis and all have a much larger existing market to cater to.

In view of the above, the PUSPETA Luwu should be able to achieve revenue levels and corresponding margins as detailed within the 15 year financial projections appended. As per the projections, the PUSPETA Luwu will realize profitable operations in its next year when one assumes disbursement of working capital from Title I occurs over the next few months. When however salary subsidies are discounted from the year's income, the bottom line will be marginally negative. Dependency upon partial salary subsidy will however be eliminated by the next year as margins will exceed the reduced level of subsidy provided.

The long term outlook for most of the operations appears positive. Although the rice sector's associated input and output businesses will level off early in the project, the potential for the diversified operations are great. As earlier described, the rattan activity should prosper with the ban on pole exports coming into effect in 1989 and the project being one of the very few pole processing operations directly integrated to furniture production businesses. The shrimp fry sales and production market opportunities seem great when taking into account the results of the production package developed and the

vast amount of brackishwater ponds in the area utilizing extremely low production technology. A continuation of credit financing from the ERI could quickly accelerate the rate of farmer adaptation and greatly reduce PUSPETA financial risk in encouraging farmer participation.

The cocoa operation once workable should also be of substantial volume as the recently planted 17,000 hectares of small farmer plots will be coming into production soon without an alternative efficient market and processing system. Finally, the results of intensified secondary crop production within the initial hybrid corn program and the potential of doubling soybean yields on the large transmigration farmer land holdings should provide a significant opportunity for increased project incomes from both selling improved inputs and increased production.

With the existing margins and achievable levels of business planned in the appended financial projections, the project breakeven level of sales revenues will occur at approximately Rp. 2.5 billion per annum and occur late within the coming year once the Title I working capital is disbursed.

In evaluation of the PUSPETA Luwu leverage ratios, although medium term debt seems excessive relative to liquid assets, none of the existing payables will be due without corresponding refinancing as earlier described. With maintenance of current margins as planned for in the

15 year financial projections and also maintenance of current receivables policies, PUSPETA Luwu should afford the scheduled payment of interest and principal for the Title I loan's conditions while having regenerated sufficient captial for perpetual operations.

5. NATIONAL COOPERATIVE IMPACT AND IMPLICATIONS

The impact of the CAEDP upon national level cooperative operations has by the second year of the program been felt in a variety of ways and at numerous locations within Indonesia. Due to the innovative approach taken by the project, it's GOI management has been placed under the supervision of the Head of the Cooperative Research and Development Agency within the Department of Cooperatives. In the first month of the project's implementation, a Ministerial Decree established a national level CAEDP Steering Committee specifically to cater to the project's oversight and supervision. On the committee sit the Department's three Director Generals, the head of the Department's Planning Bureau, and several other officials from the Department's Inspectorate and Secretariat General.

Since the Steering Committee's establishment, the Department has placed responsibility for the implementation of several other priority operations within the CAEDP's project management through its Project Management Unit (PMU, which consists of the NCEA representative, the CAEDP Project Development Officer and the Department's Foreign Project Coordinator) under the Steering Committee. These activities, described earlier in the report's Section 2.2.4, have included management and marketing assistance to the National Federation of Rural Cooperatives (INKUD), the Provincial Cooperative Federation of Bali (vanilla), the Provincial Cooperative Federation of Central Java

(furniture and rice seed production management), and in relationships and ventures with several private sector firms. The Department sees the project as an important example in both testing the viability of joint private sector-cooperative ventures with management participation by the cooperative partner and in demonstrating to other cooperatives the ability to produce and undertake international business transactions.

A second impact evidenced by the CAEDP implementation is replication by other donor agencies together with the Department of Cooperatives in other areas of Indonesia. The replication usually consists of the establishment of a pre-secondary cooperative organization at a district level involved in autonomous business operations. These include:

- * The establishment of PUSPETA Kutai in East Kalimantan by a German Government aid program which actually after studying the project at length, recruited a PUSPETA Klaten employee to replicate and manage the project.
- * The establishment of FCCs in the provinces of South Sumatera and Jambi financed by the World Bank and the GOI.
- * The frequent study of the project by foreign donor organizations in the process of project design at the request of the Department of Cooperatives.

The project has additionally undertaken pilot activities prior to their inception on a larger scale. The Luwu organization was the first non-provincial level cooperative to directly procure fertilizer on a cash basis

without going through the provincial cooperatives. This system has now been implemented in nearly every district of Indonesia where selected KUDs can buy fertilizer directly on a cash basis. The program has both raised the portion of fertilizer handled by cooperatives and almost reduced to nothing the outstanding fertilizer debt of the cooperative sector.

PUSPETA Klaten and more recently PUSPETA Luwu have for the past year procured sugar directly from BULOG without again going through the provincial level cooperatives. Evaluation of this system will hopefully also prove that a decentralized method of sugar distribution will provide greater efficiency to the cooperative movement.

Perhaps however the most important policy impact of the project will be the long term final judgement of the validity of locating secondary cooperative organizations at below the provincial level. What is clearly evident to the Department of Cooperatives is that existing secondary level cooperative organizations at the provincial level have both failed to operate solvently even with huge GOI subsidy and have also impacted little upon their primary cooperative constituency. District, or multi-district level secondaries, could be the solution, and indeed, the CAEDP has at least demonstrated PUSPETA ability to operate viably and have greater impact upon its primary cooperatives. It however has not yet done so without project technical

assistance or under the direct policy guidance of a non-governmentally influenced local board of directors.

Such will be the most important input to national policy once the secondaries are established, the TABs are phased out by local cooperative management, and governmental influence is gradually decreased. It will be then that the model's degree of replicability can be accurately assessed.

Oftentimes, the issue of replicability particular to the CAEDP model is questioned due the investment of GOI and AID funds in the PUSPETAs. Upon examination however of the vast amount of financial inputs provided to existing PUSKUDs through commodity allocations and fees from primary cooperatives, the finances already spent in equipping each district in Indonesia with offices and land under the PPK program, the degree of KUD capitalization within the Indonesian cooperative bank, and the amount of operational diversification undertaken by PUSPETA in excess of a breakeven district level operation, the question of financial cost is one of lower importance.

6. LESSONS LEARNED

6.1 VIABILITY OF JOINT PRIVATE SECTOR/COOPERATIVE WORKING RELATIONSHIPS

The project, at the encouragement of the Department of Cooperatives, has entered into several working relationships on an experimental basis with both the Indonesian and foreign private sector. Some have involved joint investments where PUSPETA has taken equity, and others under contractual production or marketing relationships. Recent GOI policies have encouraged such relationships, contrary to previous policies, and PUSPETA is seen by the Department of Cooperatives as a pilot in demonstrating approaches for cooperatives working with the private sector. Their current activities in furniture and crop production have demonstrated the mutual benefits both sectors can realize through joint operations. Further experimentation on these lines (such as the PUSPETAs' plans in the areas of rattan manufacturing, cocoa processing/export, food production/ processing, etc) should be encouraged.

6.2 DIVERSIFICATION FROM GOVERNMENT SPONSORED ACTIVITIES NECESSARY FOR LONG TERM PROJECT VIABILITY

A large portion of government cooperative activities that the project initially depended upon for its revenues have been either removed due to their discontinuation by government or their assumption by another entity through government decree. Such have

included the TRI fertilizer distribution, BIMAS credit input, and Lappo-Ase credit program previously run during the Klaten or Luwu projects' earlier implementation phases. Such experiences have been financially traumatic for the organizations, and their current emphasis upon implementing diversified business operations with viability based more upon normal economic and market forces will remove most of the above risk. The PUSPETAS should continue to play important roles in implementing priority government programs but reduce their financial dependence upon their implementation and, as quickly as feasible, prepare local KUDs for the assumption of these operations.

Additionally, the PUSPETAS should, in most activities, prepare the KUDs and their kelompok to assume the maximum amount of operational responsibility within the shortest time possible while concentrating their managerial and financial resources in providing services requiring higher level economies of scale to support those activities.

6.3 SUBSTANTIAL AND LENGTHY RESEARCH NECESSARY PRIOR LARGE SCALE IMPLEMENTATION OF NEW ECONOMIC ACTIVITIES ON THE FARMER LEVEL

Through several activities implemented during the PUSPETAS Klaten and Luwu initial phases, it can be concluded that inadequate research and development was conducted prior to their implementation at the farmer level. Although initially some activities operated

profitably, various unforeseen risks rendered the operations not viable on a long term basis. Recent activities, especially those with a level of high technical input and local adaptation requirements (such as the aquaculture and spice production operations) should continue their lengthy research and development phases until proven prior to wide farmer adaptation. This is essential, even at the cost of delaying project implementation scheduling.

6.4 STRICT CONTROL OVER THE GRANTING OF CREDIT TO BOTH KUDS AND NON-KUDS IS ESSENTIAL TO LONG TERM FINANCIAL SOLVENCY

The previous implementation phases of both the PUSPETAS Klaten and Luwu have illustrated the danger of overly liberal cooperative credit policies. Both organizations have in the past accumulated a sizable amount of bad debt for KUDs and non-KUDs. Although neither organization was totally at fault for these bad debt accumulations (such as the FCC Luwu in its forced role as distributor of credit inputs to farmers under the Lappo-Ase program), it has been extremely important that both have tightened their credit policies even at the risk of reducing sales to below breakeven levels, perhaps sacrificing their role in important government programs, forsaking the timely achievement of project targets, and limiting farmer adaptation of their services.

The PUSPETAS should vigorously maintain prudently stringent credit policies as a priority to insure its long

term solvency. As a government project and cooperative serving mostly the poor, this will be a difficult challenge. However, in view of past experience and the current insolvent position of most secondary cooperatives due to bad debt, this will be a major factor in the project's eventual outcome.

6.5 REPLICABILITY OF THE PROJECT MODEL TO OTHER AREAS OF INDONESIA

The Department of Cooperatives (through its admission to the evaluation team) has learned through recent and somewhat repetitive experience that the successful and widespread replication of any cooperative model within Indonesia on a strictly uniform basis will be doomed to eventual failure. In a country with such extreme cultural, economic and demographic diversity, the importance of the project model to the Department of Cooperatives is to test experimental governmental policies and programs within the project's framework. When found workable, several aspects of the model can be taken from the project and applied to cooperative organizations in other areas of Indonesia and under differing economic and social circumstances.

The main element of the model is the establishment of a secondary cooperative organization at the district rather than the provincial level and its provision with managerial and financial autonomy to implement business operations outside the purview of normal

governmental cooperative activities. The experience with PUSKUDs at the provincial level and their inability to serve the requirements of the majority of their extremely numerous and often remote primary cooperatives has demonstrated the necessity of an evolving network of secondary cooperatives at lower than the provincial level (involving either one or several districts). However, the Department of Cooperatives correctly realizes that great discretion needs to be exercised in the formulation of national cooperative policies on this subject. Once experienced through the PUSPETA organizations, the Department will be able to more accurately assess both the potential and risks of revising past policies concerning the location of secondary cooperative organizations.

Other elements less significant in national policy implication have been tested by the project, and to some degree have been instituted as Department policy. These include mainly the distribution of agricultural inputs and consumption goods and the establishment of joint private sector/cooperative entities as described earlier. It is however too early in the project's implementation to conclude the degree of its widespread replicability, especially since its eventual organizational structures, as planned for in the project agreements, as a secondary cooperative body will only be realized in the coming months.

6.6 EXAMPLES OF SPECIFIC FAILURES AT PUSPETA
KLATEN, LESSONS LEARNED, AND ACTION TAKEN

The following examples of failures originated from the previous project.

6.6.1 EGG MARKETING

In 1984, PUSPETA started an egg marketing operation that involved purchasing eggs from local poultry farmers through their KUDs and marketing them to a private company in Jakarta. The activity became substantial in volume and within one year PUSPETA marketed over 20 tons of eggs per week with a value of approximately Rp 25 million. Payments during that time were fluent and terms were on a weekly consignment basis. Guaranteeing the private company's payment was a land certificate located in Jakarta. Upon one delivery of eggs after one year of activity, the Jakarta company went bankrupt and left the project with two weekly payments unpaid. PUSPETA Klaten is still in court attempting to receive and sell the rights to the property hypothecated by the Jakarta company.

Lesson Learned/Action Taken:

(1) PUSPETA Board greatly tightened up the control on the provision of credit to non-cooperatives by the PUSPETA management;

(2) Only allowed the provision of credit to non-cooperatives for the sale of cooperative produced products and only to large private firms with good financial reputations.

6.6.2 GARMENT MANUFACTURING

PUSPETA in late 1983 started working with two garment exporters in the production of handmade embroidered garments. For the first two years, the activity was quite successful in that orders were fluent, all involved profited, and although initially 30 workers trained to produce the garments, it was eventually expanded to include 120 workers. In 1986 however, the market for embroidered garments declined substantially in the U.S and the orders decreased to nearly nil for that type of garment. Although additional customers were found for non-embroidered garments, PUSPETA found itself without export quota for such types, and, the workers were trained only for embroidery and the machines were also adjusted only for embroidery.

Lesson Learned/Action Taken:

- (1) Size of the operation was scaled down to a level that reduced the risk of seasonal production/market fluctuations, or 70 people;
- (2) All embroiders were retrained so that they could produce sewn as well as embroidered garments;
- (3) The number of customers was increased and the volume of production per customer was proportionally reduced, thus reducing dependence upon a single customer or his limited production style;
- (4) A customer for local (Batik Keras), as well as exported garments was found to reduce the risk of work stoppages due to export quota shortages.

7. RECOMMENDATIONS

7.1 HIGHEST PRIORITY SHOULD BE PLACED UPON THE IMMEDIATE DISBURSEMENT OF TITLE I FUNDS TO THE PROJECT

The Title I funds finance the project's working capital, construction, equipment and machinery outlays, which involve 70% of the project's inputs including technical assistance. Until now, the Klaten and Luwu PUSPETAs, due to their existing buildings, equipment and working capital, have been able to function and develop at rates approximately appropriate to their managerial capacity and the stage of development of newly created project objectives. Further growth and eventual achievement of project objectives will however not be possible without the timely disbursement of Title I funds. The PUSPETAs have apparently completed negotiations with the Department of Finance on the timing for the release of the funds and terms for their eventual repayment and according to information provided the team, disbursement is evidently near.

7.2 THE ESTABLISHMENT OF PUSPETA MALANG SHOULD BE DELETED FROM THE SCOPE OF EXISTING CAEDP

Due to several unforeseen circumstances, including the late and greatly reduced amount of Title I funds and the delayed commitment of Title II funds as well as a broadening of the project's scope to include other activities and areas, the CAEDP Steering Committee and

Project Management Unit have decided to combine the PUSPETAs Boyolali and Klaten and are strongly considering dropping Malang as a project location. With the amount of funding available to the project from Title I funds and the limited amount of time available even if additional funding sources were somehow secured, the CAEDP should not consider further implementing the project in Malang and concentrate the project's limited resources upon the Klaten, Luwu and Boyolali locations. Implementation in Malang would however be viable if originally planned funding levels and timeframes could be realized. Alternative budgets have been prepared by the project which prudently plan for the utilization of remaining Title I and Title II funds in the Klaten, Boyolali and Luwu locations. These plans should be finalized by the project management and submitted to USAID for normal amendment of the project's implementation plan.

7.3 THE TRANSITION FROM CURRENT PROJECT MANAGEMENT STRUCTURE TO SECONDARY COOPERATIVE STATUS SHOULD BE VERY CAREFULLY AND GRADUALLY UNDERTAKEN SO AS TO INSURE MAINTENANCE OF EXISTING PROJECT ACHIEVEMENTS

The PUSPETAs Klaten and Luwu have developed into multimillion dollar business entities with technically complex management, administrative and operational requirements and previous substantial technical assistance input to existing management. Steps should be taken to insure that:

(a) The future PUSPETA boards of directors represent a broad base of the cooperative member clientele that benefit

from PUSPETA services so as to insure continued priority is placed upon activities which are compatible with the objectives of the project. As is always a risk in rural cooperatives, much will initially have to be done to insure against the most powerful rural people capturing the majority of economic benefits from PUSPETAs' activities for themselves.

(b) The future boards understand and undertake their primary function of providing policy decision-making authority to the management and not to assume day to day operational functions so as to insure the continuation of activities under existing qualified management.

(c) Provisions must be made so carefully follow, as stipulated within the TA's Appendix E, the plan for continued, albeit substantially limited, involvement of the Project Management Unit and CAEDP Steering Committee in the decision-making process of the PUSPETAs once they are made secondary cooperative organizations. The guiding principle for such involvement and policy intervention should remain "as little as possible, as much as necessary". Recommendations on the question of the degree of operational independence that should be expected of the eventually functioning PUSPETA business entities within Indonesia's cooperative structure involves judgements appropriately the prerogative of the Government. It is however important not to prematurely overestimate the ability of these newly created institutions to survive economically over the long haul. This does not reflect shortcomings of the project, as the achievements of both PUSPETAs have been significant, to date; but rather, the realization of the risky nature of its agriculturally based businesses and its inherent necessity to serve the poor and their economically weak cooperative organizations. To consider a complete withdrawal of CAEDP Steering Committee, PMU and TAB input at this time could undo much of the substantial progress achieved to date.

On the other hand, if these are to become truly secondary cooperatives working as agents of the KUDs, the process of transformation needs to get underway early. Boards of Directors elected by the KUDs need to assume their duties while there is still sufficient time for the TAB's to monitor, supervise and, where necessary, veto their actions, as they get the necessary in-service training to direct the PUSPETAs.

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4. Project Document for the Indonesian Enterprise and Trade Development Foundation, NCEA and CBI in Conjunction with Department of Cooperatives, Government of Indonesia
5. Completion of Project Report on PUSPETA Project, Klaten, NCEA, 1985
6. Data-Data Hasil Survey Produksi Susu Perah di Kabupaten Klaten, Tahap III: Proyek PUSPETA Klaten, PUSPETA Klaten CAEDP, Department of Cooperatives, NCEA, 1987
7. Agreement between the Government of USA and the Government of the Republic of Indonesia for Sale of Agricultural Commodities, February 13, 1985
8. Transfer Authorization Agreement, Government of Indonesia and the Cooperative League of USA, Jan 10, 1986
9. Agreement between BULOG and CLUSA for the Sale and Purchasing Wheat, 22 November, 1985
10. Sub-Agreement between CLUSA and Department of Cooperatives on Expenditure Procedures, 29 January, 1986
11. Agreement on Operational Guidelines for PUSPETA Klaten, Malang and Boyolali and FCCs Luwu, 31 January, 1986
12. CLUSA Support Agreement for PUSPETA Klaten, Boyolali, Malang and FCCs Luwu, January 29, 1986
13. Examination on the Consolidation of Central Java PUSKUD and PUSPETA Cooperative Furniture Production Operations, CLUSA and BPK PUSPETA Klaten

APPENDIX A

SCOPE OF WORK, CAEDP EVALUATION TEAM

Elements of the Evaluation

It has been recognized by both USAID and NCBA/I that this evaluation is considered as a mid-term exercise and is being conducted ahead of schedule. Thus, as so agreed, this exercise is scheduled to begin by the first week of October, 1987. Its scope of work will include the following elements:

1. Taking into account the project(s) objectives which are:
 - to develop the cooperative system so as to improve agricultural products and marketing services;
 - to replicate and intensify the activities under the PUSPETA and FCC projects;
 - to provide business services in the areas of input supply credit, processing and marketing to support small-holder production; the following benchmarks against which performance towards attaining these objectives will be assessed;
 - an examination of benefits accrued or in process of being accrued to individual cooperative members; i.e., (a) number of jobs (positions and mandays)

created from project-supported enterprises and (b) total number of incomes created;

- an assessment of the enterprises created or in process of being created; (a) number supported by project resources; number succeeding or failing; (b) assessment of technical assistance provided; organization and management of the project; (c) nature and amount of subsidies provided to existing enterprises; (d) sustainability of these enterprises and/or whether they can be expected to stand alone at this time.

- what has been the role of PUSPETA in Klaten and Luwu as a supporter of the KUDs, or is it independent of the KUDs? To what extent are the KUDs involved in PUSPETA's activities?

- what has been the source of opportunities which PUSPETA has pursued; how are these opportunities identified and selected? How well has the mechanism described in the project paper for financing, managing and providing government support for subproject worked in terms of assessing sub-project viability, increasing support for viable operations and terminating support for nonviable ones?

The financial assessment should not only examine the viability of the accounting system and internal controls of entities assisted, but also assess the amount

of subsidy(ies) involved (if any) and their nature in establishing an enterprise; how long do the subsidies continue; are there opportunity costs involved and, if so, what are they; how do they weigh against the benefits the supported enterprises provide

Evaluation Team Members:

1. Russel O. Olson, Agricultural Economist, Team Leader
2. Prof. Sudjito, Rural Sociologist
3. Mirza Siregar SE.MBA, Finance

Appendix B.1

Original PL 480 Title II Illustrative Dollar and Rupiah Budgets

Description	Year 1	Year 2	Year 3	Year 4	Year 5	Total Outflows
Revenues	c/f	\$1936.30	\$1135.00	\$501.50	\$197.60	
1. Sale of Title II Wheat	\$2691.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
2. Interest Income Realized						
Total Revenues	\$2691.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
A. U.S. Dollar Budget						
1. Salaries--U.S. Staff	\$209.60	\$239.00	\$191.40	\$81.50	\$63.80	\$785.30
2. Fringe Benefits	\$52.40	\$59.80	\$47.90	\$20.40	\$16.00	\$196.50
3. Consultant Fees	\$6.00	\$6.30	\$0.00	\$0.00	\$0.00	\$12.30
4. Travel & Allowances	\$96.90	\$71.80	\$71.20	\$41.00	\$26.10	\$307.00
5. Other Direct Costs	\$2.00	\$2.00	\$2.00	\$2.00	\$2.00	\$10.00
6. Overhead	\$146.70	\$151.50	\$125.00	\$58.00	\$43.00	\$524.20
7. G and A	\$10.80	\$11.20	\$9.20	\$4.30	\$3.20	\$38.70
Total Dollar Cost	\$524.40	\$541.60	\$456.70	\$207.20	\$154.10	\$1874.00
B. Indonesian Rupiah Budget						
1. Personnel Compensation	\$77.50	\$94.70	\$68.00	\$37.70	\$6.60	\$284.50
2. Local Consultants	\$12.00	\$12.00	\$12.00	\$12.00	\$0.00	\$48.00
3. Travel & Allowances	\$89.10	\$97.20	\$72.90	\$24.30	\$16.20	\$299.70
4. Other Direct Costs	\$51.70	\$55.80	\$32.90	\$22.70	\$20.70	\$184.80
Total Rupiah Costs	\$230.30	\$259.70	\$186.80	\$96.70	\$43.50	\$817.00
TOTAL ALL COSTS	\$754.70	\$801.30	\$633.50	\$303.90	\$197.60	\$2691.00

Appendix E.2

Revised Title II Dollar & Rupiah Budgets

Description	Original Plan	Actual Year 1	Revised Year 2	Revised Year 3	Revised Year 4	Revised Year 5	Revised Total
Revenues							
			Estimate	Estimate	Estimate	Estimate	Estimate
1. Sale of Title II Wheat	\$2091.00	\$1939.38	\$897.50				\$2836.88
2. Interest Income Realized		\$66.80	\$52.71	\$64.78	\$41.30	\$18.81	\$264.40
Total Revenues	\$2091.00	\$2006.18	\$950.21	\$64.78	\$41.30	\$18.81	\$3101.28
Budget Carried Forward			\$1495.27	\$1849.30	\$1178.07	\$535.83	
Available Funds		\$2006.18	\$2445.48	\$1914.08	\$1219.07	\$554.64	
A. U.S. Dollar Budget							
1. Total Salaries	\$797.00	\$139.42	\$149.99	\$183.38	\$199.05	\$146.82	\$818.66
2. Fringe Benefits	\$196.50	\$38.98	\$37.50	\$45.85	\$49.70	\$36.70	\$208.78
3. Travel & Transport	\$119.00	\$12.08	\$27.00	\$28.00	\$24.00	\$22.00	\$123.38
4. Allowances	\$188.00	\$40.20	\$41.50	\$54.81	\$52.70	\$51.70	\$242.07
5. Other Direct Costs	\$10.00	\$8.90	\$10.00	\$10.00	\$10.00	\$10.00	\$48.90
6. Overhead	\$534.20	\$95.85	\$100.45	\$128.80	\$134.19	\$107.20	\$572.57
7. G and A	\$38.70	\$7.10	\$7.30	\$9.50	\$9.90	\$7.91	\$42.27
8. Commodities/Equipment	\$0.00	\$0.11	\$0.00	\$0.00	\$0.00	\$0.00	\$0.91
Total Dollar Cost	\$1874.00	\$343.48	\$380.64	\$400.38	\$479.60	\$383.39	\$2047.55
B. Indonesian Rupiah Budget							
1. Personnel Compensation	\$284.50	\$52.17	\$64.79	\$69.85	\$54.50	\$32.81	\$275.18
2. Local Consultants	\$48.00	\$21.92	\$22.27	\$39.42	\$42.16	\$39.45	\$175.22
3. Travel & Allowances	\$299.70	\$32.04	\$50.54	\$48.06	\$50.40	\$45.42	\$226.52
4. Other Direct Costs	\$184.60	\$80.30	\$67.94	\$83.00	\$57.00	\$53.57	\$341.81
5. Invitational Travel	\$0.00	\$0.00	\$0.00	\$35.00	\$0.00	\$0.00	\$35.00
Total Rupiah Costs	\$817.00	\$167.43	\$215.54	\$275.33	\$204.18	\$171.25	\$1053.73
TOTAL ALL COSTS	\$2091.00	\$510.91	\$596.18	\$705.71	\$683.84	\$554.64	\$3101.28

Appendix B.3

Title II Budget and Expenditures: January 1, 1986 - June 30, 1987
Local Currency Expenditures

EXPENDITURE CATEGORY	BUDGETED AMOUNT	EXPENSES TO DATE	U.S. \$ EQUIVALENT	REMAINING BUDGET	PERCENT EXPENDED
1. PERSONNEL COMPENSATION	\$294,500.00	111,097,210	\$80,641.04	\$203,858.96	28%
2. LOCAL CONSULTANTS	\$46,000.00	52,684,336	\$37,983.72	\$10,016.28	79%
3. TRAVEL & ALLOWANCES	\$299,700.00	74,893,218	\$54,073.34	\$245,626.66	18%
4. OTHER DIRECT COSTS	\$184,800.00	164,352,901	\$121,014.67	\$63,785.33	65%
TOTALS	\$817,000.00	402,928,325	\$293,713.76	\$523,287.24	36%

U.S. \$ Expenditures

	BUDGETED AMOUNT (\$)	EXPENSES TO DATE (\$)	REMAINING BUDGET (\$)	PERCENT EXPENDED
1. Total Salaries	787,600	212,289	584,311	27%
2. Fringe Benefits	196,500	57,947	138,553	29%
3. Travel & Transport	119,000	21,892	97,108	18%
4. Allowance	188,000	58,547	129,453	31%
5. Other Direct Cost	10,000	11,408	-1,408	
6. Overhead	524,200	145,615	378,585	28%
7. Commodities & Equipment	0	1,369	-1,369	
8. General Administration	38,700	10,751	27,949	28%
Total Budget / Expenses (\$)	1,874,000	520,818	1,353,182	28%

Appendix C.1. Volume of Sales / Revenues , Projection for 1988 - 2002
Puspata Klaten / Boyolali

Cash Flow Projection, Balance Sheet and Income Statement for Puspata Klaten & Boyolali for 1988 - 2002

Assumptions Volume of Revenues & Sales

NO.	DESCRIPTION	UNIT	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
1.	Sales of Rice	TON	1,988	1,995	2,095	2,199	2,300
2.	Sales of Milk	THOUSAND LTR	2,005	2,206	2,316	2,432	2,553
3.	Sales of Fruit / Vegetables / Spices	MILLION RP.	48	58	69	83	100
4.	Sales of Silage / Fodder	TON	9,000	15,000	18,000	18,450	18,911
5.	Sales of Fertilizer	TON	3,288	3,360	3,520	3,704	3,890
6.	Sales of Cattle	COU	90	100	270	360	360
7.	Sales of Livestock Feed	TON	6,020	9,540	13,367	9,357	6,550
8.	Sales of Sugar	TON	1,650	1,800	1,800	1,800	1,800
9.	Sales of Meatbirds	CHICKEN	80,000	100,000	120,000	140,000	140,000
10.	HPI Research & Dev. Revenues	THOUSAND RP.	80,360	80,360	40,180	0	0
11.	Equipment Rental Revenues	MILLION RP.	24	24	24	12	12
12.	Transport Service Revenues	MILLION RP.	35	36	37	38	39
13.	Seed Production Revenues	THOUSAND RP	43,550	20,000	21,000	22,050	23,153
14.	Fertilizer Discount Revenues	THOUSAND RP	4,000	5,040	5,292	5,557	5,834
15.	Management Fee Income	MILLION RP.	35	39	42	47	51
16.	Dividend from Share Appreciation	MILLION RP.	38	45	47	50	52
17.	Garment Service Revenues	THOUSAND RP.	46,000	55,200	56,580	57,995	59,444
18.	Sales of Day Old Chicks	THOUS. DOC	52	104	156	208	208
19.	Sales of Fish	TON	38	33	50	60	60
20.	Sales of Complete Feed	TON	2,388	2,865	2,865	2,886	1,604

* These are annual benchmarks, which serve as assumptions for tables C2, C3 and C4

Appendix C.2. Cash Flow Projections 1988 - 2002
Puspeta Klanten & Boyolali

Cash Flow Projection		(Rp. 000)					
NO.	ACCOUNT DESCRIPTION	YEAR 0	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
1.	Beginning Liquid Balance	57,979	612,529	60,531	45,493	25,523	360,356
2.							
3.	Inflows						
4.	Sales of Rice		646,000	678,300	712,215	747,026	785,217
5.	Sales of Milk		729,020	802,002	842,942	885,009	929,344
6.	Sales of Fruit / Vegetables / Spices		40,000	57,600	69,120	82,944	99,333
7.	Sales of Corn Silage		306,000	510,000	612,000	727,300	842,944
8.	Sales of Fertilizer		371,200	309,700	409,248	420,710	642,983
9.	Sales of Cattle		70,075	141,750	212,625	283,500	451,196
10.	Sales of Livestock Feed		1,500,400	2,100,500	2,940,704	4,059,500	5,448,984
11.	Sales of Sugar		940,750	1,035,000	1,035,000	1,035,000	1,035,000
12.	Sales of Meatbirds		132,000	163,000	190,000	231,000	231,000
13.	Revenue from HPI		00,360	00,360	00,100	0	0
14.	Equipment Rental Revenues		24,000	24,000	24,000	12,000	12,000
15.	Transport Service Revenues		35,000	35,075	36,772	37,691	38,633
16.	Sales from Seed		43,550	20,000	21,000	22,050	23,152
17.	Fertilizer Discount Revenues		4,000	5,040	5,292	5,557	5,834
18.	Management Fee Income		30,000	30,500	42,350	46,505	5,244
19.	Dividend Revenues		30,000	45,000	47,250	49,613	51,244
20.	Garment Service Revenues		46,000	55,200	56,500	57,995	59,444
21.	Sales from Day Old Chick		26,000	52,000	76,000	104,000	104,000
22.	Sales of Fish		22,500	24,750	37,500	45,000	45,000
23.	Sales of Complete Feed		167,125	200,550	200,550	140,305	112,300
24.	Increase / (Decrease) in Stock		-535,000	-445,000	-200,000	20,000	70,000
25.	Loan from PI 400 Title I	1900000		200,000			
26.	Increase / (Decrease) Account Receivable		200,000				
27.	Interest Income		-110,000	-110,000	-95,000	40,000	0
28.	Total Inflows	1900000	4,633,140	6,170,007	7,261,260	6,975,053	6,406,525
29.	Outflows						
30.	Purchases of Unhulled Rice		475,456	499,220	524,100	550,400	577,920
31.	Purchases of Rice		122,740	120,877	133,321	142,007	149,191
32.	Purchases of Milk		693,320	762,662	800,795	840,835	882,076
33.	Purchases of Fruit / Vegetable / Fruit / Spices		31,400	37,440	44,920	53,914	60,673
34.	Purchases of Corn Silage		260,100	433,500	520,200	633,205	746,535
35.	Purchases of Fertilizer		350,200	376,110	394,924	414,671	435,404
36.	Production Cost Cattle		59,535	119,070	170,605	230,140	230,140
37.	Production Cost Livestock Feed		1,312,050	1,037,200	2,073,100	1,001,230	1,260,061
38.	Purchase of Sugar		913,646	996,705	996,705	996,705	996,705
39.	Production Cost Meatbirds		126,000	157,375	189,000	220,605	220,605
40.	Cost of Research & Development		56,252	56,252	20,126	0	0
41.	Cost of Equipment Rental		4,000	4,000	4,000	2,400	2,400
42.	Cost of Transport Service		20,545	21,000	21,505	22,125	22,670
43.	Purchase of Seed		35,711	16,000	17,220	10,001	10,005
44.	Cost of Garment Service		31,740	30,000	30,000	40,016	41,017
45.	Purchase of Day Old Chick		23,730	47,476	71,214	94,952	94,952
46.	Purchase of Fish		20,993	23,092	34,990	41,005	41,005
47.	Prod. Cost of Complete Feed		142,056	170,460	170,460	119,327	95,462
48.	Selling & Distribution Expenses		96,964	127,001	167,569	140,109	120,520
49.	General Expenses		80,365	110,024	146,633	131,002	119,290
50.	Administration & Overhead Expenses		127,049	135,500	143,651	152,270	161,400
51.	Investment in shares						
52.	Repayment Title I	320,000					
53.	Repayment Title II	202,569					
54.	Repayment DDI Credit	407,451	57,000	0			
55.	Repayment Title I						
56.	Investment in Building / Land	130,000					
57.	Investment in Equipment / Vehicle	70,000	00,000	70,000	70,000	70,000	70,000
58.	Total Outflows	1,315,450	5,215,137	6,105,045	7,201,230	6,633,010	6,174,613
59.	Carried forward	642,529	60,531	45,493	25,523	360,356	600,270

Cash Flow Projection (Cont.)

NO.	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13	YEAR 14	YEAR 15
1.	688,270	717,488	688,125	657,734	617,485	596,211	586,596	631,831	693,642	765,915
2.	924,478	925,782	998,987	952,000	952,000	952,000	952,000	952,000	952,000	952,000
3.	1175,811	1,024,681	1,073,831	1,183,413	1,381,756	1,431,932	1,437,888	1,437,888	1,437,888	1,437,888
4.	1199,433	1,143,327	1,157,669	1,173,426	1,196,769	1,209,845	1,230,830	1,253,913	1,279,384	1,337,888
5.	1355,935	1,273,533	1,292,422	1,289,732	1,277,476	1,245,663	1,214,384	1,183,412	1,152,997	1,122,355
6.	1464,000	1,404,000	1,464,000	1,464,000	1,464,000	1,464,000	1,464,000	1,464,000	1,464,000	1,464,000
7.	1599,500	1,503,000	1,598,000	1,598,000	1,598,000	1,598,000	1,598,000	1,598,000	1,598,000	1,598,000
8.	1754,000	1,633,000	1,768,000	1,768,000	1,768,000	1,768,000	1,768,000	1,768,000	1,768,000	1,768,000
9.	1929,000	1,788,000	1,998,000	1,998,000	1,998,000	1,998,000	1,998,000	1,998,000	1,998,000	1,998,000
10.	2124,000	1,968,000	2,268,000	2,268,000	2,268,000	2,268,000	2,268,000	2,268,000	2,268,000	2,268,000
11.	2339,000	2,183,000	2,568,000	2,568,000	2,568,000	2,568,000	2,568,000	2,568,000	2,568,000	2,568,000
12.	2574,000	2,433,000	2,968,000	2,968,000	2,968,000	2,968,000	2,968,000	2,968,000	2,968,000	2,968,000
13.	2829,000	2,718,000	3,468,000	3,468,000	3,468,000	3,468,000	3,468,000	3,468,000	3,468,000	3,468,000
14.	3104,000	3,038,000	4,068,000	4,068,000	4,068,000	4,068,000	4,068,000	4,068,000	4,068,000	4,068,000
15.	3409,000	3,403,000	4,768,000	4,768,000	4,768,000	4,768,000	4,768,000	4,768,000	4,768,000	4,768,000
16.	3744,000	3,813,000	5,568,000	5,568,000	5,568,000	5,568,000	5,568,000	5,568,000	5,568,000	5,568,000
17.	4109,000	4,268,000	6,468,000	6,468,000	6,468,000	6,468,000	6,468,000	6,468,000	6,468,000	6,468,000
18.	4504,000	4,768,000	7,468,000	7,468,000	7,468,000	7,468,000	7,468,000	7,468,000	7,468,000	7,468,000
19.	4929,000	5,313,000	8,568,000	8,568,000	8,568,000	8,568,000	8,568,000	8,568,000	8,568,000	8,568,000
20.	5384,000	5,913,000	9,768,000	9,768,000	9,768,000	9,768,000	9,768,000	9,768,000	9,768,000	9,768,000
21.	5869,000	6,568,000	11,068,000	11,068,000	11,068,000	11,068,000	11,068,000	11,068,000	11,068,000	11,068,000
22.	6384,000	7,278,000	12,468,000	12,468,000	12,468,000	12,468,000	12,468,000	12,468,000	12,468,000	12,468,000
23.	6929,000	8,043,000	14,068,000	14,068,000	14,068,000	14,068,000	14,068,000	14,068,000	14,068,000	14,068,000
24.	7504,000	8,873,000	15,868,000	15,868,000	15,868,000	15,868,000	15,868,000	15,868,000	15,868,000	15,868,000
25.	8109,000	9,768,000	17,868,000	17,868,000	17,868,000	17,868,000	17,868,000	17,868,000	17,868,000	17,868,000
26.	8744,000	10,738,000	19,968,000	19,968,000	19,968,000	19,968,000	19,968,000	19,968,000	19,968,000	19,968,000
27.	9409,000	11,793,000	22,168,000	22,168,000	22,168,000	22,168,000	22,168,000	22,168,000	22,168,000	22,168,000
28.	10,104,000	12,933,000	24,468,000	24,468,000	24,468,000	24,468,000	24,468,000	24,468,000	24,468,000	24,468,000
29.	10,749,000	14,158,000	26,868,000	26,868,000	26,868,000	26,868,000	26,868,000	26,868,000	26,868,000	26,868,000
30.	11,434,000	15,478,000	29,368,000	29,368,000	29,368,000	29,368,000	29,368,000	29,368,000	29,368,000	29,368,000
31.	12,159,000	16,893,000	31,968,000	31,968,000	31,968,000	31,968,000	31,968,000	31,968,000	31,968,000	31,968,000
32.	12,924,000	18,403,000	34,668,000	34,668,000	34,668,000	34,668,000	34,668,000	34,668,000	34,668,000	34,668,000
33.	13,729,000	19,998,000	37,468,000	37,468,000	37,468,000	37,468,000	37,468,000	37,468,000	37,468,000	37,468,000
34.	14,574,000	21,678,000	40,368,000	40,368,000	40,368,000	40,368,000	40,368,000	40,368,000	40,368,000	40,368,000
35.	15,459,000	23,443,000	43,368,000	43,368,000	43,368,000	43,368,000	43,368,000	43,368,000	43,368,000	43,368,000
36.	16,384,000	25,293,000	46,468,000	46,468,000	46,468,000	46,468,000	46,468,000	46,468,000	46,468,000	46,468,000
37.	17,349,000	27,228,000	49,668,000	49,668,000	49,668,000	49,668,000	49,668,000	49,668,000	49,668,000	49,668,000
38.	18,354,000	29,248,000	52,968,000	52,968,000	52,968,000	52,968,000	52,968,000	52,968,000	52,968,000	52,968,000
39.	19,399,000	31,353,000	56,368,000	56,368,000	56,368,000	56,368,000	56,368,000	56,368,000	56,368,000	56,368,000
40.	20,484,000	33,543,000	59,868,000	59,868,000	59,868,000	59,868,000	59,868,000	59,868,000	59,868,000	59,868,000
41.	21,609,000	35,818,000	63,468,000	63,468,000	63,468,000	63,468,000	63,468,000	63,468,000	63,468,000	63,468,000
42.	22,774,000	38,178,000	67,168,000	67,168,000	67,168,000	67,168,000	67,168,000	67,168,000	67,168,000	67,168,000
43.	23,979,000	40,623,000	70,968,000	70,968,000	70,968,000	70,968,000	70,968,000	70,968,000	70,968,000	70,968,000
44.	25,224,000	43,153,000	74,868,000	74,868,000	74,868,000	74,868,000	74,868,000	74,868,000	74,868,000	74,868,000
45.	26,509,000	45,768,000	78,868,000	78,868,000	78,868,000	78,868,000	78,868,000	78,868,000	78,868,000	78,868,000
46.	27,834,000	48,468,000	82,968,000	82,968,000	82,968,000	82,968,000	82,968,000	82,968,000	82,968,000	82,968,000
47.	29,199,000	51,253,000	87,168,000	87,168,000	87,168,000	87,168,000	87,168,000	87,168,000	87,168,000	87,168,000
48.	30,604,000	54,123,000	91,468,000	91,468,000	91,468,000	91,468,000	91,468,000	91,468,000	91,468,000	91,468,000
49.	32,049,000	57,078,000	95,868,000	95,868,000	95,868,000	95,868,000	95,868,000	95,868,000	95,868,000	95,868,000
50.	33,534,000	60,118,000	100,368,000	100,368,000	100,368,000	100,368,000	100,368,000	100,368,000	100,368,000	100,368,000
51.	35,059,000	63,243,000	104,968,000	104,968,000	104,968,000	104,968,000	104,968,000	104,968,000	104,968,000	104,968,000
52.	36,624,000	66,453,000	109,668,000	109,668,000	109,668,000	109,668,000	109,668,000	109,668,000	109,668,000	109,668,000
53.	38,229,000	69,748,000	114,468,000	114,468,000	114,468,000	114,468,000	114,468,000	114,468,000	114,468,000	114,468,000
54.	39,874,000	73,128,000	119,368,000	119,368,000	119,368,000	119,368,000	119,368,000	119,368,000	119,368,000	119,368,000
55.	41,559,000	76,593,000	124,368,000	124,368,000	124,368,000	124,368,000	124,368,000	124,368,000	124,368,000	124,368,000
56.	43,284,000	80,143,000	129,468,000	129,468,000	129,468,000	129,468,000	129,468,000	129,468,000	129,468,000	129,468,000
57.	45,049,000	83,778,000	134,668,000	134,668,000	134,668,000	134,668,000	134,668,000	134,668,000	134,668,000	134,668,000
58.	46,854,000	87,498,000	139,968,000	139,968,000	139,968,000	139,968,000	139,968,000	139,968,000	139,968,000	139,968,000
59.	48,699,000	91,293,000	145,368,000	145,368,000	145,368,000	145,368,000	145,368,000	145,368,000	145,368,000	145,368,000
60.	50,584,000	95,163,000	150,868,000	150,868,000	150,868,000	150,868,000	150,868,000	150,868,000	150,868,000	150,868,000
61.	52,509,000	99,108,000	156,468,000	156,468,000	156,468,000	156,468,000	156,468,000	156,468,000	156,468,000	156,468,000
62.	54,474,000	103,128,000	162,168,000	162,168,000	162,168,000	162,168,000	162,168,000	162,168,000	162,168,000	162,168,000
63.	56,479,000	107,223,000	167,968,000	167,968,000	167,968,000	167,968,000	167,968,000	167,968,000	167,968,000	167,968,000
64.	58,524,000	111,393,000	173,868,000	173,868,000	173,868,000	173,868,000	173,868,000	173,868,000	173,868,000	173,868,000
65.	60,609,000	115,638,000	179,868,000	179,868,000	179,868,000	179,868,000	179,868,000	179,868,000	179,868,000	179,868,000
66.	62,734,000	120,058,000	185,968,000	185,968,000	185,968,000	185,968,000	185,968,000	185,968,000	185,968,000	185,968,000
67.	64,899,000	124,653,000	192,168,000	192,168,000	192,168,000	192,168,000	192,168,000	192,168,000	192,168,000	192,168,000
68.	67,104,000	129,423,000	198,468,000	198,468,000	198,468,000	198,468,000	198,468,000	198,468,000	198,468,000	198,468,000
69.	69,349,000	134,368,000	204,868,000	204,868,000	204,868,000	204,868,000	204,868,000	204,868,000	204,868,000	204,868,000
70.	71,634,000	139,488,000	211,368,000	211,368,000	211,368,000	211,368,000	211,368,000	211,368,000	211,368,000	211,368,000
71.	73,959,000	144,783,000								

Appendix C.3. Income Statement, Projections 1988 - 2002
Puspata Klaten / Boyolali

Profit & Loss Projection

NO.	ACCOUNT DESCRIPTION	(RP. 000)						
		YEAR 0	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	
A. Revenues								
1.	Sales of Agricultural Commodities		1,088,000	1,245,900	1,393,335	1,458,078	1,527,732	
2.	Sales of Cattle Feed		1,667,525	2,381,110	3,141,334	2,198,934	1,553,292	
3.	Sales from Cattle/ Fish / Poultry		981,195	1,186,382	1,369,867	1,548,589	1,592,844	
4.	Sales of Agricultural Inputs		414,758	489,768	438,248	451,768	474,348	
5.	Sales of Consumption Goods		948,758	1,035,000	1,035,000	1,035,000	1,035,000	
6.	Service Income		185,368	195,435	157,532	187,686	118,878	
7.	Fertilizer Discount Revenues		4,888	5,848	5,292	5,557	5,834	
8.	Management Fee Income		35,000	38,588	42,358	46,585	51,244	
9.	Dividend Income		38,888	45,888	47,258	49,613	52,893	
10.	Interest Income		18,768	12,968	14,868	14,868	14,868	
11.	Total Revenues		8	3,278,148	6,475,887	7,636,268	6,915,853	6,416,525
12.	Expenses							
13.	Cost of Goods Sold		4,688,959	5,726,888	6,745,385	6,138,677	5,695,389	
14.	Gross Profit / Loss		589,181	748,287	890,883	787,176	721,136	
15.	Selling & Distribution Expenses		96,964	127,981	167,569	148,189	128,528	
16.	General Expenses		88,365	116,824	146,633	131,882	119,298	
17.	Administration & Overhead Expenses		127,849	135,528	143,651	152,278	161,486	
18.	Interest Expenses		68,888	78,888	78,888	78,888	78,888	
19.	Depreciation Cost		97,533	97,533	97,533	97,533	97,533	
20.	Bad Debt Expenses		18,888	18,888	18,888	18,888	18,888	
21.	Total General & Administration Expenses		488,712	565,779	643,396	689,874	586,758	
22.	Net Profit / Loss		100,469	182,428	247,497	175,381	134,378	

Profit & Loss Projection (cont.)

NO.	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13	YEAR 14	YEAR 15
1.	1,682,974	1,684,563	1,734,089	1,835,158	1,878,244	1,987,588	1,947,134	1,989,325	2,034,381	2,082,387
2.	1,182,888	1,182,888	1,182,888	1,182,888	1,182,888	1,182,888	1,182,888	1,182,888	1,182,888	1,182,888
3.	1,639,311	1,688,181	1,734,331	1,846,915	1,965,256	2,095,432	2,181,388	2,181,388	2,181,388	2,181,388
4.	488,318	489,526	496,882	492,142	493,549	495,827	496,578	498,287	499,917	501,713
5.	1,835,888	1,835,888	1,835,888	1,835,888	1,835,888	1,835,888	1,835,888	1,835,888	1,835,888	1,835,888
6.	112,538	115,843	117,619	120,268	122,966	125,748	128,584	131,498	134,486	137,548
7.	6,888	6,888	6,888	6,888	6,888	6,888	6,888	6,888	6,888	6,888
8.	56,368	62,888	68,288	75,826	82,528	90,781	99,859	109,845	120,829	132,912
9.	54,698	57,433	61,188	68,888	68,888	68,888	68,888	68,888	68,888	68,888
10.	14,868	14,368	14,188	15,688	16,288	17,888	17,368	17,688	17,848	18,188
11.	6,111,251	6,254,838	6,392,196	6,588,188	6,753,823	6,934,487	6,993,815	7,058,775	7,111,673	7,176,888
12.										
13.	5,423,511	5,541,321	5,657,249	5,827,847	5,978,484	6,125,897	6,165,125	6,288,753	6,238,517	6,278,593
14.	687,748	712,639	735,557	768,253	783,419	808,598	828,698	858,821	873,156	898,286
15.	187,778	113,879	116,787	128,987	125,871	129,552	133,511	137,889	142,527	147,785
16.	118,741	113,889	115,373	118,543	121,824	123,695	124,648	125,544	126,464	127,418
17.	171,891	181,356	192,238	203,772	215,998	228,958	242,696	257,257	272,693	289,854
18.	86,888	77,488	68,888	68,288	51,688	43,888	34,488	25,888	17,288	8,688
19.	97,533	97,533	97,533	97,533	97,533	97,533	97,533	97,533	97,533	97,533
20.	18,888	18,888	18,888	18,888	18,888	18,888	18,888	18,888	18,888	18,888
21.	583,143	592,378	601,651	611,835	621,227	632,739	642,788	653,944	666,417	680,363
22.	184,597	128,261	135,886	149,218	162,192	175,852	185,981	196,878	206,739	217,983

Appendix C-4. Balance Sheet, Projections 1988 - 2002
Puspeta Klaten / Boyolali

Balance Sheet Projection

NO.	ACCOUNT DESCRIPTION	YEAR 0	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Assets							
1.	Cash & Bank						
2.	Inventories	642,529	68,531	45,493	25,523	368,358	688,278
3.	Account Receivables	238,167	765,167	1,218,167	1,498,167	1,478,167	1,498,167
4.	Unrealized Income	427,992	537,992	647,992	742,992	782,992	782,992
5.	Investments	48,455	48,455	48,455	48,455	48,455	48,455
6.	Land	485,957	485,957	485,957	485,957	485,957	485,957
7.	Building	28,772	28,772	28,772	28,772	28,772	28,772
8.	Equipment / Vehicle / Machine	398,393	398,393	398,393	398,393	398,393	398,393
9.	Total Assets	2,889,378	3,848,372	3,588,334	3,935,364	4,216,199	4,469,111
Liabilities & Equity							
11.	Account Payables						
12.	Interest Payables	2,865,322	2,888,322	2,258,322	2,258,322	2,258,322	2,258,322
13.	Unrealized liabilities	0	0	0	0	0	0
14.	Depreciation	0	0	0	0	0	0
15.	Bad Debt Reserve	274,977	372,518	478,844	567,577	665,111	762,644
16.	Capital	0	18,888	28,888	38,888	48,888	58,888
17.	Department of Cooperatives						
18.	Tani Nakmur & Title II	67,478	67,478	67,478	67,478	67,478	67,478
19.	Accrued Profit / Loss	786,984	786,984	786,984	786,984	786,984	786,984
20.		-225,383	-124,914	57,514	385,811	488,312	614,691
20.	Total Liabilities & Equity	2,889,378	3,848,372	3,588,334	3,935,364	4,216,199	4,469,111

Balance Sheet Projection (cont.)

NO.	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13	YEAR 14	YEAR 15
1.	717,488	688,195	657,734	617,485	596,211	586,596	631,831	623,642	765,915	848,431
2.	1,368,167	1,387,167	1,419,167	1,465,167	1,587,167	1,549,167	1,565,167	1,579,167	1,594,167	1,689,167
3.	782,992	717,992	743,992	779,992	813,992	849,992	867,992	879,992	891,992	984,992
4.	48,455	48,455	48,455	48,455	48,455	48,455	48,455	48,455	48,455	48,455
5.	485,957	485,957	485,957	485,957	485,957	485,957	48,455	48,455	48,455	48,455
6.	28,772	28,772	28,772	28,772	28,772	28,772	485,957	485,957	485,957	485,957
7.	398,393	398,393	398,393	398,393	398,393	398,393	28,772	28,772	28,772	28,772
8.	723,185	723,185	723,185	723,185	723,185	723,185	398,393	398,393	398,393	398,393
9.	4,457,241	4,478,836	4,497,575	4,539,326	4,594,852	4,662,437	4,748,872	4,829,483	4,928,756	5,839,272
10.										
11.	2,843,322	1,828,322	1,613,322	1,398,322	1,183,322	968,322	753,322	538,322	323,322	108,322
12.	0	0	0	0	0	0	0	0	0	0
13.	0	0	0	0	0	0	0	0	0	0
14.	868,178	957,711	1,055,244	1,152,778	1,250,311	1,347,845	1,445,378	1,542,912	1,640,445	1,737,978
15.	68,888	78,688	88,888	98,888	108,888	118,888	128,888	138,888	148,888	158,888
16.										
17.	67,478	67,478	67,478	67,478	67,478	67,478	67,478	67,478	67,478	67,478
18.	786,984	786,984	786,984	786,984	786,984	786,984	786,984	786,984	786,984	786,984
19.	719,287	839,549	974,555	1,123,772	1,285,965	1,461,816	1,647,718	1,843,795	2,058,535	2,268,518
20.	4,457,241	4,478,836	4,497,575	4,539,326	4,594,852	4,662,437	4,748,872	4,829,483	4,928,756	5,839,272

Appendix D.1. Volume of Sales / Revenue , Projections for years 1988 -2002
Puspeta Lumu

Cash Flow Projection, Balance Sheet and Income Statement for Puspeta Lumu from 1988 - 2002

ASSUMPTION FOR VOLUME IN REVENUES / SALES

NO.	DESCRIPTION	UNIT	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
1.	Sales of Rice	TON	2,400	2,600	2,800	3,000	3,000
2.	Sales of Coffee	TON	13	11	12	13	15
3.	Sales of Cocoa	TON	50	63	70	90	122
4.	Sales of Pesticides	TON	24	20	32	37	42
5.	Sales of Fertilizer	TON	3,200	3,360	3,520	3,704	3,890
6.	Sales of Soybeans	TON	40	46	53	61	70
7.	Sales of Poultry Feed & Medicine	TON	150	155	182	206	220
8.	Sales of Sugar	TON	600	600	600	600	600
9.	Tuna Fish Boat Revenues	FISH	31,200	62,400	93,600	93,600	93,600
10.	HPI Research & Dev. Revenues	MILLION RP.	65	65	30	0	0
11.	Tractor Service Revenues	HECTARE	525	650	650	550	525
12.	Transport Revenues	MILLION RP	26	23	21	19	17
13.	Sales of Seed	THOUSAND RP	2,000	2,000	2,000	2,000	2,000
14.	Fertilizer Discount Revenues	THOUSAND RP	10,000	11,424	11,995	12,595	13,225
15.	Retail Consumer Sales	MILLION RP	60	63	66	69	73
16.	Salary Subsidy	MILLION RP	72	43	22	0	0
17.	Workshop Revenues	THOUSAND RP	1	1	1	1	1
18.	Sales of Fry	THOUSAND FRY	6,000	8,400	9,600	10,800	12,000
19.	Sales of Shrimp / Fish	TON	36	40	44	48	53

* These Annual benchmarks serve as the basis for projections in tables D2, D3 and D4

ASSUMPTION FOR VOLUME IN REVENUES / SALES (cont.) (CRF 000)

NO.	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13	YEAR 14	YEAR 15
1.	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
2.	16	18	19	21	24	26	29	31	35	38
3.	153	191	238	298	328	361	397	436	488	528
4.	48	56	56	56	56	56	56	56	56	56
5.	4,884	4,288	4,583	4,728	4,264	5,212	5,473	5,747	6,874	6,335
6.	88	93	186	122	141	141	141	141	141	141
7.	242	266	292	292	292	292	292	292	292	292
8.	688	688	688	688	688	688	688	688	688	688
9.	93,688	93,688	93,688	93,688	93,688	93,688	92,688	93,688	93,688	93,688
10.	8	8	8	8	8	8	8	8	8	8
11.	588	475	458	425	488	375	358	358	358	358
12.	15	14	12	11	10	9	8	7	7	6
13.	2,888	2,888	2,888	2,888	2,888	2,888	2,888	2,888	2,888	2,888
14.	13,886	14,588	15,389	16,075	16,878	17,722	18,688	19,539	20,516	21,542
15.	77	88	84	89	93	98	103	108	113	119
16.	8	8	8	8	8	8	8	8	8	8
17.	1	1	1	1	1	1	1	1	1	1
18.	12,888	12,888	12,888	12,888	12,888	12,888	12,888	12,888	12,888	12,888
19.	58	64	70	77	85	93	103	113	124	137

MEMORANDUM U.S. Cash Flow Projections 1988 - 2002
Ruspeta Luma

Cash Flow Projection		(RP. 000)					
NO.	DATA DESCRIPTION	YEAR 0	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
1.	Beginning Liquid Balance	56,000	109,000	16,832	127,139	200,996	269,976
2.	Inflows						
3.	Sales of Rice		741,600	603,400	665,200	927,600	927,000
4.	Sales of Coffee		33,500	34,000	40,200	44,000	49,047
5.	Sales of Cocoa		120,500	100,625	100,281	235,252	204,100
6.	Sales of Pesticides		60,000	60,000	70,350	91,253	104,940
7.	Sales of Fertilizer		300,000	362,600	300,000	407,400	427,000
8.	Sales of Soybeans		23,000	27,300	31,476	36,197	41,626
9.	Sales of Poultry Feed & Medicine		51,750	56,925	63,618	69,879	75,767
10.	Tuna Fish Boat Revenues		354,000	353,000	354,000	354,000	354,000
11.	HPI Research & Dev. Revenues		10,920	21,840	32,760	32,760	32,760
12.	Tractor Service Revenues		65,000	65,000	65,000	65,000	65,000
13.	Transport Revenues		26,250	32,500	38,750	45,000	51,250
14.	Seed Unit Revenues		26,000	23,400	21,000	18,000	16,000
15.	Fertilizer Discount Revenues		2,000	2,000	2,000	2,000	2,000
16.	Retail Consumer Sales		10,000	11,424	11,925	12,505	13,125
17.	Salary Subsidy		60,000	63,000	66,150	69,450	72,825
18.	Workshop Revenues		72,000	43,200	21,600	0	0
19.	Sales of Fry		1,200	1,200	1,200	1,200	1,200
20.	Sales of Shrimp & Fish		210,000	204,000	336,000	378,000	420,000
21.	Increase / (Decrease) in Stock		21,600	-23,760	-26,156	-28,750	-31,625
22.	Loan from Title I		-250,000	-200,000	-50,000	-34,962	-54,962
23.	Increase / (Decrease) in Account Receivable	650,000	200,000	50,000	-24,300	-21,070	-13,122
24.	Interest Income		-30,000	-27,000	7,317	0	18,750
25.	Total Inflows	650,000	2,160,700	2,420,234	2,516,102	2,600,422	2,833,650
26.	Outflows						
27.	Purchase of Unbulled Rice		381,924	413,751	445,578	477,405	477,405
28.	Purchase of Rice		200,451	200,031	313,202	335,571	355,114
29.	Purchase of Coffee		20,010	31,021	34,000	38,346	42,151
30.	Purchase of Cocoa		107,607	134,500	160,125	210,160	262,741
31.	Purchase of Pesticides		53,940	62,031	71,336	82,036	94,341
32.	Purchase of Fertilizer		345,664	362,947	360,676	367,110	406,465
33.	Purchase of Soybeans		27,000	26,330	30,270	34,621	40,045
34.	Purchase of Poultry Feed & Medicine		47,610	52,371	57,600	63,369	69,706
35.	Purchase of Sugar		334,530	334,530	334,530	334,530	334,530
36.	Seed Production Cost		400	400	400	400	400
37.	Tractor Operating Cost		0,056	11,213	11,213	1,400	0,056
38.	HPI Processing Cost		30,936	33,514	36,092	38,670	41,248
39.	Organization Cost		17,000	10,700	20,570	30,440	36,670
40.	General Administration Expenses		7,000	8,100	8,600	9,200	9,800
41.	Building Maintenance Expenses		2,500	2,625	2,750	2,875	3,000
42.	Marketing Expenses		63,650	70,106	72,967	77,304	82,102
43.	Transport Cost		4,000	4,000	4,000	4,000	4,000
44.	Vehicle Cost		10,000	12,101	13,501	15,000	16,500
45.	Store / Cold Storage Cost		51,000	53,500	56,000	59,000	61,900
46.	Workshop Cost		240	240	240	240	240
47.	Salary & Wage Cost		81,500	84,700	88,150	91,676	95,343
48.	HPI Research & Dev. Cost		52,000	52,000	52,000	52,000	52,000
49.	Tuna Boat Operation Cost		7,426	14,851	22,277	22,277	22,277
50.	Fry Cost		126,000	176,400	201,600	226,000	252,000
51.	Purchase of Shrimp / Fish		19,400	21,300	23,522	25,075	28,462
52.	Repayment FI 400 Title II	165,000	57,000	0	0	0	0
53.	Repayment of Old ODI Credit		68,000	35,917	35,917	35,917	35,917
54.	Repayment of FI 400 Title I		4,000	33,917	35,917	35,917	35,917
55.	Investment in Building / Land	200,000					
56.	Investment in Equipment / Vehicle	140,000					
57.	Interest Repayment		4,000	33,917	35,917	35,917	35,917
58.	Carried Forward	109,000	16,832	127,139	200,996	269,976	362,813

Appendix D.3. Income Statement, Projections 1988 -2002
Puspata Lumu

Income Statement Projection		(Rp. 000)						
NO.	ACCOUNT DESCRIPTION	YEAR 0	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	
A. Revenues								
1.	Sales from Agricultural Commodities		767,400	832,770	898,676	965,197	978,626	
2.	Sales from Estate Crops		154,000	187,475	228,816	279,940	343,237	
3.	Sales from Aquacultural Commodities		242,520	339,600	394,896	439,510	484,38	
4.	Sales from Agricultural Inputs		463,750	495,525	530,848	567,616	608,566	
5.	Sales from Consumption Goods		414,000	417,000	420,150	423,458	426,438	
6.	Service Revenues		118,450	122,000	84,760	47,654	44,500	
7.	Discount & Subsidy Revenues		82,800	54,624	33,595	12,595	13,225	
8.	Interest Income		2,700	5,138	7,317	9,285	18,466	
9.	Total Revenues		0	2,245,700	2,454,224	2,598,257	2,745,254	2,901,943
Expenses								
10.	Cost of Goods Sold		1,661,879	1,783,924	1,983,955	2,048,274	2,153,411	
11.	Gross Margin							
12.	Marketing Costs		583,821	678,300	694,383	696,980	748,533	
13.	Operational Profit / Loss		62,668	70,186	72,967	77,334	82,182	
			521,160	608,113	621,336	619,596	666,351	
14.	Seed Production Cost		480	480	480	480	480	
15.	Tractor, RMU , Workshop Operation Costs		48,232	44,966	47,544	48,397	47,966	
16.	Administration & Organizational Cost		24,800	26,800	29,178	31,656	34,371	
17.	Vehicle & Building Expenses		13,384	14,726	12,581	13,342	14,169	
18.	Service Expenses		4,550	4,895	3,686	3,317	2,985	
19.	Salary & Wages Cost		81,588	84,760	88,158	91,676	95,343	
20.	HPI Expenses		52,800	52,800	24,800	0	0	
21.	Tuna Boat Operation Cost		7,426	14,851	22,277	22,277	22,277	
22.	Fry Cost		126,800	176,400	281,600	226,800	252,800	
23.	Depreciation Cost		86,930	86,930	86,930	86,930	86,930	
24.	Interest Expenses		33,917	35,917	35,917	35,917	35,917	
25.	Total Administrative & General Expenses		471,059	541,936	552,254	560,713	592,359	
26.	Net Profit / (Loss)		58,182	58,177	69,881	58,883	73,992	

Income Statement Projection (cont.)

(FP. 000)

NO.	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13	YEAR 14	YEAR 15
1.	976,878	984,851	992,388	1,001,885	1,012,725	1,012,895	1,012,895	1,012,895	1,012,895	1,012,895
2.	421,689	519,818	639,871	798,846	869,851	955,956	1,051,551	1,156,787	1,272,377	1,399,615
3.	487,547	491,826	494,852	499,862	503,692	508,785	514,387	520,558	527,329	534,786
4.	653,276	782,176	736,145	760,884	788,888	814,111	842,779	872,881	904,488	937,676
5.	438,577	434,486	438,426	442,647	447,888	451,734	456,628	461,751	467,139	472,796
6.	41,553	38,767	36,136	33,642	31,273	29,816	26,859	26,843	25,389	24,648
7.	13,886	14,588	15,399	16,875	16,878	17,722	18,588	19,539	20,516	21,542
8.	11,175	11,688	11,855	12,885	12,885	12,885	12,885	12,885	12,885	12,885
9.	3,836,573	3,195,624	3,364,983	3,556,166	3,679,591	3,802,383	3,935,786	4,082,451	4,242,138	4,416,842
10.	2,276,784	2,422,815	2,576,488	2,758,312	2,863,778	2,975,756	3,097,268	3,229,368	3,373,815	3,529,384
11.	759,869	773,689	788,423	805,853	815,821	826,547	838,318	853,891	869,124	886,738
12.	86,238	98,942	95,986	101,461	105,114	108,673	112,544	116,797	121,428	126,471
13.	673,638	682,666	692,517	704,393	718,787	717,874	725,974	736,294	747,696	760,267
14.	488	488	488	488	488	488	488	488	488	488
15.	47,535	47,184	46,672	46,241	45,818	45,379	44,947	44,947	44,947	44,947
16.	37,334	48,569	44,184	47,965	52,185	56,799	61,844	67,361	73,397	80,881
17.	14,869	15,688	16,536	17,493	18,123	18,737	19,484	20,137	20,836	21,885
18.	2,687	2,418	2,176	1,959	1,763	1,586	1,428	1,285	1,157	1,041
19.	99,157	103,124	107,248	111,538	116,089	120,648	125,466	130,484	135,783	141,132
20.	8	8	8	8	8	8	8	8	8	8
21.	22,277	22,277	22,277	22,277	22,277	22,277	22,277	22,277	22,277	22,277
22.	252,888	252,888	252,888	252,888	252,888	252,888	252,888	252,888	252,888	252,888
23.	86,938	86,938	86,938	86,938	86,938	86,938	86,938	86,938	86,938	86,938
24.	32,317	28,717	25,117	21,517	17,917	14,317	10,717	7,117	3,517	3,462
25.	595,585	599,218	603,468	608,321	558,485	564,144	578,492	578,818	586,343	599,875
26.	78,125	83,448	89,857	96,872	152,223	153,738	158,482	158,275	161,352	161,192

Appendix D.4. Balance Sheet Projection 1988 -2002

Balance Sheet Projection (Rp.000)

NO.	ACCOUNT DESCRIPTION	YEAR 0	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Assets							
1.	Cash & Bank						
2.	Inventories	100,000	16,032	127,137	200,996	269,976	362,013
3.	Accounts Receivable	146,900	401,990	450,990	516,045	571,007	626,770
4.	Unrealized Income	192,200	222,200	249,200	273,500	295,370	300,492
		28,940	28,940	28,940	28,940	28,940	28,940
5.	Land						
6.	Buildings	42,114	42,114	42,114	42,114	42,114	42,114
7.	Machines / Vehicles / Equipments	640,100	640,100	640,100	640,100	640,100	640,100
		461,206	549,206	549,206	549,206	549,206	549,206
8.	Total Assets	1,620,630	1,900,670	2,095,777	2,251,709	2,397,601	2,550,523
Liabilities & Equity							
9.	Accounts Payable	793,562	936,562	986,562	986,562	986,562	986,562
10.	Interest Payables	0	0	0	0	0	0
11.	Unrealized Loss	25,901	25,901	25,901	25,901	25,901	25,901
12.	Depreciation	230,143	317,073	404,003	490,933	577,863	664,793
13.	Bad Debt Reserve	6,000	6,000	6,000	6,000	6,000	6,000
14.	Capital & Equity						
15.	Department of Cooperatives	661,864	661,864	661,864	661,864	661,864	661,864
16.	Donation	520	520	520	520	520	520
17.	Accrued Profit / Loss	-97,360	-17,250	10,919	00,001	130,003	212,075
18.	Total Liabilities & Equity	1,620,630	1,900,670	2,095,777	2,251,709	2,397,601	2,550,523

Balance Sheet Projection (RP. 000)

NO.	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	YEAR 11	YEAR 12	YEAR 13	YEAR 14	YEAR 15
1.	375,033	395,725	423,915	459,484	498,674	539,458	581,988	627,382	675,782	723,941
2.	681,732	736,694	791,656	846,619	901,581	956,543	1,011,505	1,066,468	1,121,430	1,176,392
3.	316,365	321,889	323,923	326,474	326,474	326,474	326,474	326,474	326,474	326,474
4.	28,948	28,948	28,948	28,948	28,948	28,948	28,948	28,948	28,948	28,948
5.	42,114	42,114	42,114	42,114	42,114	42,114	42,114	42,114	42,114	42,114
6.	648,188	648,188	648,188	648,188	648,188	648,188	648,188	648,188	648,188	648,188
7.	549,286	549,286	549,286	549,286	549,286	549,286	549,286	549,286	549,286	549,286
8.	2,633,578	2,713,956	2,799,943	2,892,945	2,987,177	3,082,916	3,180,488	3,280,692	3,384,854	3,487,255
9.										
10.	886,562	886,562	716,562	626,562	536,562	446,562	356,562	266,562	176,562	86,562
11.	0	0	0	0	0	0	0	0	0	0
12.	25,981	25,981	25,981	25,981	25,981	25,981	25,981	25,981	25,981	25,981
13.	751,723	838,653	925,583	1,012,513	1,099,443	1,186,373	1,273,303	1,360,233	1,447,163	1,534,093
14.	6,888	6,888	6,888	6,888	6,888	6,888	6,888	6,888	6,888	6,888
15.										
16.	661,864	661,864	661,864	661,864	661,864	661,864	661,864	661,864	661,864	661,864
17.	528	528	528	528	528	528	528	528	528	528
18.	291,888	374,448	463,585	559,577	711,799	865,529	1,021,811	1,179,287	1,348,639	1,501,831
19.	2,633,578	2,713,956	2,799,943	2,892,945	2,987,177	3,082,916	3,180,488	3,280,692	3,384,854	3,487,255

Appendix E

Comparative Balance Sheet, Puspeta Klaten
Dec 31, 1986 and Sept 30, 1987 (Rp. 000)

Description	1987	1986			

CURRENT ASSETS:					
Cash & Bank	76,977	57,272			
SPPB	0	717			
Account Rec	531,177	427,952			
Advance Payment	9,835	7,133			
Prepaid Expenses	20,449	20,449			
Accrued Income	18,296	17,459			
Inventories	311,326	184,845			
TOTAL CURRENT ASSETS	968,060	715,847			
Furniture Equity	183,012	165,957			
	1,151,072	881,804			
FIXED ASSETS:					
Land	28,772	28,772			
Building	263,976	256,170			
Machineriaes&Eq	406,265	330,162			
Vehicles	168,502	161,172			
Office Equipment	69,570	64,747			
Other Equipment	9,016	9,016			
Other Assets	13,321	16,846			
Depreciation	(334,582)	(274,969)			
TOTAL FIXED ASSETS	624,840	591,916			
TOTAL ASSETS	1,775,912	1,473,720			
CURRENT LIABILITIES:					
Liab to Member(Goods)	20,408	18,251			
Liab to Member(Service)	879	1,193			
Liab to NonMemb(Goods)	57,105	8,727			
Liab to NonMemb(Service)	294,766	147,660			
Other Liabilities	26,097	35,655			
Accrued Expenses	13,327	11,492			
Advance Income	19,737	1,068			
TOTAL CURRENT LIABILITIES	432,319	224,046			
LONG TERM DEBT	642,349	623,383			
EQUITY					
Ex Coop Office+Tani makmu	313,296	313,296			
Ex NCBA/CLUSA	578,228	571,228			
Accumulated Profits					
Loss	(258,233)	(237,670)			
Current Profit&Loss	79,459	(20,563)			
Profit Correction	(11,506)	0			
Total Equity	701,244	626,291			
Total Liab & Equity	1,775,912	1,473,720			

Financial Analysis Ratio		
	1987	1986
1.Liquidity Ratio:		
Current Ratio	224%	320%
Acid Test Ratio	152%	237%
2.Leverage Ratio:		
Total Debt to Equity Ratio	153%	135%
Long Term Debt to Equity Ratio	92%	100%
3.Activity Ratio:		
Rec Turnover	5.6	7.1
Inv Turnover	9.6	23.0
4.Profit Ratio:		
Gross Prof Margin	13%	8%
Net Prof Margin	3%	-1%
Rate of return on Investment	4.47%	0.00%

Appendix F

Comparative Balance Sheet, Puspeta Luvu
Dec 31, 1986 and June 30, 1987

		FINANCIAL ANALYSIS RATIO	
		1987	1986
=====			
June 30, 1987 Dec 31, 1986			
=====			
CURRENT ASSETS:			
Cash & Bank	34,510 38,555	1. Liquidity Ratio:	
SPPE		Current Ratio	402%
Account Rec	204,695 210,794	Acid Test Ratio	286%
Advance Payment			
Prepaid Expenses	16,056 15,635	2. Leverage Ratio:	
Accrued Income		Total Debt to	
Inventories	193,094 181,985	Equity Ratio	62%
TOTAL CURRENT ASSETS	448,355 446,969	Long Term Debt to	68%
		Equity Ratio	42%
		40%	
FIXED ASSETS:		3. Activity Ratio:	
Land	27,115 27,115	Receivables	
Building	375,188 375,188	Turn Over 1)	3.5 1.9
Machineries&Eq	196,960 196,960	Inventory	
Vehicles	76,349 76,349	Turn Over 2)	3.7 2.2
Office Eq	39,896 39,896		
Other Eq		4. Profit Ratio	
Other Assets		GrosProf Margin 3)	35%
Depreciation	(247,568) (225,568)	Net Prof Margin	2%
TOTAL FIXED ASSETS	467,940 489,940	Rate of Return	1%
		on Investment	1%
TOTAL ASSETS	916,295 936,909		
CURRENT LIABILITIES			
Liab to NonMem(Goods)	110,911 152,571		
Liab to Member(Service)	36 36		
Savings Voluntary	114 114		
Accrued Liabilities	492 26		
Interest Payable			
TOTAL CURRENT LIABILITIES	111,553 156,020		
LONG TERM DEBT	237,804 221,104		
CAPITAL			
Luvu Project	650,664 650,664		
Donated ex Gov't	529 529		
Accumulated Profit	(92,108) (84,007)		
Current Profit&(Loss)	7,853 (8,101)		
TOTAL EQUITY	566,938 559,085		
TOTAL LIAB+EQUITY	916,295 936,909		