

Appendix-B
Agricultural Processing

THE STUDY
ON
THE IMPROVEMENT OF FARMERS' INCOME: AGRICULTURAL PROCESSING AND
RURAL MICRO FINANCE
IN INDONESIA

Appendix B AGRICULTURAL PROCESSING

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CHAPTER 1 NATIONAL POLICY

In the Policy and Program of Processing and Marketing Development of Agricultural Products for the year of 2006 – 2009 formulated Strategic Plan on the basis of vision and mission of Ministry of Agriculture. In this Strategic Plan various points are emphasized and stressed to be improved or to be implemented. Major points directly related to Agricultural Processing Sector under this JICA Study could be summarized as follows.

Objectives and Goals

Objectives of agricultural product marketing and processing are:

- (a) To encourage farmers and agro-businessmen able to access technology of product processing and post-harvest, as well as market information.
- (b) To extend processing industry of agricultural products in the village in order to increase competitive ability and add value, as well as to create employment opportunity and to increase people's welfare.
- (c) To stimulate people in order to like domestic agricultural product.
- (d) To increase volume, value and variety of both fresh and processed product.

Goals of processing and marketing development of agricultural products are:

- (a) Increasing farmer's capacity and ability in doing their business.
- (b) Decreasing of losses of agricultural product.
- (c) Establishment of self-sufficiency and food security
- (d) Increasing added value and competitiveness of agricultural product.
- (e) Increasing farmer's income and welfare.

Strategy and Policy

To achieve above objectives and goals, basic strategy and policy is listed as follows:

- (a) Increasing capacity and empowering human resources as well as Institution in processing and marketing of agricultural products.
- (b) Increasing innovation and dissemination of processing and post-harvest technology.
- (c) Increasing efficiency of agricultural products marketing, processing and post-harvest.
- (d) Increasing market share of domestic and international market.
- (e) Industrial development approach through Cluster Concept to support the sustainability.

CHAPTER 2 PRESENT CONDITION OF THE STUDY AREA

2.1 Kabupaten Cirebon

The duck industry in Cirebon is said as started about 200 years ago during Dutch colony. Major practices at that time were small-scale herding system by family management. Work-sharing system among farmers group started in 1990th and this method contributed the development of the industry to a degree in Cirebon District. This is called as the triangle system. The MOU (Memorandum Of Understanding) was exchanged between groups in charging fertile egg producing and supply group, DOD (Day Old Duck) supply group and pullets/layer supply group. These groups should concentrate their own responsibility of duty for the supply of such products each other on a priority base.

This system is also advantageous to newcomers who wish to start duck business as such core products can be sourced without difficulty. Before this triangle system became functioned, a lot of inflows of duck products to Cirebon from neighboring Districts were common activity. In stead, there are certain amount of outflow of duck products from Cirebon to other Districts nowadays, a reputation as a successful approach is established in the country. Dinas Pertanian has contributed this development through supports of equipment like hatchery to farmers groups.

The triangle system can be illustrated as follows. There are supply sources of necessary products for duck industry such as fertile eggs, DOD and layers and each group exchanges these commodities with priority each other. At the same time, newcomers can access to such necessary commodities. Currently, with the supports and guidance, KT Bebek Jaya is responsible to supply fertile eggs, KT Tigan Mekar is DOD supply and KT Branjangan Putih supplies layer/pullet ducks. KT Sari Sejahtera who produces fresh salty eggs exclusively (they process all fresh eggs, fertile or infertile to salty one immediately after laying), having reputation in the salty egg market has entered into MOU.

Main activities of duck industry can be categorized into 5 items: (i) Fertile Egg Production & Supply, (ii) DOD (Day Old Duck) Production & Supply, (iii) Layer (Pullets) Production & Supply, (iv) Salty Egg Production & Supply, and (v) Other Activities: Meat Duck, Feather, Smoked Ducks, etc.

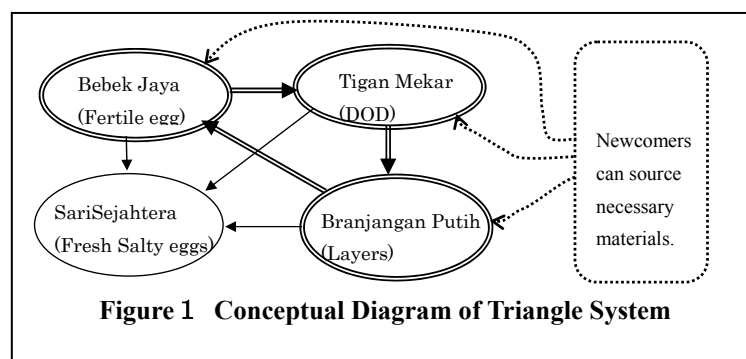


Figure 1 Conceptual Diagram of Triangle System

The Figure B-2 illustrates the correlation of each activities and the price formulation. The variety of ducks in Cirebon is generally Rambon Aking that needs much of water so called wet duck. There are two types of duck breeding system in Cirebon. One is traditional Herding System (*Angon*) and other is fence system. The difference of this 2 system is in Table 27.

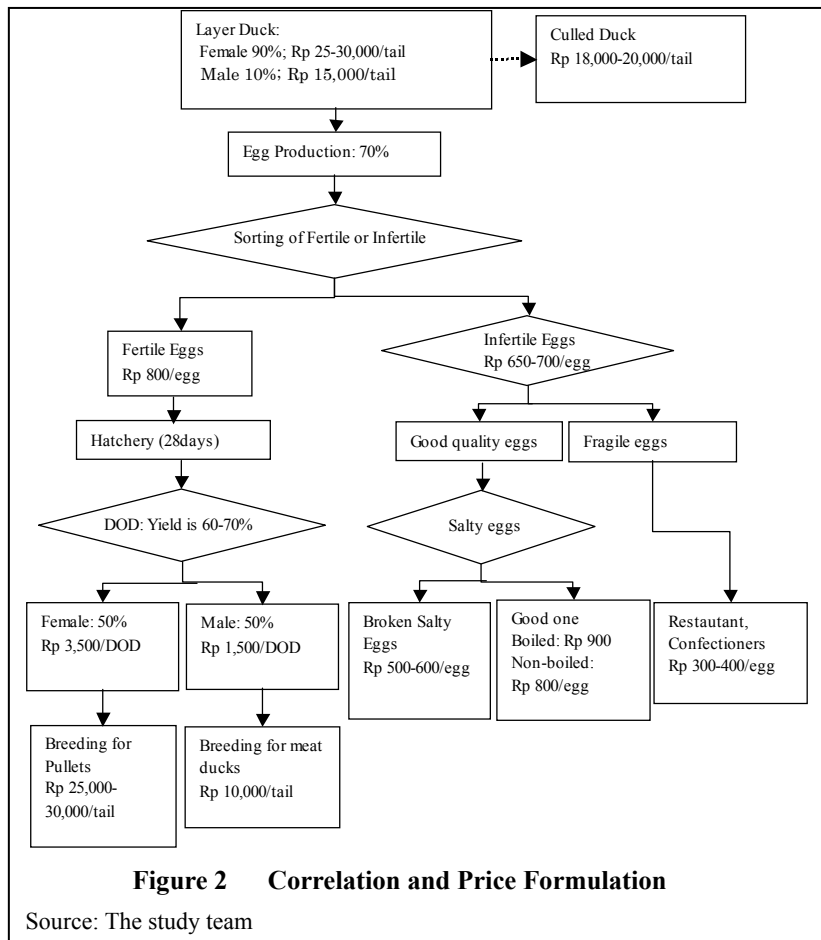


Table 1 Type of Duck Breeding System

Traditional	Semi-Intensive	Intensive
Employing shepherding	Sometime use shepherding	No shepherding system
100% feed from field	50% feed from filed and 50% from fabricated feed	100% fabricated feed
Simple cage without reservoir	Cage near river	Dry cage with reservoir
No medicine and vaccine	Give medicine and vaccine occasionally	Intensive use of medicine and vaccine

Souse: Bank of Indonesia

The traditional free-range duck farming (*Angon*) looses ducks to paddy fields after harvest where fallen paddy or snails are available as a feed. Farmer migrant with ducks from village to village or crossing District/Provincial borders.

Farmers engaged in *Angon* claim that the egg production yield gets better in addition to lower feed costs by this method. Majority of *Angon* farmers in Cirebon takes herding system during dry-season (from March till November) and fence system in wet season (December till February) near their residential area. However, farmers adopt semi-intensive or intensive style is in increase nowadays. It is said normally one shepherd can manage 500 ducks by *Angon* system. Food and Agriculture Organization of the United Nations (FAO) estimates 57% of duck breeders mainly take *Angon* system and the rest of 43% is partial *Angon* adopters in Cirebon.

The average duck-breeding stile in Cirebon is as show in Table B-2.

Table 2 Duck-Breeding in Cirebon

	Cirebon Style
Herding and Feed	Majority is not full herding but sometime employ herding system. Farmers group located near a river raise ducks in fence system with dry cages. Locally available feed such as small fish, shell, rice bran and broken rice in addition to concentrated feed are used.
Cage	Simple cage near river or dry cage with water supply is popular.
Medicine/Vaccination	Most of farmers utilize medicine/vaccination

Box 1: Common practice of egg sorting and hatching works in Cirebon

Selecting Method of Fertile Eggs:

- Load fresh eggs in Hatchery for a night (about 12 hours)
- Un-load those eggs on the next day and candle them in front of Lamp through roll of paper or 10cm PVC pipe or bamboo pipe with its diameter little bit smaller than eggs.
- Transparent eggs are infertile, while eggs with dark red spot and move inside are fertile eggs.

Hatching Method (Capacity: 700 eggs/hatchery)

- Load fertile eggs on tray of hatchery. Generally each egg-tray contents 100 eggs and 7 trays in a hatchery so the capacity is 700 eggs.
- Those eggs should be rolled once every 2 hours (some farmers say as every 3-4 hours) for 28 days continuously. On the 28th days, DOD will emerge from the eggs.
- Temperature in hatchery should be kept 37–38 °C with humidity 60% for the first day up to 18th day. After that, the humidity should be increased up to 70% until emerge.

Note: Temperature control employs kerosene lamp mostly except some farmers who use electric heater. Humidity control is not seriously carried out in Cirebon. Normally there is no thermometer or hygrometry in the hatchery room. Farmers trust their intuition without equipment.

Box 2: Salty egg production

Eggs → Washing → Battering → Storing for 10 - 14 days in room temperature → Washing → Boiling for 3-4 hours → Ready to sell/consume
 Batter consists of Clay Powder, Salt and Ash of firewood and it can be recycled for 3 time of battering.
 Proportion of Clay and Salt differs by farmers group from 1:1 to 2:1

<Technical issue to be improved>

Following technical issues to be improved were observed during the survey.

- Low egg production yield by layer: The egg production yield is less than 60% by some groups.
- Low hatching yield from fertile eggs: The natality is less than 50% sometime.
- High mortality of DOD: The mortality exceeds 5% of DOD sometime.
- Farmers trust their intuition on temperature and relative humidity control. New technologies are hard to be introduced to rural area.
- In Cirebon, marketing of young male duck as a meat is not active causing low opportunity for the earnings from male DOD.
- No practice of duck feather application is found.

2.2 Kabupaten Kuningan

Productivity and production of sweet potato in Kuningan District is quite good. The productivity can reach to 20 ton/ha, which is higher than in Majalengka. Most areas of sweet potato locate in foot of Ciremay Mountain that its land is fertile and good irrigation system can supply enough water throughout a year. Farmers usually plant sweet potato in dry season and depend on a farmer, he plants one or two times of sweet potato. Each farmer in this district is capable to plant sweet potato, because the planting method is simple and use simple equipment as well. Crop pattern of sweet potato's farmer in Kuningan can be shown as Figure 25. Main variety is AC type. A person concerned reports that farmers do not use superior seed intensively; the production yield and tolerance to diseases are getting deteriorated year by year. It is important to establish the seed multiplication and supply system of quality seed of sweet potato by Dinas Pertanian.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	←-----→					←-----→			←-----→			
Crop	Rice					Sweet Potato			Sweet Potato or Maize			

Figure 3 Cropping Calendar

Source: Dinas Pertanian, Kuningan

Farmers groups in Kuningan work on various sweet potato processing. Common products are *Keremes*, *Dodol*, sweet potato flour and sweet potato chips. Some farmer groups challenge unique processing such as ice cream or *Sambal* sauce production under the leadership of the group leader. All of these works are small-scale and their markets surround their domiciles only. The biggest issues being small-scale activity of them are lack of capital for business expansion, weak marketing capability and lack of approach to new products/technology.

Such farmer group's work on those traditional products within their cottage-level work yard, they rather can keep the cohesiveness among them because each processing skills are almost same level such as at KT Jatimulya, KT Tiltamulya. However, in case required processing technology is not ordinary and belongs to a personnel, the operation tends to be a personnel business although some official assistances are arranged, such as at Binakarya for *Sambal* sauce production and Lingasari 2 for ice cream making.

For establishing modern processing operation of Kelompok Tani, there are a lot of problems to be tasked such as development of members' ownership and cooperation, management capability, marketing ability, transparency of book-keeping, fair profits sharing and so on.

Two large-scale sweet potato processing factories are operating in Kabupaten Kuningan. One is PT. Galih Estetika located at Kecamatan Cilimus. This company mainly produces sweet potato paste and frozen sticks for export to Japan, Korea and China. They employ around 250 workers from surrounding area, gaining popularity among the residences. Galih Estetika processes about 10,000 metric ton of fresh sweet potato

annually. They use Bogor variety as a raw material, which is rich with sugar contents and purchase it from Kabupaten Majalengka through collectors. Farmers in Kuningan reported that the climate and soil condition are not fit to Bogor variety causing low production yield, so farmers don't produce this variety in Kuningan.

According to a company manager, he is reluctant to purchase raw material directly from a farmer or farmers group. Main reasons he explained were that farmers were not in a position to keep the promise to maintain the required quality, to deliver the amount on time and at reasonable prices. The preliminary processing by farmers on raw material for the value addition is not adapted as yet because they have to maintain the export quality strictly, which pauses on such trial. Galih Estetika exports frozen sweet potato cubes but they are afraid of troubles happened in export markets if they sub-contract some processes to farmers.

The other sweet potato processing factory is PT. Global Agro-Inti located at Kecamatan Ciganda Mekar. Their product is sweet potato flour. As the operation started in December 2005, they do not start full operation yet but they plan to produce 3,500 ton of sweet potato flour using 10,000 ton of raw sweet potato annually. Required variety of sweet potato is AC white/ red, which are popular in Kuningan.

Global Agro-Inti equips large-scale modern machines such as high-speed Slicing machine, huge Rotary Dryer with kerosene burner and Pin Mills. Sweet potato flour has market demand as adding flour to wheat flour. So wheat flour price strongly influence to sweet flour prices. If the prices of wheat flour become lower, the sweet potato flour's prices are lowered. Wheat flour prices in Indonesia is around 4,000 Rp/kg currently, the acceptable prices of sweet potato flour in markets is said to be lower than 3,500 Rp/kg. This company is positive to procure dried sweet potato chips from farmers for their final product. But through their experience, dried chips produced by farmers for own consumption are dried on bamboo trays in the open air, had contamination problems of dust or sand. Careful quality assurance for the quality is essential on this matter by suppliers (farmers) when they will start.

On the other hand, solar energy as heat source draws attention in the world nowadays. Many researches and trials on this issue are on going in Indonesia by institutes or private sectors. For example, IPB (Bogor Agricultural University) developed several types of solar dryers applicable to vegetable, fruits, tubers and fish drying. IBP has supplied several solar dryers to farmers groups under projects of Ministry of Energy already. Such new developments and technologies should be disseminated to rural area without delay. Concrete planning and supporting arrangement on technical and financial matters is required for the improvement of farmer's income through agricultural processing.

2.3 Kabupaten Majalengka

Productivity and production of sweet potato in Majalengka District is lower than Kuningan District. In this area, farmers plant sweet potato usually one time in a year during wet season. A part of areas of sweet potato have not irrigation canal, so farmer plants sweet potato or paddy in wet season. On the contrary, if sweet potato is planted in wet season, the productivity is lower than in dry season. It is also reported that farmers do not use superior seed intensively; the production yield and tolerance to diseases are getting deteriorated year by year. It is important to establish the seed multiplication and supply system of quality seed of sweet potato by Dinas Pertanian.

In Majalengka, many small-scale women groups engage in producing and selling traditional sweet potato products. For example, 37 women (no male member) formed KT Mitra Binagkit at Kecamatan Cigasong in 1992 and started producing traditional *Keremes*, *Kecemplung* and *Papais*. Production equipment they are using is ordinary house ware such as kerosene stove, manual slicing tool, frying pan and kitchen knives. The group leader is responsible to the marketing. She takes a public bus to go to Bazaar twice a week and deliver their products to retailers and collect the payment. As the production and marketing scale is quite small, the additional incomes to each member is limited at around 400,000 Rp/year per each member. KT Mitra Binagkit wishes to have financial assistance officially to enlarge their business scale.

Table 3 Cost and Profit Analysis for 20 Bags of *Keremes*

No.	Items	Unit	Volume	Unit price	Value (Rp)
Revenue					
	Kremes	bag	20	1,800	36,000
Production cost					
1	Raw Material (Sweet Potato)	kg	4	800	3,200
2	Palm Sugar	kg	1.5	6,000	9,000
3	Palm Oil	kg	1	5,750	5,750
4	Kerosene	liter	1	2,700	2,700
5	Plastic Bag	piece	10	15	150
6	Labor	person	1	5,000	5,000
7	Depreciation cost				197
Total Cost					25,997
Profit					10,003

KT. Delima II located at Kecamatan Talaga, having 16 members (5 men and 11 women) produces fried chips of Sweet Potato, Banana, Cassava, Taro and *Keremes* everyday and sells neighboring Talaga market. Delima II has regular business with 20 shops in the market. The payment term is cash on deliver style. They say they can produce 23 traditional items in total but normally they produce 10 items only. Their main issue for the production and sales of these traditional products is the difficulty for collecting raw materials such as immature banana. Delima II also wishes to have soft loan from Government for the business expansion.

These farmers' activities for the income generation are small-scale in terms of production facility and business scale utilizing locally available materials. Expansion of marketing area for those products is difficult. This business type is classified as "Local Production and Local Consumption/Marketing using Local Produces".

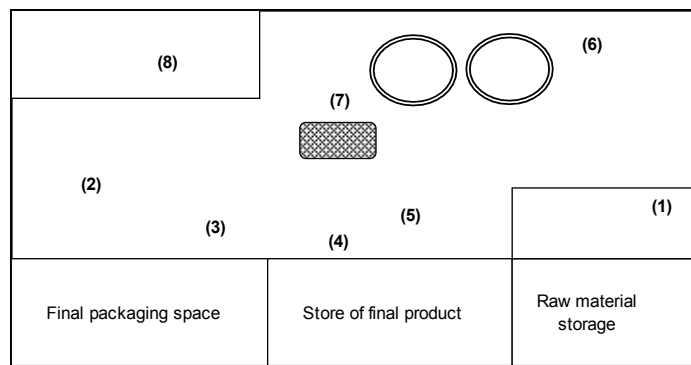
There is another women group named Asri Rahayu in Majalengka city. Leader is Ms. Popon Suhaemah, a famous active lady. They produce various agricultural processed products including fried mango chips, processed by Vacuum Fryer and also traditional fried chips, *dodol*, *keremes*, etc. Their marketing area spreads over to Cirebon and Bandung. Their packages are much better than of the other farmer group's one. They say Dinas Industry has supported them.

In addition, surrounding Cikijing town located near the border area of Kuningan, 72 agro-processing factories are concentrated. There are 50 factories in Rawa village and 22 factories in Nagara

Kunbang village. Their main products are fried beans, fried sweet potato, fried cassava and fried banana. All factories are small-scale having a few employs only. Some owners changed the job from farming. Their products are marketed throughout Java Island through wholesalers' channels. The equipment and layout is simple one and can be illustrated in Figure B-4.

Washing of peeled material such as Cassava, Sweet Potato. Sub-contracted working team carries out peeling works at other place(s).

The working arrangement is not well designed such that washing area (1) far from the next step of cutting (2) causing unnecessary movement of materials and labors. Most of these factories purchase required raw materials through wholesalers. They explained the reasons why they do not procure necessary raw agricultural products from surrounding farmers directly are that the delivery is not stable, the quality is not reliable and the cost especially the transportation becomes higher.



- (1) Washing raw material
 - (2) Cutting by a Chipping Machine
 - (3) Washing chips
 - (4) Coloring by pigment water
 - (5) Draining of pigment water
 - (6) Frying in large pot (*Caldron*), using pressurized kerosene burner
 - (7) Separating of cooking oil
 - (8) Cooling area and Packaging
- Size of the factory: 8 x 10 Meter

Figure 4 Typical Layout of a Factory for Agro-Processing in Cikijing town

2.4 Kabupaten Mojokerto

The basic technologies of duck farming and its recover ratio such as breeding, DOD production and salty egg processing are same as in Cirebon. The price formulation is almost same situation.

However, following differences are observed.

There is no definitive nucleus suppliers system of fertile egg, DOD and pullet duck like in Cirebon causing restriction of the development of duck breeding business in Mojokerto. It is difficult for new comers to enter into duck business or existing duck breeders who want to expand his business. Dinas Peternakan is recommended to start establishing such triangle scheme in Mojokerto for the development of duck industry.

There is the biggest farmers group engaged in duck business in Modopura Village, KT Lestari Sejahtera in which all members of this group (47 persons) have hatchery and they can produce required numbers of DOD for their own use and fertile eggs, salty eggs and meat ducks. Smoked duck processing is their special product. The other Keronpok Tani located near KT Lestari Sejahtera has tried to develop duck business with technical and finance supports from Dinas since 2001 but this trial is not took root in this village as yet. This village has 200 households but the number of farmers selected by Dinas for starting duck business was only 28 families. Further, houses in village are rather closing up and non-selected farmers disliked the smell and noise from duck. The promotion of new business requires a lot of consideration in all aspects such as the location, environment, human relation, leadership, skill of the management, accounting, transparency of the business, marketing condition, infrastructures and so on.

For hatching process, farmers in this district also use simple technologies; kerosene lamp as heater and hand feel to knowing temperature is common doing by farmers. However, to control temperature of eggs, they not only shut down the kerosene lamp and open the door of hatchery, but they also swap the eggs by wet cloth or spray water over every egg by hand-sprayer. They roll up the eggs in hatchery is reported as only 3 times in a day (in the morning, at noon, and in the evening). New technology such as semi-automatic hatchery with electric heater is not yet introduced to this region.

Variety of most of ducks is Mojosari (local variety and registered as super variety) that is called as dry duck that does not needs much water. Duck meat supply is very active in Mojokerto. Male DOD is bred for meat until 40 – 60 days old, so the selling prices of male and female DOD are sometime exactly same value, not like in Cirebon.

For salty egg processing, beside dry method such as in Cirebon, some farmers groups adapt a wet method. Wet method is that raw eggs are soaked in salty water during 10-12 days only without battering of salt and soil. This wet method is simpler even though quality is lower than battering method but the price in market is almost same. Even the dry method, farmers in this area do not use ash in batter, saying that the taste is no

different but they can reduce production cost and work volume. Such new approach should be examined by the authority and be disseminated to other areas if they accept.

Farmers in Mojokerto usually herd their duck when 20 days up to 5 months old (ready to laying). When the ducks start lay, farmers will grow them in fence. Duck house made of brick and roof made of tile, so it looks semi permanent and more cleans than duck house in Cirebon.

Main constraints faced by ducks farmers on ducks farming are same with farmers in Cirebon, that is feed price relatively high but price of raw eggs is relatively low. Also they need capital supporting for business expansion because most of the duck farmers groups are lack of capital.

2.5 Kabupaten Kediri

Dinas Pertanian East Java promotes Podang mango as main commodity in Kediri District, but up to now there is not many intensive attention on post harvest handling & processing including marketing from the related institution so that during harvesting time the price of the mango is sharply drop (before the peak season of harvest unit price is Rp 2,000/kg but it drops sharply down to Rp 300-400/kg during peak season).

Mango farmers usually apply *Tumpang Sari* (mix farming) system, so under their mango trees they plant vegetable or secondary crops. Harvest season of mango is only once a year though farmers wish to have mango tree of two harvests per year. Agricultural equipment for mango and food crops is simple ones such as hand sprayer, hoe, sickles, fork, large and small water drum, handsaw, scissor and plastic hose.

Mango Podang processing is not developed in mango areas (Tarokan, Semen, Grogol, and Banyakan Sub District). Some farmers groups intention to carryout processing for Podang mango, but they don't know how to process it and sell the products. Besides that, most of them lack of capital to process the mango. Up to now, most of farmers sell their mango in fresh to collector. Consequently, in peak season they do not get enough profit because the mango price is too low to cover cost of harvesting.

A women farmers group (KT Budidaya), have got Vacuum Fryer for mango and training from BPTP (Balai Pengkajian dan Pengembangan Teknologi Pertanian; Center for Research and Development of Agriculture Technology) Malang. However, for mango processing up to now is still in trial stage. According to them, they produced mango juice with traditional simple method without pasteurization process, it lasted long for 1 day only.

As farmers strongly desire to sell out all mango fruits, it is said that 75% of mango transaction between collectors and farmers are made before the harvest. This style is named *Ijon* system and being widely practiced in Java, not only mango case but also other fruits, tuber crops like sweet potato, cassava and root vegetable, even for paddy sometime.

The middlemen/collectors exchange verbal agreement with farmers to purchase such produce basing on a unit of fruit tree or acreage, not by weight or volume and fix the terms of payment before the harvest. Farmers can get cash partially in advance to harvest without risk of wasting products by inability of selling-out. Hired labors by the collector work on the harvesting but the owner (farmer) do not join the harvesting work just watching their works. The cash amount to the farmer is decided by the estimation of buyer (collector) how many kg of mango fruits he can get through his visual examination in the farm and his experience. It would be high risk but high return system for a collector as he can secure the product at farm and negotiate buying price in advance with farmers. In most of other countries especially for fruits harvesting, as individual maturity of fruits are different, farmers normally harvest his products by himself from the matured one first, he never pick up all fruits at once. It seems *Ijon* system is very rare case that farmers sell fruits by a tree or by acreage without farmers' harvesting works. The change of their attitude to such *Ijon* system would be required before new technologies of harvesting or marketing to be extended to farmers.

However, there are two worth noting activities have started in Kabupaten Kediri.

One activity is dried chip processing of mango fruits at Kelompok Tani. NGO named REI Indonesia (Resource Exchange International), located at Bandung started mango processing at KT Sumber Mulyo, Desa Tiron, Kecamatan Banyakan. REI installed fruits dryer with kerosene burner and conducted technical supervision to the members. At the same time REI Indonesia obtained technical supports from BPTP, Malang. This business was just started from the end of October 2006 and REI has a plan to export dried mango chips to USA and Japan in the near future.

The drying capacity is 600kg/lot and 4.5kg of final products can be made from 10.5kg of fresh mango (production yield 43%) taking 9 - 10 operation hours, this figure may change by mango varieties. The procedure is as follows; Washing ⇒ Peeling ⇒ Slicing (thickness: 5mm) ⇒ Soaking in syrup ⇒ Mechanical drying ⇒ Packaging. All works are manually operated by the member. The members receive 20,000 - 25,000 Rp/day for the work. KT Sumber Mulyo has 160 members in total and 24 members (11 men and 13 women) now engaged in this work. REI studies other fruits drying, such as papaya to be processed using same facilities after mango season is expired. Other Kelompok Tani located near this Kecamatan may have a chance to join this value adding activity with REI Indonesia.

Other worth noting activity is pineapple processing by KT Lohginawi, located at Kecamatan Ngancar. Young farmers of this group started production of pineapple juice, vacuum fried pineapple, virgin coconut oil and others since 2002. They receive benefits from technical advice of BPTP Malang, Brawijaya University and Dinas industry Kediri. Their equipment is simple and inexpensive but using latest heat-sealer for plastic cups. KT has 75 members and 10 young members in this group tackle this new business for the income generation. They supplied supermarket chain before but due to unfavorable payment, they now stopped supplying the products but appointed 4 agents who stayed in

urban area and responsible to the development of markets. This segregation of duties, i.e. farmer concentrates to production and appoint other team for the marketing in urban area will be a solution to farmers' fears for securing the markets of their processed commodities.

Podang mango is seasonal fruit, so any processing mango activities will run in harvesting season only; there are about 3 months (November – January) and in off-season the equipment will be idle. In view of business, this condition is not feasible. Therefore, processing mango should be combined with other fruits in order the processing activities could run a long of a year. For sustainability agro processing activities, first step should identify which groups that have capability on marketing and business, especially if they would support by soft loan.

In Cirebon, West Java, a private company produces mango juice, puree, jam and jelly. The company size is small, number of employ is 12 persons only and their turn over was 500 Million Rp in 2005. All machines they are using are made in Indonesia, which include Washing machine, Pulping machine, Strainer, Mixer and Pasteurizing equipment. BPTP, Bogor has conducted technical supports and advices to this company. During off-season of mango, they produce several other commodities of Guava, Soursop, Tamarind and Nata de coco. The factory manager tries to utilize low-grade fruits at cheaper prices for juice and puree production. Table 69 and Table 70 show cost analysis of their business.

Table 4 Grade/Proportion/ Prices of Mango

Grade	Proportion & Main Use	Price as of Sep. 2006
Grade A	30%, For fresh fruit	6,000 Rp/kg
Grade B	50%, For processing	2,000 Rp/kg
Grade C	20%, For processing	1,500 Rp/kg

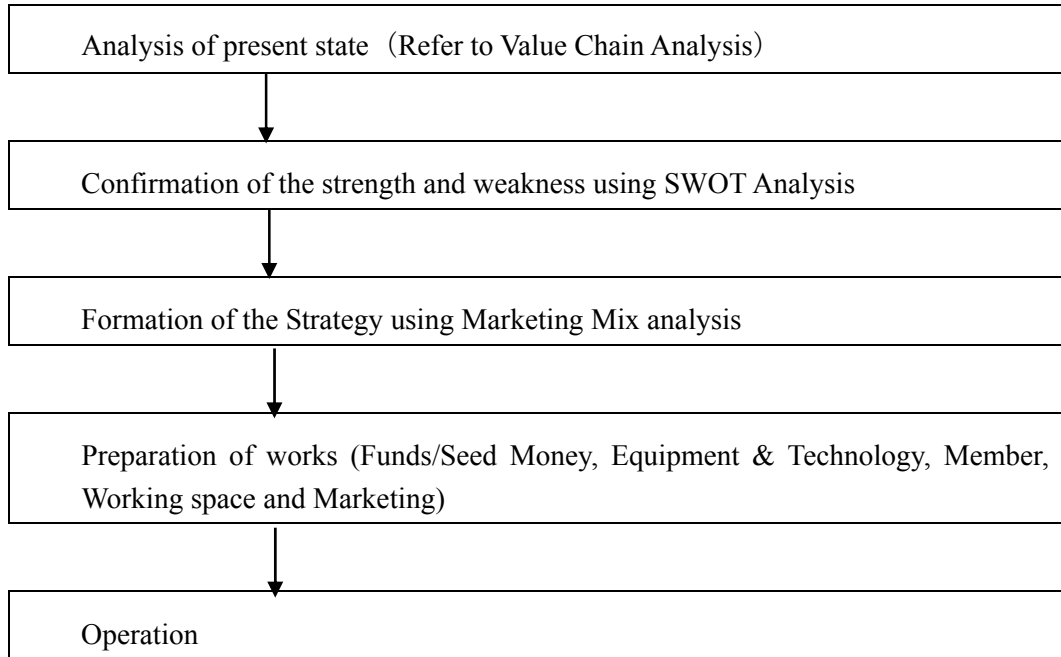
Table 5 Recovery and Profits

Product recovery	40% (100kg of fresh mango can produce 40 liter of puree)
Cost of raw material	Rp 200,000 (100kg x @2,000 Rp/kg)
Operation cost	Rp 100,000 for 40 liter of puree
Sales amount	Rp 600,000 for 40 liter (40 liter x @15,000/liter)
Gross profits	Rp 300,000 (Gross profit rate: 50%)

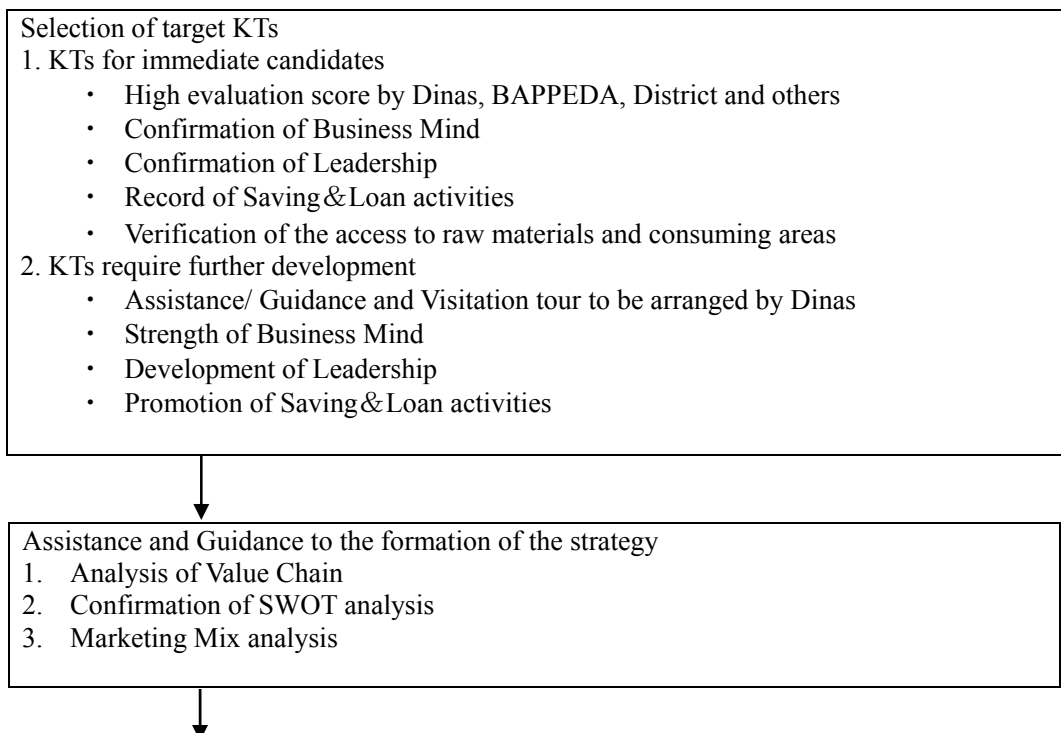
CHAPTER 3 IMPROVEMENT DIRECTION

3.1 Promotion of Agro-Processing Business by Kelompok Tani (KT)

- (1) Case 1: Kelompok Tani will start the business. However, DINAS Pertanian is required to provide much assistance to KT, as KT alone is very weak in the collection of various information and those analyses.



- (2) Case 2: DINAS Pertanian promotes Agro-processing business to KTs



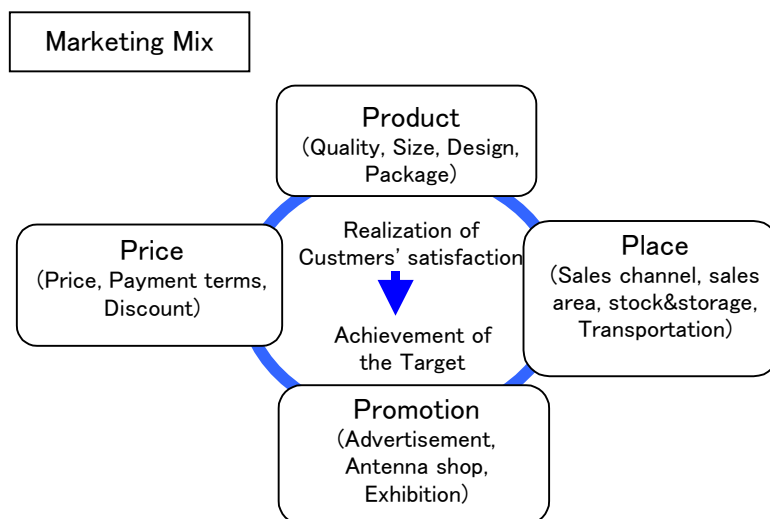
<p>Assistance and Guidance to the Operation</p> <ol style="list-style-type: none"> 1. Arrangement of Funds (Own money, Subsidy, Revolving funds, Loan by formal banking institutions) 2. Arrangement for external assistance (Assist KT to select it but not intrusion by Dinas) <ul style="list-style-type: none"> • BDS/NGO • Research Institutes, Universities • Distributors/ Sales agents • Other sources

3.2 Points to consider on the promotion of agro-processing business

(1) Concept of agro-processing business promotion

Necessary basic items for agro-processing business promotion are operational funds, processing technologies and securements of sales amounts and profits. Obtaining business funds and processing technologies alone has no meaning. Marketing activities are most important for securement of sales and profits to sustain the agro-processing business.

Marketing are activities of research and study on how to produce, how to sell and how to execute such works. There are 4 Ps in execution of marketing activities, i.e. Products, Prices, Places and Promotion. The method of deploying the marketing strategy organizing those four (4) elements is called as Marketing Mix. This concept can be illustrated as following figure.



(2) Activities of each element

Product:

- Processing locally produced agricultural and animal products.
- Defining the commodity profile (Determine what product and how to produce utilizing locally available technologies)
- Confirmation and verification of the market needs referring to existing products, potential products and new products already available in other area.

- Determination of sizes, designs, packaging materials and packaging methods.
- Guarantee, expiration date, etc.

Price:

- Calculation the costs of raw material, processing fee, facility cost, interest rates, depreciation cost, technical know-how fee and etc.
- Prices determination on wholesale prices, retail prices
- Terms of payment
- Discount policy

Place (Marketing)

- Sales routes and sales arrangements
- Setting up target areas for the marketing
- Cooperation with sales companies, sub-contractor agreement or setting up Joint Venture company.
- Delivery promises of primary processed products.
- Assortment and stocks management, including provision of warehouses.
- Securing required transportation.

Promotion:

- Determination of marketing methods (direct sales as locally producing/ locally consuming type, appointing sales agents, wholesale to sales companies, setting up J/V company and others).
- Open an antenna shop
- Entry exhibitions
- Public relation (P/R) and advertisement
- Utilization of mouth-to-mouth advertising (Buzz marketing) such as promotion to same village (area) association in Jakarta.
- Marketing to local institutes such as factories, schools, army camps, etc.

3.3 Duck

(1) Value chain analysis

Value chain/Correlation chart of Duck industry in Kabupaten Cirebon and Mojokerto is as shown in Figure B-5. Basing on this value chain/correlation chart illustrated, the improvement direction of each Kabupaten is explained in this chapter.

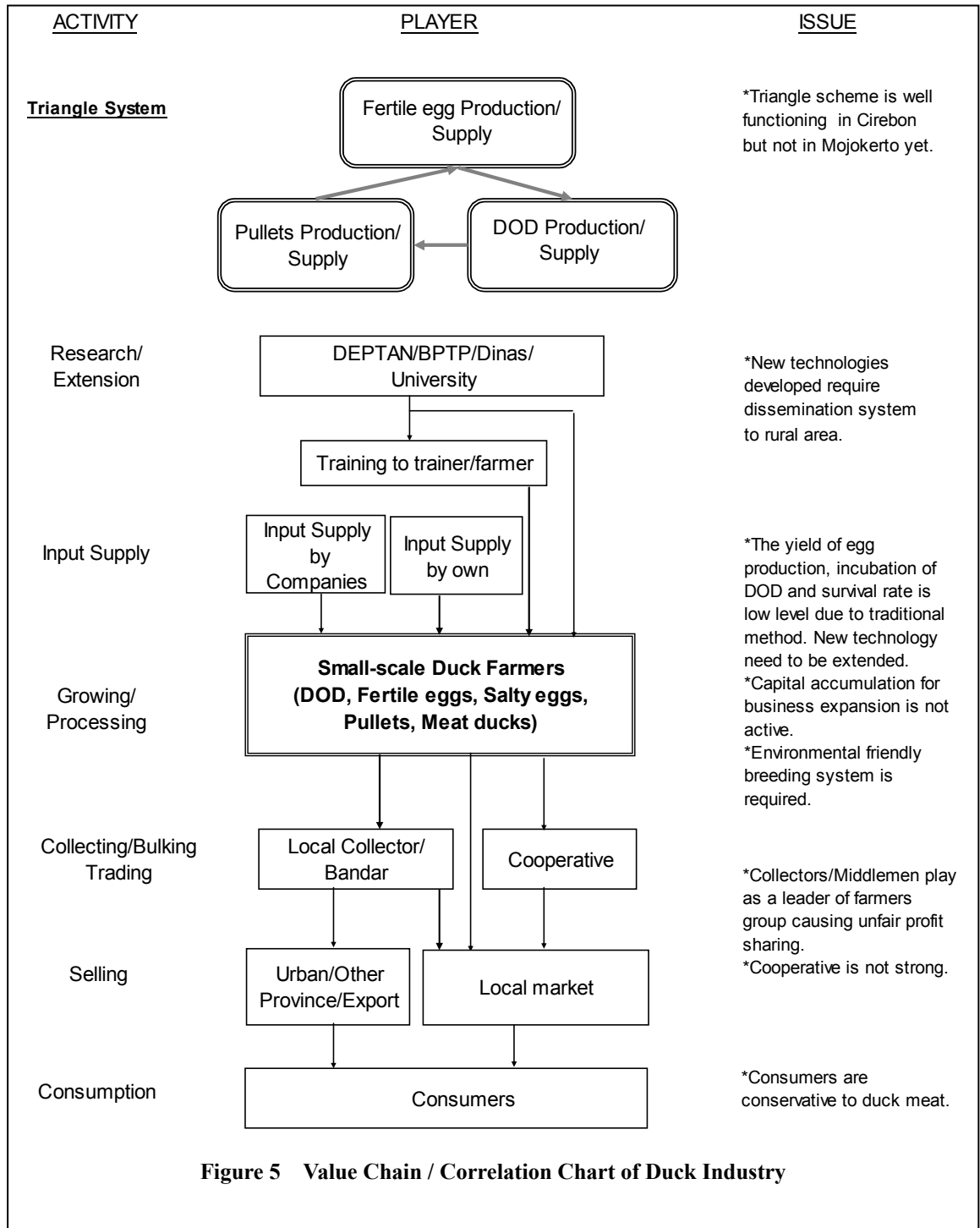


Figure 5 Value Chain / Correlation Chart of Duck Industry

(2) Kabupaten Cirebon

Following direction should be taken for the improvement in production and processing aspect.

- 1) The existing triangle scheme should be further strengthened through official supports. Plural number of the scheme is better to be multiplied in other areas in order to cover whole Kabupaten.
- 2) Technical assistance/extension should be arranged from BPTP Bogor, IPB and other institutions through Seminar and training to farmers periodically for gradual improvement of their traditions, such as incubation technology, minimization of mortality of DOD, increasing egg production yield, introduction of new variety of duck, utilization of duck's dung and so on. The environmental issue to keep duck field and surrounding areas clean should be emphasized to farmers.
- 3) New hatchery equipment (Semi-automatic type using electric heater and moist control device) should be demonstrated in order to improve the incubation ratio of DOD and farmer's working environment.
- 4) Various supports for business management, accounting, profit sharing and monitoring should be provided to KT for further development and stability of the business.
- 5) Soft loan should be provided for business expansion but not by grant. The loan should be refunded as the revolving fund to be utilized by the next farmers group.
- 6) New business opportunity such as young male duck meat market, feather utilization and etc. should be developed for farmers together with official efforts by Dinas.

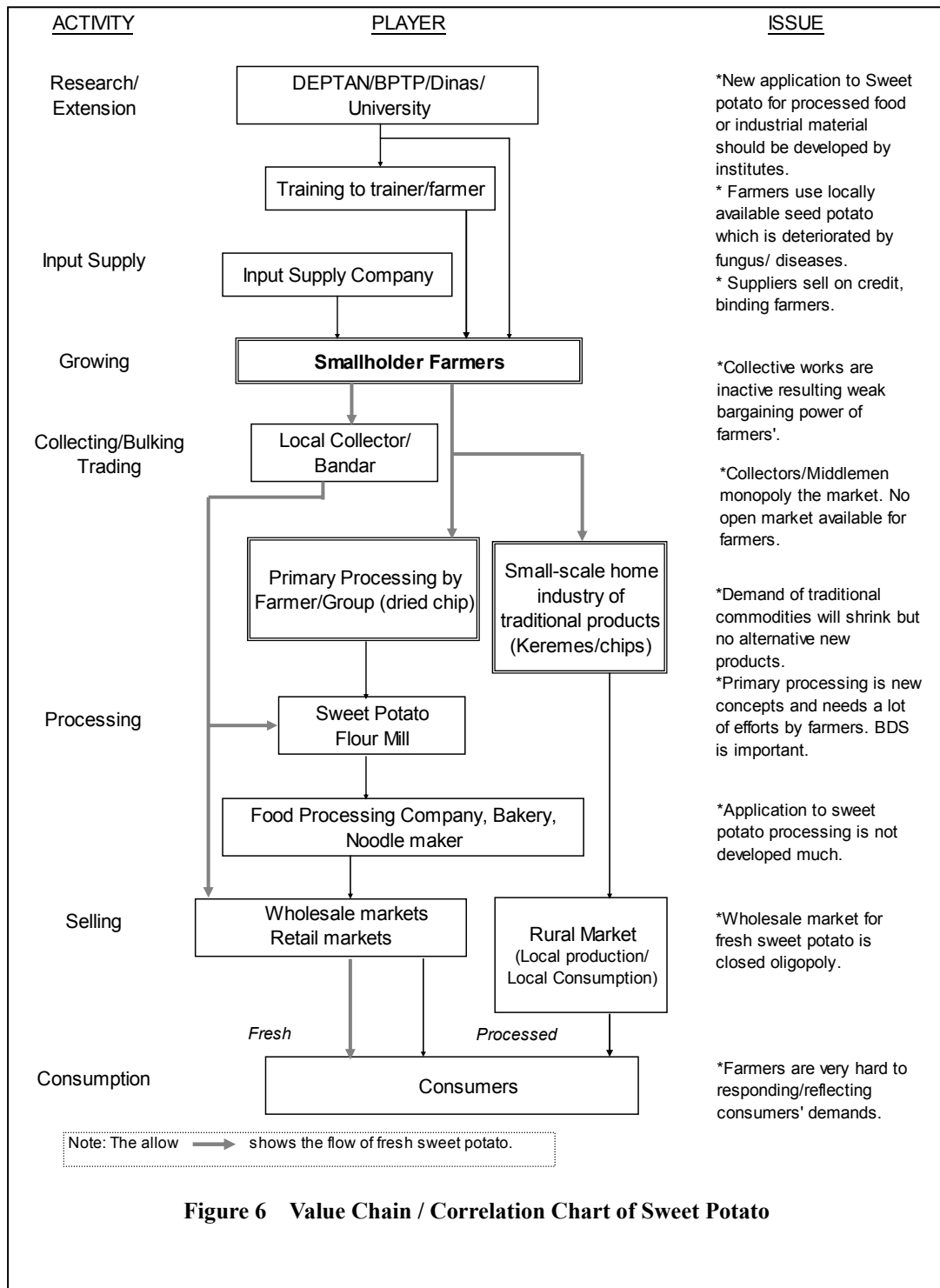
(3) Kabupaten Mojokerto

- 1) The triangle system; establishment of definitive nucleus suppliers for core commodities i.e. fertile egg, DOD and layer duck should be founded.
- 2) Technical assistance/extension should be arranged from BPTP Malang, Brawijaya University and other institutions through Seminar and training to farmers periodically same as the case in Cirebon.
- 3) New hatchery equipment (Semi-automatic type using electric heater and moist control device) should be demonstrated in order to improve the efficiency.
- 4) Various supports for business management, accounting, profit sharing and monitoring should be provided to KT for further development and stability of the business.
- 5) Soft loan should be provided for business expansion but not by grant. The loan should be refunded as the revolving fund to be utilized by the next farmers group.

3.4 Sweet Potato

(1) Value chain analysis

Value chain/Correlation chart of Sweet Potato in Kabupaten Kuningan and Majalengka is shown in Figure B-6. Basing on this illustration, the improvement direction of each Kabupaten is explained in this chapter.



(2) Kabupaten Kuningan

Following direction should be taken for the improvement in production and processing aspect.

- 1) Disease free sweet potato seed should be multiplied and supplied to farmers.
- 2) Quality seed distribution system needs to be established by Government sector.
- 3) New food items by sweet potato substituting traditional food item such as *Keremes* need to be developed by institutes for KT activity as income generation.
- 4) Those KT who have unique products such as *Sambal* sauce or sweet potato ice cream, etc., need their marketing ability. New trial such as segregation between KT as a producer and the 3rd party as a sales force should be studied.
- 5) Development of new concept of value addition through primary processing should be materialized. Local sweet potato flour company and KT should enter into MOU for supplying dried sweet potato chips as a raw material of flour; final product. Solar dryer for sweet potato drying under clean condition should be demonstrated. The technical assistance from BPTP Bogor or IPB on this matter is required.
- 6) Various supports for business management, accounting, profit sharing and monitoring should be provided to KT for further development and stability of the business.
- 7) Soft loan should be provided for business expansion but not by grant. The loan should be refunded as the revolving fund to be utilized by the next farmers group.

(3) Kabupaten Majalengka

- 1) Disease free sweet potato seed should be multiplied and supplied to farmers, same as in Kuningan.
- 2) New food items by sweet potato substituting traditional food item such as *Keremes* need to be developed, same as in Kuningan.
- 3) Various supports for business management, accounting, profit sharing and monitoring should be provided to KT for further development and stability of the business.
- 4) Soft loan should be provided for business expansion but not by grant. The loan should be refunded as the revolving fund to be utilized by the next farmers group.

3.5 Mango in Kabupaten Kediri

Value chain/Correlation chart of Mango in Kabupaten Kediri is shown in Figure B-7. Basing on this illustration, the improvement direction of Mango processing is explained in this chapter.

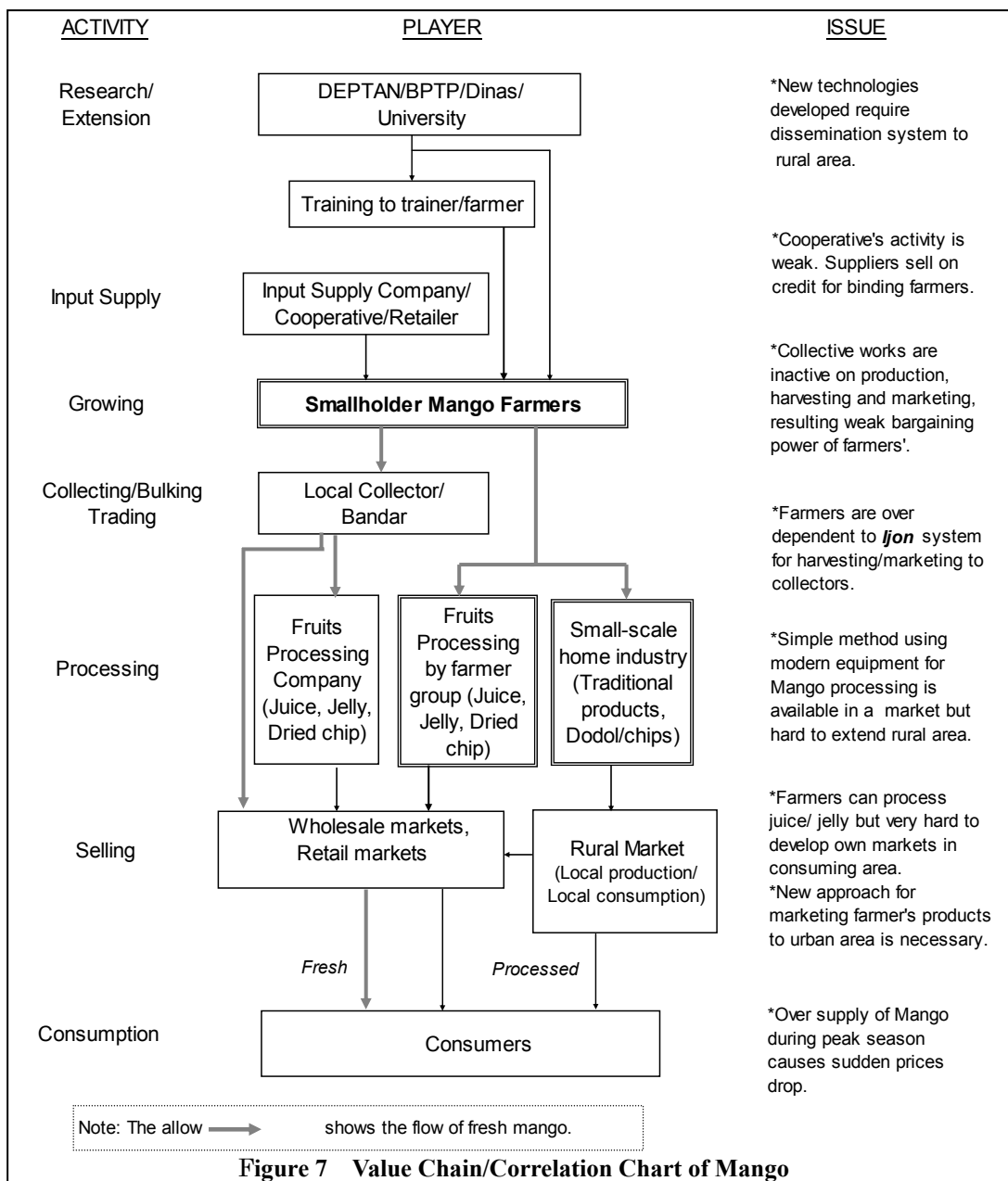


Figure 7 Value Chain/Correlation Chart of Mango

Following improvement direction for mango production and processing is proposed.

- 1) New technologies for mango processing should be tried at selected KT first with various supports.
- 2) KT to be supported for trial processing should be identified which group has solid organization, daily activity, saving and loan management and especially capability on processing, marketing and business.
- 3) Mango dried chip production by KT should be arranged in conjunction with REI project. The selected KT would be able to obtain technical advice from REI and institutes such as BPTP Malang and Brawijaya University. The market compartmentalization between KT and REI can be arranged like KT partially delivers

the product to REI for their markets in large cities and export market and KT's local market in the Kecamatan/Kabupaten.

- 4) Mango juice, puree and jelly production project should be started at a selected KT for trial basis. The basic technology is simple ones similar to those being used by KT Lohginawi in Kediri for pineapple. Technical supports should be arranged from University Brawijaya.
- 5) Once above two pilot projects will be verified as feasible and sustainable as KT's activity, expansion should be promoted to other KT, which will pass certain criteria set force by Dinas as capable farmers group. Group marketing by plural number of KT may accelerate the market share in rural and surrounding urban markets.
- 6) The new approach for the marketing of rural products produced by KT should be studied. Several cases can be planned as follows;
 - a. To form a joint venture or partnership company with KT and private sector (3rd party). KT is responsible for the production of raw mango and processed products and the 3rd party is responsible to the marketing. The share of investment capital and profits should be determined before hand.
 - b. KT appoints sales agents demarcating their territory. The agent may have an obligation of minimum sales per a period.
 - c. KT appoints marketing team(s) who should be provided with a motorcycle for the mobility. The team should be selected from the member who has marketing capability with personal talent.
- 7) Various supports for business management, accounting, profit sharing and monitoring should be provided to KT.

CHAPTER 4 IMPROVEMENT PLAN

4.1 Implementation Plan for Processing and Marketing Scheme

This section briefly describes 13 project plans for those Kelompok Tani (KTs) selected by Dinas in each Kabupaten and conducted Workshops and Socialization for further discussion and understanding. The summary table of Improvement Plan for selected Kelompok Tani, Table B.1-1, 1/5-5/5 and feasibility study of each project, Table 2.1 – 13.1 are attached as annexes.

4.2 Implementation Period:

Loan period by the revolving fund (5 years): 2007-2012 as shown below:

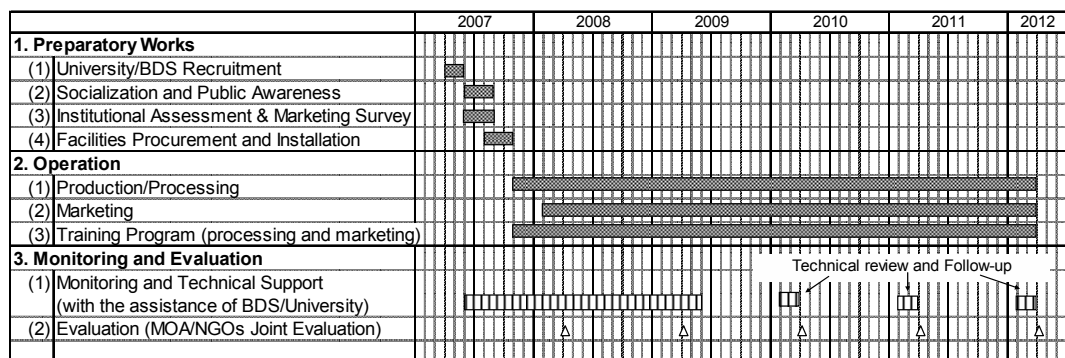


Figure 8 Implementation Schedule of Agricultural Processing and Marketing Model

4.3 KT Sigranala Indah for model 2: Business Scale Expansion & Strengthening of Duck Industry (Kabupaten Cirebon)

- 1) Project Name: The Improvement of Small-Scale Duck Farmers' Income through the Expansion of Business Scale.
- 2) Background: Due to lack of capital, they cannot expand their business scale and their income level is limited though this KT has certain level of experiences and technologies under the chairman's leadership.
- 3) Project Purpose:
 - a. Improvement of duck production business by enlargement of the scale through provision of soft loan.
 - b. BDS will be introduced to strengthen their business management capability, promotion of embryo LKM and monitoring/ advices for their business.
 - c. DINAS officers will receive capacity development training through supporting and monitoring services to KT during this project as on-the-job-training.
- 4) Input and output plan of the Project

Details can be referred to Table B.1-1, 1/5 and Table B2.1 & B2.2.

Table 6 Input and Output Plan (Kelompok Tani Sigranala Indah)

	Amount (Rp)	Remarks
Investment	66,000,000	100 Pullets for each, auxiliaries.
Grant for capacity development	58,000,000	BDS, monitoring
Total project cost	124,000,000	
Sales plan	220,960,000	DOD, salty eggs and culling ducks
Operation cost	164,994,000	Depreciation cost is included.
Net Profit (Interest is not calculated)	42,765,400 (19.4%)	For initial 5 years during reimbursing the loan.
Profit for each member who will participate.	6,109,343	7 members (1 female)

5) Marketing: Main products are fertile egg, salty egg and DOD selling to own markets through collectors/ middlemen. In order to offset members' disadvantages caused by money-bound relationship with middlemen, they should enter into the triangle system in Cirebon. All activities are fully supported by BDS provider. Marketing activities are summarized in Appendix C.

6) Direct and Indirect Benefit

Direct and indirect effects are expected toward income generation and poverty alleviation in target Kelompok Tani and the communities as follows:

- a. Direct effects: Improvement of income in 7 Kelompok Tani members including 1 female are anticipated, which will contribute to poverty alleviation of 1 household. Total population directly benefited for poverty alleviation through the implementation of this model, therefore, is 5 persons.
- b. Indirect effects: Indirect impacts are expected toward 2,100 households in community including 1,365 of very poor & poor households (65 %, 1,365 persons). This will primarily brought from the activation and vitalization of rural economy through replication and expansion of pilot project approach.

7) Gender Issues and Others

- a. Gender Issues: Women member of KT Sigranala Indah is few at the moment. This situation does not necessarily represent that women's cannot access to resources. In order to promote women's participation in the project, careful gender consideration should be made in the preparatory stage of the project based on "Gender Analysis Pathway (GAP)¹." Prospective gender indicators, from the view point of four factors consisting of access, control, participation and benefit, will be: (i) changes in the ratio of men and women member of KT, (ii) changes in the ratio of men and women member in the board of director of KT, (iii) changes in participation rate of women in training program, and (iv) distribution of costs and benefits among the members.
- b. Environmental Impact: Currently, there is no serious environmental impact observed by duck industry in Kabupaten Cirebon. And significant impact will not be expected

¹ As proposed by BAPPENAS and the Ministry of Agriculture. BAPPENAS (2004): Pengarusutamaan Gender Dalam Pembangunan Pertanian. Departmen Pertanian (2004): Pedoman Umum Pengarusutamaan Gender Dalam Penyusunan Rencana Aksi Pembangunan Pertanian

by promoting and expanding duck production and processing in the proposed area. However, proper treatment of drainage water is not conducted at the moment and drainage is directly introduced to the river. Continuous monitoring, therefore, is required particularly for the water quality of the river currently utilized as drainage, monitoring items of which will include organic/ microbial pollution, rubbish and trash, nutrient enrichment and electric conductivity and pH.

4.4 KT Bebek Jaya for model 1: Expansion of Business Scale and Renewal of Technologies (Kabupaten Cirebon)

1) Project Name: The Improvement of Small-Scale Duck Farmers' Income through the Expansion of Business Scale and Renewal of Technologies.

2) Background:

- a. KT Bebek Jaya enters into MOU and shares their duty with the support of DINAS Livestock Service, Cirebon. However due to lack of capital, they cannot expand their business scale and their income level is limited.
- b. The duck breeding technologies are traditional one, for example, hatchery uses kerosene lamp, which generate CO₂ gas into hatchery room causing low hatching yield (60%). They trust their intuition on temperature and relative humidity control in the hatchery room. The manual rolling works of all eggs, which need to be carried out at every 2-3 hours continuously over the hatching period of 28 days, cause uneven stirring resulting to low incubation ratio.

3) Project Purpose:

- a. Improvement of duck production business by enlargement of the scale through provision of soft loan.
- b. New technologies such as electrical heat and humidity controller or semi-automatic hatchery should be introduced and tested with technical supports by IPB, etc. for better productivity then for the dissemination of such new technologies in rural area.
- c. BDS will be introduced to strengthen their business management capability, promotion of embryo LKM and monitoring/ advices for their business.
- d. DINAS officers will receive capacity development training through supporting and monitoring services to KT during this project as on-the-job-training.

4) Input and output plan of the Project

(Details can be referred to Table B.1-1, 1/5 and Table B3.1 & B3.2)

Table 7 Input and Output Plan (Kelompok Tani Bebek Jaya)

	Amount (Rp)	Remarks
Investment	450,000,000	3,700 pullets and 400 tails of male ducks and auxiliaries.
Grant for capacity development	174,000,000	Semi-automatic hatchery, technical assistance and BDS, monitoring
Total project cost	624,000,000	
Sales plan	705,900,000	Fertile eggs, salty eggs and culling ducks
Operation cost	487,556,000	Depreciation cost is included
Net profit (Interest is not calculated)	128,344,000 (18.2%)	For initial 5 years during reimbursing the loan.
Profit for each member who will participate.	6,417,200	20 members (0 female)

5) Marketing: KT Bebek Jaya is responsible for supplying fertile eggs under the triangle system. All activities are fully supported by BDS provider. Marketing activities are summarized in Appendix C.

6) Direct and Indirect Benefit

Direct and indirect effects are expected toward income generation and poverty alleviation in target Kelompok Tani and the communities as follows:

- a. Direct effects: Improvement of income in 20 Kelompok Tani members is anticipated.
- b. Indirect effects: Indirect impacts are expected toward 775 households in community including 411 of very poor & poor households (53 %, 2050 persons). This will primarily brought from the activation and vitalization of rural economy through replication and expansion of pilot project approach.

7) Gender Issues and Others

- a. Gender Issues: Women member of KT Bebek Jaya is few at the moment. Overall situation on gender issues are almost same as at KT Sigaranara Indah.
- b. Environmental Impact: Currently, there is no serious environmental impact observed by duck industry in Kabupaten Cirebon. And significant impact will not be expected by promoting and expanding duck production and processing in the proposed area as same as at KT Sigaranara Indah.

4.5 KT Tigan Mekar for model 1: Expansion of Business Scale and Renewal of Technologies (Kabupaten Cirebon)

1) Project Name: The Improvement of Small-Scale Duck Farmers' Income through the Expansion of Business Scale and Renewal of Technologies.

2) Background:

- a. KT Tigan Mekar enters into MOU and shares their duty with the support of DINAS Livestock Service, Cirebon. However due to lack of capital, they cannot expand their business scale and their income level is limited.

- b. The duck breeding technologies are traditional one same as of KT Bebek Jaya. They trust their intuition on temperature and relative humidity control in the hatchery room. The manual rolling works of all eggs, which need to be carried out at every 2-3 hours continuously over the hatching period of 28 days, cause uneven stirring resulting to low incubation ratio.

3) Project Purpose:

- a. Improvement of duck production business by enlargement of the scale through provision of soft loan.
- b. New technologies such as electrical heat and humidity controller or semi-automatic hatchery should be introduced and tested with technical supports by IPB, etc. for better productivity then for the dissemination of such new technologies in rural area.
- c. BDS will be introduced to strengthen their business management capability, promotion of embryo LKM and monitoring/ advices for their business.
- d. DINAS officers will receive capacity development training through supporting and monitoring services to KT during this project as on-the-job-training.

4) Input and output plan of the Project

Table 8 Input and Output Plan (Kelompok Tani Tigan Mekar)

	Amount (Rp)	Remarks
Investment	550,000,000	5,000 tails of pullets and 500 tails of male ducks and auxiliaries.
Grant for capacity development	212,000,000	Semi-automatic hatchery, technical assistance and BDS, monitoring.
Total project cost	762,000,000	
Sales plan	1,578,792,000	DOD, salty eggs and culling ducks
Operation cost	1,186,744,000	Depreciation cost is included.
Net profit (Interest is not calculated)	282,048,000 (17.9%)	For initial 5 years during reimbursing the loan.
Profit for each member who will participate.	7,834,667	36 members (3 female)

(Details can be referred to Table B.1-1, 1/5 and Table B4.1 & B4.2)

- 5) Marketing: KT Tigan Mekar is responsible for supplying DOD under the triangle system. All activities are fully supported by BDS provider. Marketing activities are summarized in Appendix C.

6) Direct and Indirect Benefit

Direct and indirect effects are expected toward income generation and poverty alleviation in target Kelompok Tani and the communities as follows:

- a. Direct effects: Improvement of income in 36 Kelompok Tani members including 3 females is anticipated.
- b. Indirect effects: Indirect impacts are expected toward 1,800 households in community including 720 of very poor & poor households (40 %, 3,600 persons).

This will primarily brought from the activation and vitalization of rural economy through replication and expansion of pilot project approach.

7) Gender Issues and Others

- a. Gender Issues: Women member of KT Tigan Mekar is few at the moment. Overall situation on gender issues are same as at KT Bebek Jaya.
- b. Environmental Impact: Currently, there is no serious environmental impact observed by duck industry in Kabupaten Cirebon. And significant impact will not be expected by promoting and expanding duck production and processing in the proposed area same as at KT Bebek Jaya.

4.6 KT Mitra Binangkit for Model 2: Cottage Level Food Processing & Marketing of Traditional Products (Kabupaten Majalengka)

- 1) Project Name: The Improvement of Small-Scale Sweet Potato Farmers’ Income through Cottage Level Food Processing and Marketing.
- 2) Background: KT Mitra Binangkit carries out small-scale food processing and marketing activity of sweet potato, banana and cassava. Due to lack of capital, they cannot expand the business scale and their income level is small.
- 3) Project Purpose:
 - a. To provide soft loan to assist those small scale business for the enlargement and improvement of their income.
 - b. BDS will be introduced to KT in order to strengthen their business management capability, promotion of embryo LKM and monitoring the business for the transparency and fair profits sharing.
 - c. Similar small-scale food processing activity will be extended to other KT.
- 4) Input and output plan of the Project

Table 9 Input and Output Plan (Kelompok Tani Mitra Binangkit)

	Amount (Rp)	Remarks
Investment	45,000,000	Milling machine, stoves, molding and auxiliaries.
Grant for capacity development	51,500,000	BDS and monitoring
Total project cost	96,500,000	
Sales plan	375,000,000	Keremes, keripil, ragining, tempe.
Operation cost	244,150,000	Depreciation cost is included.
Net profit (Interest is not calculated)	121,850,000 (32.5 %)	For initial 5 years during reimbursing the loan.
Profit for each member who will participate.	4,061,667	30 members (30 female)

(Details can be referred to Table B.1-1, 1/5 and Table B5.1 & B5.2)

- 5) Marketing: The product of KT Mitra Binangkit is traditional one for local consumption. In order to expand their activity, they need a lot of new approach for development of

new products and marketing responding to customers' demand. All activities are fully supported by BDS provider. Marketing activities are summarized in Appendix C.

6) Direct and Indirect Benefit

Direct and indirect effects are expected toward income generation and poverty alleviation in target Kelompok Tani and the communities as follows:

- a. Direct effects: Improvement of income in 30 female members in Kelompok Tani members is anticipated, which will contribute to poverty alleviation of 28 household (140 persons).
- b. Indirect effects: Indirect impacts are expected toward 151 households in community including 64 of very poor & poor households (28 %, 575 persons). This will primarily brought from the activation and vitalization of rural economy through replication and expansion of pilot project approach.

7) Gender issues and others

- a. Gender Issue: KT Mitra Binangkit is women-led group. There would be no significant unbalance in resource accessibility and sharing between men and women. As same as other proposed projects, "Gender Analysis Pathway (GAP)" is applied to analyze prospective gender impact and prepare countermeasures in the initial stage of the project.
- b. Environmental Impact: No adverse environmental impact will be expected from proposed activities of sweet potato production and processing.

4.7 KT Delima II for Model 2: Cottage Level Food Processing & Marketing of Traditional Products (Kabupaten Majalengka)

- 1) Project Name: The Improvement of Small-Scale Sweet Potato Farmers' Income through Cottage Level Food Processing and Marketing.
- 2) Background: KT Delima II carries out small-scale food processing and marketing activity of sweet potato, banana and cassava. Due to lack of capital, they cannot expand the business scale and their income level is small.
- 3) Project Purpose:
 - a. To provide soft loan to assist those small scale business for the enlargement and improvement of their income.
 - b. BDS will be introduced to KT in order to strengthen their business management capability, promotion of embryo LKM and monitoring the business for the transparency and fair profits sharing.
 - c. Similar small-scale food processing activity will be extended to other KT.

4) Input and output plan of the Project

Table 10 Input and Output Plan (Kelompok Tani Delima II)

	Amount (Rp)	Remarks
Investment	45,000,000	Motorcycle, stoves and auxiliaries.
Grant for capacity development	51,500,000	BDS and monitoring
Total project cost	96,500,000	
Sales plan	600,000,000	Keremes, keripil, ragining, tempe.
Operation cost	404,278,000	Depreciation cost is included.
Net profit (Interest is not calculated)	186,722,000 (31.1%)	For initial 5 years until reimburse the loan.
Profit for each member who will participate.	11,670,125	16 members (11 female)

(Details can be referred to Table B.1-1, 2/5 and Table B6.1 & B6.2)

5) Marketing: The products of KT Delima II is traditional one for local consumption. In order to expand their activity, they need a lot of new approach same as of KT Mitra Binangkit. All activities are fully supported by BDS provider. Marketing activities are summarized in Appendix C.

6) Direct and Indirect Benefit

Direct and indirect effects are expected toward income generation and poverty alleviation in target Kelompok Tani and the communities as follows:

- a. Direct effects: Improvement of income in 16 female members including 11 females is anticipated, which will contribute to poverty alleviation of 28 households (140 persons).
- b. Indirect effects: Indirect impacts are expected toward 195 households in community including 53 of very poor & poor households (27 %, 265 persons). This will primarily brought from the activation and vitalization of rural economy through replication and expansion of pilot project approach.

7) Gender issues and others

- a. Gender Issue: KT Delima II is women-led group. There would be no significant unbalance in resource accessibility and sharing between men and women. As same as other proposed projects, "Gender Analysis Pathway (GAP)" is applied to analyze prospective gender impact and prepare countermeasures in the initial stage of the project.
- b. Environmental Impact: No adverse environmental impact will be expected from proposed activities of sweet potato production and processing.

4.8 KT Andayarasa for model 1: Primary Processing & Marketing (Kabupaten Kuningan)

1) Project Name: The Improvement of Small-Scale Sweet Potato Farmers' Income through

primary processing and marketing.

- 2) Background: The farm-gate prices of sweet potato fluctuate from 400 till 1,000 Rp/kg through out the year. Farmers have no choice but to sell fresh sweet potato to collectors at their rates. Large-scale sweet potato flourmill started operation in Kuningan in 2006 and they are ready to purchase dried chips of sweet potato from farmers/ farmers group.
- 3) Project Purpose:
 - a. Improvement of farmers' income through primary processing (value-addition) is most suitable economical activity to be carried out by farmers group such as selling sweet potato to flour companies after processing raw material to dried chips.
 - b. New technology developed by BPTP (Bogor), IPB, BALITKAB (Indonesian Legumes and Tuber Crops Research Institute, Malang) and etc should be extended to farmers such as Solar Dryer for sweet potato.
 - c. BDS will be introduced to KT in order to strengthen their business management capability, promotion of embryo LKM and monitoring the business for the transparency and fair profits sharing.
 - d. Similar value addition project by other KT or other crops will be carried out and extended.
- 4) Input and output plan of the Project

Table 11 Input and Output Plan (Kelompok Tani Andayarasa)

	Amount (Rp)	Remarks
Investment	200,000,000	Solar Dryers, moisture meter, slicing machines, scales and auxiliaries.
Grant for capacity development	153,000,000	Technical assistance, BDS and monitoring
Total project cost	353,000,000	
Sales plan	810,000,000	300 ton of dried sweet potato chips
Operation cost	581,800,000	Depreciation cost is included.
Net profit (Interest is not calculate)	188,200,000 (23.2%)	For initial 5 years during reimbursing the loan.
Profit for each member who will participate.	7,528,000	25 members (5 female)

(Details can be referred to Table B.1-1, 2/5 and Table B7.1 & B7.2)

- 5) Marketing: KT Andayarasa will supply dried sweet potato as a primary processed products to flour company in Kuningan. This is a new commercial activity, which needs a lot of efforts for quality control, delivery on time and quantity assurance to the buyer. They need to enter into MOU with the buyer. Plural number of markets (buyers) will be required. All activities are fully supported by BDS provider. Marketing activities are summarized in Appendix C.
- 6) Direct and Indirect Benefit

Direct and indirect effects are expected toward income generation and poverty alleviation in target Kelompok Tani and the communities as follows:

 - a. Direct effects: Improvement of income in 25 members in Kelompok Tani including 5

females is anticipated, which will contribute to poverty alleviation of 16 households (80 persons).

b. Indirect effects: Indirect impacts are expected toward 395 households in community including 111 of very poor & poor households (28 %, 575 persons). This will primarily brought from the activation and vitalization of rural economy through replication and expansion of pilot project approach.

7) Gender issues and Others

a. Gender Issues: Women in KT Andayarasa occupy 20 % of the member. The group is well formalized and resource accessibility as well as resource allocation among the group would be better situation than those in other sweet potato group in Kabupaten. As same as other proposed project, “Gender Analysis Pathway (GAP)” is applied to analyze prospective gender impact and prepare countermeasures in the initial stage of the project particularly strengthening transparency among the members.

b. Environmental Impact: No adverse environmental impact will be expected from proposed project implementation. Regular monitoring will be anticipated in the course of the Project for sweet potato waste treatment to be born by processing.

4.9 KT Bina Karya for model 2: Cottage Level Food Processing & Marketing of unique products (Kabupaten Kuningan).

1) Project Name: The Improvement of Small-Scale Sweet Potato Farmers’ Income through Cottage Level Food Processing and Marketing.

2) Background: KT Bina Karya has unique sweet potato processing techniques for sauce (*sambal*) production. However, they still have technical difficulties such as sanitary control and packaging skill. Their marketing capability is one of their serious constraints. Lack of capital is another restriction of their business expansion for the sustainability.

3) Project Purpose:

a. To provide soft loan to assist such small-scale business for the enlargement and improvement of their income.

b. BDS will be introduced to KT in order to strengthen their business management capability, promotion of embryo LKM and monitoring the business for the transparency and fair profits sharing.

c. Similar small-scale food processing activity will be extended to other KT.

4) Input and output plan of the Project

(Details can be referred to Table B.1-1, 2/5 and Table B8.1 & B8.2)

Table 12 Input and Output Plan (Kelompok Tani Bina Karya)

	Amount (Rp)	Remarks
Investment	67,000,000	Rehabilitation of kitchen/ storages, cooking drum, chiller, auxiliaries.
Grant for capacity development	58,000,000	BDS and monitoring
Total project cost	125,500,000	
Sales plan	360,000,000	Sambal sauce
Operation cost	259,990,000	Depreciation cost is included.
Net profit (Interest is not calculated)	86,610,000 (24.1 %)	For initial 5 years during reimbursing the loan.
Profit for each member who will participate.	4,330,500	20 members (1 female)

- 5) Marketing: KT Bina Karya has unique product: sambal sauce however due to their weak marketing and product development capability, the sales volume is very limited. They need new marketing approach for the expansion. All activities are fully supported by BDS provider.
- 6) Direct and Indirect Benefit

Direct and indirect effects are expected toward income generation and poverty alleviation in target Kelompok Tani and the communities as follows:

 - a. Direct effects: Improvement of income in 20 members in Kelompok Tani including 1 female is anticipated.
 - b. Indirect effects: Indirect impacts are expected toward 151 households in community including 63 of very poor & poor households (42 %, 317 persons). This will primarily brought from the activation and vitalization of rural economy through replication and expansion of pilot project approach.
- 7) Gender issues and Others
 - a. Gender Issues: Women member of KT Bina Karya is few at the moment. Overall situation on gender issues are same as at KT Bebek Jaya in Kabupaten Cirebon. As same as other proposed project, “Gender Analysis Pathway (GAP)” is applied to analyze prospective gender impact and prepare countermeasures in the initial stage of the project particularly strengthening transparency among the members.
 - b. Environmental Impact: No adverse environmental impact will be expected from proposed project implementation. Regular monitoring will be anticipated in the course of the Project for sweet potato waste treatment to be born by processing.

4.10 KT Lingasari II for model 2: Cottage Level Food Processing & Marketing of unique products (Kabupaten Kuningan)

- 1) Project Name: The Improvement of Small-Scale Sweet Potato Farmers’ Income through Cottage Level Food Processing and Marketing.
- 2) Background: KT Lingga Sari II has unique sweet potato processing techniques for ice cream and cakes. However, their marketing capability is very weak resulting low

production activities and income generation.

3) Project Purpose:

- a. To provide soft loan to assist such small-scale business for the enlargement and improvement of their income.
- b. BDS will be introduced to KT in order to strengthen their business management capability, promotion of embryo LKM and monitoring the business for the transparency and fair profits sharing.
- c. Similar small-scale food processing activity will be extended to other KT.

4) Input and output plan of the Project

Table 13 Input and Output Plan (Kelompok Tani Linggasari II)

	Amount (Rp)	Remarks
Investment	43,000,000	Ice box, freezers, motorcycle
Grant for capacity development	58,000,000	BDS and monitoring
Total project cost	101,000,000	
Sales plan	90,000,000	Sweet potato ice cream, cake, etc.
Operation cost	52,840,000	Depreciation cost is included.
Net profit (Interest is not calculated)	28,560,000 (31.7%)	For initial 5 years during reimbursing the loan.
Profit for each member who will participate.	1,428,000	20 members (0 female)

(Details can be referred to Table B.1-1, 3/5 and Table B9.1 & B9.2)

5) Marketing: KT Lingga Sari II is has unique product: sweet potato ice cream however due to their weak marketing and product development capability, the sales volume is very limited. They need new marketing approach for the expansion. All activities are fully supported by BDS provider.

6) Direct and Indirect Benefit

Direct and indirect effects are expected toward income generation and poverty alleviation in target Kelompok Tani and the communities as follows:

- a. Direct effects: Improvement of income in 20 members in Kelompok Tani is anticipated, which will contribute to poverty alleviation of 5 household (25 persons).
- b. Indirect effects: Indirect impacts are expected toward 182 households in community including 58 of very poor & poor households (32 %, 291 persons). This will primarily brought from the activation and vitalization of rural economy through replication and expansion of pilot project approach.

7) Gender issues and Others

a. Gender Issues: Women member of KT Lingga Sari II is few at the moment. Overall situation on gender issues are same as at KT Bina Karya. As same as other proposed project, “Gender Analysis Pathway (GAP)” is applied to analyze prospective gender impact and prepare countermeasures in the initial stage of the project particularly

strengthening transparency among the members.

- b. Environmental Impact: No adverse environmental impact will be expected from proposed project implementation. Regular monitoring will be anticipated in the course of the Project for sweet potato waste treatment to be born by processing.

4.11 KT Makmur Jaya for model: Fruit Processing & Marketing with Private Companies (Kabupaten Kediri)

- 1) Project Name: The Improvement of Small-Scale Mango Farmers Income through Fruit Processing and Marketing (dried mango chips)
- 2) Background:
 - a. Farm-gate prices of mango sharply drop during peak season of harvest (before the peak, the price of Rp 2,000/kg drops to Rp300-400/kg). It is difficult for fresh mango to prolong its storability by introducing cold storage. Some farmers produce traditional mango food such as Dodole for income generation but due to its narrow marketable area, the business scale is quite small.
 - b. One KT started mango processing for dried mango chip production with external technical supports (NGO) in Kediri. KT Makmur Jaya will have a chance to enter into MOU with this NGO for the supply with their technical supports and supervision.
- 3) Project Purpose:
 - a. Improvement of farmers' income through processing of locally available products and marketing of them is most suitable economical activity to be carried out by farmers group.
 - b. Technical assistances will be provided to KT from research institutes such as BPTP (Malang) and Universities. BDS also will be introduced to KT in order to strengthen their business management capability, promote embryo LKM and monitoring the business.
 - c. To provide soft loan to assist such small-scale business for the enlargement and improvement of their income.
 - d. This new business will be promoted as a pilot project. 80% of investment cost will be covered by subsidiary and the remaining 20% will be covered by soft loan to KT. Technical and capacity development program will be provided by grant scheme.
 - e. Similar small-scale fruit processing activity will be extended to other KT.
- 4) Input and output plan of the Project
(Details can be referred to Table B.1-1, 4/5 and Table B10.1 & B10.2)

Table 14 Input and Output Plan (Kelompok Tani Makmur Jaya)

	Amount (Rp)	Remarks
Investment	200,000,000 (80% of this amount will be covered by subsidy as a pilot Project)	Fruit dryer, auxiliaries for washing/ peeling/ sweetening, packaging
Grant for capacity development	81,000,000	Technical assistances, BDS and monitoring
Total project cost	281,000,000	
Sales plan	600,000,000	Dried mango chips (15 ton/year)
Operation cost	497,955,000	Depreciation cost is included.
Net profit (Interest is not calculated)	98,005,000 (16.3%)	For initial 5 years during reimbursing the loan.
Profit for each member who will participate.	2,177,889	45 members (15 female)

Note: This is a pilot project as the market of dried mango chip is not secured yet, 80% of investment cost should be covered by grant.

- 5) Marketing: KT Makmur Jaya will produce dried mango chips. This is a new commercial activity, which needs a lot of efforts for processing technologies, quality control and quantity assurance to the buyer. They need to enter into MOU with the buyer. Plural number of markets (buyers) will be required. All activities are fully supported by BDS provider. Marketing activities are summarized in Appendix C.

6) Direct and Indirect Benefit

Direct and indirect effects are expected toward income generation and poverty alleviation in target Kelompok Tani and the communities as follows:

- a. Direct effects: Improvement of income in 45 members in Kelompok Tani including 15 females is anticipated, which will contribute to poverty alleviation of 26 households (130 persons).
- b. Indirect effects: Indirect impacts are expected toward 348 households in community including 268 of very poor & poor households (77 %, 1340 persons). This will primarily brought from the activation and vitalization of rural economy through replication and expansion of pilot project approach.

7) Gender issues and Others

- a. Gender Issues: Women member of KT Makmur Jaya is few at the moment. Overall situation on gender issues are same as at KT Andayarasa in Kabupaten Kuningan. As same as other proposed project, “Gender Analysis Pathway (GAP)” is applied to analyze prospective gender impact and prepare countermeasures in the initial stage of the project particularly strengthening transparency among the members.
- b. Environmental Impact: No adverse environmental impact will be expected from proposed project implementation. Regular monitoring will be anticipated in the course of the Project for sweet potato waste treatment to be born by processing.

4.12 KT Budidaya for model: Fruit Processing and Marketing with Private Companies (Kabupaten Kediri)

- 1) Project Name: The Improvement of Small-Scale Mango Farmers Income through Fruit Processing and Marketing (Mango juice/ jelly)
- 2) Background:
 - a. Farm-gate prices of mango sharply drop during peak season of harvest (before the peak, the price of Rp2,000/kg drops to Rp300-400/kg). KT Budidaya produces traditional mango food such as Dodole for income generation but due to its narrow marketable area, the business scale is quite small.
 - b. Simple technologies for fruit processing are available locally at BPTP or Universities. Such appropriate technologies should be disseminated to rural areas for income generation and creation of job opportunity.
- 3) Project Purpose:
 - a. The technical supports to KT will be provided by Universities or research institutes such as BPTP East Java.
 - b. The market of processed mango requires large area and consumers. Marketing should be conducted by private companies, which enter into MOU with KT or set up a joint venture company with KT.
 - c. Consultants or BDS will be introduced to KT to supervise and assist the management of the joint venture company. Promotion of embryo LKM will also be carried out.
 - d. This new business will be promoted as a pilot project. 80% of investment cost will be covered by subsidiary and the remaining 20% will be covered by soft loan to KT. Technical and capacity development program will be provided by grant scheme.
 - e. Similar small-scale fruit processing activity will be extended to other KT.
- 4) Input and output plan of the Project
(Details can be referred to Table B.1-1, 4/5 and Table B11.1 & B11.2)

Table 15 Input and Output Plan (Kelompok Tani Budidaya)

	Amount (Rp)	Remarks
Investment	191,000,000 (80% of this amount will be covered by subsidy as a pilot Project)	Juice/ jelly processing equipment, and auxiliaries for washing/ peeling/ sweetening, packaging and etc.
Grant for capacity development	81,000,000	Technical assistances, BDS and monitoring
Total project cost	272,000,000	
Sales plan	396,000,000	Juices/jelly from 100ton mango
Operation cost	290,589,000	Depreciation cost is included.
Net profit (Interest is not	101,411,250	For initial 5 years during reimbursing the

	Amount (Rp)	Remarks
calculated)	(25.6%)	loan.
Profit for each member who will participate.	3,380,375	30 members (20 female)

Note: This is pilot project as the market of mango juice/ jelly is not secured yet, 80% of investment cost should be covered by grant.

5) Marketing: KT Budidaya will produce mango juice/ jelly and etc. This is a new commercial activity, which needs a lot of efforts for processing technologies, quality control and quantity assurance to the buyer. They need to develop marketing channels to urban areas such as setting up partnership with private sector/ forming a joint venture company or appointing sales agents with guaranteed sales volume by each agent. All activities are fully supported by BDS provider. Marketing activities are summarized in Appendix C.

6) Direct and Indirect Benefit

Direct and indirect effects are expected toward income generation and poverty alleviation in target Kelompok Tani and the communities as follows:

a. Direct effects: Improvement of income in 30 members in KT including 20 female members of sub-group under 160 members (70 females) is anticipated, which will contribute to poverty alleviation of 15 households (75 persons).

b. Indirect effects: Indirect impacts are expected toward 256 households in community including 212 of very poor & poor households (83 %, 1,060 persons). This will primarily brought from the activation and vitalization of rural economy through replication and expansion of pilot project approach.

7) Gender issues and others

a. Gender Issues: KT Budidaya is women-led group. There would be no significant unbalance in resource accessibility and sharing men and women. As same as other proposed project, “Gender Analysis Pathway (GAP)” is applied to analyze prospective gender impact and prepare countermeasures in the initial stage of the project.

b. Environmental Impact: No adverse environmental impact will be expected from proposed project implementation. Regular monitoring will be anticipated in the course of the Project for sweet potato waste treatment to be born by processing.

4.13 KT Karya Tani for model 2: Business Scale Expansion & Strengthening of Duck Industry (Kabupaten Mojokerto)

1) Project Name: The Improvement of Small-Scale Duck Farmers’ Income through the Expansion of Business Scale.

2) Background: KT Karya Tani produces meat ducks of 40 days old but due to lack of capital, they cannot expand their business scale though the market demand for young duck meat is stable and expanding.

3) Project Purpose:

- a. Improvement of duck production business by enlargement of the scale through provision of soft loan.
- b. BDS will be introduced to strengthen their business management capability, promotion of embryo LKM and monitoring/ advices for their business.
- c. DINAS officers will receive capacity development training through supporting and monitoring services to KT during this project as on-the-job-training.

4) Input and output plan of the Project

Table 16 Input and Output Plan (Kelompok Tani Karya Tani)

	Amount (Rp)	Remarks
Investment	190,000,000	100 pullets/ each members & auxiliaries.
Grant for capacity development	60,000,000	Technical assistance, BDS and monitoring
Total project cost	250,000,000	
Sales plan	1,035,506,000	Meat duck, infertile eggs, culling ducks
Operation cost	781,342,000	Depreciation cost is included.
Net profit (Interest is not calculated)	216,163,944 (20.9%)	For initial 5 years during reimbursing the loan.
Profit for each member who will participate.	19,651,268	11 members (1 female)

(Details can be referred to Table B.1-1, 4/5 and Table B12.1 & B12.2)

- 5) Marketing: Main products are young ducks for meat markets selling through collectors/ middlemen. In order to offset members' disadvantages caused by money-bound relationship with middlemen as well as to develop duck industry in Kabupaten Mojokerto, they should enter into the triangle system. All activities are fully supported by BDS provider. Marketing activities are summarized in Appendix C.

6) Direct and Indirect Benefit

Direct and indirect effects are expected toward income generation and poverty alleviation in target Kelompok Tani and the communities as follows:

- a. Direct effects: Improvement of income in 11 members in Kelompok Tani including 1 female is anticipated.
- b. Indirect effects: Indirect impacts are expected toward 1,002 households in community including 451 of very poor & poor households (45 %, 2,255 persons). This will primarily brought from the activation and vitalization of rural economy through replication and expansion of pilot project approach.

7) Gender issues and Others

- a. Gender Issues: Women member of KT Karya Tani is few at the moment. Overall situation on gender issues are same as at KT Makmur Jaya in Kabupaten Kediri. As same as other proposed project, "Gender Analysis Pathway (GAP)" is applied to analyze prospective gender impact and prepare countermeasures in the initial stage of the project particularly strengthening transparency among the members.

- b. Environmental Impact: No adverse environmental impact will be expected from proposed project implementation. Regular monitoring will be anticipated in the course of the Project for sweet potato waste treatment to be born by processing.

4.14 KT Tani Mulyo for model 2: Business Scale Expansion & Strengthening of Duck Industry (Kabupaten Mojokerto)

- 1) Project Name: The Improvement of Small-Scale Duck Farmers' Income through the Expansion of Business Scale.
- 2) Background: Due to lack of capital, they cannot expand their business scale and their income level is limited though this KT has certain level of experiences and technologies under the chairman's leadership.
- 3) Project Purpose:
 - a. Improvement of duck production business by enlargement of the scale through provision of soft loan.
 - b. BDS will be introduced to strengthen their business management capability, promotion of embryo LKM and monitoring/ advices for their business.
 - c. DINAS officers will receive capacity development training through supporting and monitoring services to KT during this project as on-the-job-training.
- 4) Input and output plan of the Project

Table 17 Input and Output Plan (Kelompok Tani Tani Mulyo)

	Amount (Rp)	Remarks
Investment	300,000,000	100 Pullets for each, auxiliaries.
Grant for capacity development	120,000,000	Technical assistance, BDS and monitoring
Total project cost	420,000,000	
Sales plan	797,920,000	DOD, salty eggs and culling ducks
Operation cost	544,646,000	Depreciation is included.
Profit (Interest is not calculated)	193,273,600 (24.2%)	For initial 5 years during reimbursing the loan.
Profit for each member who will participate.	6,90,629	28 members (23 female)

(Details can be referred to Table B.1-1, 5/5 and Table B13.1 & B13.2)

- 5) Marketing: Main products are fertile egg, salty egg and DOD selling through collectors/ middlemen. In order to offset members' disadvantages caused by money-bound relationship with middlemen as well as to develop duck industry in Kabupaten Mojokerto, they should enter into the triangle system. All activities are fully supported by BDS provider. Marketing activities are summarized in Appendix C.
- 6) Direct and Indirect Benefit

Direct and indirect effects are expected toward income generation and poverty alleviation in target Kelompok Tani and the communities as follows:

 - a. Direct effects: Improvement of income in 28 members in Kelompok Tani including 23

females is anticipated.

b. Indirect effects: Indirect impacts are expected toward 219 households in community including 77 of very poor & poor households (35 %, 383 persons). This will primarily brought from the activation and vitalization of rural economy through replication and expansion of pilot project approach.

7) Gender issues and Others

a. Gender Issues: Women member of KT Karya Tani is few at the moment. Overall situation on gender issues are same as at KT Makmur Jaya in Kabupaten Kediri. As same as other proposed project, “Gender Analysis Pathway (GAP)” is applied to analyze prospective gender impact and prepare countermeasures in the initial stage of the project particularly strengthening transparency among the members.

b. Environmental Impact: No adverse environmental impact will be expected from proposed project implementation. Regular monitoring will be anticipated in the course of the Project for sweet potato waste treatment to be born by processing.

4.15 KT Lestani Sejahtera for model 1: Expansion of Business Scale and Renewal of Technologies (Kabupaten Mojokerto)

1) Project Name: The trial project for renewal of duck breeding technology for Small-Scale Duck Farmers.

2) Background: The duck breeding technologies are traditional one, for example, Hatchery uses kerosene lamp which generate CO₂ gas into hatchery room causing low incubation yield (60 – 70%). They trust their institution on temperature and relative humidity control. The manual rolling works of all eggs are very hard, as it must be continued over 28 incubating days without rest time. Locally available semi-automatic hatchery is now available, the trial should be conducted for small-scale duck farmers’ benefit with financial and technical supports by the officials.

3) Project Purpose:

a. Trial of new technology for better working environment and economic efficiency by grant.

b. All trial fees such as losses, electricity and labor cost should be born by KT.

c. The result obtained from this trial should be disseminated widely to stakeholders concerned.

d. Technical assistance by institutes such as BPTP, Universities should be provided.

e. Promotion of embryo LKM will be carried out by BDS.

4) Input and output plan of the Project

Table 18 Input and Output Plan (Kelompok Tani Lestari Sejahtera)

	Amount (Rp)	Remarks
Investment	90,000,000	Auto-hatchery with power supply system for back up.
Grant for capacity development	110,000,000	Technical assistance, BDS and monitoring
Total project cost	200,000,000	
Sales plan	N.A.	
Operation cost	N.A.	To be covered by KT
Profit (Interest is not calculated)	N.A.	
Profit for each member who will participate.	N.A.	47 members (47 female)

(Details can be referred to Table B.1-1, 5/5 and Table B14)

5) Marketing: KT Lestari Sejahtera is well-established duck breeding farmers group. In order to offset members' disadvantages caused by money-bound relationship with middlemen as well as to develop duck industry in Kabupaten Mojokerto, they should enter into the triangle system. All activities are fully supported by BDS provider. Marketing activities are summarized in Appendix C.

6) Direct and Indirect Benefit

Direct and indirect effects are expected toward income generation and poverty alleviation in target Kelompok Tani and the communities as follows:

- a. Direct effects: Improvement of income in 47 female members is anticipated.
- b. Indirect effects: Indirect impacts are expected toward 422 households in community including 269 of very poor & poor households (40%, 844 persons). This will primarily brought from the activation and vitalization of rural economy through replication and expansion of pilot project approach.

7) Gender Issues and Others

- a. Gender Issues: KT Lestari Sejahtera is women-led group. There would be no significant unbalance in resource accessibility and sharing men and women. As same as other proposed project, "Gender Analysis Pathway (GAP)" is applied to analyze prospective gender impact and prepare countermeasures in the initial stage of the project.
- b. Environmental Impact: No adverse environmental impact will be expected from proposed project implementation. Regular monitoring will be anticipated in the course of the Project for sweet potato waste treatment to be born by processing.

Table

TableB.1.1 Summary of Improvement Plan for Selected Kelompok Tani (1/5)

West Jawa Province

Kabupaten	Kelompok Tani	Member	Back ground	Approach/Purpose	Necessity and Importance of the Project	Project Component (a. Input)	Project Component (b. Activity/ Marketing)	Benefit and Effect of the Project
Cirebon	Sigranala Indah	7 nos. Men 6 Women 1	<ul style="list-style-type: none"> ➤ Due to current increase of gasoline price, many of the farmers gave up duck feeding. ➤ No saving & loan is observed. ➤ They need financial supports. 	<ul style="list-style-type: none"> ➤ Current 7 members are the initial targets for the development of KT. ➤ Consultants/BDS/NGO will be introduced for the strengthening the capability. ➤ This is a kind of KT revitalization model. 	<ul style="list-style-type: none"> ➤ To meet GOI policy. ➤ Revitalization model for the small-scale farmers business. 	<ul style="list-style-type: none"> ➤ Soft loan amounting 66 Million for the investment. ➤ BDS by grant. ➤ Governmental various supports. 	<ul style="list-style-type: none"> ➤ To purchase 100 pullets for each members totaling 700 tails and 70 male ducks. ➤ To invest facilities such as cages, water supply, fence and feed mixing machine. 	<ul style="list-style-type: none"> ➤ To strengthen small-scale farmers business. ➤ To improve effectiveness on marketing for duck commodity. ➤ The management will be improved through BDS.
	Bebek Jaya	20 nos. Men 20 Women 0	<ul style="list-style-type: none"> ➤ Partnership agreement (MOU) was made among Tigan Mekar, Bebek Jaya, Sari Sejahtera and Branjangan Putih. ➤ Due to lack of capital, KT cannot expand the business scale. ➤ The group is national No. 1 Kelompok Tani (duck) in 2002. 	<ul style="list-style-type: none"> ➤ Using soft loan, they enlarge the current business scale. ➤ New technologies such as electrical heat and humidity controller or semi-automatic hatchery will be introduced together with technical supports. ➤ Consultants/BDS/NGO will be introduced for the strengthening the capability. 	<ul style="list-style-type: none"> ➤ To meet GOI policy. ➤ To disseminate new technology. 	<ul style="list-style-type: none"> ➤ Soft loan amounting 450 Million for the investment. ➤ One set of semi-automatic hatchery under pilot project (grant) ➤ BDS by grant. ➤ Governmental various supports. 	<ul style="list-style-type: none"> ➤ To purchase 3,700 tails and 400 male ducks. ➤ To invest facilities such as cages, water supply, fence and feed mixing machine. 	<ul style="list-style-type: none"> ➤ To strengthen small-scale farmers business. ➤ To introduce modern technologies for better profitability. ➤ To improve effectiveness on marketing for duck commodity. ➤ The research development by Institutes (BPTP, IPB, etc.) will contribute farmers' income. ➤ The management will be improved through BDS.
	Tigan Mekar	36 nos. Men 33 Women 3	<ul style="list-style-type: none"> ➤ This KT is famous DOD supplier in Kabupaten. ➤ Demand for DOD is high but supply of fertile egg is limited. ➤ KT wants to produce fertile eggs for DOD production. ➤ Due to lack of capital, KT cannot expand the business scale. 	<ul style="list-style-type: none"> ➤ Using soft loan, they enlarge the current business scale. ➤ New technologies such as electrical heat and humidity controller or semi-automatic hatchery will be introduced together with technical supports. ➤ Consultants/BDS/NGO will be introduced for the strengthening the capability. 	<ul style="list-style-type: none"> ➤ To meet GOI policy. ➤ To disseminate new technology. 	<ul style="list-style-type: none"> ➤ Soft loan amounting 550 Million for the investment. ➤ One set of semi-automatic hatchery under pilot project (grant) ➤ BDS by grant. ➤ Governmental various supports. 	<ul style="list-style-type: none"> ➤ To purchase 5,000 pullets and 500 tails of male ducks for fertile egg production. ➤ To invest facilities such as cages, water supply, fence and feed mixing machine. 	<ul style="list-style-type: none"> ➤ To strengthen small-scale farmers business. ➤ To introduce modern technologies for better profitability. ➤ To improve effectiveness on marketing for duck commodity. ➤ The research development by Institutes (BPTP, IPB, etc.) will contribute farmers' income. ➤ The management will be improved through BDS.
Majalengka	Mitra Binangkit	37 nos. Men 0 Women 37 (30 members participate this project)	<ul style="list-style-type: none"> ➤ The group was originally established by merging five farmers' group as a federation. Out of five, two groups are still active as processing sub-group. ➤ Due to lack of capital, they cannot expand the business scale. ➤ The group received credit through P4K. 	<ul style="list-style-type: none"> ➤ Using soft loan, they can enlarge the current business scale. ➤ Consultants/BDS/NGO will be introduced for the strengthening the capability. 	<ul style="list-style-type: none"> ➤ To meet GOI policy. ➤ To extend similar projects to other KTs. 	<ul style="list-style-type: none"> ➤ Soft loan amounting 45 Million for the investment. ➤ BDS by grant. ➤ Governmental various supports. 	<ul style="list-style-type: none"> ➤ To purchase facilities such as engine driven milling machine, kerosene burner, molding for keremes, gas cooker and gas cylinder. 	<ul style="list-style-type: none"> ➤ Local produces are processed locally and consumed locally for the income generation. ➤ The small-scale food processing for income generation will be strengthened and be expanded to other KTs. ➤ The management will be improved through BDS.

TableB.1.1 Summary of Improvement Plan for Selected Kelompok Tani (2/5)

Kabupaten	Kelompok Tani	Member	Back ground	Approach/Purpose	Necessity and Importance of the Project	Project Component (a. Input)	Project Component (b. Activity/ Marketing)	Benefit and Effect of the Project
	Delima II	16 nos. Men 5 Women 11	<ul style="list-style-type: none"> ➤ Market is limited, only at Talaga market located 5 km from the village. ➤ KT sells 20 sacks of processed product everyday. ➤ Due to lack of capital, they cannot expand the business scale. ➤ Group is supported under P4K. 	<ul style="list-style-type: none"> ➤ Using soft loan, they can enlarge the current business scale. ➤ Consultants/BDS/NGO will be introduced for the strengthening the capability. 	<ul style="list-style-type: none"> ➤ To meet GOI policy. ➤ To extend similar projects to other KTs. 	<ul style="list-style-type: none"> ➤ Soft loan amounting 45 Million for the investment. ➤ BDS by grant. ➤ Governmental various supports. 	<ul style="list-style-type: none"> ➤ To purchase facilities such as large cooking pan, kerosene stove, knives and cutting board. ➤ To purchase motorcycle for transportation of raw materials and products. 	<ul style="list-style-type: none"> ➤ Local produces are processed locally and consumed locally for the income generation. ➤ The small-scale food processing for income generation will be strengthened and be expanded to other KTs. ➤ The management will be improved through BDS.
Kuningan	Andayarasa	25 nos. Men 20 Women 5	<ul style="list-style-type: none"> ➤ Group is well formalized. Presently, they are focusing on production. ➤ Saving & Loan is currently carried out. ➤ Farm-gate prices of sweet potato fluctuate from 400 – 1,000 Rp/kg. Farmers have no choice but to sell fresh one to collectors at their rates. ➤ Group purchase waste from Gali Estetika to prepare fish feed for selling. ➤ 20 m x 21 m of land is available for the sweet potato drying business. 	<ul style="list-style-type: none"> ➤ Selling pre-processed product such as dried sweet potato chips to nearby factory will be effective strategy to increase income of the group. ➤ Using soft loan, they can start value addition activity. ➤ New technologies such as Solar Dryer developed by IPB will be introduced. ➤ Consultants/BDS/NGO will be introduced for the strengthening the capability. 	<ul style="list-style-type: none"> ➤ To meet GOI policy to develop food processing by small-scale farmers for income generation. ➤ To disseminate such new approach to other KTs and other produces. 	<ul style="list-style-type: none"> ➤ Soft loan amounting 200 Million for the investment. ➤ Technical assistance by IPB, BPTP Bogor for the solar dryer under grant scheme. ➤ BDS by grant. ➤ Governmental various supports. 	<ul style="list-style-type: none"> ➤ To invest drying facility such as Solar Dryers, Working Storage, Slicing machines, Moisture Meter, Table Scale, etc. ➤ To enter into long term agreement for the supply of dried chips with sweet potato flourmill company such as PT Global Agro-Inti. This agreement covers purchase price, specification, quantity, time of delivery and etc. 	<ul style="list-style-type: none"> ➤ Value addition for farmers by primary processing will be materialized. ➤ The research development by Institutes (BPTP, IPB, etc.) will contribute farmers' income. ➤ The value addition activities by KT Andayarasa will be disseminated to other KTs. ➤ This type value addition through primary processing will be expanded to other produces.
	Bina Karya	20 nos. Men 19 Women 1	<ul style="list-style-type: none"> ➤ Sauce production (<i>Sambal</i>) using sweet potato is a unique activity by KT Bina Karya. ➤ Due to limited facility currently they are using, the production capacity is limited. ➤ The price of the sauce produced by KT is comparatively lower than the products by larger manufacturers. ➤ The group activities as KT are limited they need business development services from outside for the brisk group activity. 	<ul style="list-style-type: none"> ➤ Expansion or stabilization of sauce production is required. ➤ Using soft loan, they can enlarge current activity. ➤ Consultants/BDS/NGO will be introduced for the strengthening the capability. 	<ul style="list-style-type: none"> ➤ To meet GOI policy to develop food processing by small-scale farmers for income generation. 	<ul style="list-style-type: none"> ➤ Soft loan amounting 67 Million for the investment. ➤ BDS by grant. ➤ Governmental various supports. 	<ul style="list-style-type: none"> ➤ To purchase facilities such as Cooking Drum, Stove, Plastic Basin, Chiller and Blending equipment. ➤ To rehabilitate existing storage, kitchen and work-yard. 	<ul style="list-style-type: none"> ➤ Local produces are processed locally and consumed locally for the income generation. ➤ The small-scale food processing for income generation will be strengthened. ➤ The management will be improved through BDS.

TableB.1.1 Summary of Improvement Plan for Selected Kelompok Tani (3/5)

Kabupaten	Kelompok Tani	Member	Back ground	Approach/Purpose	Necessity and Importance of the Project	Project Component (a. Input)	Project Component (b. Activity/ Marketing)	Benefit and Effect of the Project
	Lingga Sari II	20 nos. Men 20 Women 0	<ul style="list-style-type: none"> ➤ The product by this group includes ice cream and dodol are unique in Kabupaten. ➤ Products are frequently presented in the exhibition, however market is still limited. ➤ Currently, processed product is sold on order basis. ➤ Difficulty of marketing development is most serious constraints for the group. ➤ The group activities as KT are limited they need business development service from outside for the brisk group activity. 	<ul style="list-style-type: none"> ➤ Consultants/BDS/NGO will be introduced for the strengthening the capability especially for the marketing activity. ➤ Using soft loan, they can enlarge current activity. 	<ul style="list-style-type: none"> ➤ To meet GOI policy to develop food processing by small-scale farmers for income generation. 	<ul style="list-style-type: none"> ➤ Soft loan amounting 43 Million for the investment. ➤ BDS by grant. ➤ Governmental various supports. 	<ul style="list-style-type: none"> ➤ To purchase facilities such as Freezers, Ice boxes, Blender, Mixer and Motorcycle. ➤ To rehabilitate existing storage, kitchen and work-yard. 	<ul style="list-style-type: none"> ➤ Local produces are processed locally and consumed locally for the income generation. ➤ The small-scale food processing for income generation will be strengthened. ➤ The management will be improved through BDS.

TableB.1.1 Summary of Improvement Plan for Selected Kelompok Tani (4/5)

East Jawa Province

Kabupaten	Kelompok Tani	Member	Back ground	Approach/Purpose	Necessity and Importance of the Project	Project Component (a. Input)	Project Component (b. Activity/ Marketing)	Benefit and Effect of the Project
Kediri	Makmur Jaya	99 nos. Men 69 Women 30 (45 members participate this project)	<ul style="list-style-type: none"> ➤ Farm-gate prices of mango sharply drop during peak season of harvest. ➤ Dry mango processing is just started by one KT in 2006 under pilot project by NGO. ➤ KT received soft loan from P4K program. 	<ul style="list-style-type: none"> ➤ Dried mango chips production will start under pilot basis. ➤ Institutions will provide technical supports to KT. ➤ Consultants/BDS/NGO will assist this new business. 	<ul style="list-style-type: none"> ➤ To meet GOI policy. ➤ To extend similar projects to other KTs. 	<ul style="list-style-type: none"> ➤ Soft loan amounting 40 Million for the investment. ➤ Subsidy amounting 160 Million for the facility as a pilot project. ➤ BDS by grant. ➤ Governmental various supports. 	<ul style="list-style-type: none"> ➤ To purchase facilities such as fruit dryer, packaging machine, washing/peeling equipment. ➤ To renovate existing warehouse for the working yard. ➤ In off-season of mango, other fruit drying and marketing using the facility will be carried out. ➤ The 3rd party who will enter into an agreement with KT will conduct marketing or KT will enter into MOU with the NGO as an outside supplier of dried mango. 	<ul style="list-style-type: none"> ➤ Value addition to farmers by processing perishable product such as mango will be materialized. ➤ The research development by Institutes (BPTP, IPB, etc.) will contribute farmers' income. ➤ The value addition activities by KT will be disseminated to other KTs. ➤ This type processing activity should be developed for other produces. ➤ New marketing approach will succeed.
	Budidaya	160 nos. Men 90 Women 70 <i>Wanita tani</i> Women 20 (45 members participate this project)	<ul style="list-style-type: none"> ➤ Vacuum flyer for mango was provided by DINAS in 2005 however, it is not currently in use due to shortage of power supply. ➤ One KT in Kediri started pineapple juice processing successfully with technical supports from institutes in Malang. ➤ Support from DINAS has been insufficient until now due to KT's physical location. 	<ul style="list-style-type: none"> ➤ Mango juice/ Jelly and Puree production will start under pilot basis. ➤ Institutions will provide technical supports to KT. ➤ Consultants/BDS/NGO will assist this new business. 	<ul style="list-style-type: none"> ➤ To meet GOI policy. ➤ To extend similar projects to other KTs. 	<ul style="list-style-type: none"> ➤ Soft loan amounting 40 Million for the investment. ➤ Subsidy amounting 160 Million for the facility as a pilot project. ➤ BDS by grant. ➤ Governmental various supports. 	<ul style="list-style-type: none"> ➤ To purchase facilities such as fruit pulping, pasteurizing, packaging machine, washing/peeling equipment. ➤ To renovate existing warehouse for the working yard. ➤ In off-season of mango, other fruit processing and marketing using the facility will be carried out. ➤ The 3rd party who will enter into an agreement with KT will conduct marketing. 	<ul style="list-style-type: none"> ➤ Value addition to farmers by processing perishable product such as mango will be materialized. ➤ The research development by Institutes (BPTP, IPB, etc.) will contribute farmers' income. ➤ The value addition activities by KT will be disseminated to other KTs. ➤ This type processing activity should be developed for other produces. ➤ New marketing approach will succeed.
Mojokerto	Karya Tani	11 nos. Men 10 Women 1	<ul style="list-style-type: none"> ➤ KT has 18,300 ducks by 11 members. ➤ Main product is young duck meat supply in addition to salty egg of infertile. ➤ Due to lack of capital they cannot expand their business scale though the market demand is stable and expanding. 	<ul style="list-style-type: none"> ➤ Using soft loan, they can enlarge the current business scale. ➤ Consultants/BDS/NGO will be introduced for the strengthening the capability. 	<ul style="list-style-type: none"> ➤ To meet GOI policy. ➤ This KT is a candidate of the triangle scheme. 	<ul style="list-style-type: none"> ➤ Soft loan amounting 190 Million for the investment in addition to the contribution of 15 Million. ➤ BDS by grant. ➤ Governmental various supports. 	<ul style="list-style-type: none"> ➤ To purchase 1,200 tails of layer ducks for DOD production. ➤ To invest facilities such as hatchery, cages, water supply, fence and feed mixing machine. 	<ul style="list-style-type: none"> ➤ To strengthen small-scale farmers business. ➤ To improve effectiveness on marketing for duck commodity. ➤ The management will be improved through BDS.

TableB.1.1 Summary of Improvement Plan for Selected Kelompok Tani (5/5)

Kabupaten	Kelompok Tani	Member	Back ground	Approach/Purpose	Necessity and Importance of the Project	Project Component (a. Input)	Project Component (b. Activity/ Marketing)	Benefit and Effect of the Project
	Tani Mulyo	28 nos. Men 5 Women 23	<ul style="list-style-type: none"> ➤ Duck business was originally started using grant from DINAS. However, many members quit membership due to its low profitability. 	<ul style="list-style-type: none"> ➤ Current 28 members are the initial targets for the development of KT. ➤ Consultants/BDS/NGO will be introduced for the strengthening the capability. ➤ This is a kind of KT revitalization model. 	<ul style="list-style-type: none"> ➤ To meet GOI policy. ➤ Revitalization model for the small-scale farmers business. 	<ul style="list-style-type: none"> ➤ Soft loan amounting 300 Million for the investment. ➤ BDS by grant. ➤ Governmental various supports. 	<ul style="list-style-type: none"> ➤ To purchase 100 pullets for each members totaling 2,800 tails and 300 male ducks. ➤ To invest facilities such as cages, water supply, fence and feed mixing machine. 	<ul style="list-style-type: none"> ➤ To strengthen small-scale farmers business. ➤ To improve effectiveness on marketing for duck commodity. ➤ The management will be improved through BDS.
	Lestari Sejahtera	47 nos. Men 0 Women 47	<ul style="list-style-type: none"> ➤ This KT is a famous and a leading group of duck business in Kabupaten. ➤ This KT can be a core member of the triangle scheme in Mojokerto. 	<ul style="list-style-type: none"> ➤ Continuing and expanding current duck business. ➤ New technologies such as electrical heat and humidity controller or semi-automatic hatchery will be introduced together with technical supports. ➤ Consultants/BDS/NGO will be introduced for the strengthening the capability. 	<ul style="list-style-type: none"> ➤ To meet GOI policy. ➤ To disseminate new technology. 	<ul style="list-style-type: none"> ➤ Two sets of semi-automatic hatchery under pilot project (grant) ➤ BDS by grant. ➤ Governmental various supports. 	<ul style="list-style-type: none"> ➤ Trial operation of semi-automatic hatchery under pilot project (grant). ➤ All expenses for trial operation will be born by KT. 	<ul style="list-style-type: none"> ➤ To strengthen small-scale farmers business. ➤ To introduce modern technologies for better profitability. ➤ The research development by BPTP, IPB will contribute farmers' income.

Table B.2.1 Feasibility of the Proposed Plan (Sigranala Indah, Kabupaten Cirebon)

Sigranala Indah (Number of members: 7)

Business model: Model for revival and new comer

Investment	Rupiah	Remarks
Total Investment (100% by soft loan and saving collateral equivalent to 5% by farmers)	66,000,000 (Collateral: Rp 3,300,000)	700 tails of pullets & 70 tails of male ducks. (100 pullets & 10 male duck for each member).
Operation & Sales Plan		
1 Production assumption		
Egg production: 70% of Female Layer produce eggs everyday for 300days $700 \times 0.7 = 490$ eggs/day $\times 300$ days = 147,000 eggs/year		
Fertile or Infertile		
Fertile egg: 70%, $147,000 \times 0.7 = 103,000$ eggs/year \rightarrow DOD		
Infertile egg: 30%, $147,000 \times 0.3 = 44,000$ eggs/year \rightarrow Salty egg		
DOD production		
Hatchery (Incubation): 70% of fertile egg become DOD, $103,000$ eggs/year $\times 0.7 = 72,000$ DOD 30% of fertile egg are failed (dead)		
Female or Male of DOD: 50% respectively		
Female DOD: $72,000$ DOD $\times 0.5 = 36,000$ /year		
Male DOD: $72,000$ DOD $\times 0.5 = 36,000$ /year		
2 Sales plan		
	Items	Rupiah
	Salty egg (Infertile)/year	35,200,000
	DOD (Female)/year	126,000,000
	DOD (Male)/year	54,000,000
	Culling duck after 1.5 years (Mortality: 5%) $770 \times 0.95/2$ years	5,760,000
	Total	220,960,000
3 Cost of production		
	Duck layer breeding (feed, medicine & labor)	72,080,000
	Salty egg production	16,372,000
	DOD production	54,889,600
	Depreciation	21,653,000
	Total	164,994,600
4 Gross profits		
	Profit Ratio	55,965,400
		25.3% (Gross profits)/Total Sales $\times 100$
5 Reimbursement		
	Reimburse soft loan in 5 years	13,200,000
		Rp 66,000,000/5 years
6 Net Profits for the 1st 5 years		
	(Gross profits) - (Reimbursement)	42,765,400
	Net Profits for the 1st 5 years	19.4%
	Income generation per member/year	6,109,343
		Net profits for each 7members
Cost Breakdown		
1 Feed & Breeding cost		
	Procurement of Duck Feed: 1,000 Rp/kg	46,200,000
	Medicine cost: 4,000 Rp/cc	3,080,000
	Stationary: 150,000 Rp/month	1,800,000
	Electric cost: 30,000 Rp/month	360,000
	Water cost: 20,000 Rp/month	240,000
	Labor cost	
	Manager: 1 person $\times @1,200,000/m$	12,000,000
	Transportation cost	2,400,000
	Sundry cost: 500,000 Rp/m	6,000,000
		Rp 1,000,000/m $\times 12m$
		Rp 200,000/m $\times 12m$
		Rp 500,000 $\times 12m$
	Total	72,080,000

Table B.2.1 Feasibility of the Proposed Plan (Sigranala Indah, Kabupaten Cirebon)

2	Salty egg production of 44,000 non-fertile eggs/year		
	Clay & Ash: 60kg for 5,000 eggs	52,800	44,000/5,000 x 60kg x Rp 100/kg
	Salt: 100kg for 30,000 eggs	44,000	44,000/30,000 x 100kg x Rp 300/kg
	Kerosene for Boiling: 1 liter for 250 eggs	475,200	44,000/250 x Rp 2,700
	Packaging cost: 1 case for 20 eggs	4,400,000	44,000/20 x Rp 2,000
	Transportation cost	1,800,000	Rp 150,000/m x 12m
	Labor including packaging work: 1 person	9,600,000	Rp 800,000/person x 12m
	Total	16,372,000	
3	Hatchery business for DOD production (103,000 fertile eggs/year and Incubation ratio is 70%)		
	Kerosene for lamp: 4,000 liter/250,000eggs	4,449,600	103,000/250,000 x Rp 2,700/liter
	Feed for DOD for max. 5days: 1kg/100tails	2,520,000	72,000/100 x Rp 3,500/kg
	Medicine & Vitamin for DOD for max.5 days Rp 100,000/5days for 10,000 DOD	720,000	72,000/10,000 x Rp 100,000
	Packaging cost: 1 box for 125tails	14,400,000	72,000/125 x Rp 25,000/box
	Transportation cost	3,600,000	Rp 300,000/m x 12m
	Auxiliary equipment: 1 lot	10,000,000	
	Labor including packaging works: 2 person	19,200,000	Rp 800,000 x 2 x 12m
	Total	54,889,600	
4	Depreciation		
	Layer duck: Period of 1.5 years:	14,933,000	Cost of Layer/1.5 years
	Other facility & equipment:	6,720,000	Rp 33,600,000/5 years
	Total	21,653,000	
5	Reimbursement		
	Reimburse soft loan in 5 years	13,200,000	Rp 66,000,000/5 years
6	Net Profits for the 1st 5 years		
	(Gross profits) - (Reimbursement)	42,765,400	
		19.4%	
	Income generation for each member/year	6,109,343	Net profits for each 7members

Note: The financing cost (interest) is not included in above calculation.

Table B.2.2 Break down of the Investment Plan, Sigranala Indah (Duck), Cirebon

No	Activity	Breakdown	Budget (Rp)	Note
1	Sigranala Indah			
1.	Investment plan			
a	Pullet ducks	700 tails x @30,000	21,000,000	7members * 100 layers
b	Male Ducks	70 tails x @20,000	1,400,000	
c	Duck houses & Cages	1 lot	20,000,000	For expansion of each duck houses, cages, etc
d	Pushcart	5 units x @500,000	2,500,000	
e	Auxiliary equipment		11,100,000	
f	Initial operation cost for labor, duck feed, medicine, stationary, etc.		10,000,000	
		Sub total	66,000,000	
2.	Guidance & Supervision			
a	Capacity Development & Monitoring by BDS/NGO		40,000,000	for 2 years
b	Administration service & monitoring by Dinas/Deptan		10,000,000	for 2 years
c	Office Running Cost		8,000,000	for 2 years
		Sub total	58,000,000	
		TOTAL	124,000,000	

Table B.3.1 Feasibility of the Proposed Plan (Bebek Jaya, Kabupaten Cirebon)

Bebek Jaya (Number of members: 20)

Business model: Model for expansion of business scale and renewal of technologies.

Investment	Rupiah	Remarks
Total Investment (100% by soft loan and saving collateral equivalent to 5% by farmers)	450,000,000 (Collateral: Rp 22,500,000)	3,700 female & 400 male layer; 20members x 185 female layers in av. and 400 male layer for 20 members.
Operation & Sales Plan		
1 Production assumption		
Egg production: 70% of Female Layer produce every day for 300days $3,700 \times 0.7 = 2,600$ eggs/day x 300 days = 780,000 eggs/year		
Fertile or Infertile		
Fertile egg: 70%, $780,000 \times 0.7 = 546,000$ eggs/year → Sale to Tigan Mekar & etc.		
Infertile egg: 30%, $780,000 \times 0.3 = 234,000$ eggs/year → Salty egg production & sales		
2 Sales plan		
	Rupiah	Remarks
Fertile egg/year	464,100,000	546,000eggs x Rp 850/egg
Salty egg (Infertile)/year	210,600,000	234,000eggs x Rp 900/egg
Culling duck after 1.5 years (mortality: 5%) 4,100 x 0.95/2 years	31,200,000	Rp 16,000 x 1,950 tails
Total	705,900,000	
3 Cost of production		
Layer duck breeding (feed, medicine & labor)	300,800,000	Break down is shown below
Salty egg production	56,523,000	Ditto
Depreciation	130,233,000	Ditto
Total	487,556,000	
4 Gross profits		
Profit Ratio	218,344,000	30.9% (Gross profits)/Total Sales x 100
5 Reimbursement of the soft loan		
	90,000,000	Rp 450,000,000/5 years
6 Net profit		
(Gross profits) - (Reimbursement)	128,344,000	
Net profit ratio	18.2%	
Income generation of each member/year	6,417,200	Net profits for each 20 members
Cost Break Down		
1 Layer duck breeding (feed, medicine & labor)		
Procurement of Duck Feed: Rp 1,000/kg	246,000,000	5kg/tail/month x 4,100tails x 12m
Medicine cost: Rp 4,000/cc	16,400,000	1.0 cc/tail/year x 4,100 tail
Stationary: Rp 500,000/month	6,000,000	Rp 500,000/m x 12m
Electric cost	0	To be paid by members individually
Water cost	0	Ditto
Manager & Administrator: 1 person	14,400,000	Rp 1,200,000/m x 12m
Labor is covered by individual member.	0	To be paid by members individually
Transportation cost	12,000,000	Rp 1,000,000 x 12m
Sundry cost Rp 500,000/month	6,000,000	Rp 500,000/m x 12m
Total	300,800,000	
2 Salty egg production of 234,000 infertile eggs/year		
Clay & Ash: 60kg for 5,000 eggs	280,800	234,000/5,000 x 60kg x Rp 100/kg
Salt: 100kg for 30,000 eggs	315,000	234,000/30,000 x 100kg x Rp 300/kg
Kerosene for Boiling: 1 liter for 250 eggs	2,527,200	234,000/250 x Rp 2,700
Packaging cost: 1 case for 20 eggs	23,400,000	234,000/20 x Rp 2,000
Transportation cost	12,000,000	Rp 1,000,000/m x 12m
Administration & Accounting	18,000,000	1 person x 12m x Rp 1,500,000
Labor is covered by individual farmers	0	
Total	56,523,000	
3 Depreciation		
Layer duck: Period of 1.5 years:	79,333,000	119,000,000(Layer cost)/1.5 years
Other facility & equipment:	50,900,000	Rp 254,500,000/5 years
Total	130,233,000	
4 Reimbursement		
Reimburse soft loan in 5 years	90,000,000	Rp 450,000,000/5 years
5 Net Profits for the 1st 5 years		
(Gross profits) - (Reimbursement)	128,344,000	by 20 members
Net profit ratio	18.2%	
Income generation for each member/year	6,417,200	Net profits for each member

Note: The financing cost (interest) is not included in above calculation.

Table B.3.2 Break down of the Investment Plan, Bebek Jaya (Duck), Cirebon

No	Activity	Breakdown	Budget (Rp)	Note
1. Investment plan				
a	Layer duck, Female	3,700 tails x @30,000	111,000,000	20members x @150 - 200 layers (185tails/member in
b	Layer duck, Male	400 tails x @20,000	8,000,000	
c	Duck houses & Cages	1 lot	150,000,000	For expansion of each duck houses, cages, etc
d	Water well & water installation	1 lot	10,000,000	
e	Bamboo fence	1 lot	12,000,000	
f	Expansion of existing Storage, hatchery houses		40,000,000	
g	Mixer machine for feed	1 unit	25,000,000	
h	Pushcart	10 units x @500,000	5,000,000	
I	Electricity installation	1 lot	2,500,000	
l	Auxiliary equipment		10,000,000	
k	Initial operation cost for labor, duck feed, medicine, electricity, stationary,		76,500,000	
		Sub total	450,000,000	
2. Guidance & Supervision				
a	Trial operation & Technical Assistance fee by IPB		80,000,000	Refer to the Break down
b	Capacity Development & Monitoring by BDS/NGO		74,000,000	for 2 years
c	Administration service & monitoring by Dinas/Deptan		10,000,000	for 2 years
d	Office Running Cost		10,000,000	for 2 years
		Sub total	174,000,000	
		TOTAL	624,000,000	
Note: Trial operation cost for Semi-automatic Hatchery with electric heater & moist control				
a	Semi-automatic hatchery machine(Incubator)	Capacity: 1,400 eggs/lot	50,000,000	Capacity: @200eggs x 7layers/unit
b	Electric cable works	1 lot	5,000,000	
c	Auxiliary works	1 lot	10,000,000	
d	Technical assistance fee by IPB, Bogor	1 lot	15,000,000	
		Total	80,000,000	

Table B.4.1 Feasibility of the Proposed Plan (Tigan Mekar, Kabupaten Cirebon)

Tigan Mekar (Number of members: 36)

Business model: Model for expansion of business scale and renewal of technologies.

Investment	Rupiah	Remarks
Total Investment (100% by soft loan and saving collateral equivalent to 5% by farmers)	550,000,000 (Collateral: Rp 27,500,000)	5,000 tails of pullets & 500 tails of male duck
Operation & Sales Plan		
1 Production assumption		
Egg production: 70% of Female Layer produce eggs everyday for 300days $5,000 \times 0.7 = 3,500$ eggs/day $\times 300$ days = 1,050,000 eggs/year		
Fertile or Infertile		
Fertile egg: 70%, $1,050,000 \times 0.7 = 735,000$ eggs/year → DOD		
Infertile egg: 30%, $1,050,000 \times 0.3 = 315,000$ eggs/year → Salty egg		
DOD production		
Hatchery (Incubation): 70% of fertile egg become DOD, $735,000$ eggs/year $\times 0.7 = 514,000$ DOD 30% of fertile egg are failed (dead)		
Female or Male of DOD: 50% respectively		
Female DOD: $514,000$ DOD $\times 0.5 = 257,000$ /year		
Male DOD: $514,000$ DOD $\times 0.5 = 257,000$ /year		
2 Sales plan		
	Items	Rupiah
	Salty egg (Non-fertile)/year	252,000,000
	DOD (Female)/year	899,500,000
	DOD (Male)/year	385,500,000
	Culling duck after 1.5 years (Mortality: 5%) $5,500 \times 0.95/2$ years	41,792,000
	Total	1,578,792,000
3 Cost of production		
	Salty egg production	131,595,000
	Duck layer breeding (feed, medicine & labor)	531,400,000
	DOD production	342,082,000
	Depreciation	181,667,000
	Total	1,186,744,000
4 Gross profits		
	Gross profits	392,048,000
	Profit Ratio	24.8% (Gross profits)/Total Sales $\times 100$
5 Reimbursement		
	Reimburse soft loan in 5 years	110,000,000
6 Net Profits for the 1st 5 years		
	(Gross profits) - (Reimbursement)	282,048,000
	Net Profits for the 1st 5 years	17.9%
	Income generation per member/year	7,834,667
Net profits for each 36members		
Cost Break Down		

Table B.4.1 Feasibility of the Proposed Plan (Tigan Mekar, Kabupaten Cirebon)

	Total	131,595,000	
2	Feed & Breeding cost		
	Procurement of Duck Feed: 1,000 Rp/kg	330,000,000	5kg/tail/month x 5,500 tails x 12m
	Medicine cost: 4,000 Rp/cc	22,000,000	1.0 cc/tail/year x 5,500 tails
	Stationary: 1,000,000 Rp/month	12,000,000	
	Electric cost: 200,000 Rp/month	2,400,000	
	Water cost: 150,000 Rp/month	1,800,000	
	Labor cost		
	Manager: 1 person x Rp 1,200,000/m	14,400,000	Rp 1,200,000/m x 12m
	Administration staff: 2 persons x @800,000	19,200,000	Rp 800,000/m x 2 x 12m
	Field staff: 6 person x @800,000	57,600,000	Rp 800,000/m x 6 x 12m
	Transportation cost	12,000,000	Rp 1,000,000/m x 12m
	Sundry cost: Rp 5,000,000/m	60,000,000	Rp 5,000,000 x 12m
	Total	531,400,000	
3	Hatchery business for DOD production (735,000 fertile eggs/year and 514,000 DOD)		
	Kerosene for lamp: 4,000 liter/250,000eggs	31,752,000	735,000/250,000 x Rp 2,700/liter
	Feed for DOD for max. 5days: 1kg/100tails	17,990,000	514,000/100 x Rp 3,500/kg
	Medicine & Vitamin for DOD for max.5 days	5,140,000	514,000/10,000 x Rp 100,000
	Rp 100,000/5days for 10,000 DOD		
	Packaging cost: 1 box for 125tails	102,800,000	514,000/125 x Rp 25,000/box
	Transportation cost	24,000,000	Rp 2,000,000/m x 12m
	Auxiliary equipment: 1 lot	50,000,000	
	Administration & Accounting: 1 person	14,400,000	Rp 1,200,000 x 12m
	Labor including packaging works: 10 person	96,000,000	Rp 800,000 x 10 x 12m
	Total	342,082,000	
4	Depreciation		
	Layer duck: Period of 1.5 years:	106,667,000	Cost of Layer/1.5 years
	Other facility & equipment:	75,000,000	Rp 375,000,000/5 years
	Total	181,667,000	
5	Reimbursement		
	Reimburse soft loan in 5 years	110,000,000	Rp 550,000,000/5 years
6	Net Profits for the 1st 5 years		
	(Gross profits) - (Reimbursement)	282,048,000	
		17.9%	
	Income generation per member/year	7,834,667	Net profits for each 36members

Note: The financing cost (interest) is not included in above calculation.

Table B.4.2 Break down of the Investment Plan, Tigan Mekar (Duck), Cirebon

No	Activity	Breakdown	Budget (Rp)	Note
1. Investment plan				
a	Layer duck, Female	5,000 tails x @30,000	150,000,000	
b	Layer duck, Male	500 tails x @20,000	10,000,000	
c	Cage for layer duck	10x10 meter x 200,000/m ² x 10units	200,000,000	1 room for 550 layers
d	Cage for DOD	100 units x @200,000	20,000,000	
e	Cage for breeding	10x10 meter x 200,000 x 2units	40,000,000	
f	Water well and water installation	2 wells x 5,000,000	10,000,000	
g	Bamboo fence	500 meter x 2 meter H x 4units	12,000,000	@3,000,000
h	Storage for duck feed	4x6 meter x @500,000	12,000,000	
I	Storage for egg	4x4 meter x @500,000	12,000,000	
l	Mixer machine for feed	1 unit	25,000,000	
k	Hatchery house	4x8 meter x @500,000	16,000,000	
l	Electricity installation	1 lot	2,500,000	
m	Pushcart	5 units x @500,000	2,500,000	
n	Ash, Cray and salt for salty egg production		500,000	
o	Trial marketing cost for 40 days old Male duck	1 lot	10,000,000	
p	Auxiliary equipment		12,500,000	
q	Initial operation cost for land rental fee, labor, duck feed, medicine, electricity,	1 lot	15,000,000	
		Sub total	550,000,000	
2. Guidance & Supervision				
a	Trial operation & Technical Assistance fee by IPB		90,000,000	Refer to the Break down
b	Capacity Development & Monitoring by BDS/NGO		100,000,000	for 2 years
c	Administration service & monitoring by Dinas/Deptan		12,000,000	for 2 years
d	Office Running Cost		10,000,000	for 2 years
		Sub total	212,000,000	
		TOTAL	762,000,000	

Note: Trial operation cost for Semi-automatic Hatchery with electric heater & moist control				
a	Semi-automatic hatchery	Capacity: 1,400	50,000,000	Capacity: @200eggs x
b	Electric cable works	1 lot	5,000,000	
c	Auxiliary works	1 lot	10,000,000	
d	Technical assistance fee by IPB, Bogor	1 lot	25,000,000	
		Total	90,000,000	

Table B.5.1 Feasibility of the Proposed Plan (Mitra Binangkit, Kabupaten Majalengka)

KT Mitra Binangkit (Number of members: 37 but 30 members will participate this project)

Business model: Cottage level food processing and marketing of traditional commodities

1. Finance plan		Rupiah	Remark
	Total investment amount	45,000,000	
	100% by Soft loan	45,000,000	
	Saving collateral (5%)	2,250,000	
2. Investment			
	Equipment & tools	26,200,000	Refer to the details
	Initial operation cost for material and fuel	18,800,000	
	Total	45,000,000	
3. Sales Plan			
	Snacks (keremes, keripik, ragining, tempe, etc)	375,000,000	15,000packs/month x 10month Rp 2,500/pack
4. Operation Cost			
	4.1 Raw material: Fresh sweet potato, sugar, tempe, seasoning and cooking oil	84,000,000	Rp 7,000,000/month in av.
	Electricity: 3kW x 10hrs x 200 days	12,000,000	Unit price: Rp 2,000/kW
	Labor cost of members: 15 persons in av./month	117,000,000	Wages Rp 650,000/person
	Spare parts for equipment: 5% of equipment price	1,310,000	Rp 26,200,000x0.05
	Packing material: Plastic polly bag of 5 kg	6,600,000	Rp 550,000/month
	Transportation & delivery cost for 12 month	12,000,000	Rp 1,000,000/month
	Sundry cost	6,000,000	Rp 500,000/month
	Total	238,910,000	
	4-2. Depreciation		
	Equipment & tools for 5 years	5,240,000	Rp 26,200,000/5years
	Building	0	
	4-3 Total operation cost	244,150,000	
5. Gross Profit Plan			
	(Sales amount)-(Operation cost + Depreciation)	130,850,000	
	Profit ratio : Gross profit/Sales amount	34.9%	
6. Reimbursement			
	Reimbursement of soft loan by 5 years	9,000,000	Rp 45,000,000/5 years
7. Net profit for the 1st 5 years			
	(Gross profit) - (Reimbursement)	121,850,000	
	Net profit ratio	32.5%	(Net profit)/(Sales amount)
	Net profit per member (labor costs are included already)	4,061,667	(Net profit)/30 members

Note: The financing cost (interest) is not included in above calculation.

Table B.5.2 Break down of the Investment Plan, Mitra Binagkit (Sweet Potato), Majalengka

No	Activity	Breakdown	Budget (Rp)	Note
1. Investment plan				
a	Milling Machine	Milling machine, engine driven	11,000,000	
b	Kerosene Burner, Pressure type (<i>Joras</i>)	8 units x @350,000	2,800,000	
c	Molding for Keremes, etc	20 units x @400,000	8,000,000	
d	Scales	5 units x @200,000	1,000,000	
e	Gas cooker and gas cylinder	2 units x @700,000	1,400,000	@700,000
f	Other axially such as Stove, Knife, Cutting board	1 lot	2,000,000	
g	Initial operation cost for material and fuel	1 lot	18,800,000	Calculated as 20% of KT's requirement for 1 year.
		Sub-total	45,000,000	
2. Guidance & Supervision				
a	Capacity Development & Monitoring by BDS/NGO		41,500,000	for 2 years
b	Administration service & monitoring by Dinas/Deptan		7,000,000	for 2 years
c	Office Running Cost		3,000,000	for 2 years
		Sub total	51,500,000	
		TOTAL	96,500,000	

Table B.6.1 Feasibility of the Proposed Plan (Delima II, Kabupaten Majalengka)

KT Delima II (Number of members: 16)

Business model: Cottage level food processing and marketing

1. Finance plan		Rupiah	Remark
	Total investment amount	45,000,000	
	100% by Soft loan	45,000,000	
	Saving collateral (5%)	2,250,000	
2. Investment			
	Equipment & tools	31,000,000	Refer to the details
	Initial operation cost for material and fuel	14,000,000	
	Total	45,000,000	
3. Sales Plan			
	Snacks (keremes, keripik, ragining, tempe, etc)	600,000,000	Rp 50,000,000/m in av.
4. Operation Cost			
	4-1 Raw material per month:		Fresh sweet potato, sugar, oil, etc.
	a. Cassava flour: 600kg/month	2,100,000	Rp 3,500/kg
	b. Wheat flour: 1,000kg/month	4,000,000	Rp 4,000/kg
	c. Sugar: 250kg/month	1,750,000	Rp 7,000/kg
	d. Rice: 350kg/month	2,100,000	Rp 6,000/kg
	e. Brown sugar: 120kg/month	564,000	Rp 4,700/kg
	f. Cooking oil: 700kg/month	4,200,000	Rp 6,000/kg
	g. Sweet potato: 1,800kg/month	1,800,000	Rp 1,000/kg
	h. Banana: 1,800kg/month	720,000	Rp 400/kg
	I. Cassava: 3,600kg/month	1,080,000	Rp 300/kg
	j. Firewood: 1,800pcs/month	1,800,000	Rp 1,000/piece
	(Sub-total per month)	20,114,000	
	Sub-total/year for raw materials	241,368,000	
	Electricity & Tel	6,000,000	Rp 500,000/month
	Labor cost of members: 16 persons in av./month	124,800,000	Wages Rp 650,000/person
	Spare parts for equipment: 5% of equipment price	1,310,000	Rp 26,200,000x0.05
	Packing material: Plastic polly bag of 5 kg	6,600,000	Rp 550,000/month x 12m
	Transportation & delivery cost for 12 month	12,000,000	Rp 1,000,000/month
	Sundry cost	6,000,000	Rp 500,000/month
	Sub-total per year	156,710,000	
	Total/year	398,078,000	
	4-2. Depreciation		
	Equipment & tools for 5 years	6,200,000	Rp 31,000,000/5years
	Building	0	
	4-3. Total operation cost	404,278,000	
5. Gross Profit Plan			
	(Income)-(Operation cost + Depreciation)	195,722,000	
	Profit ratio : Gross profit/Sales amount	32.6%	
7. Reimbursement			
	Reimbursement of soft loan by 5 years	9,000,000	Rp 45,000,000/5 years
8. Net profit for the 1st 5 years			
	(Gross profit) - (Reimbursement)	186,722,000	
	Net profit ratio	31.1%	(Net profit)/(Sales amount)
	Net profit per member (labor costs are included already)	11,670,125	(Net profit)/16members

Note: The financing cost (interest) is not included in above calculation.

Table B.6.2 Break down of the Investment Plan, Delma II (Sweet Potato), Majalengka

No	Activity	Breakdown	Budget (Rp)	Note
1. Investment Plan				
a	Motorcycle for products transportation	90cc	20,000,000	
b	Large cooking pan, Rp 3,000,000/unit	Diameter 1,000mm, 2 units	6,000,000	
c	Auxiliary such as Stove, Knife, Cutting board	1 lot	5,000,000	
d	Initial operation cost for material and fuel	1 lot	14,000,000	
		Sub-total	45,000,000	
2. Guidance & Supervision				
a	Capacity Development & Monitoring by BDS/NGO		41,500,000	for 2 years
b	Administration service & monitoring by Dinas/Deptan		7,000,000	for 2 years
c	Office Running Cost		3,000,000	for 2 years
		Sub total	51,500,000	
		TOTAL	96,500,000	

Table B.7.1 Feasibility of the Proposed Plan (Andayarasa, Kabupaten Kuningan)**KT Andayarasa (Number of members: 25)**

Business model: Primary processing and marketing

Annual production of dried chips for flour: 300 ton (1,000 ton of Fresh Sweet Potato as raw material)

1. Finance plan		Rupiah	Remark
Total investment amount		200,000,000	
100% by Soft loan		200,000,000	
Saving collateral (5%)		10,000,000	
2. Investment			
Construction of workshop & storage		36,000,000	6x10M = 60M2
Equipment		154,000,000	
Consumable (packaging material, etc) for trial stage		10,000,000	
	Total	200,000,000	
3. Sales plan			
Sales of dried chips		810,000,000	Break down is shown below.
300ton/year x Rp 2,700/kg x 1000			300ton/200days=1.5ton/day
4. Operation Cost			
4-1. Raw material		500,000,000	Break down is shown below.
Operation cost (electricity & Fire wood)		10,400,000	
Labor cost		0	
Spare parts for equipment		7,700,000	
Packing material (50kg): 1,000bags x @5,000/bag		3,000,000	500ton/0.05, PP Bag
Transportation		20,000,000	
Consumable & miscellaneous		8,100,000	
	Sub-Total	549,200,000	
4-2. Depreciation cost			
Building for 20 years		1,800,000	Rp 36,000,000/20 years
Equipment for 5 years		30,800,000	Rp 154,000,000/5 years
	Sub-Total	32,600,000	
4-3 Total operation cost		581,800,000	
5. Gross profits			
		228,200,000	(Sales amount) - (Operation cost) - (Depreciation)
Profit ratio		28.2%	(Gross profit)/(Sales amount)
6. Reimbursement			
		40,000,000	Rp 200,000,000/5years
Reimbursement of soft loan by 5 years			
7. Net profit for the 1st 5 years			
(Gross profit) - (Reimbursement)		188,200,000	
Net profit ratio		23.2%	
Income generation per member/year		7,528,000	Net profits for each members.
(25 members)			Labor cost is included.
Break down of Operation Cost			
1 Raw material and fuel			
Fresh Sweet Potato: 1,000ton (low grade)		500,000,000	
Unit cost: Rp 500/kg			(1,000ton/200day = 5ton/day)
2 Fire wood: 6,000Rp/dayx4unitsx200days		4,800,000	2M3/unit/day x 4 units
			(Rp 3,000/M3)
Electricity: 2.8kWx10Hrx200daysxRp 1,000/kW		5,600,000	0.35kWx2/unitx4units = 2.8kW
Note: water cost deems as free of charge			10Hr/day*200days/year
	Sub-Total	10,400,000	
3 Labor cost		0	To be covered by all members
Break down of labors			
a. Manager x 1			
b. Assistant manager x 1			
c. Accountant x 1			
d. Washing & slicing works x 10			
e. Drying works x 4			
f. Quality control & Packaging works x 4			
g. Other works (cleaning, loading, etc) x 4			
4 Spare parts: 5% of equipment cost		7,700,000	Rp 154,000,000 x 0.05
5 Packing material (PP bag, 50kg):1,000 x @5,000		3,000,000	300ton/0.05 x 10%
6 Transportation: 200days x Rp 100,000/day		20,000,000	From KT to Company
7 Consumable & miscellaneous: 1% of sales amount		8,100,000	Rp 810,000,000 x 0.01
	Total	38,800,000	

Note: The financing cost (interest) is not included in above calculation.

Table B.7.2 Break down of the Investment Plan, Andayarasa (Sweet Potato), Kuningan

No	Activity	Breakdown	Budget (Rp)	Note
1. Investment plan				
a	Working storage	60M2(6x10M) x 600,000/m2	36,000,000	include foundation works
b	Slicing machine	Manual operation, 4units x @3,500,000	14,000,000	Capacity: 25kg/hour
c	Solar Dryer	IPB type, 4 units x @25,000,000	100,000,000	Motor: 350Wot x 2units per one Dryer
d	Moisture Meter	For dried chips, 1 unit	10,000,000	
e	Washing & cleaning equipment	Brush, Knife,	10,000,000	
f	Fencing, water supply & drainage	1 lot	10,000,000	
g	Table Scale, Max 100kg x 2 units	For raw material and dried chips each	10,000,000	@5,000,000Rp
h	Packaging material and axially	1 lot	10,000,000	
		Sub Total	200,000,000	
2. Guidance & Supervision				
a	Technical Assistance fee by IPB, BPTP		50,000,000	for 1 year
b	Capacity Development & Monitoring by BDS/NGO		83,000,000	for 2 years
c	Administration service & monitoring by Dinas/Deptan		15,000,000	for 2 years
d	Office Running Cost		5,000,000	for 2 years
		Sub total	153,000,000	
		TOTAL	353,000,000	

Table B.8.1 Feasibility of the Proposed Plan (Bina Karya, Kabupaten Kuningan)**KT Bina Karya (Number of members: 20)**

Business model: Cottage level food processing and marketing (Specialized product/Sambal sauce)

1. Finance plan		Rupiah	Remark
	Total investment amount	67,000,000	
	100% by Soft loan	67,000,000	
	Saving collateral (5%)	3,350,000	
2. Investment			
	Equipment & tools	50,000,000	Refer to the details
	Initial operation cost for material and fuel	17,000,000	
	Total	67,000,000	
3. Sales plan			
	30,000 Bottles/month, Ex-factory price: Rp 1,000	360,000,000	(Retail price: Rp 1,200/bottle)
4. Operation Cost			
	4-1 Raw material for 1 year operation		Sweet potato, chili, etc.
	a. Sweet potato: 9,000kg/month	64,800,000	Rp 600/kg
	b. Cassava flour: 150kg/month	3,600,000	Rp 2,000/kg
	c. Chili: 200kg/month	14,400,000	Rp 6,000/kg
	d. Salt: 300kg/month	1,800,000	Rp 500/kg
	e. Seasoning such as vinegar & garlic: 1 lot	21,600,000	Rp 1,800,000/month
	f. Kerosene: 600 liter/month	19,440,000	Rp 2,700/liter
	g. Plastic bottle: 15,000 bottles/month	36,000,000	Rp 200/pce
	h. Glass bottle, second hand: 15,000 pcs/month	54,000,000	Rp 300/pce
	I. Wooden box: 600pcs/month	14,400,000	Rp 2,000/box
	j. Auxiliary materials: 1 lot	12,000,000	Rp 1,000,000/month
	k. Labor: 50 mandays/month x 12 months	12,000,000	Rp 20,000/day
	Sub-Total	254,040,000	
	4-2. Depreciation		
	Equipment for 5 years	4,600,000	Rp 23,000,000/5 years
	Storage for 20 years	1,350,000	Rp 27,000,000/20 years
	SubTotal	5,950,000	
	4-3. Total operation cost	259,990,000	
5. Gross Profit			
	(Sales amount)-(Operation cost + Depreciation)	100,010,000	
	Profit ratio:	27.8%	
6. Reimbursement			
	Reimbursement of soft loan by 5 years	13,400,000	Rp 67,000,000/5 years
7. Net profit			
	(Gross profit) - (Reimbursement)	86,610,000	
	Net profit ratio	24.1%	
	Net profit per member	4,330,500	(Net profit)/20 members

Note: The financing cost (interest) is not included in above calculation.

Table B.8.2 Break down of the Investment Plan, Bina Karya (Sweet Potato), Kuningan

No	Activity	Breakdown	Budget (Rp)	Note
2-1	Investment plan			
a	Rehabilitation of Raw Material storage		5,000,000	
b	Rehabilitation of Kitchen		8,000,000	
c	Rehabilitation of Equipment storage		5,000,000	
d	Construction product storage		6,000,000	
e	Construction Bottle Cleaning room		3,000,000	
f	Box and Bottles		7,500,000	
g	Cooking Drum and Stoves		1,000,000	
h	Plastic Drum and Basin		1,500,000	
I	Chiller		5,000,000	
j	Chili Blender		4,000,000	
k	Auxiliary		4,000,000	
		Sub-total	50,000,000	
2-2	Operation cost for initial stage such as		17,000,000	
	Sweet Potato, Cassava flour, chili, salt, seasoning, kerosene, plastic packaging, transportation			
		Total	67,000,000	
2-3	Guidance & Supervision			
a	Capacity Development & Monitoring by BDS/NGO		41,000,000	for 2 years
b	Administration service & monitoring by Dinas/Deptan		14,000,000	for 2 years
c	Office Running Cost		3,000,000	for 2 years
		Sub total	58,000,000	
		TOTAL	125,000,000	

Table B.9.1 Feasibility of the Proposed Plan (Linggasari II, Kabupaten Kuningan)

KT Lingga Sari II (Number of members: 20)

Business model: Cottage level food processing and marketing (Specialized product/Sweet potato Ice Cream)

1. Finance plan		Rupiah	Remark
Total investment amount		43,000,000	
100% by Soft loan		43,000,000	
Saving collateral (5%)		2,150,000	
2. Investment			
Equipment & tools		37,700,000	Refer to the details
Initial operation cost for material and fuel		5,300,000	
	Total	43,000,000	
3. Sales Plan			
	Ice Cream: 1,000 cups/week, 50,000cups/years	90,000,000	Rp 1,800/cup, ex-factory.
4. Operation Cost			
4-1 Raw material for 1,000 cups of Ice Cream: Sweet potato flour, sugar, softener, etc.			
a. Softener (<i>Pelembut</i>): 40 packs		400,000	Rp 10,000/pack
b. Wheat sugar: 20kg		120,000	Rp 6,000/kg
c. Sweet potato flour: 10kg		40,000	Rp 4,000/kg
d. Fragrance: 5 pieces		20,000	Rp 4,000/pce
e. Mug and spoon: 20 packs		100,000	Rp 5,000/pack
	Sub-total for 1,000 cups of ice cream per week	680,000	
	Total for 50,000 cups/year	34,000,000	1,000 cups/week 50,000 cups/year
Production cost for 1,000 cups			
a. Labor cost: 5 person x Rp 20,000/day		100,000	
b. Marketing cost: 2 person x Rp 20,000/day		40,000	
c. Electricity cost for cooling machine		20,000	for 1,000 cups
	Sub-total for 1,000 cups of ice cream per week	160,000	
	Total for 50,000 cups/year	8,000,000	
Transportation & delivery cost for 1 year			
		2,400,000	Rp 200,000/month
Sundry cost			
		2,400,000	Rp 200,000/month
	Sub-total	4,800,000	
	Total of 4-1	46,800,000	
4-2. Depreciation			
Equipment for 5 years		5,540,000	Rp 27,700,000/5years
Building		500,000	Rp 10,000,000/20years
	Sub-total	6,040,000	
4-3 Total operation cost			
		52,840,000	
5. Gross Profit			
	(Sales amount)-(Operation cost + Depreciation)	37,160,000	
	Profit ratio : Gross profit/Sales amount	41.3%	
6. Reimbursement			
	Reimbursement of soft loan by 5 years	8,600,000	Rp 43,000,000/5 years
7. Net profit			
	(Gross profit) - (Reimbursement)	28,560,000	
	Net profit ratio	31.7%	
	Net profit per member	1,428,000	(Net profit)/20 members

Note: The financing cost (interest) is not included in above calculation.

Table B.9.2 Break down of the Investment Plan, Lingga Sari II (Sweet Potato), Kuningan

No	Activity	breakdown	Budget (Rp)	Note
1. Investment plan				
a	Ice Box for production, 3 boxes	@900,000	2,700,000	
b	Freezer, 4 units	@1,500,000	6,000,000	
c	Blender, 1 unit		1,000,000	
d	Mixer, 1 unit		1,000,000	
e	Motorcycle for marketing, 1 unit	50cc	12,000,000	
f	Rehabilitation of Kitchen and storage		10,000,000	
g	Auxiliary		5,000,000	
		Sub-total	37,700,000	
2. Operation cost for initial stage such as				
	Sweet Potato, Sugar, salt, seasoning,		5,300,000	
	kerosene, plastic packaging, transportation			
		Total	43,000,000	
3. Guidance & Supervision				
a	Capacity Development & Monitoring by BDS/NGO		41,000,000	for 2 years
b	Administration service & monitoring by Dinas/Deptan		14,000,000	for 2 years
c	Office Running Cost		3,000,000	for 2 years
		Sub total	58,000,000	
		TOTAL	101,000,000	

Table B.10.1 Feasibility of the Proposed Plan (Makmur Jaya, Kabupaten Kediri)**KT Makmur Jaya (Number of members: total 99 but 45 members will participate this project)**

Business model: Fruits processing and marketing (Dry Fruits processing)

1. Investment		Rupiah	Remarks
Total Investment		200,000,000	*Renovation of warehouse
Loan amount		40,000,000	*Fruits dryer, washing/ peeling/ sweetening
Saving collateral		10,000,000	equipment, packing machine, etc.
(This is a pilot project, 80% of the investment will be covered by subsidy and 20% is covered by soft loan.)			
Operation & Sales Plan			
1 Production assumption			
Dried mango production: 0.4kg of sliced fresh mango from 1 kg of mango fruits			
Moisture contents of fresh mango: 80% and dried mango is 20%			
100kg of sliced fresh mango x (100-80)/(100-20) = 25kg of dried mango (25.0%)			
100kg fresh mango become: 100 x 0.4 x 0.25 = 10.0 kg (10%) of dried mango chips			
Sales price of dried mango, Ex-factory: Rp 35,000/kg			
Production capacity (Dryer capacity): 600kg/lot of sliced fresh mango or 1,500kg of fresh mango/day. Drying time requires 9 - 11 hours for 1 lot.			
1,500kg/day x 100days/year: 150ton/year of fresh mango will be dried then 15 ton of dried mango chips will be produced.			
Good quality fresh mango price: Rp 10,000/kg (Rp 1,000,000/ton)			
2 Sales plan			
	Items	Rupiah	Remarks
	Annual production: 150 ton of fresh mango x 0.1 x 1,000 = 15,000kg of dried mango chips.	600,000,000	15,000kg x Rp 40,000/kg
3 Cost of production			
3-1 Material and labors			
	Fresh mango, 150 ton/year	150,000,000	150ton x 1,000 x Rp 10,000/kg
	Kerosene: Rp 2,700/liter, 100 days operation	13,500,000	1 liter for 12 kg of sliced mango
	Sugar: 1 kg of sugar for 100 kg of sliced mango	42,000,000	Rp 7,000/kg x 6,000kg/100 x 100 days
	Materials (plastic bags, chemical, etc.)	28,200,000	Rp 2,000 for 1 kg of dried mango chips
	Packaging: Rp 2,000 for 1 kg of dried mango chips	30,000,000	Rp 2,000 x 15,000kg
	Electricity: Rp 1,000 for 1 kg of dried mango chips	15,000,000	Rp 1,000 x 15,000kg
	Water for syrup: Rp 1,000 for 1kg of dried chips	15,000,000	Rp 1,000 x 15,000kg
	Labors	(113,200,000)	
	Management: 1 person for 4 months	4,000,000	Rp 1,000,000/month x 4 month
	Slicing works: 30 person/day for 3.5 months	68,250,000	Rp 650,000 x 30 x 3.5 months
	Tray preparation: 10 person/day for 3.5 months	22,750,000	Rp 650,000 x 10 x 3.5 months
	Mango Drying: 3 person/day for 3.5 months	6,825,000	Rp 650,000 x 3 x 3.5 months
	Packaging: 5 person/day for 3.5 months	11,375,000	Rp 650,000 x 5 x 3.5 months
	Transportation cost for 4 months	55,000,000	Rp 500,000 X 110 days
	Miscellaneous	23,095,000	5% of the total cost (Rp 461,900,000)
	Sub-Total	484,995,000	
3-2 Depreciation			
	Equipment price for 5 years for 6months/year	11,000,000	Rp 110,000,000/5 years x 1/2
	Building for 20 years for 6 months/year	2,000,000	Rp 80,000,000/20 years x 1/2
	Sub-Total	13,000,000	
	3-3 Total operation cost	497,995,000	
4 Gross profits			
	Gross profits	102,005,000	
	Profit Ratio	17.0%	(Gross profits)/ (Total Sales)
5 Reimbursement of the soft loan for 6 months/year			
		4,000,000	Rp 40,000,000/5years x 1/2
6 Net Profits			
	(Gross profits) - (Depreciation cost) - (Reimbursement)	98,005,000	
	Net profits ratio	16.3%	
	Income generation per member for 6 months/year	2,177,889	Net profits for each 45 members

Note: The financing cost (interest) is not included in above calculation.

Table B.10.2 Break down of the Investment Plan, Makmur Jaya (Mango), Kediri

No	Activity	Breakdown	Budget (Rp)	Note
1 Investment Plan				
a	Renovation of existing warehouse for factory	20x10M x @400,000/M2	80,000,000	Include storage for raw material &
b	Basic equipment for	1 lot	20,000,000	
c	Fruit Dryer complete with Kerosene Burner, Fan	1 set	60,000,000	
d	Packaging equipment	2 sets	10,000,000	
e	Printing cost	1 set	10,000,000	
f	Auxiliary equipment	1 set	5,000,000	
g	Electric Installation	1 lot	5,000,000	
h	Initial operation cost for trial production/sales advertising, etc.	1 lot	10,000,000	Supply to REI
		Sub total	200,000,000	
2 Guidance & Supervision				
a	Technical Assistance fee by Brawijaya/BPTP		30,000,000	for 2 years
b	Capacity Development & Monitoring by BDS/NGO		36,000,000	for 2 years
c	Administration service & monitoring by Dinas/Deptan		10,000,000	for 2 years
d	Office Running Cost		5,000,000	for 2 years
		Sub total	81,000,000	
		TOTAL	281,000,000	

Table B.11.1 Feasibility of the Proposed Plan (Budidaya, Kabupaten Kediri)

KT Budidaya (Number of members: 160 but 45 members will participate this project)

Business model: Fruits processing and marketing (Juice/Puree, etc.)

1. Investment		Rupiah	Remarks
Total Investment		191,000,000	*Renovation of warehouse
Loan amount		40,000,000	*Pulping machines, pasteurizing machine, packing machine, etc.
Saving collateral		10,000,000	
(This is a pilot project, 80% of the investment will be covered by grant and 20% is covered by soft loan.)			
Operation & Sales Plan			
1	Production assumption		
	Puree production: 1 kg of Mango become 0.4 liter of		
	Juice production: 1 liter of Mango puree become 2 liters of juice		
	1 kg of mango can produce 0.8 liter of juice (0.4 x 2)		
	: 1kg of mango can produce 3.3 pcs of 240ml plastic cups of juice		
	Sales price: Rp 1,200/ 240ml plastic cup (Ex-factory)		
	Production capacity: 200kg/hr of fresh mango (around 700pcs of fresh mango)		
	or 1,000kg of fresh mango/day		
	1,000kg/day x 100days/year: 100ton/year		
	Purchase price of low grade fresh mango: Rp 600/kg (Rp 600,000/ton)		
2	Sales plan		
	Items	Rupiah	Remarks
	Annual production: 100 ton of fresh mango x 3.3 x 1,000		
	= 330,000 cups of 240 ml at Rp 1,200/cup	396,000,000	330,000 x Rp 1,200/cup (Ex-factory price)
3	Cost of production		
	3-1 Material and labors		
	Fresh mango (low grade), 100 ton/year	60,000,000	100 ton x 1,000 x Rp 600
	Cup & seals: Rp 125 x 330,000cups	41,250,000	Plastic cup: Rp 110, Seal: Rp 15/pce
	Electricity: Rp 50/cup of 240ml	16,500,000	330,000 cups x Rp 50
	Water purification: Rp 100/cup	33,000,000	330,000 cups x Rp 100
	Fuel for pasteurizing: Rp 30/cup	9,900,000	330,000 x Rp 30
	Labors	(83,625,000)	
	Management: 1 person for 4 months	4,000,000	Rp 1,000,000/month x 4 months
	Slicing works: 20 persons/day for 3.5 months	45,500,000	Rp 650,000/month x 3.5 months
	Juice production: 5 persons/day for 3.5 months	11,375,000	Rp 650,000/month x 3.5 months
	Packaging work: 10 persons/day for 3.5 months	22,750,000	Rp 650,000/month x 3.5 months
	Transportation cost	22,000,000	Rp 200,000 x 110 days
	Miscellaneous	13,313,750	5% of the production cost (Rp 266,275,000)
	Sub-Total	279,588,750	
	3-2 Depreciation		
	Equipment price for 5 years for 6 months/year	9,000,000	Rp 90,000,000/5 years x 1/2
	Building for 20 years for 6 months/year	2,000,000	Rp 80,000,000/20 years x 1/2
	Sub-Total	11,000,000	
	3-3 Total operation cost		
		290,588,750	
4	Gross profits of mango juice production (4 months)		
		105,411,250	
	Profit Ratio	26.6%	(Gross profits)/Total Sales
6	Reimbursement of the soft loan for 6 months/year		
		4,000,000	Rp 40,000,000/5 years x 1/2
7	Net Profits		
	(Gross profits) - (Depreciation + Reimbursement)	101,411,250	
	Net profit ratio	25.6%	
	Income generation per member/ 6 months	3,380,375	Net profit for each 30 members

Note: The financing cost (interest) is not included in above calculation.

Table B.11.2 Break down of the Investment Plan, Budidaya (Mango), Kediri

No	Activity	Breakdown	Budget (Rp)	Note
1. Investment Plan				
a	Renovation of existing warehouse for factory	10x20M x @400,000/M2	80,000,000	Include storage for raw material &
b	Basic equipment for Washing/Peeling	1 lot	10,000,000	
c	Pulping equipment (Pulper/Juicer)	1 set	10,000,000	
d	Pasteurizing facility	1 set	30,000,000	
e	Packaging equipment	2 sets	10,000,000	
f	Printing cost	1 set	10,000,000	
g	Auxiliary equipment	1 set	5,000,000	
h	Electric Installation	1 lot	15,000,000	
I	Initial operation cost for trial production/sales advertising, etc.	1 lot	21,000,000	
		Sub total	191,000,000	
2. Guidance & Supervision				
a	Technical Assistance fee by		30,000,000	for 2 years
b	Capacity Development & Monitoring by BDS/NGO		36,000,000	for 2 years
c	Administration service & monitoring by Dinas/Deptan		10,000,000	for 2 years
d	Office Running Cost		5,000,000	for 2 years
		Sub total	81,000,000	
		TOTAL	272,000,000	

Table B.12.1 Feasibility of the Proposed Plan (Karya Tani, Kabupaten Mojokerto)

Karya Tani (member: 11 persos)

Business model: Expansion of business scale

Investment	Rupiah	Remarks
Total Investment (100% by soft loan and saving collateral equivalent to 5% by farmers)	190,000,000 (Collateral: Rp 9,500,000)	1,200 tails of layer ducks (@100 pullets /member, total 1,100 pullets and 100 male ducks) for DOD production and facility.
Operation & Sales Plan		
1 Production assumption		
(1) DOD production & fresh egg sales		
Egg production: 70% of Female Layer produce eggs everyday for 300day		
$1,100 \times 0.7 = 770 \text{ eggs/day} \times 300 \text{ days} = 231,000 \text{ eggs/year}$		
Fertile or Infertile		
Fertile egg: 70%, $231,000 \times 0.7 = 161,700 \text{ eggs/year} \rightarrow \text{Hatchery/DOD}$		
Infertile egg: 30%, $231,000 \times 0.3 = 6,930 \text{ eggs/year} \rightarrow \text{Egg sales}$		
DOD production		
Hatchery (Incubation): 70% of fertile egg become DOD, $161,700 \text{ eggs/year} \times 0.7 = 113,190 \text{ DOD}$		
30% of fertile egg are failed (dead)		
Both Female and Male DOD will be raised for meat duck sales.		
(2) Meat duck breeding from own DOD		
To supply 40 days old ducks as a meat duck at Rp 9,500/tail.		
The mortality deems as 5% of DOD. $113,190 \text{ DOD} \times 0.95 = 107,530 \text{ meat duck production per year.}$		
2 Sales plan		
Items	Rupiah	Remarks
Meat Duck (40 days old) from own DOD	1,021,535,000	107,530 meat duck x Rp 9,500/tail
Egg sale (infertile)	4,851,000	6,930 eggs x Rp 700
Culling duck after 1.5 years (Mortality: 5%) $1,200 \times 0.95/2 \text{ years} = 570 \text{ tails}$	9,120,000	570 tails x Rp 16,000/tail
Total	1,035,506,000	
3 Cost of production		
Duck layer breeding (feed, medicine & labor)	136,800,000	Break down is shown below
DOD production	124,453,190	Ditto
Meat duck breeding for own DOD	474,555,866	Ditto
Depreciation	45,533,000	Ditto
Total	781,342,056	
4 Gross profits	254,163,944	
5 Reimbursement of the soft loan by 5 years	38,000,000	Rp 190,000,000/5years
6 Net profits: Gross profit - Reimbursement	216,163,944	For the initial 5 years.
Profit Ratio	20.9%	(Gross profits)/Total Sales
Income generation per member/year	19,651,268	Net profits for each 11 members
Cost Break Down		
1 Duck layer breeding (feed, medicine & labor) for 1,200 tails		
Procurement of Duck Feed: 1,000 Rp/kg	72,000,000	5kg/tail/month x 1,200 tails x 12m
Medicine cost: 4,000 Rp/cc	4,800,000	1.0 cc/tail/year x 1,200tails
Stationary: 500,000 Rp/month	6,000,000	
Electric cost: 200,000 Rp/month	2,400,000	
Water cost: 500,000 Rp/month	6,000,000	
Labor cost		
Manager: 1 person x Rp 1,000,000/m	12,000,000	Rp 1,000,000/m x 12m
Administration staff: 1 person x @800,000	9,600,000	Rp 800,000/m x 1 x 12m
Field labor is covered by individual member	0	
Transportation cost	12,000,000	Rp 1,000,000/m x 12m
Sundry cost:	12,000,000	Rp 1,000,000 x 12m
Total	136,800,000	
2 DOD production (Hatchery works)		
Kerosene for lamp: 4,000 liter/250,000eggs	6,985,440	161,700/250,000 x Rp 2,700/liter
Feed for DOD for max. 5days: 1kg/100tails	19,808,250	113,190/100 x Rp 3,500/kg x 5 days

Table B.12.1 Feasibility of the Proposed Plan (Karya Tani, Kabupaten Mojokerto)

	Medicine & Vitamin for DOD for max. 5 days	5,659,500	113,190/10,000 x Rp 100,000 x 5 days
	Transportation cost	12,000,000	Rp 1,000,000/m x 12m
	Auxiliary equipment: 1 lot	20,000,000	
	Administration & Accounting: 1 person	12,000,000	Rp 1,000,000 x 12m
	Labor including delivery works: 5 person	48,000,000	Rp 800,000 x 5 x 12m
	Total	124,453,190	
3	Meat duck breeding for DOD production (113,190 tails)		
	a. Feed for DOD 6-10 days old.		
	Starter 511: 400kg for 2,000 DOD	86,024,400	113,190/2,000 x 400kg x Rp 3,800
	b. Feed for DOD 11-20 days old		
	Starter 511: 310kg for 2,000 tails	66,668,910	113,190/2,000 x 310kg x Rp 3,800
	Mix feed (<i>Polosan</i>): 310kg for 2,000 tails	31,580,010	113,190/2,000 x 310kg x Rp 1,800
	Rice bran: 630kg for 2,000 tails	35,654,850	113,190/2,000 x 630kg x Rp 1,000
	(Total feed: 1,250kg/2,000 tails)		
	c. Feed for DOD 21-30 days old		
	Concentrate 144: 100kg for 2,000 tails	20,374,200	113,190/2,000 x 100kg x Rp 3,600
	Mix feed (<i>Polosan</i>): 150kg for 2,000 tails	15,280,650	113,190/2,000 x 150kg x Rp 1,800
	Rice bran: 1,250kg for 2,000 tails	70,743,750	113,190/2,000 x 1,250kg x Rp 1,000
	(Total feed: 1,500kg/2,000 tails)		
	d. Feed for DOD 31-40 days		
	Concentrate 144: 150kg for 2,000 tails	30,561,300	113,190/2,000 x 150kg x Rp 3,600
	Mix feed (<i>Polosan</i>): 150kg for 2,000 tails	15,280,650	113,190/2,000 x 150kg x Rp 1,800
	Rice bran: 1,700kg for 2,000 tails	96,211,500	113,190/2,000 x 1,700kg x Rp 800
	(Total feed: 2,000kg/2,000 tails)		
	e. Supplement		
	Vitamin: 3.2kg for 2,000 tails	742,526	113,190/2,000 x 3.2kg x Rp 4,100/kg
	Sugar: 16kg for 2,000 tails	5,433,120	113,190/2,000 x 16kg x Rp 6,000/kg
	Total	474,555,866	
	<i>Note: Labor cost is to be covered by individual member.</i>		
4	Depreciation		
	Layer duck: Period of 1.5 years:	23,333,000	Cost of Layer: Rp 35,000,000/1.5 years
	Other facility & equipment:	20,600,000	Rp 103,000,000/5 years
	Hatchery house	1,600,000	Rp 32,000,000/20 years
	Total	45,533,000	

Note: The financing cost (interest) is not included in above calculation.

Table B.12.2 Break down of the Investment Plan, Karya Tani (Duck), Mojokerto

No	Activity	Breakdown	Budget (Rp)	Note
1. Investment Plan				
a	Layer Duck for egg production	1,100 pullets x Rp30,000 + 100 x Rp20,000	35,000,000	
b	Hatchery unit, 700 eggs/unit	10 units x @500,000	5,000,000	
c	Cage for layer duck	10x5 meter x @200,000/m ² x 2 units	20,000,000	
d	Cage for DOD	50 units x @200,000	10,000,000	
e	Cage for breeding up to 40 days	3x3 meter x @200,000/m ² x 10 units	18,000,000	
f	Water well and water installation	2 wells x @4,000,000/set	8,000,000	
g	Bamboo fence	500 meter x 2 meterH x 2 units	6,000,000	Rp 3,000,000/unit
h	Storage for duck feed	4x6 meter x @500,000/M ²	12,000,000	
I	Mixer machine for feed	1 unit	10,000,000	
j	Hatchery house	4x20 meter x @400,000/M ²	32,000,000	
k	Electricity installation	1 lot	2,000,000	
l	Push cart	2 units x @500,000	1,000,000	
m	Auxiliary equipment		11,000,000	
n	Initial operation cost for purchasing duck feed, medicine		20,000,000	
		Sub total	190,000,000	
2. Guidance & Supervision				
a	Technical Assistance fee by Brawijaya/BPTP		10,000,000	
b	Capacity Development & Monitoring by BDS/NGO		35,000,000	for 2 years
c	Administration service & monitoring by Dinas/Deptan		10,000,000	for 2 years
d	Office Running Cost		5,000,000	for 2 years
		Sub total	60,000,000	
		TOTAL	250,000,000	

Table B.13.1 Feasibility of the Proposed Plan (Tani Mulyo, Kabupaten Mojokerto)

Tani Mulyo (member: 28 persons)

Business model: Revival and new comer.

Investment	Rupiah	Remarks
Total Investment (100% by soft loan and saving collateral equivalent to 5% by farmers)	300,000,000 (Collateral: Rp 15,000,000)	2,800 tails of pullets & 300 tails of male ducks. (100 pullets for each member).
Operation & Sales Plan		
1 Production assumption		
Egg production: 70% of Female Layer produce eggs everyday for 300day $2,800 \times 0.7 = 1,960$ eggs/day $\times 300$ days = 588,000 eggs/year		
Fertile or Infertile		
Fertile egg: 70%, $588,000 \times 0.7 = 412,000$ eggs/year → DOD		
Infertile egg: 30%, $588,000 \times 0.3 = 176,000$ eggs/year → Salty egg		
DOD production		
Hatchery (Incubation): 70% of fertile egg become DOD, $412,000$ eggs/year $\times 0.7 = 288,000$ DOD 30% of fertile egg are failed (dead)		
Female or Male of DOD: 50% respectively		
Female DOD: $288,000$ DOD $\times 0.5 = 144,000$ /year		
Male DOD: $288,000$ DOD $\times 0.5 = 144,000$ /year		
2 Sales plan		
	Items	Rupiah
	Salty egg (Infertile)/year	140,800,000
	DOD (Female)/year	331,200,000
	DOD (Male)/year	302,400,000
	Culling duck after 1.5 years (Mortality: 5%) $3,100 \times 0.95/2$ years	23,520,000
	Total	797,920,000
3 Cost of production		
	Duck layer breeding (feed, medicine & labor)	240,400,000
	Salty egg production	51,088,000
	DOD production	158,758,400
	Depreciation	94,400,000
	Total	544,646,400
4 Gross profits		
	Profit Ratio	31.7%
		(Gross profits)/Total Sales $\times 100$
5 Reimbursement		
	Reimburse soft loan in 5 years	60,000,000
		Rp 300,000,000/5 years
6 Net Profits for the 1st 5 years		
	((Gross profits) - (Reimbursement))	193,273,600
	Net Profits for the 1st 5 years	24.2%
	Income generation per member/year	6,902,629
		Net profits for each 28members
Cost Break Down		
1 Feed & Breeding cost		
	Procurement of Duck Feed: 1,000 Rp/kg	186,000,000
	Medicine cost: Rp 4,000/cc	12,400,000
	Stationary: Rp 500,000/month	6,000,000
	Electric cost:	0
	Water cost:	0
	Manager: 1 person \times Rp 1,200,000/m	12,000,000
	Labor cost:	0
	Transportation cost	12,000,000
	Sundry cost: Rp 1,000,000/m	12,000,000

Table B.13.1 Feasibility of the Proposed Plan (Tani Mulyo, Kabupaten Mojokerto)

	Total	240,400,000	
2	Salty egg production of 176,000 non-fertile eggs/year		
	Clay & Ash: 60kg for 5,000 eggs	211,200	176,000/5,000 x 60kg x Rp 100/kg
	Salt: 100kg for 30,000 eggs	176,000	176,000/30,000 x 100kg x Rp 300/kg
	Kerosene for Boiling: 1 liter for 250 eggs	1,900,800	176,000/250 x Rp 2,700
	Packaging cost: 1 case for 20 eggs	17,600,000	176,000/20 x Rp 2,000
	Transportation cost	12,000,000	Rp 1,000,000/m x 12m
	Labor including packaging work: 2 person	19,200,000	Rp 800,000/person x 12m
	Total	51,088,000	
3	Hatchery business for DOD production (412,000 fertile eggs/year, 288,000 DOD)		
	Kerosene for lamp: 4,000 liter/250,000eggs	17,798,400	412,000/250,000 x Rp 2,700/liter
	Feed for DOD for max. 5days: 1kg/100tails	10,080,000	288,000/100 x Rp 3,500/kg
	Medicine & Vitamin for DOD for max.5 days	2,880,000	288,000/10,000 x @100,000
	Packaging cost: 1 box for 125tails	57,600,000	288,000/125 x Rp 25,000/box
	Transportation cost	12,000,000	Rp 1,000,000/m x 12m
	Auxiliary equipment: 1 lot	20,000,000	
	Labor including packaging works: 4 person	38,400,000	Rp 800,000 x 12m x 4persons
	Total	158,758,400	
4	Depreciation		
	Layer duck: Period of 1.5 years:	60,000,000	Cost of Layer/1.5 years
	Other facility & equipment:	34,400,000	Rp 172,000,000/5 years
	Total	94,400,000	
5	Reimbursement		
	Reimburse soft loan in 5 years	60,000,000	Rp 300,000,000/5 years
6	Net Profits for the 1st 5 years		
	(Gross profits) - (Reimbursement)	193,273,600	
	Income generation per member/year	6,902,629	Net profits for each 28members
	Note: Labor cost is not covered in this calculation except 1x manager and 1x labor in total. Daily works should be carried out by individual member and his/her family.		

Note: The financing cost (interest) is not included in above calculation.

Table B.13.2 Break down of the Investment Plan, Tani Mulyo (Duck), Mojokerto

No	Activity	Breakdown	Budget (Rp)	Note
1. Investment Plan				
a	Layer duck, Female	2,800 tails x @30,000	84,000,000	28 members x 100 layers
b	Layer duck, Male	300 tails x @20,000	6,000,000	
c	Duck houses & Cages	1 lot	70,000,000	For expansion of each duck houses, cages, etc
d	Water well & water installation	1 lot	10,000,000	
e	Bamboo fence	1 lot	12,000,000	
f	Expansion of existing Storage, hatchery		40,000,000	
g	Mixer machine for feed	1 unit	25,000,000	
h	Pushcart	10 units x @500,000	5,000,000	
I	Auxiliary equipment		10,000,000	
j	Initial operation cost for labor, duck feed, medicine, electricity, stationary,		30,000,000	
k	Office Running Cost		8,000,000	
		Sub total	300,000,000	
2. Guidance & Supervision				
a	Technical Assistance fee by Brawijaya/BPTP		20,000,000	
b	Capacity Development & Monitoring by BDS/NGO		75,000,000	for 2 years
c	Administration service & monitoring by Dinas/Deptan		20,000,000	for 2 years
d	Office Running Cost		5,000,000	for 2 years
		Sub total	120,000,000	
		TOTAL	420,000,000	

**Table B.14.1 Break down of the Investment Plan, Lestari Sejahtera (Duck),
Mojokerto**

No	Activity	Breakdown	Budget (Rp)	Note
1. Investment Plan				
a	Semi-automatic Hatchery machine		90,000,000	Grant as pilot project but all operational expenses will be born by KT. Data obtained should be opened to all parties concern to duck industry.
		Sub total	90,000,000	
2. Guidance & Supervision				
a	Technical Assistance fee by Brawijaya/BPTP		26,000,000	
b	Capacity Development & Monitoring by BDS/NGO		69,000,000	for 2 years
c	Administration service & monitoring by Dinas/Deptan		10,000,000	for 2 years
d	Office Running Cost		5,000,000	for 2 years
		Sub total	110,000,000	
		TOTAL	200,000,000	

Table B.15.1 Case study 1: Sweet potato Processing for Traditional Products

Study on small-scale processing activity by 10 members. Each member should contribute Rp100,000 as an investment from LKM, totaling Rp 1,000,000.

1. Investment plan					
	Equipment	No.	U/cost	Cost	Remarks
a	Frying pan	1		100,000	Duration: 5 years
b	Frying spatula	2	5,000	10,000	
c	Kerosene Stove	1		100,000	
d	Kerosene jerry can	2	10,000	20,000	
e	Washing basin	4	10,000	40,000	
f	Knife	2	6,000	12,000	
g	Slicing board	2	5,000	10,000	
h	Sugu (Grater/ slicer)	2	75,000	150,000	
I	Auxiliary	1		100,000	
	Sub-total			(542,000)	
Production cost for 50 kg of fresh potato					
a	Raw material (sweet potato)	50kg	700	35,000	
b	Palm sugar	10kg	4,000	40,000	
c	Palm oil	10 liter	2,000	20,000	
d	Kerosene	10 liter	1,000	10,000	
e	Plastic bag	400 pcs	10	4,000	
f	Auxiliary	1lot		10,000	
	Sub-total			(119,000)	
Assumption: 50kg of sweet potato is processed every week and 40 weeks operation per year.					
Total production cost is (Rp 119,000/week x 40 weeks)				4,760,000	
2. Revenue Plan					
a	Kremes	400 bag	600	240,000	16,000 bags/year
Yearly revenue: (Rp 240,000/week x 40weeks)				9,600,000	400bags from 50kg fresh sweet potato
3. Gross Profit					
Revenue - Production cost				4,840,000	
4. Cash flow					
a	LKM loan			1,000,000	
Repayment plan: After 6 months, 50% of principal and it's interest will be settled. The remaining 50% should be cleared within 12 months with interest. Interest rate is 1.5%/month (18%/an) from LKM					
b	Repayment schedule				
6 months later: principal				500,000	
Interest: Rp 1,000,000 x 0.015 x 6month				90,000	
Sub total				(590,000)	
12 months later: principal				500,000	
Interest: Rp 500,000 x 0.015 x 6month				45,000	
Sub total				(545,000)	
Total				1,135,000	
5. Net profits including labor cost without transportation cost					
(Gross profit) - (Loan repayment + interest)				3,705,000	Depreciation of equipment need to be reserved.
The Break-Even point: Cost per year					
Materials cost/ year				4,760,000	
Financial cost/ year				1,135,000	
Sub total				5,895,000	
(Total Cost)/ (Unit cost) = Minimum sales: bags/year:				9,825 bags	Rp 5,895,000/Rp 600
61.4% operation yields					

Table B.16.1 Case study 2: Mango Processing for Small Cups of Juice/Jelly

Study on small-scale processing activity by 10 members. Each member should contribute Rp 1,000,000 as an investment from LKM, totaling Rp 12,000,000.

1. Investment plan				
Equipment	No.	U/cost	Cost	Remarks
a Washing basin	5	10,000	50,000	
b Knife	10	6,000	60,000	Duration: 5 years
c Slicing board	10	5,000	50,000	
d Juicer (electric, local brand)	2	200,000	400,000	
e Strainer, stainless steel	10	10,000	100,000	manual
f Mixer	1		2,140,000	
g Kerosene stove for pasteurizing	2	100,000	200,000	
h Packaging machine	1		5,000,000	
i Printing cost	1 lot		1,000,000	
j Auxiliary	1 lot		1,000,000	mainly for pasteurizing
Sub-total			(10,000,000)	
2. Production cost for 100 kg of fresh mango/day, 100 days operation/season: total 10 ton/season				
a Raw material (ripen mango)	10,000kg	800	8,000,000	100kg/day x 100 days
b Sugar	300kg	4,000	1,200,000	
c Mineral water	4,000 liter	500	2,000,000	40liter/100kg mango
d Kerosene	800 liter	2,800	2,240,000	8 liter/day
e Plastic cup (240cc) & seal: Rp125	33,000 pcs	125	4,125,000	8,000liter/0.24liter, cup
f Electricity cost	33000 cups	50	1,650,000	Rp 50/cup
g Auxiliary	1 lot		1,925,000	10% of production cost
Sub-total			(21,140,000)	
Assumption: 100kg of ripen mango can produce 80 liter of dilute juice (Diluting 50:50 of juice & sugared water). (40 liter of pure mango juice can be produced from 100kg of ripen mango)				
3. Revenue Plan				
Mango juice 50% diluted with sugared water				
Yearly revenue:	33,000 cup	1,200	39,600,000	Selling price: Rp 1,200/cup
4. Gross Profit				
Revenue - Production cost			18,460,000	Transportation cost excluded.
5. Financial cost				
LKM loan: Rp 1,200,000 x 10 members			12,000,000	Rp1,200,000 x 10
Repayment plan: After 6 months, 100% of principal and it's interest will be settled.				
6 months later: principal			12,000,000	
Interest: Rp 12,000,000 x 0.015 x 6month			1,080,000	
Total			13,080,000	
5. Net profits (labor cost is included but transportation cost is excluded.)				
(Gross profit) - (Financial cost)			5,380,000	Depreciation of equipment need to be reserved.
Net profits including labor cost per member for the 1st year			538,000	10 members
Net profit from the 2nd year			18,460,000	
Net profits including labor cost per member for the 2nd year			1,846,000	10 members
The Break-Even point: Cost per year				
Materials cost/ year			21,140,000	
Financial cost/ year			13,080,000	
Total cost			34,220,000	
(Total Cost)/ (Unit cost) = Minimum sales: cups/year:			28,517	28,517 cups
				Operation yield: 86%

Table B.17.1 SWOT Analysis (Strength, Weakness, Opportunity, Threat) of Mango *Podang*

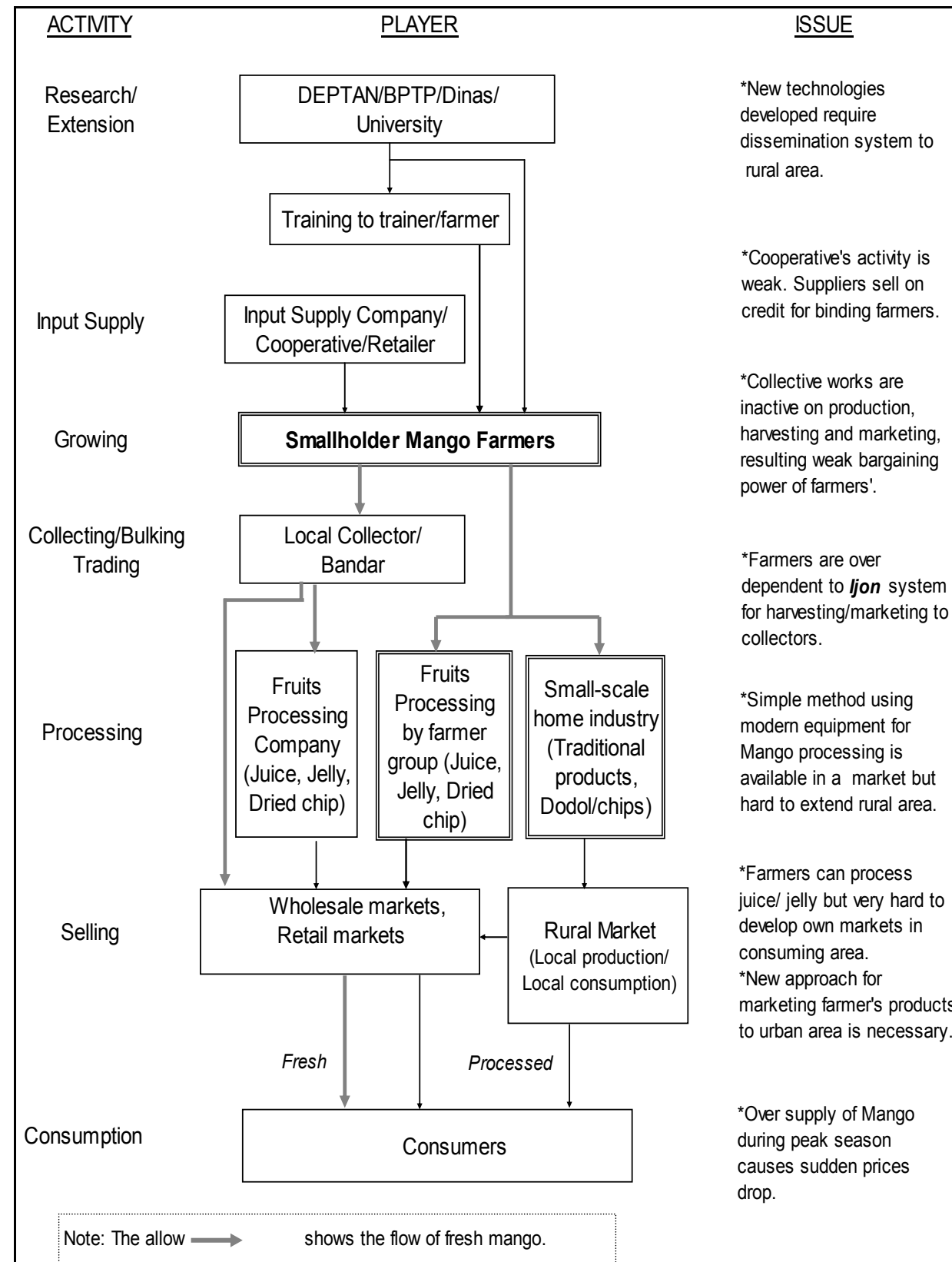
	Positive Factors	Negative Factors
Internal Factors	<p style="text-align: center;">Strong</p> <ul style="list-style-type: none"> - Production center of Mango Podang enable to supply a certain amount every year. - Some groups have possibility for the marketing as the leader work double for producer and collector. - Some groups developed discipline through saving and loan activities. - Some groups in Kabupaten work on mango juice or corn snack production. - Farmers who rely on Ijon or Tebes system are free from the dead stock. - Local institutions can render technical and managerial supports. 	<p style="text-align: center;">Weak</p> <ul style="list-style-type: none"> - During peak season of harvest, farm gate prices sharply drop, which unable farmers to earn incomes constantly. - Farmers are impossible to earn additional income as they sell mango before the harvest through Ijon/Tebes system. - Small-scale mango farmers are difficult to sell their fresh mango by themselves at reasonable prices. - Road conditions are no good, which causes high degree of damage, transportation cost and inconvenience. - Both farming and processing techniques are poor. - No experience of selling processed mango products. - Collectors or middlemen bind many farmers through farming fund and inputs.
External Factors	<p style="text-align: center;">Opportunity</p> <ul style="list-style-type: none"> - Farmers have chance to sell at better prices through collective activities by a group such as marketing, bargaining and direct sales to consumers. - Farmers can improve the quality and work loads through separation and grafting of mango trees. - Farmers prolong harvesting period by harvesting mango from matured ones. - Farmers can harvest most suitable maturity of mango to meet best quality of processed products. 	<p style="text-align: center;">Threat</p> <ul style="list-style-type: none"> - Mango production in surrounding area will increase causing low farm gate prices. - The consumers' demand on the favorites, quality and price level are unknown. - The packaging or design is poorer than those of large-scale manufacturers' one resulting lower market prices. - Mango processing alone is difficult to fund the depreciation cost due to short operation period. - The name of Podang is not famous in large cities. - Consumers' analysis on Podang juice is not clear.

Marketing Procedures



Table B.18.1 Promotion of Agro-Processing Business (Mango in Kediri)

VALUE CHAIN ANALYSIS



SWOT ANALYSIS

Strong

- Production center of Mango Podang
- Some village leaders work as collector.
- Some KTs produce traditional processed products such as Dodol.
- Brawijaya University in Malang is available for technical assistance.
- Some KT working Saving & Loan activity

Weak

- During peak season of harvest, farm gate prices drop sharply.
- Farmers selling price through Ijon system is low.
- Farmers are difficult to sell fresh mango directly to collectors/ consumers.
- Road conditions are poor.
- Farming and processing level is low.
- Collectors bind farmers through renting fund & inputs.

Opportunity

- Farmers can improve the bargaining power by collective action.
- Mango farming technology can be improved.
- Farmers can harvest mature mango according to the demand.

Threat

- Mango production increase causing low prices.
- Consumers' demand is not clear to farmers.
- Packaging technique for traditional product is low.

MARKETING STRATEGY

For fresh mango sales

- Ijon system should be improved. Farmers should harvest matured one for fresh consumption and processing.
- Large wooden box for the transportation should be improved for minimum damaged during transportation.

For traditional processed mango

- Specialty of Dodol should be studied by consulting Universities and BPTP.
- Packaging technology should be improved to attract consumers' interests.
- Marketing channel should be secured by appointing sales agents and etc.

For new processed mango products

- Juice/ Jelly
 - Processing technology is available at Brawijaya University in Malang.
 - Large cigarette factories locate in Malang, which is potential market of local mango juice/jelly.
 - Sales agents should be appointed under win-win relation.
- Dried mango
 - REI started trial production in Kediri. KT can enter into distribution agreement with REI.
 - Promotion of direct sales by KT to shops in neighboring towns or through antenna-shop.
 - Promotion of primary processing works. For example, KT produce half-dried mango to souvenir shops in Bali. Shops will produce final dried mango and packaging for sales.
 - Dinas Province should promote such new products through exhibition, Brochure, etc.

Appendix-C
Agricultural Marketing

THE STUDY
ON
THE IMPROVEMENT OF FARMERS' INCOME: AGRICULTURAL PROCESSING AND
RURAL MICROFINANCE
IN
INDONESIA

Appendix C AGRICULTURAL MARKETING

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CHAPTER 1 NATIONAL POLICY

The Directorate General of Processing and Marketing of Agricultural Products, the Ministry of Agriculture formulated its Strategic Plan (2005-2009) for development of processing and marketing of agricultural products (hereinafter called “the Plan”) on the basis of vision and mission of National Development Plan and Agricultural Strategic Plan.

The Plan sets objectives of agricultural product processing and marketing, including: <1> To encourage farmers and agro-businessmen to access market information, and <2> To extend processing industry of agricultural products in village level in order to increase competitive ability with value addition, as well as creation of employment opportunity and improvement of people’s welfare. Also, its goals include <1> To increase farmers’ ability in doing their business, <2> To increase competitiveness of agricultural product by its value addition and <3> To improve farmers’ income and welfare.

Development program of the Plan defines for main activities; <1> To improve capacity and quality of human resources through technical guidance for processing and marketing of agricultural products, <2> To improve farmers’ access to market and relevant information and <3> To protect farmers from unfair competition.

The Plan, in its conclusion, stresses that <1> Development of agricultural products needs to be implemented in market-oriented approach, and also <2> Harmonious and supportive cooperation by agro-businessmen as well as regional government and community is indispensable for effective and efficient enforcement of the Development Program.

This Study is for improvement of farmers’ income through agricultural processing (value addition) and rural micro-finance. As reported in the subsequent chapters, the Study is totally in line with the above-mentioned policy and development program set by Indonesian government, from marketing aspect.

As for institutional improvement of marketing issues, “The Study on Improvement of Institutions and Information Systems of the Market for Agricultural Products” was implemented by JICA in 2004. As a result of the Study, the report recommends <a> to establish local/regional distribution center; to improve traditional market; <c> to improve market information system by comprehensive approach; and <d> to establish relevant legal framework.

CHAPTER 2 PRESENT CONDITION OF THE STUDY AREA

BOX 1 Common Findings

Findings common to 5 kabupatens and 3 commodities are summarized as follows:

- Middlemen (bandar, tengkulak, pengepul, etc.) are very active in their sales promotion, conducting various marketing activities, while farmers (individuals/ groups) are inactive due to no or little experiences/ knowledge/ business mind.
- Middlemen are involved in the majority of transactions made by Kelompok Tanis (KTs).
- KT's marketing activities are conducted more by individual members than by groups.
- KT's having middlemen at its key position are more active in marketing than otherwise.
- Farmers and middlemen are often in money-bound relationship.
- Market participants are in many cases multi-players. They have several faces.

2.1 Kabupaten Cirebon

BOX 2 Particular Findings in Cirebon

Particular findings in Kabupaten Cirebon (Duck Product) are summarized as follows:

- Partnership agreement is made among Kelompok Tanis (KTs) under MOU, in which priority is given for supplying and procuring duck-related product each other, forming their basis for business expansion.
- Middlemen organize their own farmers' groups, sharing 5-10 % of all duck-related farmers in Cirebon.
- Much of fresh duck eggs are incoming from other kabupatens/ provinces due to shortage of supply to demand, while DOD (day old ducks) are outgoing to other same areas for oversupply. Every movement of the product gives middlemen a chance for business.

2.1.1 Marketing Channels

Overall marketing channels of duck-related product in Kabupaten Cirebon are outlined in Fig.C2.1.1. Although official data are not available, the interview with several officers (DINAS) and middlemen suggests that middlemen (bandar, tengkulak, etc.) are involved in the majority (more than 60 %) of duck-related transactions made by Kelompok Tanis (hereinafter called KT's).

Product

Main duck product for marketing in Indonesia is traditionally Egg. Salted duck eggs are sold nationwide including supermarkets in urban areas with steady demand. Duck meat is

- 1) Fresh egg (Fertile or infertile)
- 2) DOD (Day old ducks)
- 3) Salted egg (Raw or boiled salted eggs)
- 4) Pullet (5 to 6 months old layer ducks)
- 5) Others

Fresh eggs for processing are usually separated to fertile and infertile ones. The former goes to hatchery for DOD production, while the latter is for processing to salted eggs, etc. Some processors omit the separation process to fertile and infertile ones before making salted eggs, thereby expecting more fresh and tasty product. The fertile eggs are mostly unbroken ones. Broken fertile eggs are usually for farmers' own consumption. Main products distributed in duck business in Cirebon are fresh eggs, salted eggs and DOD.

Main Players and each Function

Participants acting in between farmers (individuals/ groups) and retailers in the market of duck-related product in Cirebon are:

1) Bandar / Tengkulak

Persons who buy duck-related product from farmers or collectors, and sell the same or another form of product after processing to other buyers (middlemen, processors, etc.). Bandar also acts as finance (loan) provider to farmers or collectors. Many farmers (in some cases collectors too) are bound by using this financing system to sell their product to the finance provider (Bandar) at the latter's initiatives. The loan can be in cash or input (duck feed, etc.) and the repayment usually by eggs equivalent. Bandar is usually said to be in higher position and of bigger size in business than tengkulak and collectors.

2) Village Collectors (Pengepul)

Persons who are the nearest to farmers in transactions and based in their own village. They buy product from farmers and sell the same to other middlemen (Tengkulak or Bandar). In duck business in Cirebon, however, village collectors are limited. There is little room for them to act in between farmers and bandar/ tengkulak. Possible reasons will be (a) relatively strong duck farmers' groups (KTs) in Cirebon as represented by "Partnership by KT's" (described later), (b) no market dominating middlemen's group (more competition) and (c) features of duck product unlike fruit and vegetables (no labor-intensive work such as harvest & shipment for short period, etc.).

3) Processor

Persons or groups who process to make duck-related product (salted eggs, DOD, pullet, etc.) for marketing.

4) Trader/ Grosir

Persons who are the nearest to retailers in transactions. Compared with Bandar, they handle more variety of products and have no finance service.

Multi-Players

Market participants as described above, including farmers and retailers, are in many cases multi-players. They have several faces. Most of them are farmers too. This situation seems to make marketing channels of duck business in Cirebon rather complicated. Actual examples are:

- (i) Farmer (including KT's chairperson and member) = Bandar or Tengkulak
- (ii) Bandar or Tengkulak = Collector
- (iii) Bandar or Tengkulak = Processor
- (iv) Retailer = Processor

The Proportion of each Channel and Transaction System

According to the estimate of DINAS Peternakan Cirebon, duck farmers belonging to KTs account for 55 to 60 % of total, while non-KT farmers 30 to 40 %. Remaining farmers (5 to 10 %) are organized by middlemen as their own groups. As described before, duck business of KTs are conducted mostly through middlemen (bandar, tengkulak, etc.), and more by individual member farmers (including chairpersons) than by groups. The proportion of involvement of middlemen in KT's business differs much by KT, but DINAS Peternakan (Cirebon) estimates it at more than 60 % on average.

When KT's chairperson or other key member is middleman too, the profit from their own private business is shared among them, KT and KT's member farmers, but the most portion seems to go to them.

As for supply and demand of duck product in Cirebon in recent years, much of fresh duck eggs are incoming from other kabupatens/ provinces due to shortage of supply to demand, while DOD are outgoing to other same areas for oversupply. Every movement of the product gives middlemen a chance for business. Salted eggs and pullets are reported to be in equilibrium as a whole. Table 1 indicates the rough estimate made by DINAS Peternakan, Cirebon for the last year (2005).

Table 1 Supply and Demand of Duck Product in Kab.Cirebon (2005)

Duck product	Supply (Qty)	Demand (Qty)
Fresh eggs (of which, fertile 80 % & infertile 20 %)	1,200,000	4,000,000
DOD	2,600,000	650,000
Areas of partners (Kabupatens/ Provinces)	West Java: Kab. Subang, Kerawang, Indramayu, Garut, Bekasi and Majalengka / East Java: Kab.Mojokerto / Central Java: Kab. Brebes, Jegal and Cilacap / Other Provinces: Lampung, Riau, Kalimantan Tengah and Irian Barat	

Selling prices of each duck product were collected at every point of marketing channels. Although number of samples is limited, range and average of the prices are summarized below. The data suggest that a margin of middlemen (bandar,etc.) and retailer is approx. 10

to 15 % in gross and 5 to 10 % in net (assuming the cost at 50 Rp/egg) respectively, which seems to be within a reasonable range.

For information, price data collected in Jakarta indicate that retail prices of salted duck eggs in urban areas (supermarket) are more or less 50 % higher than in local retail prices in Cirebon.

Table 2 Summary of Selling Prices Data in Cirebon (Rp/pce)

	Fresh Egg			Salted Egg		
	Farmers	Middlemen	Retailers	Farmers	Middlemen	Retailers
Range	600 – 850	740 – 900	(N.A.)	(N.A.)	575 – 1,100	950 – 1,150
Average	697	789	(N.A.)	(N.A.)	916	1,064

(Data Source: KTs / Middlemen / Pasars, by interview in Aug-Nov 2006)

Partnership Agreement among KTs

Three (3) KTs make a partnership agreement under MOU. Role sharing is for supplying duck product to each other. KT Bebek Jaya supplies fertile fresh eggs to KT Tigan Mekar; KT Tigan Mekar supply DOD to KT Branjangan Putih; and KT Branjangan Putih supply pullet to KT Bebek Jaya. These transactions should be given priority among 3 KTs, but except this, they can sell/ buy any duck product to/ from any other parties. Thus, it enables them to form their basis for business expansion, and eventually contribute to regional revitalization in duck business. This system among 3 KTs is called “Triangle System” for its cyclic operation in production of fertile fresh eggs, DOD and pullet. Another KT (Sari Sejahtera) joined this system later, but only for procurement of pullet from KT Branjangan Putih.

The system was initiated in 2001 under financial support by DINAS. However, it is reported that DINAS has difficulty in replication of this system to other duck related KTs at the moment due to limited budget.

2.1.2 Activities

From the findings of the basic research survey, several cases of marketing activities currently conducted in duck business in Cirebon are enumerated in Table C2.1.1. These activities, which are mostly carried out by middlemen and may appear to be small actions, will give some hint to improve and strengthen the marketing operation of farmers. It is observed that middlemen are very active in their marketing operation. Some middlemen organize their own farmers’ groups. When they are in key position like chairperson of KT, they can have an advantage from the expected government support, and also some benefit from its business expansion may be extended to KT member farmers.

2.1.3 Problems

Marketing-related problems raised or found in the Study are summarized in Table C2.1.2. Analysis of these problems is made in Chapter 3 to identify a core problem.

2.2 Kabupaten Kuningan

BOX 3 Particular Findings in Kuningan

Particular findings in Kabupaten Kuningan (Sweet Potato) are summarized as follows:

- Approx. 70 % of sweet potato is outgoing through middlemen to other kabupatens (processors or wholesalers for export) in fresh (unprocessed) form, due to less demand to supply in Kuningan as a whole. Remaining 30 % is distributed to local processors and wholesalers.
- There exists the processing industry (2 private companies) for export in Kab. Kuningan.
- There is no bandar group dominating sweet potato market. More fair and open competition is observed among middlemen, than in Majalengka

2.2.1 Marketing Channels

Overall marketing channels of sweet potato in Kabupaten Kuningan are outlined in Fig.C2.2.1. Although official data are not available, the interview with several officers (DINAS) suggests that middlemen (bandar, etc.) are involved in the majority (approx. 80 %) of sweet potato related transactions made by Kelompok Tanis (KTs) and non-KT member farmers.

Product

Kuningan is one of the main sweet potato production areas in West Java, producing approx. 90,000 to 93,000 ton/year (2004-2005). In addition to the fresh form, sweet potato is processed to make the various types of products in large scale and home industry levels for local consumption or export. Processed products distributed in the market are:

- 1) Keremes (Fried stick snack)
- 2) Keripik (Sliced fried snack)
- 3) Dodol (Cake from flour and sugar)
- 4) Others

Main market of processed product seems to be rural area, although Keripik from East and Central Java was observed in some supermarkets in Jakarta.

Main Players and each Function

Participants acting in between farmers (individuals/ groups) and retailers in the market of sweet potato in Kuningan are as follows. They have basically same functions as in other kabupatens, although commodity is different.

- 1) Bandar

Many farmers are bound by using middlemen's loan to sell their product to the finance provider (middlemen) at the latter's initiatives. Big bandars have their own shops in big marketplaces (pasar induk).

2) Village Collectors (Pengepul)

Persons who are the nearest to farmers in transactions and based in their own village, usually acting in between farmers and bandars. Since no market dominating bandar groups exist in Kuningan, village collectors in this kabupaten seem to be rather free, compared with Majalengka case (described later in section 2.3).

3) Processor

4) Trader/ Grosir

Multi-Players

As in Cirebon, market participants are in many cases multi-players.

The Proportion of each Channel and Transaction System

According to the estimate of DINAS Pertanian Kuningan, duck farmers belonging to KTs account for 40 % of total. As described before, sweet potato business in Kuningan are conducted mostly (80 %) through middlemen (bandar, etc.), and more by individual member farmers (including chairpersons) than by groups. Out of the transactions through middlemen, 90 % is destined to grosirs or processors in other kabupatens/ provinces. Thus, more than 70 % of sweet potato produced in Kuningan are outgoing through middlemen to other kabuatens/ provinces (processors or wholesalers for export) in fresh (unprocessed) form, due to less demand to supply in Kuningan as a whole. Remaining 30 % is distributed to local processors and wholesalers.

There exists the processing industry (2 private companies) for export of various types of processed sweet potato (flour, chips, paste, etc.) in Kuningan. One company (PT. Galih Estetika) is located in Kec. Cilimus and another (PT. Global) in Kec. Cigandamekar. This provides sweet potato farmers with marketing opportunities for their product. However, there are constraints for farmers. Variety demanded by PT. Galih Estetika (Bogor) is not available much in Kuningan. Partnership with PT. Global may be more feasible at the moment, assuming that farmers can meet their requirement in price, quality and delivery.

As described before, there is no bandar group dominating sweet potato market in Kuningan. More fair and open competition is observed among middlemen, than in Majalengka

Selling prices of sweet potato product were collected at every point of marketing channels. Although number of samples is limited, range and average of prices/ margins are summarized below. The data suggest that a margin of middlemen (bandar, etc.) is approx. 5-10 %, which seems to be a fair level acceptable by farmers, and reflect some competitive situation among middlemen in Kuningan.

Table 3 Middlemen's Prices and Margins in Kuningan (Rp/kg)

	Middlemen's Selling Prices and Margins (Fresh Sweet Potato)	
	Selling Prices	Margin in net
Range	1,300 – 1,450	40 – 150
Average	1,380	93

(Data Source: KTs / Middlemen / Pasars, by interview in Aug-Nov 2006)

For information, price data collected in Jakarta indicate that differences in retail prices of fresh sweet potato between urban areas (supermarket) and local market (Kuningan) are much bigger than in wholesale prices.

2.2.2 Activities

From the findings of the basic research survey, several cases of marketing activities currently conducted in sweet potato business in Kuningan are enumerated in Table C2.2.1. These activities, which are mostly carried out by middlemen and may appear to be small actions, will give some hint to improve and strengthen the marketing operation of farmers.

2.2.3 Problems on Marketing

Marketing-related problems raised or found in the Study are summarized in Table C2.2.2. Analysis of these problems is made in Chapter 3 to identify a core problem.

2.3 Kabupaten Majalengka

BOX 4 Particular Findings in Majalengka

Particular findings in Kabupaten Majalengka (Sweet Potato) are summarized as follows:

- Production of sweet potato in Majalengka is far less than Kuningan, being 1/7 to 1/5 of Kuningan's.
- One particular middlemen's group dominates more than 60 % of sweet potato market in Majalengka. Main destination of the product through this group is big processors for export in other kabupatens / provinces.
- In the areas dominated by the said middlemen's group, sweet potato farmers have no choice for marketing. In other areas, however, marketing by farmers seems to be more open.
- There is no processing industry for sweet potato in Majalengka, but only home industry level. One kechamatan has an "agro-processing village" by private sectors, but the processing of sweet potato is a minor part.

2.3.1 Marketing Channels

Overall marketing channels of sweet potato related product in Kabupaten Majalengka are outlined in Fig.C2.3.1. One particular middlemen's (bandar) group dominates more than 60 % of sweet potato market in Majalengka.

Product

Production of sweet potato in Kab.Majalengka is reported to be approx. 13,000 to 20,000 ton/year in recent years, being 1/7 to 1/5 of Kuningan's, in which several types of products are handled in sweet potato business like Kuningan:

- 1) Keremes (Fried stick snack)
- 2) Keripik (Sliced fried snack)
- 3) Kecemplung (Fried ball)
- 4) Pais (Cake wrapped in banana leaves)
- 5) Others

DINAS Pertanian Majalengka estimates that out of sweet potato production, 3 % is for seed for next crop, 2 % for farmers' self consumption and remaining 95 % is for distribution in the market. As in Kuningan, main market of processed product seems to be rural area.

Main Players and each Function

Participants acting in between farmers (individuals/ groups) and retailers in the market of sweet potato in Majalengka are as follows. They have basically same functions as in other areas.

- 1) Bandar / Tengkulak

As described before, one particular middlemen's group ("Sinar Ubi") dominates the majority of sweet potato market in Majalengka. Many farmers (in many cases collectors too) are bound by using middlemen's (bandars') loan to sell their product to the finance provider (middlemen) at the latter's initiatives.

- 2) Village Collectors (Pengepul)

Persons who are the nearest to farmers in transactions and based in their own village, usually acting in between farmers and bandars. In the areas dominated by the particular bandar group, village collectors are linked with them.

- 3) Processor
- 4) Trader/ Grosir

Multi-Players

As in Kuningan, market participants are in many cases multi-players.

The Proportion of each Channel and Transaction System

DINAS estimates that the marketing channel through one dominating middlemen's group (Sinar ubi) accounts for 60 %, while 10 % out of remaining 40 % channels is also controlled by that group. Main destination of the product through this group is big processors for export in other kabupatens / provinces (demand of sweet potato <fresh and processed> in Majalengka is limited). In the areas dominated by the said middlemen's group, sweet potato farmers usually sell their sweet potato to village collectors linked with the group before harvest. Harvesting work is to be conducted by the collectors at their cost. Finance services

(loan) are provided from the group to collectors and in same way from collectors to farmers. Prices are determined at the group's initiatives. Farmers have no choice for marketing. In other areas, however, marketing by farmers seems to be more open.

As in Kuningan, sweet potato business of KT's are conducted mostly through middlemen (bandar, etc.), and more by individual member farmers (including chairpersons) than by groups.

There is no processing industry for sweet potato in Majalengka, but only home industry level exists. "Agro-processing village" by private sectors is located in Kec. Cingambul, where fresh commodities are procured in and out of Majalengka, but the processing of sweet potato is very limited.

Selling prices of sweet potato product were collected at every point of marketing channels. Although number of samples is limited, average of the prices are summarized below. The data suggest quite a low selling price of farmers and a high margin of middlemen in the group's dominating areas, compared with Kuningan and non-dominant areas in Majalengka. This shows that no or less competitive situation among middlemen cause more disadvantage to farmers.

Table 4 Selling Prices Data in Majalengka (Rp/kg)

	"Sinar Ubi" dominating areas			Non-"Sinar Ubi" areas		
	Farmers	Collectors*	Middlemen	Farmers	Collectors	Middlemen
Average	565	800	1,250	989	(N.A.)	1,137

* Collectors' transactions here are mostly made before harvest. So, prices include harvesting/transportation cost
(Data Source: Farmers / Middlemen, by interview in Aug-Nov 2006)

For information, price data collected in Jakarta indicate that differences in retail prices of fresh sweet potato between urban areas (supermarket) and local market (Majalengka) are much bigger than in wholesale prices.

2.3.2 Activities

From the findings of the basic research survey, several cases of marketing activities currently conducted in sweet potato business in Majalengka are enumerated in Table C2.3.1. These activities, which are mostly carried out by middlemen and may appear to be small actions, will give some hint to improve and strengthen the marketing operation of farmers.

2.3.3 Problems

Marketing-related problems raised or found in the Study are summarized in Table C2.3.2. Analysis of these problems is made in Chapter 3 to identify a core problem.

2.4 Kabupaten Mojokerto

BOX 5 Particular Findings in Mojokerto

Particular findings in Kabupaten Mojokerto (Duck Product) are summarized as follows:

- There is no partnership agreement among KTs.
- Much of duck-related product (fresh eggs/ DOD/ salted eggs) flows out to other kabupatens/ provinces, due to limited demand in Mojokerto.
- Various types of transaction between farmers and middlemen (particularly village collectors) are observed with the specific features of duck-related product.

2.4.1 Marketing Channels

Overall marketing channels of duck-related product in Kabupaten Mojokerto are outlined in Fig. C2.4.1. Although official data are not available, the interview with several officers (DINAS) suggests that middlemen (bandar, etc.) are involved in the majority of duck-related transactions made by Kelompok Tanis (KTs).

Product

Population of ducks in Kab.Mojokerto is reported to be 206,949 (DINAS Peternakan Mojokerto/ 2005), approx. 3/4 of Cirebon, in which several types of products are handled in duck business like Cirebon:

- 1) Fresh egg (Fertile or infertile)
- 2) DOD (Day old ducks)
- 3) Salted egg (Raw or boiled salted eggs)
- 4) Pullet (5 to 6 months old layer ducks)
- 5) Others (Smoked ducks, Flavored eggs, Abon, etc.)

As in Cirebon, main products distributed in duck business in Mojokerto are fresh eggs, salted eggs and DOD. Market of other product as above is limited.

Main Players and each Function

Participants acting in between farmers (individuals/ groups) and retailers in the market of duck-related product in Mojokerto are as follows. They have basically same functions as in other areas.

- 1) Bandar / Tengkulak

Many farmers are bound by using middlemen's loan to sell their product to the finance provider (middlemen) at the latter's initiatives.

- 2) Village Collectors (Pengepul)

In some kechamatans, Mojokerto, various types of transactions are observed between duck farmers and collectors, such as:

- (i) Commitment basis trading - e.g. Sell DOD for breeding to and later buy pullet from

farmer. Share profit and settle cost at the end.

- (ii) Procure various rejects from food company in other kabupatens and make it to duck-feed for selling to farmers at rather low prices.

In Mojokerto, no market dominating middlemen's group exists. Under the competitive situation, middlemen (particularly village collectors) have to make an utmost effort to seek marketing opportunity at risk for survival. As in Cirebon's case, there is little room for collectors to act in between farmers and bandars.

3) Processor

4) Trader/ Grosir

Multi-Players

As in Cirebon, market participants are in many cases multi-players. It is not unusual that kab. government staffs are bandar or collectors too.

The Proportion of each Channel and Transaction System

According to the estimate of DINAS Peternakan Mojokerto, duck farmers belonging to KT's account for 70 % of total. Middlemen's own farmers' groups are limited. As in Cirebon, duck business of KT's is conducted mostly through middlemen (bandar, etc.), and more by individual member farmers (including chairpersons) than by groups.

Although official data are not available, in recent years, a lot of fresh eggs/ DOD/ salted eggs are outgoing to other kabupatens/ provinces due to limited demand in Mojokerto.

Selling prices of each duck product were collected at every point of marketing channels. Although number of samples is limited, range and average of the prices are summarized below. The data suggest that margin of middlemen is less than 5 %, which seems to be a fair level acceptable by farmers, and reflect some competitive situation among middlemen (particularly collectors) in Mojokerto.

Table 5 Summary of Selling Prices Data in Mojokerto (Rp/pce)

	Fresh Egg		Salted Egg	
	Farmers	Middlemen	Farmers	Middlemen
Range	620 - 760	680 - 700	800 - 850	(N.A.)
Average	671	695	833	(N.A.)

(Data Source: KT's / Middlemen / Pasars, by interview in Aug-Nov 2006)

Partnership agreement among KT's as observed in Cirebon does not exist in Mojokerto at the moment.

2.4.2 Activities

From the findings of the basic research survey, several cases of marketing activities currently conducted in duck business in Mojokerto are enumerated in Table C2.4.1. These activities, which are mostly carried out by middlemen and may appear to be small actions, will give some hint to improve and strengthen the marketing operation of farmers.

2.4.3 Problems

Marketing-related problems raised or found in the Study are summarized in Table C2.4.2. Analysis of these problems is made in Chapter 3 to identify a core problem.

2.5 Kabupaten Kediri

BOX 6 Particular Findings in Kediri

Particular findings in Kabupaten Kediri (Mango) are summarized as follows:

- More than 50 % of fresh mango is outgoing to other kabupatens (wholesalers, etc.), due to limited demand to supply in Kediri.
- There is a “fruits market” in the center of production area. 80 % of local mango gathers to this market in harvest season, but buyers from other kabupatens are more than local ones.
- Approx. 75 % of mango transactions is made before harvest, with farmers’ strong desire to secure the outlet.
- There is no mango processing industry in Kediri, but only home industry level.
- Some partnership between KTs (Kab. Kediri) and private companies (other kabupatens) are observed for supply of raw materials, training and processing.

2.5.1 Marketing Channels

Overall marketing channels of mango in Kabupaten Kediri are outlined in Fig.C2.5.1. As in other kabupatens/ commodities, middlemen (bandars, collectors, etc.) are involved in the majority of mango related transactions made by Kelompok Tanis (KTs) and non-KT member farmers.

Product

Production of mango in Kediri varies so much by year (approx. 48,500 ton in 2005). Mango in Kediri is distributed in the market mostly in fresh form. Processed mango is limited. There is no processing industry in Kediri. Mango is processed in home industry level to produce Dodor, fried chips, dry mango, candy kripik, etc., many of which are on trial level.

Main Players and each Function

Participants acting in between farmers (individuals/ groups) and retailers in the market of Mango in Kediri are as follows. They have basically same functions as in other kabupatens, although commodity is different.

1) Bandar

Bandar in Kediri usually procures fresh mango from village collector and sell it to other kabupatens. They are said to be in higher position, of bigger business size and covering wider marketing areas than collectors.

2) Village Collectors

Persons who are the nearest to farmers in transactions and based in their own village, usually acting in between farmers and bandars. Particular feature of mango transaction with farmers in Kediri is an existence of “penebas” who is village collector but buy product from farmers before harvest (called “tebas system”). The majority of fresh mango transactions are made between farmers and penebas, with farmers’ strong desire to secure an outlet of their product. Ordinary collectors buying product after harvest is called “pengepul”.

3) Processor

4) Trader/ Grosir

Multi-Players

As in other kabupaten, market participants are in many cases multi-players. Many village collectors have two (2) functions; penebas and pengepul.

The Proportion of each Channel and Transaction System

According to the estimate of DINAS Pertanian Kediri, mango farmers belonging to KTs account for 60 % of total. As described before, mango business in Kediri are conducted mostly through middlemen (bandar, collector, etc.), and by individual member farmers (including chairpersons), not by groups.

Out of fresh mango produced in Kediri, approx. 75 % is sold from farmers to penebas before harvest, 15 % sold to ordinary village collector (pengepul) after harvest and 10 % to bandar. Pengepul sell 80 % to bandar and 20 % to retailer.

Farmers’ selling prices to pengepul are totally determined by the latter’s initiatives with payment in cash. Prices become the lowest in harvest season (usually Nov to Dec), and reach the peak right before harvest (Oct to Nov). In harvest season, village collectors become less available because of low market prices. So, farmers are forced to sell by themselves to the market with substantial losses (damage, unsold, etc.). This situation leads to “tebas system” (transaction before harvest) by penebas and farmers.

In case of “tebas system”, criteria for determination of farmers’ prices to penebas are (a) number and size of trees per unit area, (b) quality of fruits, (c) time of harvest, etc. However, there is no clear standard for assessment of the quality of fruits. Payment is usually in installments and the terms differ much by case. According to DINAS, typical case is 10 % on contract (mostly verbal agreement, 1 to 2 months before harvest), 50 % on commencement of harvest and 40 % on its completion. Because of time lag between the contract and the sales of harvested commodity, penebas also has some risk. It is not unusual that penebas change a mutually agreed price later unilaterally to its advantage depending on market situation. Although transaction with penebas is said to be more negotiable for farmers than pengepul cases, the initiative for price decision is usually taken by penebas.

More than 50 % of fresh mango is outgoing to other kabupatens/ provinces through middlemen (bandar), due to limited demand in Kediri to supply. There exists a “fruits market” located in Kec. Banyakan, the center of mango production area in Kediri. Approx. 80 % of local fresh mango gathers to the market in harvest season, but buyers from other kabupatens/ provinces are more than local ones.

Selling prices of mango product were collected at every point of marketing channels. Although number of samples is limited, range and average of the prices are summarized below. The data indicate that a margin of middlemen (particularly collectors including “penebas”) is approx. 30-35 % in gross and more or less 20 % in net (assuming the cost at 300-400 Rp/kg). The data suggest that collectors seem to take a high margin to cover above-mentioned risks, while farmers are forced to sell their product at relatively low prices. For more precise analysis, however, further research needs to be done, since prices differ so much even on same basis, in addition to limited number of samples.

Table 6 Selling Prices Data in Kediri (Rp/kg)

	Fresh Mango (Podang)	
	Farmers	Middlemen
Range	750 – 2,500	2,000 – 2,700
Average	1,583	2,425

(Data Source: KTs / Middlemen / Pasars, by interview in Aug-Nov 2006)

For information, price data collected in Jakarta indicate that differences in retail prices of fresh mango between urban areas (supermarket) and local market (Kediri) are much bigger than in wholesale prices.

2.5.2 Activities

From the findings of the basic research survey, several cases of marketing activities currently conducted in sweet potato business in Majalengka are enumerated in Table C2.5.1. These activities, which are mostly carried out by middlemen and may appear to be small actions, will give some hint to improve and strengthen the marketing operation of farmers.

2.5.3 Problems

Marketing-related problems raised or found in the Study are summarized in Table C2.5.2. Analysis of these problems is made in Chapter 3 to identify a core problem.

CHAPTER 3 IMPROVEMENT DIRECTION

BOX 7 Improvement Direction

- From analysis of marketing-related problems found in the Study so far made, a core problem was identified as “Lack of Business Mind”.
- To improve the situation represented by the core problem, supporting system through <1> Partnership with another private business unit and/or <2> Facilitator (BDS provider) is proposed. Farmers’ groups need to conduct marketing activities to find customers’ requirement and sales promotion at their initiative continuously, under the supporting system.
- Taking particular features of each kabupaten in view, appropriate types of business unit are proposed; <1> Strengthening or replication of the existing partnership system among KTs for Cirebon and Mojokerto (duck), <2> Partnership with local processing industry for Kuningan (sweet potato), <3> Establish “Local Production & Local Marketing” business system for Majalengka (sweet potato) and <4> Partnership with private sector (marketing) for Kediri (mango).

3.1 Common

Problem Analysis

As described in Chapter 2, marketing-related problems by kabupaten / commodity are summarized in Table C2.1.2, C2.2.2, C2.3.2, C2.4.2 and C2.5.2, which contains many issues common to 5 kabupatens and 3 commodities. These problems were analyzed as follows.

- 1) Select the problems raised or found commonly to 5 kabupatens / 3 commodities and also more frequently than others.
- 2) Identify a problem that has connections with other problems most closely and frequently (considered as “Core Problem”) Identify a problem that has connections with other problems most closely and frequently (considered as “Core Problem”)

Thus, a core problem was identified as “Lack of Business Mind”. Image of the problem analysis is shown in Fig. C3.1.1.

Direction for Improvement

In order to improve the situation represented by the core problem as above, the following direction is proposed.

- 1) Prerequisite

Target farmers should have a strong will to increase their income through agro-processing and take initiative in their marketing activities.

- 2) Supporting system

As described in Chapter 2, most farmers are inactive in marketing operation. They have no or very little knowledge and experiences. Therefore, appropriate supporting system needs to be established. Possible options of the system are:

<1> Partnership with another business unit

Partnership may be in the form of joint venture or agreement. Partner may be any third party or private company, but should be business-minded group. In this structure, farmers' group is mainly responsible for production and processing of commodity, and the partner for management and marketing. Through joint operation, farmers can concentrate on production / processing and be expected to absorb knowledge and skills for marketing, leading to development of business-mind.

<2> Facilitator

Dispatch BDS (Business Development Services) provider to farmers' group for several years at the beginning of implementation of the proposed model to facilitate their marketing activities.

3) Marketing activities

Marketing activities are basically common to 5 kabupatens and 3 commodities. As described several cases in Chapter 3, middlemen are very active, conducting various types of operation that are applicable to farmers' groups.

Marketing activities to be conducted by farmers' groups are as per Table C3.1.1, where categorized activities, actual examples of activities being conducted and application to each type of business unit are summarized.

Image of activities is illustrated in Fig.C3.1.2, which explains a key concept of marketing activities. At the beginning, target product, areas and customers should be identified.

Also, marketing strategy needs to be established. These may be adjustable depending on progress of marketing activities thereafter.

Marketing activities can be simplified to 3 categories; <1> Find customers' requirement, <2> Develop/ improve product to meet the customers' requirement, and <3> Create and develop customers (Sales promotion). Through activities <3>, customers' needs may be found further which are to be reflected in the improvement and development of the product. This sort of cyclic operation should be conducted continuously and kept in mind always, because all factors in the market are variable, no constant. In Fig.C3.1.2, several examples of activities for finding customers' requirement and for creation /development of customers are enumerated and encircled respectively. Overlapping part indicates the activities considered to have these two objectives.

3.2 Kabupaten Cirebon and Mojokerto (Duck)

Market Features

As described in Chapter 2, market features of Cirebon and Mojokerto (duck product) are characterized and analyzed as per Table C3.2.1.

Direction for Improvement (type of business unit)

Taking above situation into account, the business unit is proposed for Cirebon and Mojokerto as per Table C3.2.2.

3.3 Kabupaten Kuningan and Majalengka (Sweet Potato)

Market Features

As described in Chapter 2, market features of Kuningan and Majalengka (Sweet Potato) are characterized and analyzed as per Table C3.3.1.

Direction for Improvement (type of business unit)

Taking above situation into account, the business unit is proposed for Kuningan and Majalengka as per Table C3.3.2.

3.4 Kabupaten Kediri (Mango)

Market Features

As described in Chapter 3, market features of Kediri (Mango) are characterized and analyzed as per Table C3.4.1.

Direction for Improvement (type of business unit)

Taking above situation into account, the business unit is proposed for Kediri as per Table C3.4.2.

CHAPTER 4 IMPLEMENTATION MODEL

Marketing Activities in Implementation Model

Marketing Activities in Implementation Model are summarized in Table C4.1.1 (Duck / Cirebon), Table C4.2.1 (Duck / Mojokerto), Table C4.3.1 (Sweet Potato / Kuningan), Table C4.4.1 (Sweet Potato / Majalengka) and Table C4.5.1 (Mango / Kediri). All activities are fully supported by BDS provider and proposed new finance scheme. Cost required for KT's own marketing operation is covered by its contribution in principle.

Table

Table C2.1.1 Marketing Activities (Cirebon)

From the findings of the basic research survey, several cases of marketing activities currently conducted in duck business in Cirebon are enumerated below:

	Type of Market Player	Marketing Activities & Categories
Case 1	Bandar & Chairperson of KT (Kec. Kapetakan, Sales volume: 1,000 eggs/day) / Retailer & Processor (Kota Cirebon, Sales volume: 750 eggs/day)	Buy fresh eggs from KT member farmers and process to salted eggs for selling at pasar where he has his own shop (→Marketing Category: 3) No separation to fertile and infertile before making salted eggs. <u>More tasty product is expected.</u> (→Marketing Category: 1) Some samples of product are open on display at the shop so that consumers can do visual and tasting check before buying. (→Marketing Category: 2)
Case 2	Bandar (Kec. Kapetakan, Sales volume: n.a.)	Buy fresh eggs and process it to salted eggs for selling. <u>Ask several acquaintances to introduce buyers.</u> (→Marketing Category: 2) No separation to fertile and infertile, expecting <u>more tasty salted eggs</u> , like other cases. Adjust the ratio of ash, salt, soil, etc. to meet buyers' requirement. (→Marketing Category: 1) The buyer usually comes to his place in Cirebon to buy.
Case 3	Bandar (Kec. Kapetakan, Sales volume: n.a.)	Sell fresh eggs to another kabupaten where fresh eggs are in <u>short supply to demand.</u> (→Marketing Category: 1) <u>Visited there in 1998 carrying sample product, and found buyers.</u> (→Marketing Category: 2)
Case 4	Tengkulak & Chairperson of KT (Kec. Losari, sales volume: 10,000 eggs/day)	Buy DOD and sell pullet after breeding. <u>Participated in DINAS workshop where exchanged market information with many participants including DINAS officers from other provinces/ kabupaten. Buyers were found then and there.</u> (→Marketing Category: 2)
Case 5	Bandar & Chairperson of KT (Kec. Gebang, Sales volume: 190,000 eggs/month)	Buy fresh eggs and process it to salted eggs for selling. <u>Exchange market information with intimate Tengkulak in another kabupaten to know supply/demand situation (usually short supply here and less demand there for fresh eggs).</u> (→Marketing Category: 1) Go there to procure fresh eggs according to information. <u>Sell salted eggs to another province (very salty taste preferred there and the more salt the longer shelf life) by low-margin/high-volume policy.</u> (→Marketing Category: 1 & 2)

● This table shows actual examples of marketing activities and categories.

● Marketing Categories shown in right columns are defined as below:

1. Activities for finding Customers' Requirement
 2. Activities for Creation and Development of Customers
 3. Activities for two (2) objectives 1 & 2
- Refer to Table 4.2.2-1, which summarizes marketing activities and an applicable type of business unit for each activity.

Table C2.1.2 Problems on Marketing (Cirebon)

Marketing-related problems raised or found in the Study for Kab. Cirebon are summarized below.

Information sources:

- 1) The basic research survey (the result of interviews with KT members/ middlemen/ local government officers)
- 2) The workshops (the result of discussions among KT member farmers)
- 3) The preliminary study (findings of the study conducted in 2004).

Problems are categorized by similarity. Items marked with the symbol (●) are the ones more frequently taken up than others.

(Processing)
1) Lack of processing machine/equipment for DOD/ salted eggs (●)
2) Limited production due to traditional processing method
(Transportation)
3) Lack of transportation means (●)
4) High cost of transportation (●)
5) Damage of road
(Capital/ finance)
6) Lack of soft loan with low interest, no collateral) (●)
7) Lack of capital for expansion of business (●)
8) Limited amount of credit from cooperative (●)
(Business quality)
9) Lack of business mind
10) Farmers' inactive marketing operation compared with middlemen
11) KTs' unfavorable reputation (business behavior) looking from middlemen
(Dependence on middlemen)
12) Unsustainable marketing due to dependency on middlemen (●)
13) Price determination at middlemen's initiatives (●)
14) Bound by using middlemen's loan to sell to them (●)
(Procurement of duck feed)
15) Dependency of raw materials on the supply source (rice mill, etc.) (●)
16) Lack of feed processing required for egg production
17) High price of feed (●)

(Selling price of duck product)
18) Low selling price (egg) (●)
19) Comparatively low price (value addition) to feed price
20) No standard of egg price
(Raw materials)
21) Shortage of duck population (●)
(Market)
22) Difficulty in access to market (●)
23) Difficult marketing due to avian-flu (●)
24) Limited access to global marketing (●)
(Knowledge/ experiences)
25) Limited knowledge of diseases / medicine
26) Limited knowledge and skill of duck farmers for marketing

Table C2.1.3 Selling Prices by Type of Market Players and Point of Market Channels, Cirebon (Rp/pce or tail) November 2006

Source	Fresh Egg			Salted Egg			DOD			Remarks	
	Farmer	Middlemen	Retailer	Farmer	Middlemen	Retailer	Farmer	Middlemen	Pr	Tr	NP
(Middlemen)											
B (Mr.D)	700				900	1,000			*	*	125
B (Mrs.M)	650				1,000				*	*	
T (Mr.S)	600-700				1,100				*	*	
B (Mr.R)					850				*	*	
T (Mrs.I)					880	1,000-1,100			*	*	
B (Mr.Ac)					575-900				*	*	
B (Mr.Ar)	665	900			1,100				*	*	
B (Mr.Ace)		740-760									
(Pasar A)											
R (1)		775	900		900	1,125			*	*	
R (2)					980	1,125					
R (3)		800				1,125			*	*	
R (4)		760				1,150			*	*	100
(Pasar B)											
R (5)					870	1,000					100
R (6)					950	1,000					
(Pasar C)											
R (7)						1,050					
R (8)						1,150					
R (9)					900	950					
(KT)											
F(1)							2,500				
F(2)	650-850										
F(3)	700-850						2,250				
F(4)				1,090					*		
F(5)					(N.A.)						
F(6)	650										
F(7)	650-700						2,200				
F(8)				950					*		
F(9)					(N.A.)						
Average	697	789	900	1,020	916	1,064	2,317				

F: Farmer B: Bandar T: Tengkulak R: Retailer KT: Kelompok Tani NP: Net Profit Pr: Processing Tr: Transportation

Table C2.2.1 Marketing Activities (Kuningan)

From the findings of the basic research survey, several cases of marketing activities currently conducted in sweet potato business in Kuningan are enumerated below:

	Type of Market Player	Marketing Activities & Categories
Case 1	Processor & Chairperson of KT (Kec. Climus, Sales volume: 30 kg flour/month)	Buy fresh sweet potato from KT member farmers and process to make several kinds of products for selling. <u>Local retailers and consumers come to his place to buy.</u> (→Marketing Category: 2)
Case 2	Bandar (Kec. Cigandamekar, Sales volume: 78 ton fresh potato /month)	Buy fresh sweet potato from farmers or collectors and <u>sort it before selling</u> to Pasar-Induk Jakarta, removing small size and damaged ones. (→Marketing Category: 1) <u>Sell removed potato to local processors at lower prices.</u> No waste. (→Marketing Category: 2)
Case 3	Bandar (Kec. Cigandamekar, Sales volume: 320 ton fresh potato /month)	Sell fresh sweet potato to Pasar-Induk Jakarta where he has <u>his own shop with stock space.</u> (→Marketing Category: 3) <u>Set selling prices based on information from his friend who belongs to private processor/exporter.</u> (→Marketing Category: 1)
Case 4	Bandar & Chairperson of KT (Kec. Cigandamekar, Sales volume: 20 ton fresh potato /month)	Sell fresh sweet potato to private processor in accordance with their requirement (<u>variety, quantity, delivery, size, weight, etc.</u>). Do trial planting for development of new variety of potato to meet buyer's needs. (→Marketing Category: 1)
Case 5	Bandar (Kec. Cigandamekar, Sales volume: 100 ton fresh potato /month)	Procure fresh sweet potato (<u>bigger size and good taste</u>) in certain area of Kuningan and sell it to <u>other demanding kabupaten.</u> Prices also differ by area in Kuningan even in same time and variety. (→Marketing Category: 1)

● This table shows actual examples of marketing activities and categories.

● Marketing Categories shown in right columns are defined as below:

- 1. Activities for finding Customers' Requirement
- 2. Activities for Creation and Development of Customers
- 3. Activities for two (2) objectives 1 & 2

● Refer to Table 4.2.2-1, which summarizes marketing activities and an applicable type of business unit for each activity.

Table C2.2.2 Problems on Marketing (Kuningan)

Marketing-related problems raised or found in the Study for Kab. Kuningan are summarized below.

Information sources:

- 1) The basic research survey (the result of interviews with KT members/ middlemen/ local government officers)
- 2) The workshops (the result of discussions among KT member farmers)
- 3) The preliminary study (findings of the study conducted in 2004).

Problems are categorized by similarity. Items marked with the symbol (●) are the ones more frequently taken up than others.

(Production / Processing)
1) Lack of processing machine/equipment (●)
2) Limited knowledge and skill of processing technology (●)
3) Limited cultivation area
4) Low yield / low income (●)
5) Necessity of existence of processing industry to absorb the production
6) Processing by order at high cost
(Transportation)
7) Lack of transportation means for distribution of the product
(Capital/ finance)
8) Limited capital to purchase fertilizer/ pesticides (●)
9) Difficult to acquire credit due to many requirement
10) Financial institutions do not reach the level to meet KT's capital needs for increase of production (●)
(Business quality)
11) Lack of business mind
12) Farmers' inactive marketing operation compared with middlemen
13) Difficulty in holding regular meetings (●)
(Dependence on middlemen)
14) Price determination at middlemen's initiatives (●)
15) Bound by using middlemen's loan to sell to them (●)
(Procurement of input)
16) High price of fertilizer/ pesticide (●)
17) Improper application of fertilizers due to high procurement prices of

fertilizers (●)
(Selling price of sweet potato)
18) Sharp decline in prices at harvest time (●)
19) No government control to stabilize prices
(Market)
20) No knowledge of market prices
21) MIS does not function effectively
(Knowledge/ experiences)
22) Lack of knowledge and skills for effective meetings and organization management

Table C2.2.3 Selling Prices by Type of Market Players and Point of Market Channels, Kuningan (Rp/kg or pack) November 2006

Source	Fresh Sweet Potato			Kremes			Keripik			Remarks	
	Farmer	Middlemen	Retailer	Farmer	Middlemen	Retailer	Farmer	Retailer	Pr	Tr	NP
(Middlemen)											
B (Mr.N)	1,000-1,100	1,450								*	75
B (Mr.H)										*	50-100
P (Mr.Z)	900									*	
B(Mr.T)	Ace1100	Ace1450								*	100-150
B(Mr.As)	970	1,320	1,450							*	40
B(Mr.Am)	Bogor 1,000	Bogor 1,300								*	
C(Mr.P)	1,200	1,300									
(Pasar)											
R(1)	1,250		1,500							*	
R(2)			1,500				7000/pk	10000/pk	*	*	
(KT)											
F(1)				800/pk					*		GP264/pk NP100-150/pk
F(2)	800									*	GP420
F(3)	700									*	GP373
F(4)	800									*	GP408
F(5)				600/pk					*	*	GP283
F(6)	Ace1,000										GP665
Average	894	1,278		1,483/pk			7,000/pk	10,000/pk			

F: Farmer B: Bandar R: Retailer C: Collector KT: Kelompok Tani NP: Net Profit GP: Gross Profit Pr: Processing Tr: Transportation

* Comparison by simple averages of vertical columns does not make sense, since many data are on different basis (variety, size, quantity, etc.).

Table C2.3.1 Marketing Activities (Majalengka)

From the findings of the basic research survey, several cases of marketing activities currently conducted in sweet potato business in Majalengka are enumerated below:

	Type of Market Player	Marketing Activities & Categories
Case 1	Member of KT (Kec. Cigasong, Sales volume: n.a.)	Process sweet potato to make kremes, etc. for selling. Sell it once a week by the method of <u>door-to-door walking sales</u> within dusun/desa. (→Marketing Category: 3)
Case 2	(Type: unknown) (Kab. Serawang, Sales volume: n.a.)	Visit Majalengka from other kabupaten (Serawang) and <u>found specialty product (rice snack) there.</u> (→Marketing Category: 1) Buy it and <u>try to make similar type but different taste product</u> in hometown. Fairly good sale reported. (→Marketing Category: 1 & 3)
Case 3	Bandar (Kec. Cigasong, Sales volume: 200 small packs of keremes /month/pasar)	Visit several shops in pasar every Tuesday to ask retailers for their demand (<u>goyokiki</u>). Delivery is made every Saturday based on the result of <u>goyokiki</u> . (→Marketing Category: 3)
Case 4	Bandar (Kec. Maja, Sales volume: 6,000 kg fresh sweet potato /month/pasar)	Retailer comes to bandar's shop to buy fresh potato. The bandar <u>supplies plastic bags for packaging fresh sweet potato</u> to retailers. (→Marketing Category: 2)

● This table shows actual examples of marketing activities and categories.

● Marketing Categories shown in right columns are defined as below:

- 1. Activities for finding Customers' Requirement 2. Activities for Creation and Development of Customers 3. Activities for two (2) objectives 1 & 2
- Refer to Table 4.2.2-1, which summarizes marketing activities and an applicable type of business unit for each activity.

Table C2.3.2 Problems on Marketing (Majalengka)

Marketing-related problems raised or found in the Study for Kab. Majalengka are summarized below.

Information sources:

- 1) The basic research survey (the result of interviews with KT members/ middlemen/ local government officers)
- 2) The workshops (the result of discussions among KT member farmers)
- 3) The preliminary study (findings of the study conducted in 2004).

Problems are categorized by similarity. Items marked with the symbol (●) are the ones more frequently taken up than others.

(Production / Processing)
1) Limited raw materials (●)
2) Traditional and inefficient processing equipment (●)
3) Lack of processing equipment for improvement of quality of the product including packaging
4) Limited processing skills (●)
5) Overproduction to local demand
(Product)
6) Unsatisfactory packaging (●)
(Transportation)
7) No transportation means owned by KT (●)
(Capital/ finance)
8) Lack of capital to purchase raw materials (●)
9) Lack of capital for operation
10) Limited capital to increase sales volume (●)
(Business quality)
11) Limited sales promotion
12) Lack of business mind
13) Farmers' inactive marketing operation compared with middlemen
(Business performance)
14) Limited marketing channels (small shops such as warung) (●)
15) Limited marketing area (local only) (●)
16) Low level of profit (●)
17) No partnership with other KTs (●)

18) Necessity of partnership with others for market expansion
(Dependence on middlemen)
14) Price determination at middlemen's initiatives (●)
15) Bound by using middlemen's loan to sell to them (●)
16) No other choice for farmers in marketing their product in the areas dominated one particular middlemen's group (●)
(Market)
17) MIS does not function effectively
18) No access to market information
19) Small market size in supply and demand compared with Kuningan
(Knowledge/ experiences)
20) Lack of skills in marketing (●)

Table C2.3.3 Selling Prices by Type of Market Players and Point of Market Channels, Majalengka

Source	Fresh Sweet Potato		Kremes			Keripik		Remarks			
	Farmer	Middlemen	Retailer	Farmer	Middlemen	Retailer	Farmer	Retailer	Pr	Tr	NP
(Middlemen)											
B Group (Mr.S)	800 ?	1,200-1,300								*	100-400
C (Mr.O)	Ace 850 Cerret 1,250	Ace 1,000 Cerret 1,500									Ace 100 Cerret 200
(Pasar)											
R(1)					700/pk	800/pk					100/pk
R(2)		Ace1,250	Ace1,750		800/pk	1,000/pk					Fresh 450 Kremes 200/pk
IF(Kec.Cikijing)	Cerret 1,500										
IOFs & 5C (Kec.Argapura)	Ace 500-625	Ace 800 (C to B)									
(KT)											
F(1)				1,800/pk					*		GP500/pk
F(2)				1,800/pk					*		GP825/pk
F(3)				800/pk					*		GP155/pk
F(4)	700										GP392
F(5)	Ace 800										GP176
F(6)	925										GP600
F(7)	900										GP674
Average	895	1,175		1,467/pk	750/pk	900/pk					

F: Farmer B: Bandar R: Retailer C: Collector KT: Kelompok Tani NP: Net Profit GP: Gross Profit Pr: Processing Tr: Transportation

* Comparison by simple averages of vertical columns does not make sense, since many data are on different basis (variety, size, quantity, etc.).

Table C2.4.1 Marketing Activities (Mojokerto)

From the findings of the basic research survey, several cases of marketing activities currently conducted in duck business in Mojokerto are enumerated below:

	Type of Market Player	Marketing Activities & Categories
Case 1	Bandar & Chairperson of KT (Kec. Mojosari, Sales volume: 50,000 eggs/month)	Arranged <u>its own showroom in the past, displaying DOD and Ducks for selling. Positive reaction was brought about from visitors.</u> (→Marketing Category 3)
Case 2	Former Chairperson of KT (Kec. Bangsal, Sales volume: 45,000 eggs/month)	<u>Sold duck-related product in one supermarket in Mojokerto on consignment basis. The result was good enough during sales period, although the supermarket was burnt down shortly.</u> (→Marketing Category 3)
Case 3	Chairperson & Agribusiness Head of KT (Kec. Pacet, Sales volume: 1,100 ton fresh potato /month)	<u>Participated in exhibition in kabupaten level in Mojokerto this year, and national level in Bandung.</u> (→Marketing Category 2)
Case 4	Bandar & Kab. Government Staff (Kec. Mojosari, Sales volume: 30,000 DOD/week in 1998-2003)	<u>Buy DOD and sell it to other kabupaten/ provinces. Came to know buyers through exchange of information with neighbors.</u> (→Marketing Category 2)
Case 5	Collector (Kec. Bangsal, Sales volume: 12,000 eggs/week, etc.)	<u>Do multilateral business. Buy various kinds of rejects (possible components of duck-feed) from food companies and sell it to farmers. Also sell fresh eggs to food companies. Should comply with buyers' requirement (quality, delivery, amount) on every coming order, otherwise cancelled order thereafter and changed to other collectors.</u> (→Marketing Category 1 & 2) <u>Visited many areas to find business partners. Once relationship established, communication become possible only by phone thereafter.</u> (→Marketing Category 2)
Case 6	Bandar (Kec. Mojosari, Sales volume: 43,500 eggs/month, etc.)	<u>Do multilateral business. Sell DOD to and later buy pullet from farmers at commitment basis. At the end, settle cost and share profit equally. Likewise, pullet/ fresh eggs too. Buy and sell duck-feed component. Sell fresh eggs, duck meat, etc.</u> (→Marketing Category 1 & 2)
Case 7	Collector (Kec. Pungging, Sales volume: n.a.)	<u>Buy various rejects from food companies in other kabupaten, and mix those at some ratio to new duck-feed for selling to farmers at rather low prices.</u> (→Marketing Category 1)

● This table shows actual examples of marketing activities and categories.

● Marketing Categories shown in right columns are defined as below:

- 1. Activities for finding Customers' Requirement
 - 2. Activities for Creation and Development of Customers
 - 3. Activities for two (2) objectives 1 & 2
- Refer to Table 4.2.2-1, which summarizes marketing activities and an applicable type of business unit for each activity.

Table C2.4.2 Problems on Marketing (Mojokerto)

Marketing-related problems raised or found in the Study for Kab. Mojokerto are summarized below.

Information sources:

- 1) The basic research survey (the result of interviews with KT members/ middlemen/ local government officers)
- 2) The workshops (the result of discussions among KT member farmers)
- 3) The preliminary study (findings of the study conducted in 2004).

Problems are categorized by similarity. Items marked with the symbol (●) are the ones more frequently taken up than others.

(Production / Processing)
1) Low performance of equipment
2) Unstable egg production (●)
(Transportation)
3) Lack of transportation means
(Capital/ finance)
4) Lack of capital for expansion of business (●)
(Business quality)
5) Lack of business mind
6) Farmers' inactive marketing operation compared with middlemen
7) KTs' unfavorable reputation (business behavior) looking from middlemen
8) No partnership with other groups
(Dependence on middlemen)
9) Unsustainable marketing due to dependency on middlemen
10) Price determination at middlemen's initiatives (●)
11) Bound by using middlemen's loan to sell to them (●)
(Procurement of duck feed)
12) Traditional feed mixing equipment (●)
13) High price of feed (●)
14) DOD selling prices depend on feed prices
(Product for selling)
15) High level mortality (●)
(Selling price of duck product)

16) Unstable prices of duck product (●)
(Raw materials)
17) Shortage of duck population
(Market)
18) Difficulty in access to market (●)
19) Difficult marketing due to avian-flu (●)
20) Decrease of demand of eggs
21) MIS does not function effectively
(Knowledge/ experiences)
22) Limited knowledge of diseases / medicine
23) Limited knowledge and skill of duck farmers for marketing
24) Lack of training, knowledge & skills

Table C2.4.3 Selling Prices by Type of Market Players and Point of Market Channels, Mojokerto (Rp/pce or tail) November 2006

Source	Fresh Egg		Salted Egg		DOD		Remarks		
	Farmer	Middlemen	Farmer	Middlemen	Farmer	Middlemen	Pr	Tr	NP
(Middlemen)									
C (Mr.D)	625	700						*	
B (Mr. N)	650	700						*	
C (Mr.Nu)	620	680						*	
C (Mr.W)	620	700						*	
(Pasar)				(N.A.)					
(KT)									
F(1)	680								
F(2)	760				2,080		*		
F(3)	680		850		2,050		*		
F(4)			850						
F(5)	680-725		800		2,060		*		
F(6)					2,200				
Average	671	695	833		2,098				

F: Farmer B: Bandar R: Retailer C: Collector KT: Kelompok Tani NP: Net Profit Pr: Processing Tr: Transportation

Table C2.5.1 Marketing Activities (Kediri)

From the findings of the basic research survey, several cases of marketing activities currently conducted in mango business in Kediri are enumerated below:

	Type of Market Player	Marketing Activities & Categories
Case 1	Collector & Treasurer of Kooperasi Banyakan, Sales volume: 16 ton fresh mango/day	Sell fresh potato to buyers (bandar) in Central Java. <u>First, visited that area to find buyers and offer prices.</u> (→Marketing Category: 2)
Case 2	Member of KT (Kec. Banyakan, Sales volume: n.a.)	Participated in an exhibition held by DINAS in 2005, displaying <u>DODOR with good sales.</u> The exhibition is held once in 4 years. (→Marketing Category: 1)
Case 3	Bandar (Kec. Banyakan, Sales volume: 500-750 ton fresh mango/year)	Buy fresh mango from collectors and sell it to wholesalers in urban areas. <u>The buyer was introduced by acquaintances.</u> Vehicle on return way is loaded with goods by request of others. (→Marketing Category: 2)
Case 4	Bandar (Kab. Kediri, Sales volume: n.a.)	Buy corn from KT and sell it to food company in other kabupaten under financial support of DINAS. Continue this business for long period. (→Marketing Category: 2)
Case 5	KT / DINAS (Kec. Banyakan, Sales volume: n.a.)	<u>Establish a partnership between KT and private sector through mediation of DINAS, for processing and marketing of processed fruits.</u> The private sector provides processing equipment and assures the market, while the KT produces processed fruits in accordance with the requirement. (→Marketing Category: 2)
Case 6	Bandar (Kec. Tarokan, Sales volume: 600 ton fresh mango/year)	Buy fresh mango from collectors and sell it to bandars/ wholesalers in other provinces. <u>First, visited other provinces to find buyers.</u> (→Marketing Category: 2)

● This table shows actual examples of marketing activities and categories.

● Marketing Categories shown in right columns are defined as below:

- 1. Activities for finding Customers' Requirement
 - 2. Activities for Creation and Development of Customers
 - 3. Activities for two (2) objectives 1 & 2
- Refer to Table 4.2.2-1, which summarizes marketing activities and an applicable type of business unit for each activity.

Table C2.5.2 Problems on Marketing (Kediri)

Marketing-related problems raised or found in the Study for Kab. Kediri are summarized below.

Information sources:

- 1) The basic research survey (the result of interviews with KT members/ middlemen/ local government officers)
- 2) The workshops (the result of discussions among KT member farmers)
- 3) The preliminary study (findings of the study conducted in 2004).

Problems are categorized by similarity. Items marked with the symbol (●) are the ones more frequently taken up than others.

(Production / Processing)
1) Traditional packaging (●)
2) Lack of knowledge and skills to overcome mango pests (●)
(Transportation)
3) Lack of transportation means for distribution of the product (●)
4) Bad road condition leading to high transportation cost (●)
(Capital/ finance)
5) Limited capital for operation (●)
6) Lack of capital for new business (partnership with processing industry)
7) Insufficient utilization of the existing financial institutions (●)
8) Difficulty in procurement of funds for production
(Business quality)
9) Lack of business mind
10) Farmers' inactive marketing operation compared with middlemen
(Business performance)
11) Limited marketing area (local only) (●)
(Dependence on middlemen)
12) Price determination at middlemen's initiatives (●)
13) Bound by using middlemen's loan to sell to them (●)
(Procurement of input)
14) Difficulty in procurement of fertilizers (●)
(Selling price of mango)
15) Sharp decline in prices at harvest time (●)

16) Much fluctuation of market prices depending on season (●)
17) Low selling prices
(Market)
18) MIS does not function effectively
(Knowledge/ experiences)
19) Lack of knowledge and skills for marketing
20) Lack of knowledge on fertilizers
(Government support)
21) Lack of guidance by relevant government institutions (●)

Table C2.5.3 Selling Prices by Type of Market Players and Point of Market Channels, Kediri (Rp/kg) November 2006

Source	Fresh Mango			Middlemen's Destination		Remarks	
	Farmer	Middlemen	Retailer	Other Kab./Prov.	Kediri	H	Tr NP
(Middlemen)							
Cp (Mr.M) <Pdg>	750	2,000		#		*	850
C (Mr.K)	2,500	2,600-2,700	3,000		#		50
C (Mr.S) <Pdg/HM>	1,500	2,400	3,000	#		*	880
B (Mr.TW) <HM>	C to B 3,000	B to B 6,500		#		*	1,500
Cp (Mr.T) <Pdg>	100	500-700			#	*	300-500
C (Mr.J) <Pdg/Glk >	<Glk>2,000 <Pdg>1,000		<Glk>2,500 <Pdg>1,500		#		<Glk> 375 <Pdg> 375
B (Mr.Sp)	C to B 3,000	B to B 4,000-15,000 depending Grade		#		*	
(Pasar)							
R(1)		<Pdg>2,000 <Gdg>3,000 <Glk>3,000	<Pdg>3,500 <Gdg>5,500 <Glk>5,500		#		<Pdg> GP 1,500 <Gdg> GP 2,500 <Glk> GP 2,500
R(2)		<Pdg>2,000 <Gdg>3,000 <Glk>3,000	<Pdg>3,000 <Gdg>4,500 <Glk>4,000 <Mlg>2,500		#		<Pdg> GP 1,000 <Gdg> GP 1,500 <Glk> GP 1,000 <Mlg> GP 750
(KT)							
F(1)	2,000						GP 1,700
F(2)	(N.A.)						
F(3)	(N.A.)						
F(4)	(N.A.)						
Average	1,761	3,384	3,500				

F: Farmer B: Bandar R: Retailer C: Collector "after harvest" Cp: Collector "before harvest" KT: Kelompok Tani NP: Net Profit GP: Gross Profit
H: Harvest Tr: Transportation Pdg: Podang HM: Harum Manis Glk: Golek Gdg: Gadung Mlg: Manalagi
* Comparison by simple averages of vertical columns does not make sense, since many data are on different basis (variety, size, quantity, transaction system, etc.).

Table C3.1.1 Marketing Activities Applicable to Each Type of Business Unit

How to read this table:

1. Left columns indicate many types of marketing activities, and classified into three (3) categories; <1> Activities for finding Customers' Requirement, <2> Activities for Creation and Development of Customers (Sales Promotion), and <3> Activities for these two (2) objectives.
2. Middle columns show actual examples of activities (Only name of kabupaten/kecamatan and commodities indicated), which have been observed in the Study (interview survey).
3. Right columns are divided to four (4) types of Business Unit. Marketing activity applicable to each Business Unit is marked with the symbol "O" in the corresponding column.
4. Actual examples of activities are described in detail for each kabupaten in Table 3.3.4-3, 3.4.4-2, 3.5.4-2, 3.6.4-2 and 3.7.4-2.

Business Unit Type A: Local Production (Processing) and Local Marketing

Business Unit Type B: Partnership between Kelompok Tani and Local Processing Industry

Business Unit Type C: Partnership between Kelompok Tani and Private Sector (Marketing)

Business Unit Type D: Business Expansion for Wide Areas

Marketing Activities to be conducted	Actual Examples of Activities observed in the Basic Research Survey	Applicable Type of Business Unit			
		A	B	C	D
1. Activities for finding Customers' Requirement					
1-1. Market Research (for demand & supply, price, market needs, etc.)					
1-1-1. Small-scale Inquiry Survey (targeting relatives, neighbors, desa & kecamatan consumers, acquaintance, private friends, business friends, etc.; by means of phone/ visit/ mail)	Kec. Geban, Kab. Cirebon (Duck Fresh Eggs) / Kota Cirebon (Salted Eggs) / Kec. Cigandamekan, Kab. Kuningan (Sweet Potato)	O			
1-1-2. Medium-scale Inquiry Survey (targeting different categories of consumers within and outside the kabupaten, for wide area)			O		O
1-1-3. Large-scale Inquiry Survey (outsourcing <market research company, etc.>, targeting different categories of consumers for wide areas)			O		O
1-1-4. Buying behavior survey at pasar, supermarkets, etc.		O			O
1-2. Establish own antenna shops (fixed or mobile type) at appropriate points				O	O
1-3. Participation in local events (display, sample tasting, etc.)	Kec. Mojoasari, Kab. Mojokerto (Salted Eggs) / Kec. Paeset, Kab. Mojokerto (Sweet Potato)	O		O	O
1-4. Production areas survey for hinting of product development	Kab. Serawang (Processed Rice) / Kec. Banyakan, Kab. Kediri (Processed Mango)	O		O	O
1-5. Collect relevant information from newspapers, magazines, internet, etc.		O	O	O	O
1-6. Group meetings (to be held periodically and as required, for market information and improvement/ development of product)		O	O	O	O

Marketing Activities to be conducted	Actual Examples of Activities observed in the Basic Research Survey	Applicable Type of Business Unit			
		A	B	C	D
2. Activities for Creation and Development of Customers					
2-1. Search for buyers or business partners through various channels (visit target areas, acquaintance, friends, exhibitions, business partners, trade organizations, local government organizations such as DINAS, etc.)	Kec. Kapetakan, Kab. Cirebon (Salted Eggs) / Kec. Losari, Kab. Cirebon (DOD) / Kab. Indramayu (Salted Eggs) / Kec. Cigandamekan, Kab. Kuningan (Sweet Potato) / Kec. Mojosari, Kab. Majalengka (DOD) / Kec. Bangsal, Kab. Majalengka (Duck Fresh Eggs) / Kec. Banyakan, Kab. Kediri (Mango) / Kec. Banyakan, Kab. Kediri (Mango Processing) / Kec. Tarokan, Kab. Kediri (Mango)		○		○
2-2. Sales promotion by bringing sample product in retailers	Kota Cirebon (Salted Eggs)	○		○	○
2-3. Sales campaign in various way (product exhibition, bargain sale, privilege giving sale, etc.)		○		○	○
2-4. Mouth-to-mouth advertisement through relatives, neighbors, acquaintance, private friends, business friends, individual consumers, etc.	Kec. Cilimus, Kab. Kuningan (Processed Sweet Potato) / Kec. Banyakan, Kab. Kediri (Mango)	○		○	
2-5. Commitment basis marketing (Sell raw materials and buy its processed product)	Kec. Mojosari, Kab. Mojokerto (Duck) / Kec. Pungging, Kab. Mojokerto (Duck)				○
2-6. Establish the website for PR to broad marketing target				○	○
2-7. Advertisement on radio/ TV		○		○	
2-8. Advertisement on newspapers/ magazines/ internet				○	
2-9. Salespersons qualification & incentive system for raising their motivation		○		○	○
2-10. Group meetings (to be held periodically and as required, for narrowing down target areas/ customers and approach to create/ develop customers)		○	○	○	○
3. Activities for both I and II					
3-1. Establish Kelompok Tani's own shops with attractive design at marketplaces such as pasar		○		○	○
3-2. Door-to-door sales in desa/ kecamatan level	Kec. Cigasong, Kab. Majalengka (Processed Sweet Potato)	○			
3-3. Create and increase solid customers (retailers/ individual consumers)					
3-3-1. Establish solid customers' network for exchange of market information		○		○	○
3-3-2. Order-taking activities ("goyokita") for solid customers	Kec. Cigasong, Kab. Majalengka (Processed Sweet Potato)	○		○	○
3-4. Test-marketing at supermarkets, etc. (by consignment & space rental, etc.)	Kec. Bangsal, Kab. Mojokerto (Salted Eggs)	○		○	○
3-5. Participate in relevant training programs and put it in practice	Kab. Kediri (Mango Processing)	○	○	○	○

Table C3.2.1 Market Features of Kabupaten Cirebon and Mojokerto

	Cirebon	Mojokerto
Population of duck	274,485 tails (2004)	206,949 tails (2005)
Partnership agreement among KTs	Partnership agreement is made among Kelompok Tanis (KTs) under MOU, which enables them to form their basis for business expansion, and eventually contribute to regional revitalization in duck business	No partnership agreement among KTs at the moment. Active KTs are limited.
Middlemen's dominance of market	No market-dominating middlemen's group	
Market potential	High market potentiality may be expected for duck product (particularly eggs at the moment). Rough estimate of market size is shown below.	
Village collectors' activities and the background	Village collectors in duck business are very limited in Cirebon.	Many collectors in duck business in Mojokerto. They try to conduct new business with farmers such as: -Commitment basis trading for DOD/pullet, Pullet/fresh eggs, etc. -Procure various rejects of foods and make it to duck-feed for selling at low prices.
	Background (presumption): There is little room for them to act in between farmers and bandar, mainly due to features of duck product unlike fruit and vegetables (no labor-intensive work such as harvest & shipment for limited short period, etc).	
	New business like Mojokerto case are not conducted by collectors in Cirebon, but covered by KT, when necessary. Because, Duck farmers' groups (KTs) in Cirebon are relatively strong (active), as represented and contributed by "triangle system".	New business as above are done by collectors, although it can be managed by KTs. Because, Duck farmers' groups (KTs) in Mojokerto are generally less active than Cirebon.

Table C3.2.2 Improvement Direction of Kabupaten Cirebon and Mojokerto

Cirebon	Mojokerto
Strengthen the existing KT's partnership from technical (processing) and managerial (marketing) aspect, aiming at business expansion. Replicate the existing partnership system to other KTs.	Establish KT's partnership system (Cirebon type) in Mojokerto.
Provide technical and financial support to KT.	
Support KT by BDS provider to facilitate them in technology and management	
Conduct marketing activities as described in 4.2.2 (1)	

Table C3.2.3 Rough Estimate of Market Size (Duck Eggs)

<p>From data collected in 3 pasars (9 retail shops) in Cirebon (Nov 2006), market size of salted eggs in Cirebon are roughly estimated as follows:</p> <p><u>Basis and assumption:</u> 325 eggs/shop/day (average sales); Rp1,094/egg (average price); 10 shops (selling salted egg)/pasar (average); 1 pasar/kecamatan (average); 37 kecamatans/kab.Cirebon; Annual operation rate in whole kabupaten (average): 50 %</p> <p><u>Estimate of market size:</u> 325 x 10 x 30 x 37 x 0.5 = 1,803,750 eggs/month on average 1,803,750 x 1,094 = Approx. Rp 2 billion/month on average</p> <p>Another report (Bank of Indonesia, Scheme of Small Business -Duck Layer Breeding, 2001) estimates that demand of all duck eggs (raw and salted) in Jakarta is 1,716,000 eggs/month (data in 1994). With increasing population and per capita demand in mind, the demand in Jakarta may be more or less 2.5 million eggs /month at present. Number of cities and kabupaten in Indonesia is said to be more than 300 in total. Although data for national demand are not available, the report forecasts a high market potential of duck eggs for its nutritional and medicinal benefits, and also multi-purpose application.</p>

Table C3.3.1 Market Features of Kabupaten Kuningan and Majalengka

	Kuningan	Majalengka
Production of Sweet Potato	Approx. 90,000 to 93,000 ton/year (2004-2005).	Approx. 13,000 to 20,000 ton/year in recent years (1/7 to 1/5 of Kuningan's)
Middlemen's dominance of market	No market-dominating middlemen's group. More fair and open competition is observed among middlemen, than in Majalengka.	One particular middlemen's group dominates more than 60 % of sweet potato market in Majalengka. This situation causes a great disadvantage to farmers in the group's dominant areas.
Processing Industry	There exists the processing industry for sweet potato (2 private companies) in Kuningan.	There is no processing industry for sweet potato in Majalengka, but only home industry level.
Market Potential	Future market potentiality may be expected at fair degree from above features of Kuningan.	Above features indicate that market potentiality of sweet potato (raw and processed) in Majalengka is limited at the moment.

Table C3.3.2 Improvement Direction of Kabupaten Kuningan and Majalengka

Kuningan	Majalengka
Establish partnership between KT and local processor (private company for processing and marketing) KT supply pre-processed or half-processed product to the processor in compliance with the processor's requirement, advantageously utilizing low-grade sweet potato.	Establish "Local Production (processing) and Local Marketing" type business system in KT, in which attractive product and strong marketing capability need to be developed to call customers in. Depending on the progress of business activities, expand business in future to other products and wider areas.
Provide technical and financial support to KT	
Support KT by BDS provider to facilitate them in technology and management	
Conduct marketing activities as described in 4.2.2 (1)	

Table C3.4.1 Market Features of Kabupaten Kediri

	Kediri
Processing Industry	There is no mango processing industry in Kediri, but only home industry level.
Transaction Pattern	Approx. 75 % of mango transactions is made before harvest. This is caused by farmers' difficult position in harvest season (Price's sharp decline, Less availability of collectors due to low market prices, Substantial losses by farmers' own handling to market, etc.)
Middlemens' dominance of market	No market-dominating middlemen's group.
Partnership between KTs and private companies	Some partnership between KTs (Kediri) and private companies (other kabupatens) are observed for supply of raw materials, training and processing.
Market Potential	Market availability of processed mango is limited at the moment, although various kinds of new products may have marketability. For market size expected for processed mango, market research needs to be done for local and export demand.

Table C3.4.2 Improvement Direction of Kabupaten Kediri

Kediri (Option 1)	Kediri (Option 2)
Establish partnership between KT and private sector, as described in 4.2.2 (1). KT is mainly responsible for production and processing, and the private sector for management and marketing.	Establish "Local Production (processing) and Local Marketing" type business system in KT, in which attractive product and strong marketing capability need to be developed to call customers in. Depending on the progress of business activities, expand business in future to other products and wider areas.
Provide technical and financial support to KT	
Support KT by BDS provider to facilitate them in technology and management	
Conduct marketing activities as described in 4.2.2 (1)	

Table C4.1.1 Marketing Activities in Implementation Model (Duck / Cirebon)

Type of Business Unit: Business Expansion through Partnership of KTs		
Kelompok Tani	Bebek Jaya	Tigan Mekar
I. Start-up Operation		
Marketing Section	2 to 3 members (including 1 section-leader) responsible for marketing are assigned for each KT.	
Product Concept	Establish a product concept (originality, quality, taste, appearance, shelf life, price, etc.)	
Initial Midterm Sales Plan (Tentative)	Identify main target product/ areas/ buyers, and formulate a midterm (5 to 6 year) sales plan, based on current position as indicated below and feasibility study of the project. The sales plan may be tentative, but includes prices (unit & total), sales volume (quantity), cost, profit (amount), profit sharing and data of feasibility study.	
Current Position (Data from the Study, Nov 2006)		
Main Product	Fresh eggs (Fertile/ Infertile)	DOD (Female / Male)
Target Areas	Cirebon and surrounding areas	Cirebon and other kabupatens (West Java/ South Sumatra)
Target Buyers	<Fertile egg> KT Tigan Mekar (priority supply under "triangle system"), Members of Sumber Rejeki Cooperative (KTs and individual member farmers in Cirebon) [Selling through Sumber Rejeki Cooperative] <Infertile egg> KT Sari Sejahtera (priority supply under "agreement")	KT Branjangan Putih (priority supply under "triangle system"), Members of Sumber Rejeki Cooperative (KTs and individual member farmers in Cirebon), Retailers in Cirebon and Middlemen covering broad areas [Selling through Sumber Rejeki Cooperative]
Source of Raw Materials	<Pullet> KT Branjangan Putih (priority procurement under "triangle system")	<Fertile egg> KT Bebek Jaya (priority procurement under "triangle system"), 30 % from Cirebon, 70 % from other kabupatens (Indramayu/ Karawang/ Subang/ Bekasi)
Unit Sales Price (Rp/unit)	850/pce (Fertile Egg) 650/pce (Infertile Egg)	3,500/DOD(Female) 1,500/DOD(Male)
Sales Volume (Qty/month)	296,041 (FE) / 126,875 (IE)	63,000DOD(F) / 63,000DOD(M)
Sales Amount (Rp/month)	FE: 251,635, 020 IE: 82,468,620	DOD(F): 220,500,000 DOD(M): 94,500,000
Cost (Rp/month) <Marketing cost not considered>	FE: 134,779,042 IE: 57,762,447	DOD (Fertile egg & processing): 128,859,900
Sales Profit (Rp/month)	FE: 116,855,978 IE: 24,706,173	DOD 186,140,100
Profit Sharing	25% KT/ 75% Members	40% Cooperative/ 20% Members/ 20% Expenses for operation/ 20% Others
Direct Dealing	<p>Arrange to <u>minimize involvement of middlemen in KTs' transactions</u> for less marketing cost, easier access to market (end-users) demand and more bargaining power. Stepwise trial may be made.</p> <p><u>Possible options for approach</u> will be:</p> <p><a> Utilize proposed new finance scheme for procurement of necessary funds, in order to offset member farmers' disadvantages caused by money-bound relationship with middlemen</p> <p> Invite a middleman to the KT's key position responsible for marketing and exclusively working for the KT</p> <p><c> Contact end-buyers (middlemen's buyers) in destination areas and try to establish a win-win relationship with them by direct dealing (share middlemen's margin saved)</p> <p><d> Use "transportation services provider" instead of middlemen (in case no means of transportation available in KTs for long distances)</p> <p><e> Use rental vehicle(s) for own transportation to destination</p> <p><f> Purchase vehicle(s) for long distance transportation utilizing new finance scheme (if feasible).</p> <p>Other possible approaches are also to be considered.</p>	

Market Research	<p>Conduct Market Research.</p> <p><u>Purpose:</u> Finding market demand for various products over wide areas</p> <p><u>Surveyor:</u></p> <p><a> outsourcing a market research company (or individual researcher(s))</p> <p>or</p> <p> KT's own members with full support by BDS Provider</p> <p><u>Target Product:</u></p> <p>DOD female (for pullet) & male (for meat), Meat duck (40 days old duck), Fresh egg (fertile and infertile) and Salted egg (various types)</p> <p><u>Target Areas:</u></p> <p>Mainly urban and rural areas in Java and Sumatra (other countries also to be studied for salted eggs)</p> <p><u>Target Interviewees:</u></p> <p>Large scale consumers (restaurants, hotel, etc.), medium & large scale retailers (supermarkets, pasar, individual & group retail traders), wholesalers, breeders, butchers, relevant organizations, etc.</p>
Antenna Shops	<p>Basing on a result of the market research survey, establish KT's own Antenna Shops.</p> <p><u>Purpose:</u> Finding market demand and trend through actual transactions</p> <p><u>Target Product:</u> Salted egg (various types)</p> <p><u>Shop system:</u> Fixed or mobile (depending on location), space rental, attractive shop design, campaign sale</p> <p><u>Number and location:</u> 2 to 3 shops at representative points in Java and Sumatra.</p> <p><u>Data to collect:</u> "POS" information (customers' purchasing data: when, where, what type of customers, what product, how many quantity, price, etc.). Input of data may be by manual recording.</p>
Internet Website	<p>Establish the internet website of each KT.</p> <p><u>Purpose:</u> Advertisement and sales promotion of their product.</p> <p><u>Contents</u> to include will be introduction of KT's activities and product, exchange of market & product information, net-transactions, etc.</p>
II. Marketing Activities	
Exhibitions	<p>Participate in exhibitions, various types of local events, etc.</p> <p><u>Purpose:</u> Introduction of KT's activities and product, exchange of market & product information, search for business partners, etc.</p> <p><u>Official support</u> (by DINAS, public organizations, etc.) is required for expansion of areas and increase of frequency to be held (at least once a year in each Kabupaten is desired).</p>
Test-marketing	<p>Implement Test-Marketing.</p> <p><u>Purpose:</u> Finding market demand and trend</p> <p><u>Target Product:</u> Salted egg (various types)</p> <p><u>Place:</u> Supermarkets in urban areas.</p> <p><u>Data to collect:</u> "POS" information (as described before)</p> <p><u>Method:</u> Space rental, consignment basis, attractive shop design and campaign sale</p>
Production Areas Survey	<p>Conduct Survey in production areas of similar products (other kabupatens/ provinces).</p> <p><u>Purpose:</u> To collect ideas for product development.</p>
Search for Partners	<p>Search for new or additional business partners as required (buyers/sellers/ collaborators) through various channels.</p> <p><u>Possible channels</u> will be:</p> <p>Present business partners, acquaintance, friends, exhibitions, trade organizations, local government organizations (such as DINAS), etc.</p>
Buyers' Network	<p>Establish buyers' network for each KT.</p> <p><u>Purpose:</u> Exchange of market/ product information</p> <p><u>Membership:</u> Retailers, individual consumers, other business partners</p> <p><u>Member registration:</u> Network members may be registered and organized on every transaction and also KT's website.</p>

Sales Incentive System	<p>Establish Sales Incentive System for KT's salesperson and business partners (retailers, etc.).</p> <p><u>Purpose:</u> For raising their motivation.</p> <p><u>Possible system</u> will be a bonus to higher sales performance, etc.</p>
Group Meetings	<p>Hold group meetings.</p> <p><u>Attendant:</u> KT's chairperson, members of marketing section, members of processing section, treasurer, and other members concerned.</p> <p><u>Frequency:</u> Once a week in principle and whenever required.</p> <p><u>Agenda:</u> Exchange of information and discussion on market demand (quality/quantity), marketing strategy, improvement/ development of product, etc.</p>
Data Analysis and Feedback to the Sales Plan and the Product	<p>All data/ information collected through various activities (market research, antenna shops, website, exhibitions, test-marketing, buyers' network, etc.) are periodically analyzed, and reflected to the sales plan for revision, and also improvement/ development of the product, as required. Group meetings can be used for this purpose.</p>
Activity Plan and Result (Time Schedule)	<p>Activity plan (time schedule) is discussed and prepared, and the result is checked every month.</p>

Table C4.2.1 Marketing Activities in Implementation Model (Duck / Mojokerto)

Type of Business Unit: Business Expansion through Partnership of KTs		
Kelompok Tani	Karya Tani	3 KTs of "Triangle System"
I Start-up Operation		
Study Tour for "Triangle System"	(Same description as right, if Karya Tani becomes a candidate or nominated KT for "triangle system")	<p>Conduct a study tour to Cirebon.</p> <p><u>Purpose:</u> To study the preceding "triangle system" in Cirebon for smooth introduction of same system to Mojokerto.</p> <p><u>Participants:</u> Candidate or nominated KTs for "triangle system" and DINAS officer(s).</p> <p><u>Study Items:</u> Operation of priority supply & procurement system in duck products among 3 KTs, Inter-group revolving fund system by DINAS, Farmers' benefit by "triangle system", Regional development of duck industry in Cirebon, etc.</p> <p><u>Arrangement:</u> To be made by DINAS Peternakan & Perikanan (Mojokerto), in cooperation with DINAS Peternakan (Cirebon).</p>
Marketing Section	2 to 3 members (including 1 section-leader) responsible for marketing are assigned for each KT.	
Product Concept	Establish a product concept (originality, quality, taste, appearance, shelf life, price, etc.)	
Initial Midterm Sales Plan (Tentative)	<p>Identify main target product/ areas/ buyers, and formulate a midterm (5 to 6 year) sales plan, based on current position as indicated below and feasibility study of the project.</p> <p>The sales plan may be tentative, but includes prices (unit & total), sales volume (quantity), cost, profit (amount), profit sharing and data of feasibility study.</p>	
Current Position (Data from the Study, Nov 2006)		
Main Product	Fresh eggs / DOD (F & M) / Meat duck	
Target Areas	Mojokerto and other kabupatens (East Java)	
Target Buyers	<p><Fresh egg> Local collectors & traders</p> <p><DOD> Mainly internal transactions (KT's chairperson to members)</p> <p><Meat duck, 40 days old> Local collectors & traders</p>	
Source of Raw Materials	Pullet for fresh egg, fertile fresh egg for DOD, and DOD male for meat duck: Produced within KT.	
Unit Sales Price (Rp/unit)	<p>Fresh egg: 760/pce (Average)</p> <p>DOD: 2,080/tail (Ave., M1,900 / F2,200)</p> <p>Meat duck: 9,750/tail (Average)</p>	
Sales Volume (Qty/month)	<p>Fresh egg: 55,500</p> <p>DOD: 9,000 (M40 : F60)</p> <p>Meat duck: 1,860</p>	
Sales Amount (Rp/month)	<p>Fresh egg: 42,180,000</p> <p>DOD: 18,720,000</p> <p>Meat duck: 18,135,000</p>	
Cost (Rp/month) <Marketing cost not considered>	<p>Fresh egg: 32,285,460</p> <p>DOD: 9,654,480</p> <p>Meat duck: 14,718,800</p>	
Sales Profit (Rp/month)	<p>Fresh egg: 9,894,540</p> <p>DOD: 9,065,520</p> <p>Meat duck: 3,416,200</p>	
Profit Sharing	(N.A.)	

(Data of 3 KTs to be nominated for "triangle system" in Mojokerto)

Direct Dealing	<p>Arrange to <u>minimize involvement of middlemen in KT's transactions</u> for less marketing cost, easier access to market (end-users) demand and more bargaining power. Stepwise trial may be made.</p> <p><u>Possible options for approach will be:</u></p> <p><a> Utilize proposed new finance scheme for procurement of necessary funds, in order to offset member farmers' disadvantages caused by money-bound relationship with middlemen</p> <p> Invite a middleman to the KT's key position responsible for marketing and exclusively working for the KT</p> <p><c> Contact end-buyers (middlemen's buyers) in destination areas and try to establish a win-win relationship with them by direct dealing (share middlemen's margin saved)</p> <p><d> Use "transportation services provider" instead of middlemen (in case no means of transportation available in KT's for long distances)</p> <p><e> Use rental vehicle(s) for own transportation to destination</p> <p><f> Purchase vehicle(s) for long distance transportation utilizing new finance scheme (if feasible).</p> <p>Other possible approaches are also to be considered.</p>
Market Research	<p>Conduct Market Research.</p> <p><u>Purpose:</u> Finding market demand for various products over wide areas</p> <p><u>Surveyor:</u></p> <p><a> Outsourcing a market research company (or individual researcher(s))</p> <p>or</p> <p> KT's own members with full support by BDS Provider</p> <p><u>Target Product:</u> DOD female (for pullet) & male (for meat), Meat duck (40 days old duck), Fresh egg (fertile and infertile) and Salted egg (various types)</p> <p><u>Target Areas:</u> Mainly urban and rural areas in Java and nearby islands (other countries also to be studied for salted eggs)</p> <p><u>Target Interviewees:</u> Large scale consumers (restaurants, hotel, etc.), medium & large scale retailers (supermarkets, pasar, individual & group retail traders), wholesalers, breeders, butchers, relevant organizations, etc.</p>
Antenna Shops	<p>Basing on a result of the market research survey, establish KT's own Antenna Shops.</p> <p><u>Purpose:</u> Finding market demand and trend through actual transactions</p> <p><u>Target Product:</u> Salted egg (various types)</p> <p><u>Shop system:</u> Fixed or mobile (depending on location), space rental, attractive shop design, campaign sale</p> <p><u>Number and location:</u> 2 to 3 shops at representative points in Java and nearby islands.</p> <p><u>Data to collect:</u> "POS" information (customers' purchasing data: when, where, what type of customers, what product, how many quantity, price, etc.). Input of data may be by manual recording.</p>
Internet Website	<p>Establish the internet website of each KT.</p> <p><u>Purpose:</u> Advertisement and sales promotion of their product.</p> <p><u>Contents</u> to include will be introduction of KT's activities and product, exchange of market & product information, net-transactions, etc.</p>
II. Marketing Activities	
Exhibitions	<p>Participate in exhibitions, various types of local events, etc.</p> <p><u>Purpose:</u> Introduction of KT's activities and product, exchange of market & product information, search for business partners, etc.</p> <p><u>Official support</u> (by DINAS, public organizations, etc.) is required for expansion of areas and increase of frequency to be held (at least once a year in each Kabupaten is desired).</p>

Test-marketing	<p>Implement Test-Marketing.</p> <p><u>Purpose:</u> Finding market demand and trend</p> <p><u>Target Product:</u> Salted egg (various types)</p> <p><u>Place:</u> Supermarkets in urban areas.</p> <p><u>Data to collect:</u> "POS" information (as described before)</p> <p><u>Method:</u> Space rental, consignment basis, attractive shop design and campaign sale</p>
Production Areas Survey	<p>Conduct Survey in production areas of similar products (other kabupatens/ provinces).</p> <p><u>Purpose:</u> To collect ideas for product development.</p>
Search for Partners	<p>Search for new or additional business partners as required (buyers/sellers/ collaborators) through various channels.</p> <p><u>Possible channels</u> will be:</p> <p>Present business partners, acquaintance, friends, exhibitions, trade organizations, local government organizations (such as DINAS), etc.</p>
Buyers' Network	<p>Establish buyers' network for each KT.</p> <p><u>Purpose:</u> Exchange of market/ product information</p> <p><u>Membership:</u> Retailers, individual consumers, other business partners</p> <p><u>Member registration:</u> Network members may be registered and organized on every transaction and also KT's website.</p>
Sales Incentive System	<p>Establish Sales Incentive System for KT's salesperson and business partners (retailers, etc.).</p> <p><u>Purpose:</u> For raising their motivation.</p> <p><u>Possible system</u> will be a bonus to higher sales performance, etc.</p>
Group Meetings	<p>Hold group meetings.</p> <p><u>Attendant:</u> KT's chairperson, members of marketing section, members of processing section, treasurer, and other members concerned.</p> <p><u>Frequency:</u> Once a week in principle and whenever required.</p> <p><u>Agenda:</u> Exchange of information and discussion on market demand (quality/quantity), marketing strategy, improvement/ development of product, etc.</p>
Data Analysis and Feedback to the Sales Plan and the Product	<p>All data/ information collected through various activities (market research, antenna shops, website, exhibitions, test-marketing, buyers' network, etc.) are periodically analyzed, and reflected to the sales plan for revision, and also improvement/ development of the product, as required. Group meetings can be used for this purpose.</p>
Activity Plan and Result (Time Schedule)	<p>Activity plan (time schedule) is discussed and prepared, and the result is checked every month.</p>

**Table C4.3.1 Marketing Activities in Implementation Model
(Sweet Potato / Kuningan)**

Type of Business Unit: Partnership with Local Processing Industry (private)	
Kelompok Tani	Andayarasa
A. Activities to be covered by the Private Sector (PT. Global Agro-Inti, Kec. Cigandamekar, Kuningan)	
I. Start-up Operation	
Marketing Section	Set up Marketing Section responsible for marketing sweet potato flour and other possible processed product.
Product Concept	Establish a product concept (originality, quality, taste, appearance, shelf life, price, etc.) in close discussion with KT.
Initial Midterm Sales Plan (Tentative)	Identify main target product/ areas/ buyers, and formulate a midterm (5 to 6 year) sales plan, based on current position and feasibility study of the project. The sales plan may be tentative, but includes prices (unit & total), sales volume (quantity), cost, profit (amount), profit sharing and data of feasibility study.
Current Position of KT (Data from the Study, Nov 2006)	
Main Product	No sweet potato processing till now
Target Areas	
Target Buyers	
Raw Materials	
Unit Sales Price	(N.A.)
Sales Volume	
Sales Amount	
Cost	
Sales Profit	
Profit Sharing	
Direct Dealing	Arrange to <u>minimize involvement of middlemen in its transactions</u> for less marketing cost, easier access to market (end-users) demand and more bargaining power. Stepwise trial may be made. <u>Possible options for approach</u> will be: <a> Invite a middleman to the marketing section Contact end-buyers (middlemen's buyers) in destination areas and try to establish a win-win relationship with them by direct dealing (share middlemen's margin saved) <c> Use "transportation services provider" instead of middlemen (in case no means of transportation available for long distances) <d> Use rental vehicle(s) for own transportation to destination Other possible approaches are also to be considered.
Market Research	Conduct Market Research. <u>Purpose:</u> Finding market demand for sweet potato flour and other processed products over wide areas <u>Surveyor:</u> <a> outsourcing a market research company (or individual researcher(s)) or Own members <u>Target Product:</u> Sweet potato flour and other SP processed product <u>Target Areas:</u> Urban and rural areas in Java and Sumatra (in future, other countries too) <u>Target Interviewees:</u> Food processors, wheat flour mills, large scale consumers (restaurants, hotel, etc.), medium & large scale retailers (supermarkets, pasar, individual & group retail traders), wholesalers, industrial manufacturers, relevant organizations, etc.

Internet Website	Establish the internet website of each Business Unit. <u>Purpose:</u> Advertisement and sales promotion of their product. <u>Contents</u> to include will be introduction of its activities and product, exchange of market & product information, net-transactions, etc.
II. Marketing Activities	
Exhibitions	Participate in exhibitions, various types of local events, etc. <u>Purpose:</u> Introduction of its activities and product, exchange of market & product information, search for business partners, etc. <u>Official support</u> (by DINAS, public organizations, etc.) is required for expansion of areas and increase of frequency to be held (at least once a year in each Kabupaten is desired).
Search for Partners	Search for new or additional business partners as required (buyers/sellers/ collaborators) through various channels. <u>Possible channels</u> will be: Present business partners, acquaintance, friends, exhibitions, trade organizations, local government organizations (such as DINAS), etc.
Buyers' Network	Establish buyers' network. <u>Purpose:</u> Exchange of market/ product information <u>Membership:</u> Processors, large scale consumers, large scale retailers, flour mills, other business partners <u>Member registration:</u> Network members may be registered and organized on every transaction and also its website.
Sales Incentive System	Establish Sales Incentive System for its salesperson and business partners (retailers, etc.). <u>Purpose:</u> For raising their motivation. <u>Possible system</u> will be a bonus to higher sales performance, etc.
Group Meetings	Hold group meetings together with KT. <u>Attendant:</u> Key members of KT and the private sector responsible for processing and marketing. <u>Frequency:</u> Once a week in principle and whenever required. <u>Agenda:</u> Exchange of information and discussion on market demand (quality/quantity), marketing strategy, improvement/ development of product, etc.
Data Analysis and Feedback to the Sales Plan and the Product	All data/ information collected through various activities (market research, website, exhibitions, buyers' network, etc.) are periodically analyzed, and reflected to the sales plan for revision, and also improvement/ development of the product, as required. Group meetings can be used for this purpose.
Activity Plan and Result (Time Schedule)	Activity plan (time schedule) is discussed and prepared, and the result is checked every month.
B. Activities to be covered by KT Andayarasa	
Supply of Pre-processed Product	In accordance with the requirement of the Global, supply dried sweet potato chips to them. The requirement includes quality, taste, appearance, packaging, quantity, delivery and price.
Cooperation with the Private Sector	KT fully cooperates with the Global for its secondary processing and marketing activities as described above, from the supply side of pre-processed product.

Other Operation	<p>In parallel with performance of the partnership agreement with the Global, conduct following operation:</p> <p><a> Market survey for various types of processed product, including other commodities than sweet potato</p> <p> R & D of other kinds of processed product, including different commodities from sweet potato, using the invested equipment for primary processing of sweet potato.</p> <p><c> Search for other candidate business partners</p> <p><u>Purpose:</u> To cover the off-season, To recommend new product, marketing channels, etc. to the Global (if any), and To prepare for any possible failure in the partnership in future.</p>
Activity Plan and Result (Time Schedule)	Activity plan (time schedule) is discussed and prepared, and the result is checked every month.
C. Arrangement to be made by DINAS Pertanian Kuningan	
Formulation of Business Unit	<p><u>Finalize Partnership Agreement</u> between KT Andayarasa and the Global. Basic terms will be:</p> <p><a> Type of partnership: MOU</p> <p> Work-sharing: KT Andayarasa is responsible for supply of pre-processed product (dried sweet potato chips) to the Global in accordance with the latter's requirement; and The Global is responsible for secondary processing for making flour and its marketing</p> <p><c> Equipment for pre-processing belongs to KT</p> <p><d> Official support (finance) to be extended to KT</p> <p><e> Management system of the business unit, profit sharing, etc.: To be discussed and determined at the time of finalizing the agreement.</p>

**Table C4.4.1 Marketing Activities in Implementation Model
(Sweet Potato / Majalengka)**

Type of Business Unit: Local Production & Local Consumption		
Kelompok Tani	Mitra Binangkit	Delima II
I. Start-up Operation		
Marketing Section	2 to 3 members (including 1 section-leader) responsible for marketing are assigned for each KT.	
Product Concept	Establish a product concept (originality, quality, taste, appearance, shelf life, price, etc.)	
Initial Midterm Sales Plan (Tentative)	Identify main target product/ areas/ buyers, and formulate a midterm (5 to 6 year) sales plan, based on current position as indicated below and feasibility study of the project. The sales plan may be tentative, but includes prices (unit & total), sales volume (quantity), cost, profit (amount), profit sharing and data of feasibility study.	
Current Position (Data from the Study, Nov 2006)		
Main Product	Keremes (Sweet Potato) / Kecemplung (SP) / Rengginging (Rice)	Keremes (SP) / Chips (SP & others)
Target Areas	Kecamatan Maja & Cigason	Kecamatan Talaga
Target Buyers	2 pasars (15 retailers, Kecamatan Maja & Cigason) and consumers in the vallage	1 pasar (20 retailers, Kecamatan Talaga) and consumers in the vallage
Source of Raw Materials	Sweet Potato (SP): Member farmers and nearby pasars	Sweet Potato (SP): Member farmers and nearby pasars
Unit Sales Price (Rp/unit)	Keremes: 1,800/150gr. Kecemplung: 200/15gr. Rengginging: 1,447/20pcs	Keremes: 800/75gr. SP Chips: 8,000/1kg
Sales Volume (Qty/year)	Keremes: 3,600 Kecemplung: 52,800 Rengginging: 66,667	Keremes: 20,000 SP Chips: 6,667
Sales Amount (Rp/year)	Keremes: 6,480,000 Kecemplung: 10,560,000 Rengginging: 120,000,600	Keremes: 16,000,000 SP Chips: 53,336,000
Cost (Rp/year) <Marketing cost not considered>	Keremes: 4,680,000 Kecemplung: 5,702,400 Rengginging: 96,467,149	Keremes: 12,900,000 SP Chips: 47,002,350
Sales Profit (Rp/year)	Keremes: 1,800,000 Kecemplung: 4,857,600 Rengginging: 23,533,451	Keremes: 3,100,000 SP Chips: 6,333,650
Profit Sharing	(N.A.)	50% Chairperson/ 20% KT/ 30% Members
Direct Dealing	<p>Arrange to <u>minimize involvement of middlemen in KT's transactions</u> for less marketing cost, easier access to market (end-users) demand and more bargaining power. Stepwise trial may be made.</p> <p>Many member farmers sell their own fresh sweet potato to the dominant middlemen's group (Sinar Ubi) for "personal relationship" (probably bound by financing), and procure fresh SP (raw material for processing) at nearby market (pasar). This sort of practice should be changed from business point of view. Market of processed sweet potato, however, is open (not controlled by Sinar Ubi).</p> <p><u>Possible options for approach will be:</u></p> <p><a> Utilize proposed new finance scheme for procurement of necessary funds, in order to offset member farmers' disadvantages caused by money-bound relationship with middlemen</p> <p> Invite a middleman to the KT's key position responsible for marketing and exclusively working for the KT</p> <p><c> Contact end-buyers (middlemen's buyers) in destination areas and try to establish a win-win relationship with them by direct dealing (share middlemen's margin saved)</p> <p><d> Use "transportation services provider" instead of middlemen (in case no means of transportation available in KTs for long distances)</p> <p><e> Use rental vehicle(s) for own transportation to destination</p> <p><f> Purchase vehicle(s) for long distance transportation utilizing new finance scheme (if feasible).</p> <p>Other possible approaches are also to be considered.</p>	

Market Research	<p>Conduct Market Research.</p> <p><u>Purpose:</u> Finding market demand for various products</p> <p><u>Surveyor:</u> KT's own members with full support by BDS Provider</p> <p><u>Target Product:</u> Keremes and other types of processed sweet potato</p> <p><u>Target Areas:</u> Its own village (Tajur / Lampuyang), kecamatan (Cigasong / Talaga) and surrounding areas</p> <p><u>Target Interviewees:</u> Relatives, neighbors, desa & kecamatan consumers, acquaintance, private friends, business friends, etc., by means of phone/ visit/ mail.</p>	
KT's Own Shop	<p>Establish KT's own shops.</p> <p><u>Purpose:</u> Finding market demand and trend through actual transactions</p> <p><u>Target Product:</u> Keremes and other types of processed SP</p> <p><u>Shop system:</u> Fixed, space rental, prominent shop location, attractive shop design, campaign sale</p> <p><u>Number and location:</u> 1 to 2 pasars nearby.</p> <p><u>Data to collect:</u> "POS" information (customers' purchasing data: when, where, what type of customers, what product, how many quantity, price, etc.). Input of data may be by manual recording.</p>	
II. Marketing Activities		
Advertisement	<p>Conduct advertisement of KT's activities and product.</p> <p><u>Purpose:</u> Sales promotion, finding market demand and calling customers in from surrounding areas</p> <p><u>Possible media</u> will be:</p> <p><a> KT's own shops at nearby pasars (campaign sale, etc.)</p> <p> Door-to-door sale in desa level</p> <p><c> Order-taking activities ("goyokiki") for solid customers</p> <p><d> Mouth-to-mouth advertisement through neighbors, acquaintance, friends, individual consumers, etc.</p> <p><e> Distribution of leaflets</p> <p><f> Radio (if feasible)</p>	
Exhibitions	<p>Participate in exhibitions, various types of local events, etc.</p> <p><u>Purpose:</u> Introduction of KT's activities and product, exchange of market & product information, search for business partners, etc.</p> <p><u>Official support</u> (by DINAS, public organizations, etc.) is required for expansion of areas and increase of frequency to be held (at least once a year in Kabupaten Majalengka is desired).</p>	
Test-marketing	<p>Implement Test-Marketing.</p> <p><u>Purpose:</u> Finding market demand and trend in wide areas</p> <p><u>Target Product:</u> Keremes and other types of processed SP</p> <p><u>Place:</u> Nearby 2 Supermarkets ("Yoggia" and "Surya")</p> <p><u>Data to collect:</u> "POS" information (as described before). Input of data may be manual.</p> <p><u>Method:</u> Space rental, consignment basis, attractive shop design and campaign sale, transportation by rental pickup.</p>	<p>At the moment, implement Test-Marketing through KT's own shops (nearby pasars) and other possible marketing activities described in this table.</p>
Production Areas Survey	<p>Conduct Survey in production areas of similar products (other kabupatens/ provinces).</p> <p><u>Purpose:</u> To collect ideas for product development.</p>	

Sales Incentive System	<p>Establish Sales Incentive System for KT's salesperson and business partners (retailers, etc.).</p> <p><u>Purpose:</u> For raising their motivation.</p> <p><u>Possible system</u> will be a bonus to higher sales performance, etc. .</p>
Group Meetings	<p>Hold group meetings.</p> <p><u>Attendant:</u> KT's chairperson, members of marketing section, members of processing section, treasurer, and other members concerned.</p> <p><u>Frequency:</u> Once a week in principle and whenever required.</p> <p><u>Agenda:</u> Exchange of information and discussion on market demand (quality/quantity), marketing strategy, improvement/ development of product, etc.</p>
Data Analysis and Feedback to the Sales Plan and the Product	<p>All data/ information collected through various activities (market research, KT's own shops, exhibitions, test-marketing, production areas survey, advertisement, etc.) are periodically analyzed, and reflected to the sales plan for revision, and also improvement/ development of the product, as required. Group meetings can be used for this purpose.</p>
Activity Plan and Result (Time Schedule)	<p>Activity plan (time schedule) is discussed and prepared, and the result is checked every month.</p>

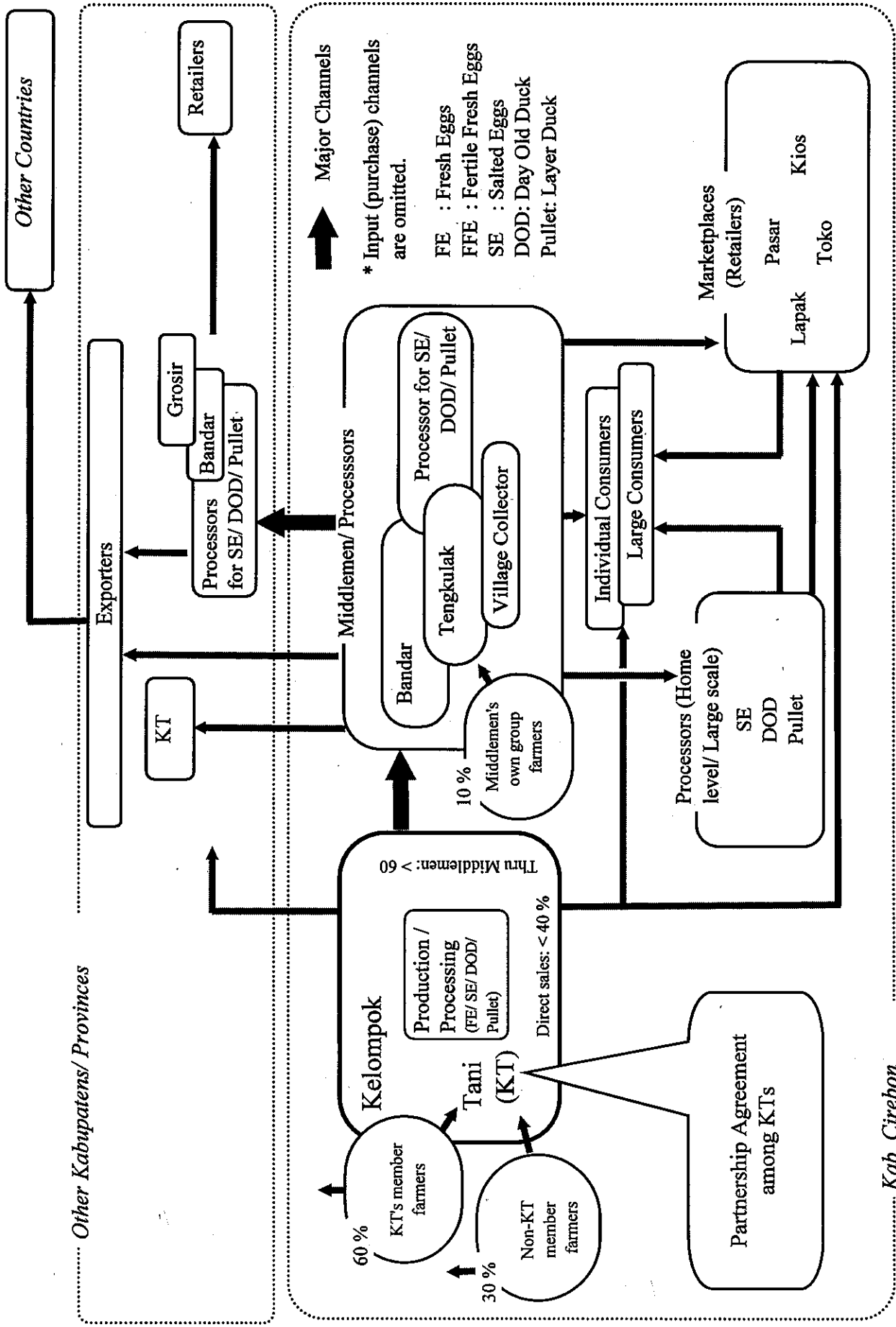
Table C4.5.1 Marketing Activities in Implementation Model (Mango / Kediri)

Type of Business Unit: Partnership with Private Sector (Marketing)		
Kelompok Tani	Budidaya	Makmur Jaya
A. Activities to be covered by the Private Sector		
I. Start-up Operation		
Marketing Section	Set up Marketing Section responsible for marketing various types of processed mango	
Product Concept	Establish a product concept (originality, quality, taste, appearance, shelf life, price, etc.) in close discussion with KTs.	
Initial Midterm Sales Plan (Tentative)	Identify main target product/ areas/ buyers, and formulate a midterm (5 to 6 year) sales plan, based on current position and feasibility study of the project. The sales plan may be tentative, but includes prices (unit & total), sales volume (quantity), cost, profit (amount), profit sharing and data of feasibility study.	
Current Position of KTs (Data from the Study, Nov 2006)		
Main Product	Dodor, Kripik, Candy, etc. on trial basis	No mango processing till now
Target Areas		
Target Buyers		
Raw Materials		
Unit Sales Price	(N.A.)	(N.A.)
Sales Volume		
Sales Amount		
Cost		
Sales Profit		
Profit Sharing		
Direct Dealing	<p>Arrange to <u>minimize involvement of middlemen in its transactions</u> for less marketing cost, easier access to market (end-users) demand and more bargaining power. Stepwise trial may be made.</p> <p><u>Possible options for approach</u> will be:</p> <p><a> Invite a middleman to the marketing section</p> <p> Contact end-buyers (middlemen's buyers) in destination areas and try to establish a win-win relationship with them by direct dealing (share middlemen's margin saved)</p> <p><c> Use "transportation services provider" instead of middlemen (in case no means of transportation available for long distances)</p> <p><d> Use rental vehicle(s) for own transportation to destination</p> <p>Other possible approaches are also to be considered.</p>	
Market Research	<p>Conduct Market Research.</p> <p><u>Purpose:</u> Finding market demand for various products over wide areas</p> <p><u>Surveyor:</u></p> <p><a> outsourcing a market research company (or individual researcher(s))</p> <p>or</p> <p> Own members</p> <p><u>Target Product:</u></p> <p>Juice, Jelly puree, sliced mango in syrup, dried mango and other processed mango</p> <p><u>Target Areas:</u></p> <p>Urban and rural areas in Java and nearby islands (in future, other countries too)</p> <p><u>Target Interviewees:</u></p> <p>Large scale consumers (restaurants, hotel, etc.), medium & large scale retailers (supermarkets, pasar, individual & group retail traders), wholesalers, relevant organizations, etc.</p>	

Antenna Shops	<p>Basing on a result of the market research survey, establish its own Antenna Shops.</p> <p><u>Purpose:</u> Finding market demand and trend through actual transactions</p> <p><u>Target Product:</u> Juice, Jelly puree, Sliced mango in syrup, Dried mango and other processed mango</p> <p><u>Shop system:</u> Fixed or mobile (depending on location), space rental, attractive shop design, campaign sale</p> <p><u>Number and location:</u> 2 to 3 shops at representative points in Java and nearby islands.</p> <p><u>Data to collect:</u> "POS" information (customers' purchasing data: when, where, what type of customers, what product, how many quantity, price, etc.). Input of data may be by manual recording.</p>
Internet Website	<p>Establish the internet website of each Business Unit.</p> <p><u>Purpose:</u> Advertisement and sales promotion of their product.</p> <p><u>Contents</u> to include will be introduction of its activities and product, exchange of market & product information, net-transactions, etc.</p>
II. Marketing Activities	
Exhibitions	<p>Participate in exhibitions, various types of local events, etc.</p> <p><u>Purpose:</u> Introduction of its activities and product, exchange of market & product information, search for business partners, etc.</p> <p><u>Official support</u> (by DINAS, public organizations, etc.) is required for expansion of areas and increase of frequency to be held (at least once a year in each Kabupaten is desired).</p>
Test-marketing	<p>Implement Test-Marketing.</p> <p><u>Purpose:</u> Finding market demand and trend</p> <p><u>Target Product:</u> Juice, Jelly puree, sliced mango in syrup, dried mango and other processed mango</p> <p><u>Place:</u> Supermarkets in urban areas.</p> <p><u>Data to collect:</u> "POS" information (as described before)</p> <p><u>Method:</u> Space rental, consignment basis, attractive shop design and campaign sale</p>
Production Areas Survey	<p>Conduct Survey in production areas of similar products (other kabupatens/ provinces).</p> <p><u>Purpose:</u> To collect ideas for product development.</p>
Search for Partners	<p>Search for new or additional business partners as required (buyers/sellers/ collaborators) through various channels.</p> <p><u>Possible channels</u> will be:</p> <p>Present business partners, acquaintance, friends, exhibitions, trade organizations, local government organizations (such as DINAS), etc.</p>
Buyers' Network	<p>Establish buyers' network for each Business Unit.</p> <p><u>Purpose:</u> Exchange of market/ product information</p> <p><u>Membership:</u> Large scale consumers, retailers, individual consumers, other business partners</p> <p><u>Member registration:</u> Network members may be registered and organized on every transaction and also its website.</p>
Sales Incentive System	<p>Establish Sales Incentive System for its salesperson and business partners (retailers, etc.).</p> <p><u>Purpose:</u> For raising their motivation.</p> <p><u>Possible system</u> will be a bonus to higher sales performance, etc.</p>
Group Meetings	<p>Hold group meetings together with KT.</p> <p><u>Attendant:</u> Key members of KT and the private sector responsible for processing and marketing.</p> <p><u>Frequency:</u> Once a week in principle and whenever required.</p> <p><u>Agenda:</u> Exchange of information and discussion on market demand (quality/quantity), marketing strategy, improvement/ development of product, etc.</p>

Data Analysis and Feedback to the Sales Plan and the Product	All data/ information collected through various activities (market research, antenna shops, website, exhibitions, test-marketing, buyers' network, etc.) are periodically analyzed, and reflected to the sales plan for revision, and also improvement/ development of the product, as required. Group meetings can be used for this purpose.
Activity Plan and Result (Time Schedule)	Activity plan (time schedule) is discussed and prepared, and the result is checked every month.
B. Activities to be covered by KTs	
Supply of Processed Product	In accordance with the requirement of the private sector (marketing), supply various kinds of processed mango to them. The requirement includes quality, taste, appearance, packaging, amount, delivery and price.
Cooperation with the Private Sector	KT fully cooperates with the private sector for its marketing activities as described above, from the product supply side.
Other Operation	In parallel with performance of the partnership agreement with the private sector, conduct following operation: <a> Market survey for various types of processed product, including other commodities than mango R & D of other kinds of processed product, including different commodities from mango, using the invested mango processing equipment. <c> Search for other candidate business partners <u>Purpose:</u> To cover the off-season, To recommend new product, marketing channels, etc. to the private sector (if any), and To prepare for any possible failure in the partnership in future.
Activity Plan and Result (Time Schedule)	Activity plan (time schedule) is discussed and prepared, and the result is checked every month.
C. Arrangement to be made by DINAS Pertanian Kediri	
Formulation of Business Unit	<u>Identify Partners of KTs</u> (private sector responsible for marketing) <u>Finalize Partnership Agreement</u> between KTs and the private sectors. <u>Basic terms</u> will be: <a> Type of partnership: MOU or Joint Venture company Work-sharing: KT is responsible for supply of processed product (mango), and The Private Sector is responsible for marketing <c> Equipment for processing belongs to KT <d> Official support (finance) to be extended to KT <e> Management of the business unit, profit sharing, etc.: To be discussed and determined at the time of finalizing the agreement, depending on the type of partnership.

Figure



CF-1

Figure. C2.1.1 Marketing Channels of Duck-related Product in Cirebon

Kab. Cirebon

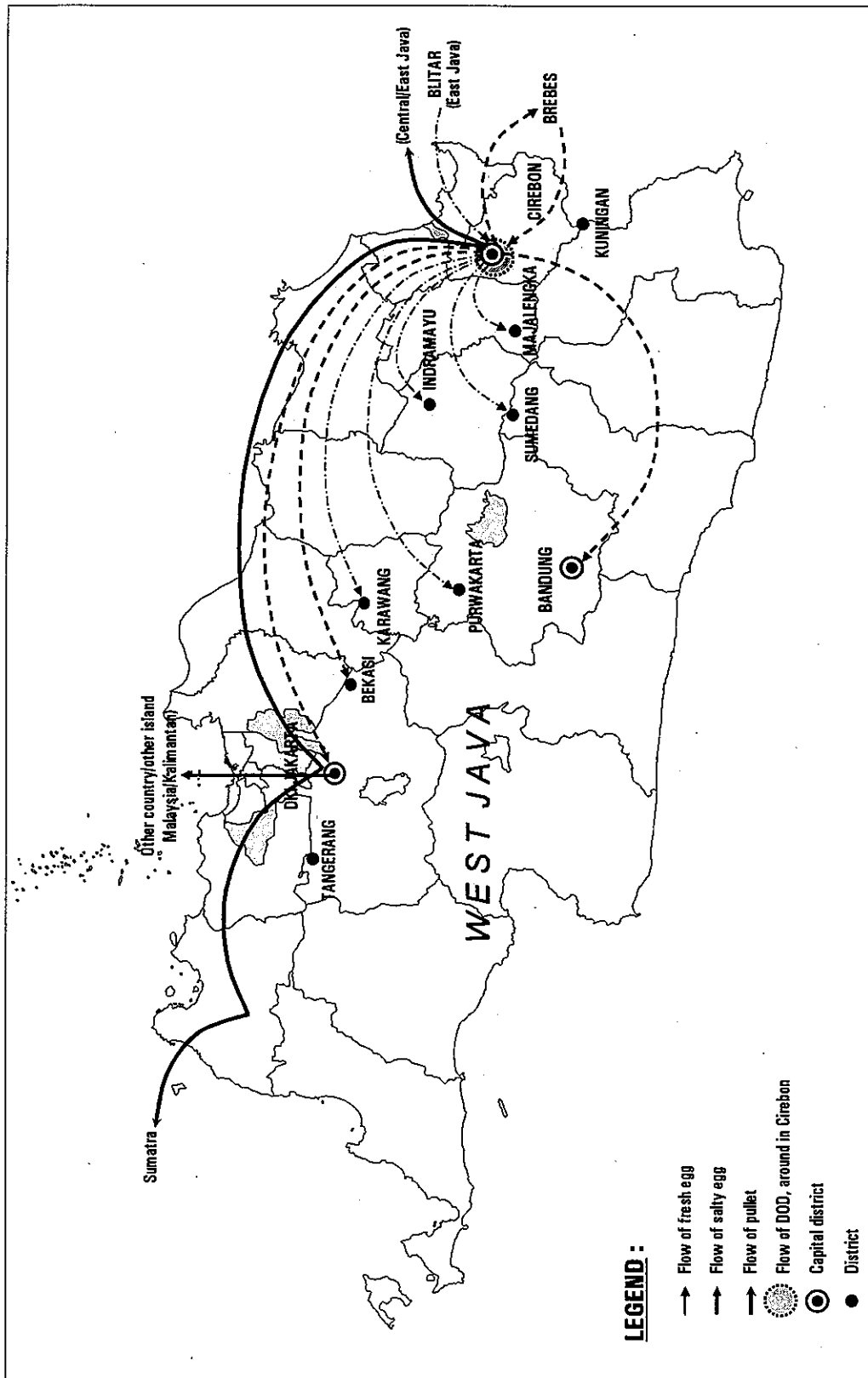


Fig. C2.1.2 Destination & Procurement Route of Duck Product (Cirebon)

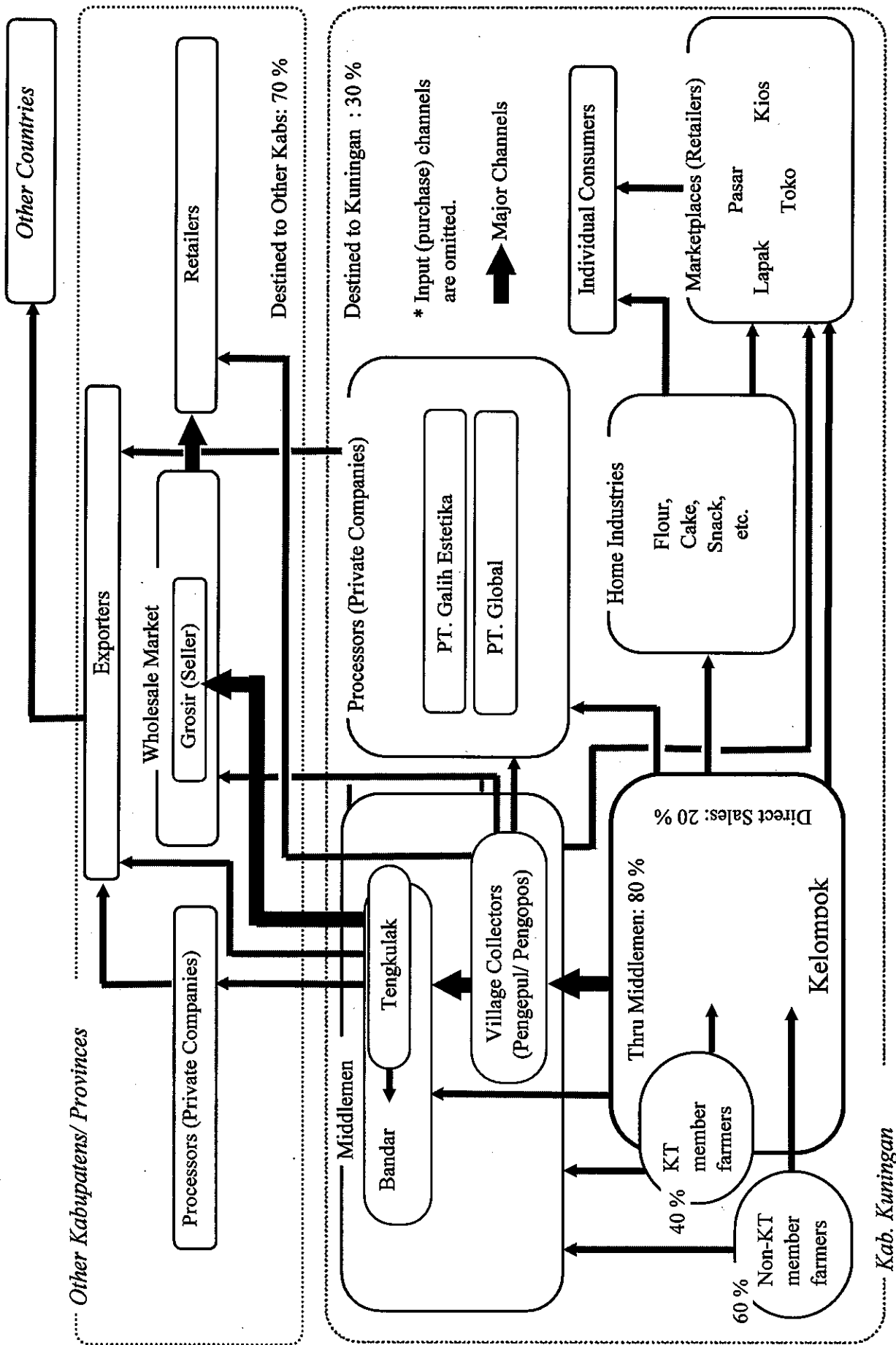


Figure. C2.2.1 Marketing Channels of Sweet Potato in Kuningan

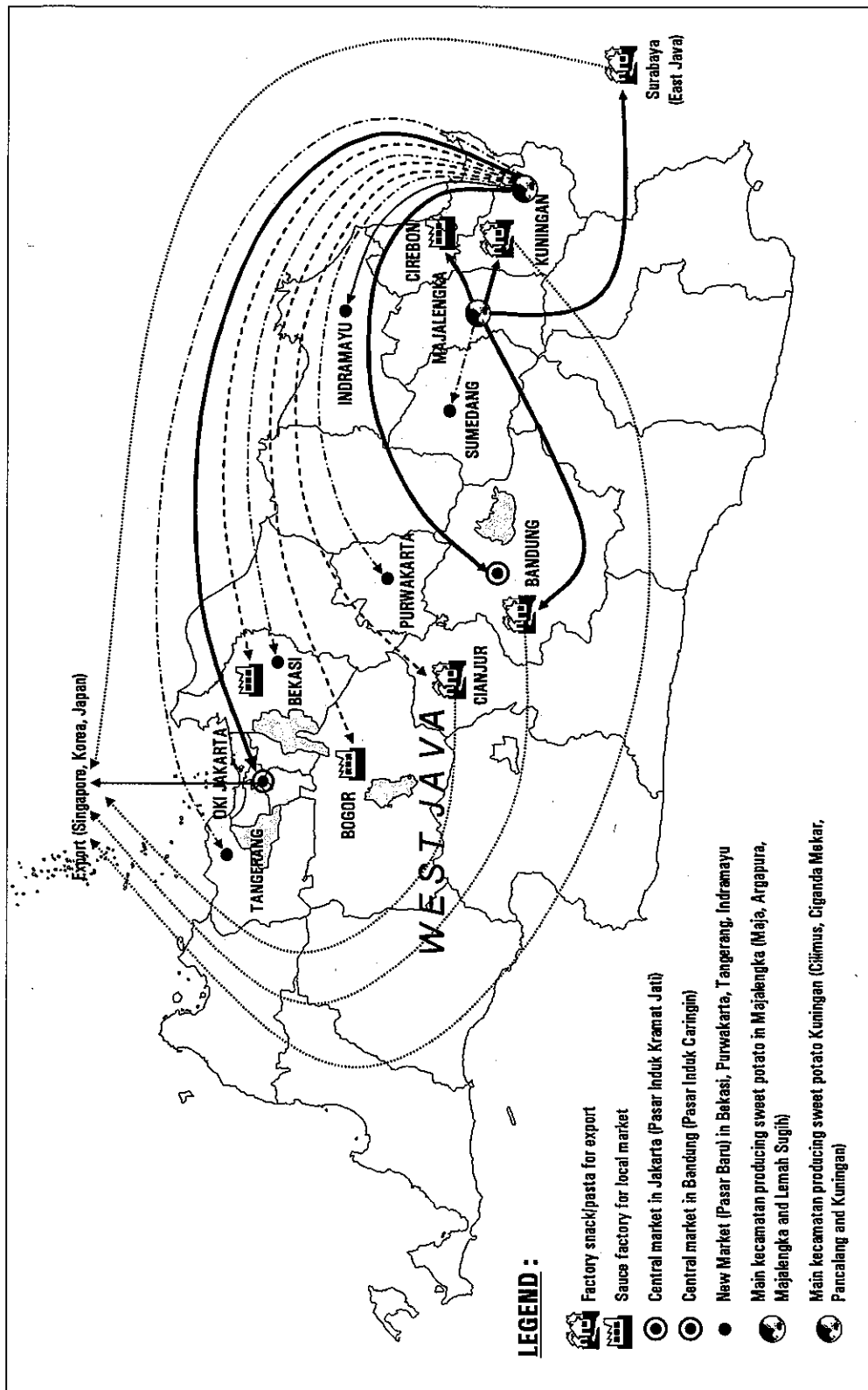
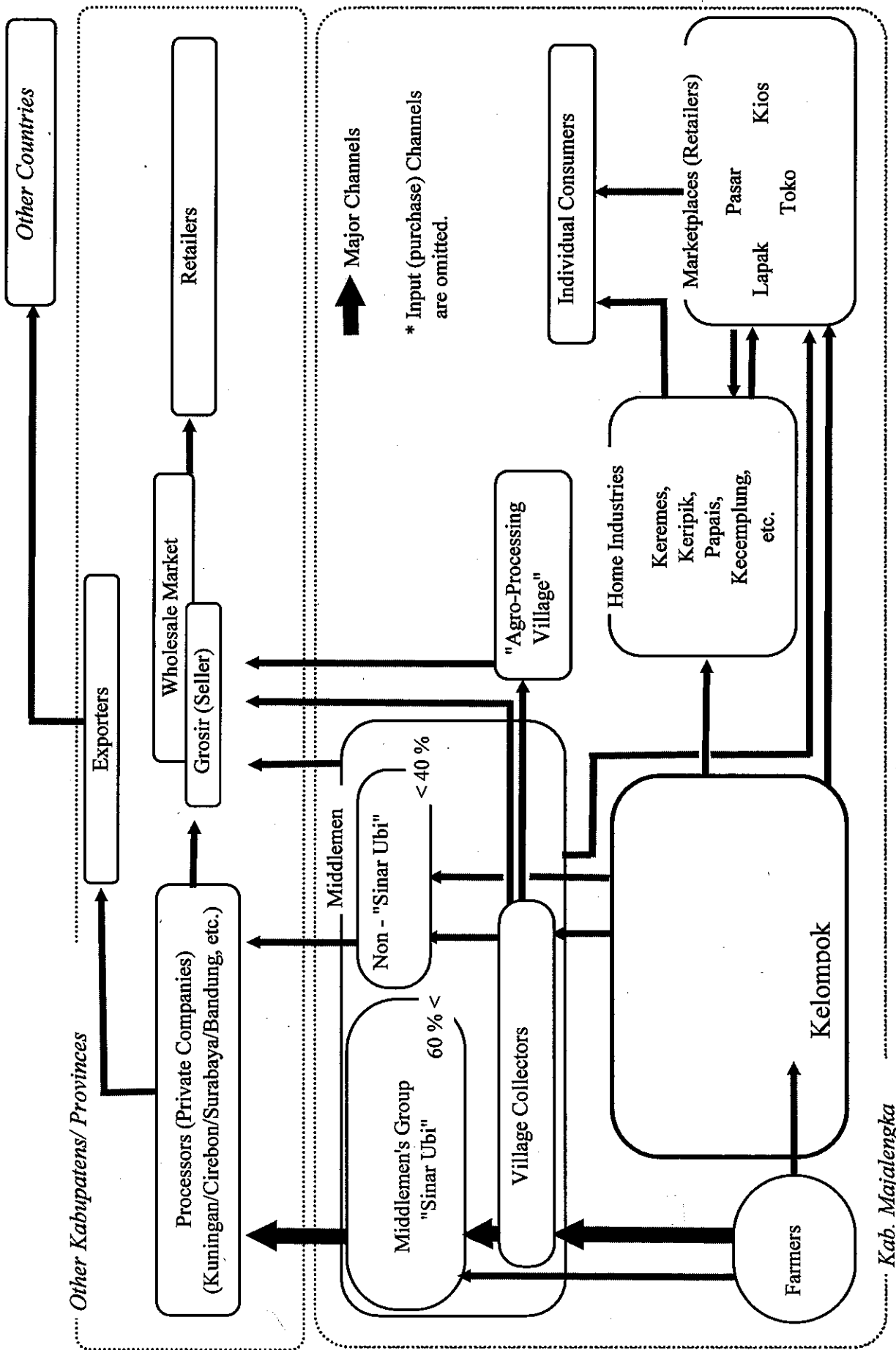


Fig. C2.2.2 Destination & Procurement Route of Sweet Potato (Kuningan)



Kab. Majalengka

Figure. C2.3.1 Marketing Channels of Sweet Potato in Majalengka

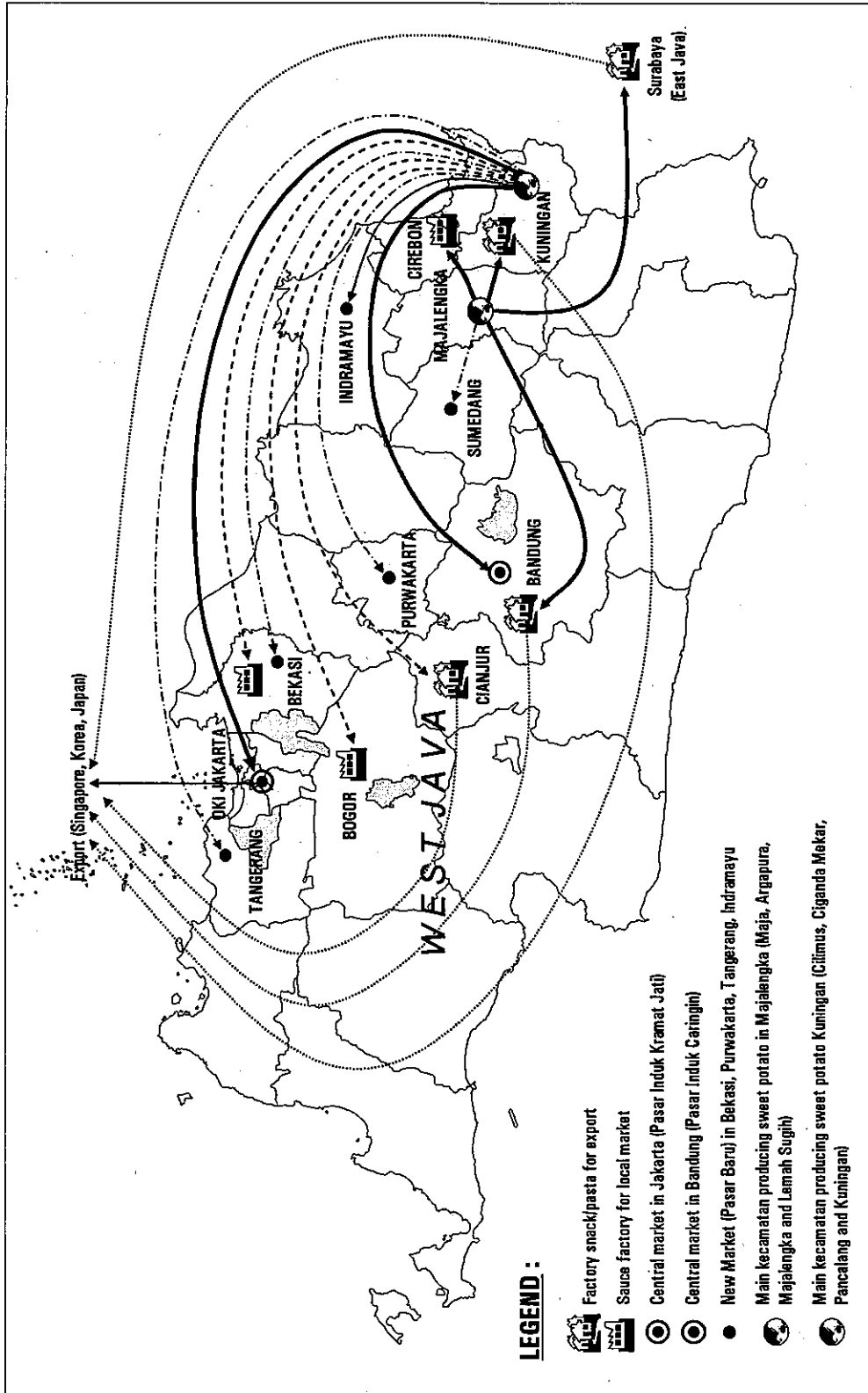


Fig. C2.3.2 Destination & Procurement Route of Sweet Potato (Majalengka)

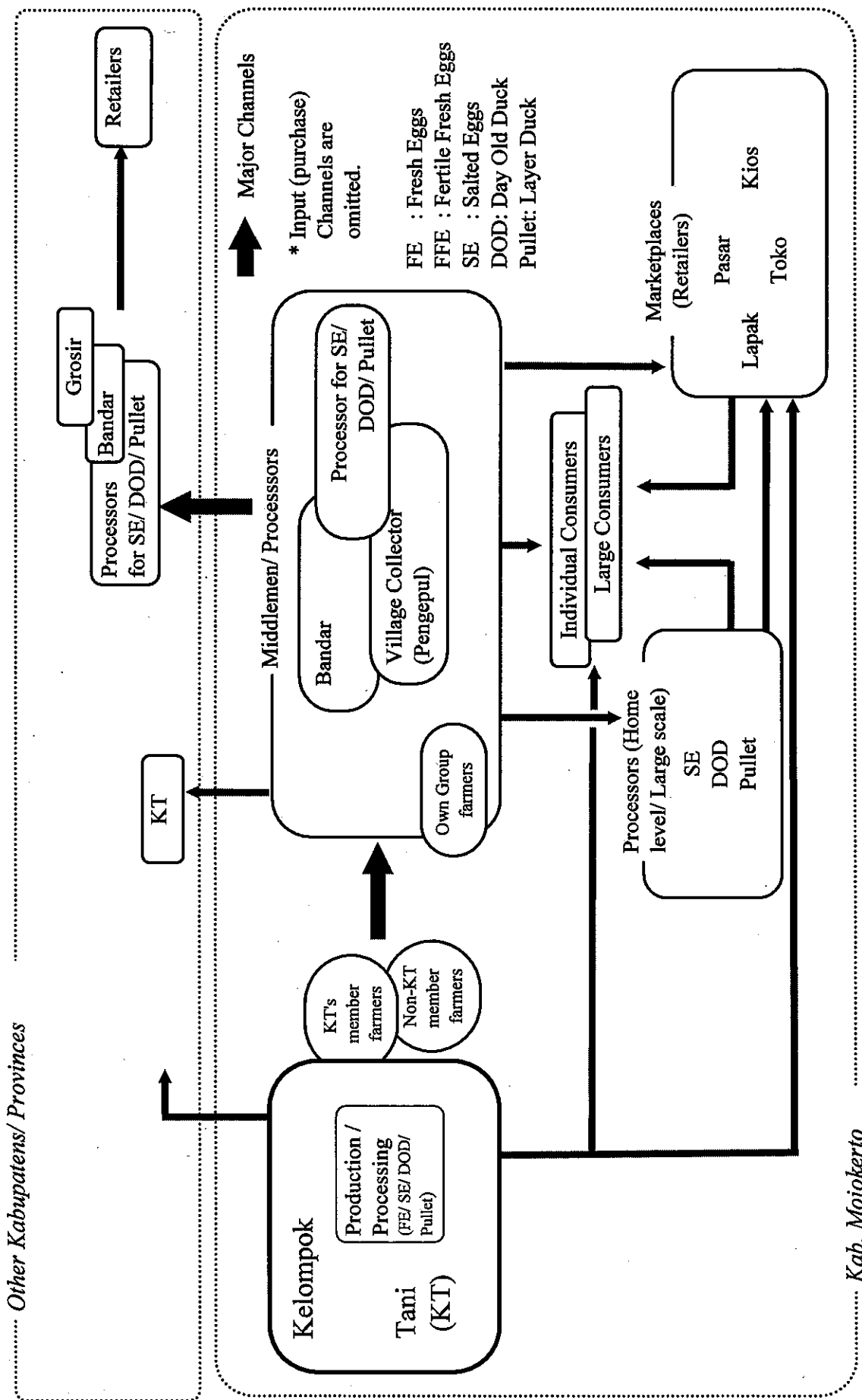


Figure. C2.4.1 Marketing Channels of Duck-related Product in Mojokerto

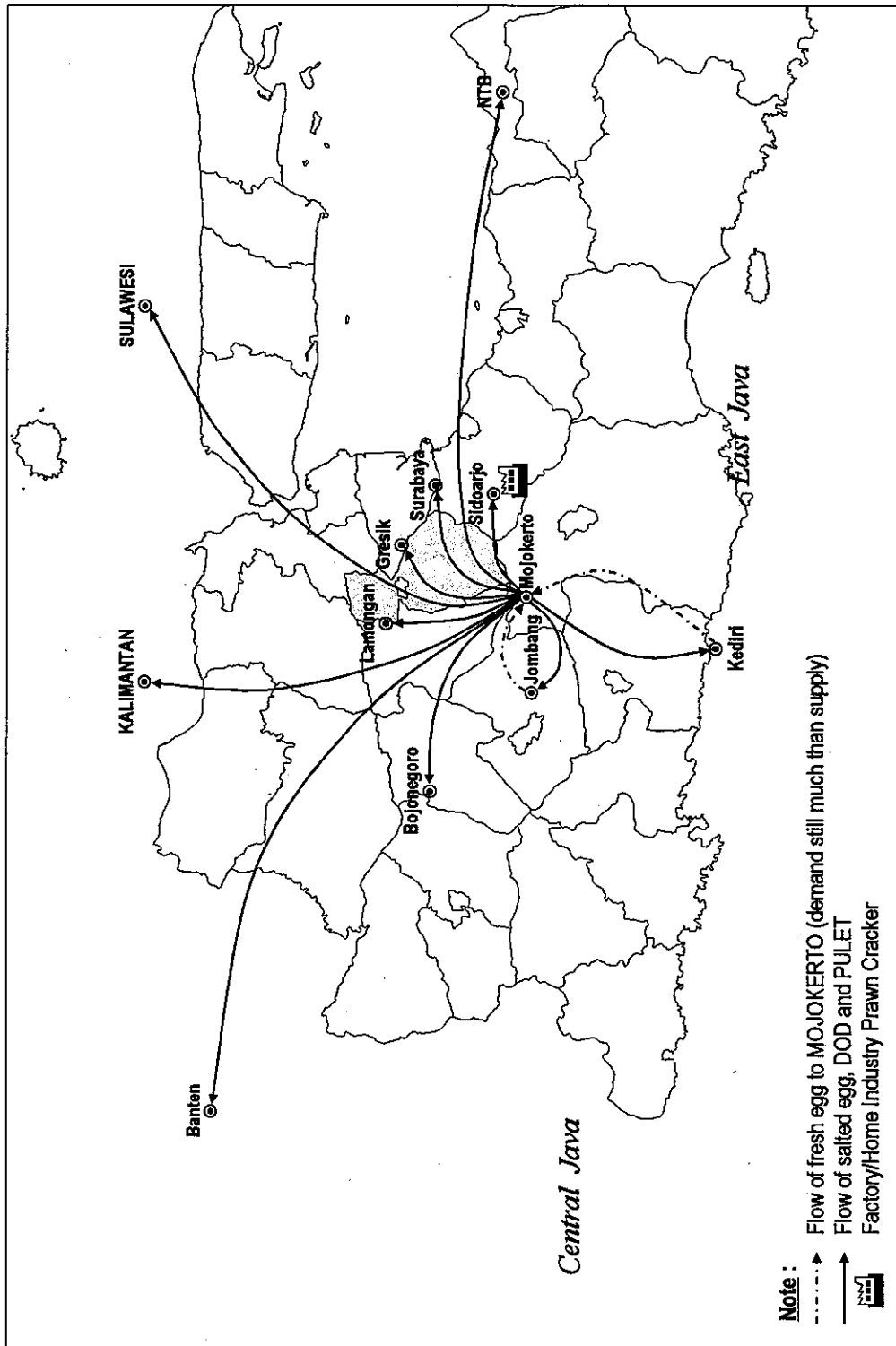


Fig. C2.4.2 Destination & Procurement Route of Duck Product (Mojokerto)

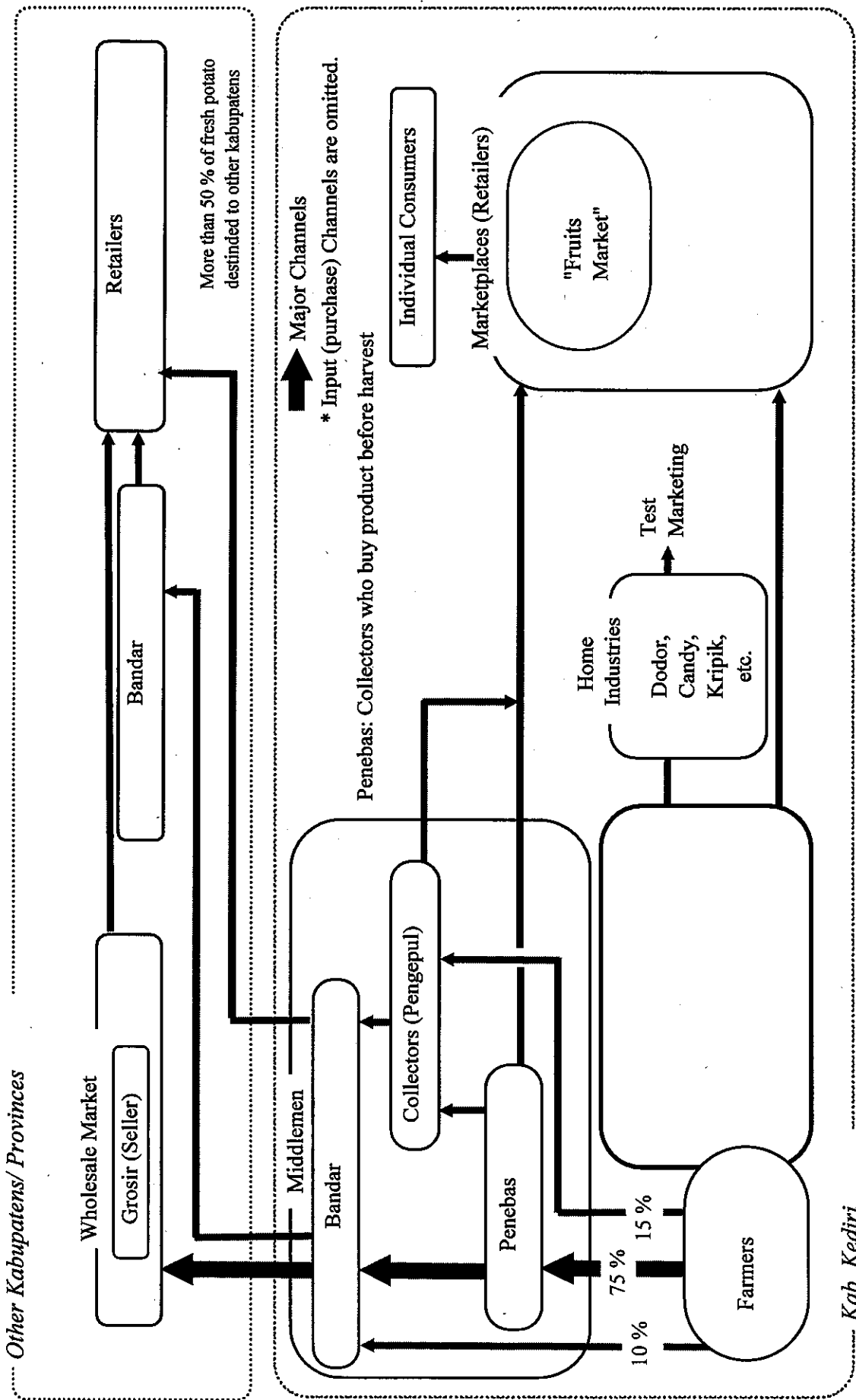


Figure. C2.5.1 Marketing Channels of Mango in Kediri

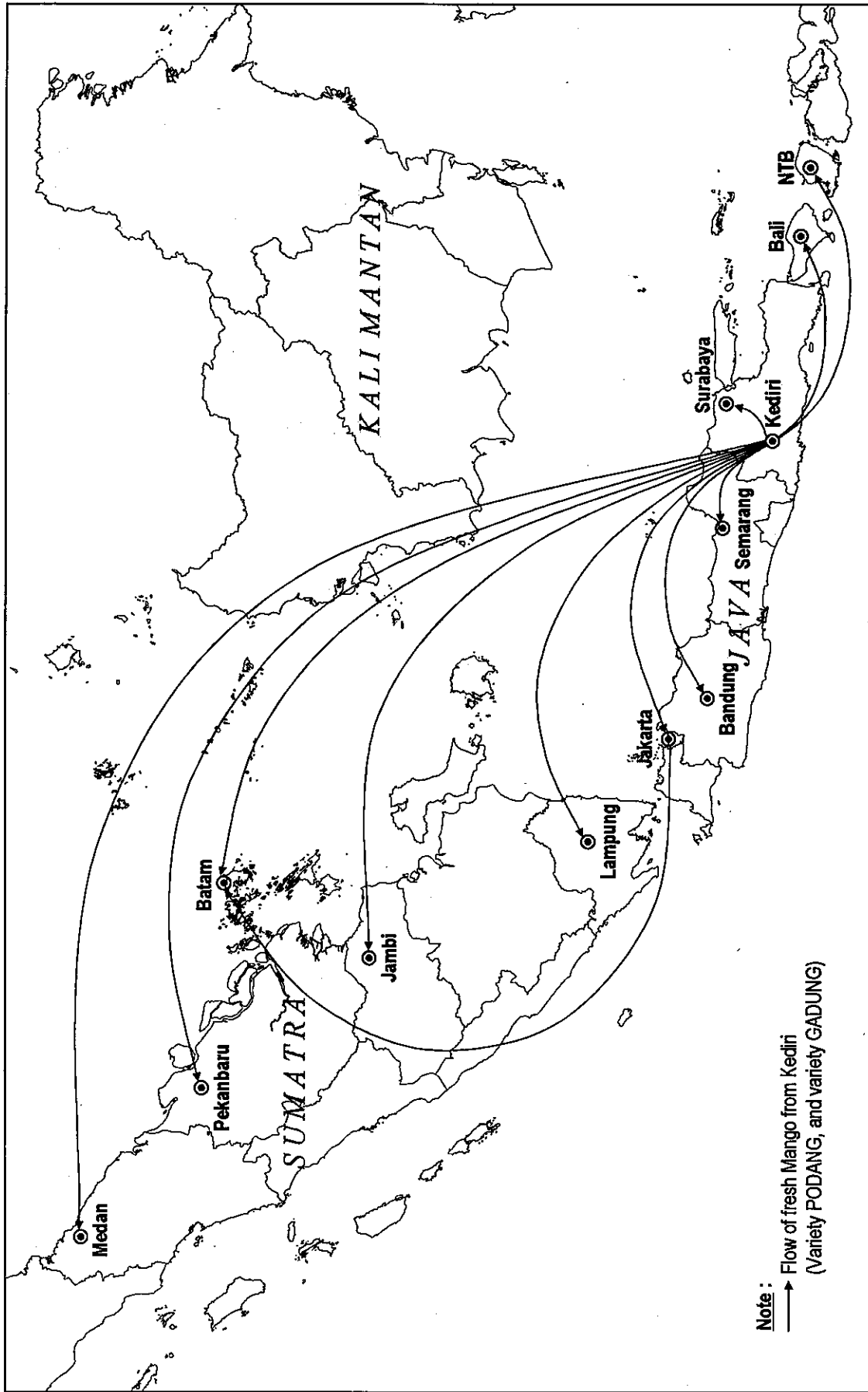


Fig. C2.5.2 Destination & Procurement Route of Mango (Kediri)

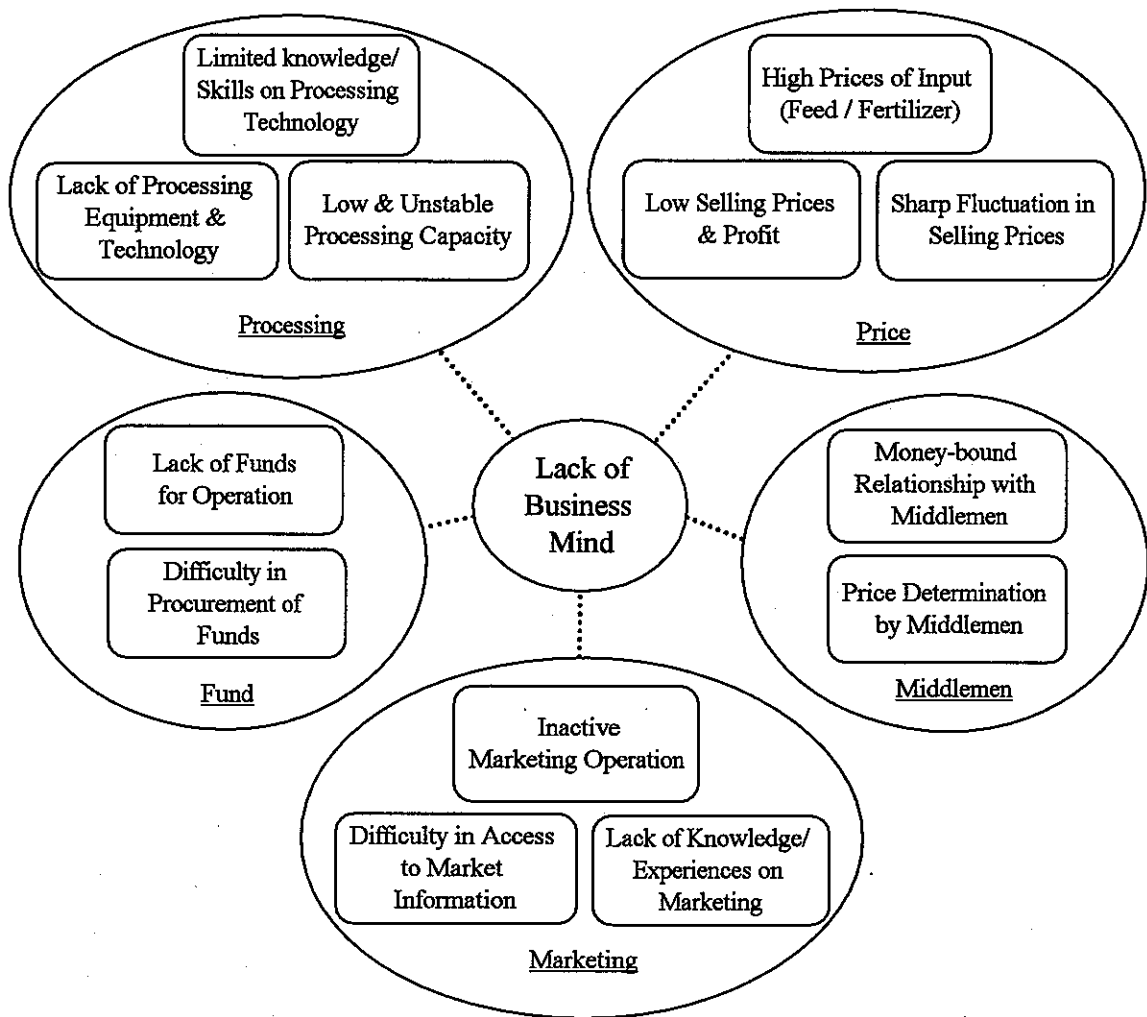


Fig. C3.1.1 Problem Analysis on Marketing-related Issues

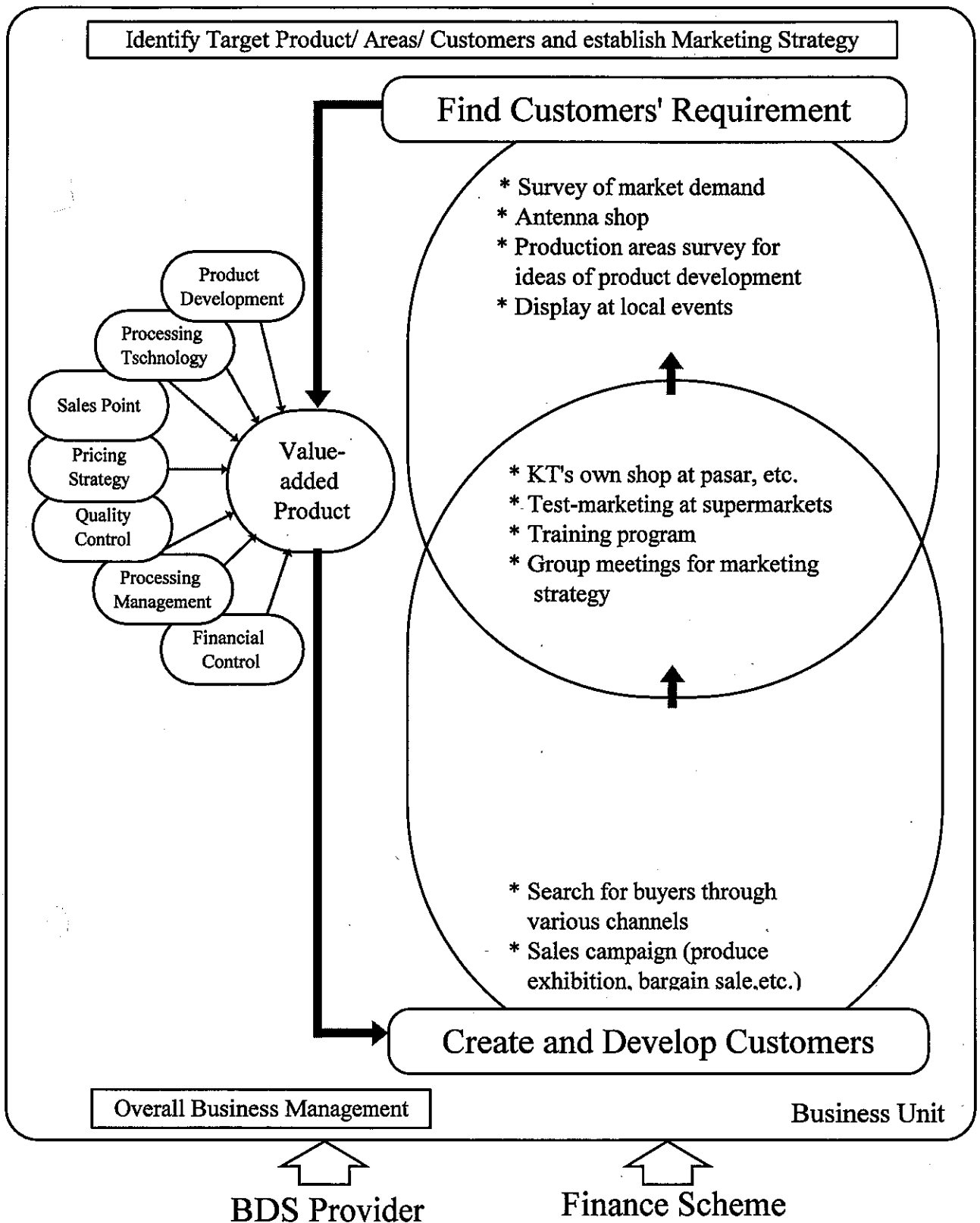


Fig. C3.1.2 Marketing Activities Image

Attachment

Attachment-1

Marketing Information of Majalengka *(Translation to English)*

LETTER FROM MR. SOSIO (DINAS Pertanian, Majalengka)
TO THE STUDY TEAM, dated September 28, 2006

Herewith we send you the answers of your questions as follows:

1. Commonly, The farmers stored the stockless of sweet potato for seeds between 1-3% of the total harvesting results (It is mean if the total productions was 10 tons so they kept the stocks for seeds for about 300 kg)
2. Usually, they consume only the smaller one even though in a little quantities (more or less 2%), due to sweet potato is not the primary food and the bigger part are gives to their neighbors those are not plant sweet potato.
3. The stocks to be sold are 95% of the total.

Comments:

Sweet potato farmer which have been planting continuously did not buy the seeds, but they made by the selves from the stick of plant.

Due to sweet potato is not the primary food so the farmers had not too much stocks for their own consumption

Data of market price in 3 years recent (unless the year of 2005) are available in Dinas monthly average of sweet potatoes market price in Rp/kg seen at the table below:

Year	Months											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2006	830	940	940	850	1100	1100	1190	1135	-	-	-	-
2005	-	-	-	-	-	-	-	-	-	-	-	-
2004	1000	925	900	950	1000	700	830	700	750	800	950	900
2003	750	800	1000	950	900	1050	700	760	800	850	1000	900

Name of the type of market in Majalengka:

Type & Name of Market	Units
- Village market District Market in Kecamatan : Cigasong, Sumber jaya , Majalengka, Kadipaten	20 units
- Livestock Market In Kecamatan Dawuan	1 units
- Fish Market In Kecamatan Maja, Cikijing, Sindang wangi	3 units

Consumption and sales of Sweet Potato in Majalengka :

CATEGORY OF CONSUMPTION AND SALES	%
Self Consumption by farmers	2%
Seed for next year	3%
Sales amount	95%

Attachment-2 Price Data in DKI Jakarta

Date : September 28, 2006
Object of Research : Kramat Jati Central Market
Data to be Collected : Marketing Channel, Buying price and selling price

Kramat Jati Central Market :

Establishment date : December 28, 1973 by Jakarta Local Government.

Total lapak in 2005 : 4,648 lapaks
2006 : 5,000 lapaks
2007 : 5,400 lapaks (planning)

Mango

Lapak Mr. Dul (Grosir):

Only sell two varieties : Mango Harum Manis
Mango Indramayu

Mango Harum Manis

Supplier come from : Jombang, Ponorogo, Purbolinggo and Pasuruan (all
Kabupaten in east Java)

Selling price : Rp 3500 – Rp 4000 / kg,

Grosir gets commission from Big Bandar 10 % from total transaction.

Sales Volume : 1,67 Ton/ day (lowest demand)
5 Ton/ day (highest demand)

Buyer come to Kramat Jati Central Market

Buyer come from : Tangerang
Ciledug
Ciputat
Depok
Jakarta

Mango Indramayu

Supplier come from : Indramayu (West Java)

Buying price : Rp. 4,000,-/ kg

Selling price : Rp. 4,500,-/ kg

Sales Volume : 0.35 Ton/ day (lowest demand)
3.5 Ton/ day (highest demand)

Buyer come to Kramat Jati Central Market

Buyer come from : Tangerang
Ciledug
Ciputat
Depok
Jakarta

Additional information

No transportation cost for this grocer, Bandar and buyer come to Keramat Jati.

Buyer not only retailer but also consumer, minimal order one box.

1 Box : 35 kg, 1 kg : 3-4 Mango (depend on mango size)

Supplier Transportation Cost

- Harum manis : supplier come from east Java
 Cost : Rp 2,000,000,- / trip (usually driver of truck look for some commodities for loading his truck when go back to his town. He will not go back until he get commodities for loading).
- Indramayu : supplier come from Indramayu (still on the way)
 Cost : Rp 600,000, / trip (driver of truck sometimes bring some commodities when go back to Indramayu, sometimes he go back directly without looking for commodities as loading).

Lapak Kembar Jaya

Lapak sell four varieties of Mango :

1. Harum Manis
2. Manalagi
3. Golek
4. Jawa

Mango Harum Manis

- Supplier come from : Purbolinggo and Rembang
 Selling price : Rp 3,500,- – Rp 5,000,- / kg
 Grosir gets commission 10 % from total transaction.
 Buyer come to Kramat Jati Central Market
 Buyer come from : Tanah Abang traditional market (Jakarta)
 Cilebut (Bogor)
 Palmerah Traditional Market (Jakarta)
 Depok

Mango Manalagi

- Supplier come from : Purbolinggo and Rembang
 Selling price : Rp 3,000,- – Rp 4,000,- / kg
 Grosir gets commission 10 % from total transaction.
 Buyer come to Kramat Jati Central Market
 Buyer come from : Tanah Abang traditional market (Jakarta)
 Cilebut (Bogor)
 Palmerah Traditional Market (Jakarta)
 Depok

Mango Golek

- Supplier come from : Purbolinggo and Rembang
 Selling price : Rp 2,500,- – Rp 3,000,- / kg
 Grosir gets commission 10 % from total transaction.
 Buyer come to Kramat Jati Central Market
 Buyer come from : Tanah Abang traditional market (Jakarta)
 Cilebut (Bogor)
 Palmerah Traditional Market (Jakarta)
 Depok

Mango Jawa

- Supplier come from : Purbolinggo and Rembang

Selling price : Rp 1,000,- – Rp 1,500,- / kg
Grosir gets commission 10 % from total transaction.

Buyer come to Kramat Jati Central Market

Buyer come from : Tanah Abang traditional market (Jakarta)
Cilebut (Bogor)
Palmerah Traditional Market (Jakarta)
Depok

Additional Information :

No transportation cost for this grocer, Bandar and buyer come to Keramat Jati.

Buyer not only retailer but also consumer, minimal order one box.

One Box : 35 kg, 1 kg : 3-4 Mango (depend on mango size)

Supplier Transportation Cost

Supplier from Purbolinggo (East Java)

Cost : Rp 2,000,000,- / trip (Driver of truck look for some commodities for loading his truck when go back to his town. He will not go back until he get commodities for loading).

Supplier from Rembang (Central Java)

Cost : Rp 1,600,000,- / trip (Driver of truck look for some commodities for loading his truck when go back to his town. He will not go back until he get commodities for loading).

Sweet Potato

Lapak Wahyu Rama

The owner of Wahyu Rama is Mr Tarno, he is big Bandar from Kabupaten Kuningan.

Sell two varieties of sweet potato :

White AC

Red AC

Sweet Potato White AC

Supplier come from : Kuningan and Majalengka (West Java) 70 %
Kabupaten Madiun (East Java) 30 %

Buying price : Rp 500, – Rp 1,600,- (depend on season)

Selling price : Rp 1,000, – Rp 2,000 / kg (selling price negotiable)

Sales Volume : 5 Ton/ day

Buyer come to Kramat Jati Central Market

Buyer come from : Jakarta

Batam (order weekly, 18 ton (one container) / week

Order also come from Factory that produce Sauce sweet potato, such as :

PT Kadu Manis Utama (Tangerang)

PT ABC (Jakarta)

PT Sari Sedap

PT Inkenas

Sweet Potato Red AC

Supplier come from : Kuningan and Majalengka (West Java) 70 %
Kabupaten Madiun (East Java) 30 %

Buying price : Rp 700, – Rp 2,000,- (depend on season)

Selling price : Rp 1,200, – Rp 2,500 / kg (selling price negotiable)
Sales Volume : 3 Ton/ day
Buyer come to Kramat Jati Central Market
Buyer come from : Jakarta
Batam (order weekly, 18 ton (one container) / week
Order also come from Factory that produce Sauce sweet
potato, such as :
PT Kadu Manis Utama (Tangerang)
PT ABC (Jakarta)
PT Sari Sedap
PT Inkenas

Additional information

Mr Tarno also supply sweet potato to other central market directly :

Caringin Central Market (Bandung)

Bekasi

Cikarang

Tasikmalaya

Tranportation Cost

Rp 200,- / kg (from Majalengka and Kuningan to Kramat Jati)

Rp 2,000,000,- / truck/ trip (from Madiun to Kramat Jati)

One truck contain 6 ton sweet potato.

Date : September 28, 2006
Object of Research : Giant Super Market
Data to be Collected : Selling price

Telur Bebek Mentah (Fresh Egg)

Selling price : Rp 4,850,-/ pack

One pack = four eggs

Brand : Giant Telur Bebek Mentah

Packaging : Packaging by Harry Ernalis (Jakarta)

Supplier : Supplier come to Central Giant in Cibitung (Bekasi), Central
Giant distribute to each branch

Telur Asin Mentah (Salty Egg Before Boiling)

Selling price : Rp 5,450,-/ pack

One pack = four eggs

Brand : Giant Telur Bebek Mentah

Packaging : Packaging by Harry Ernalis (Jakarta)

Supplier : Supplier come to Central Giant in Cibitung (Bekasi), Central
Giant distribute to each branch

Telur Asin Matang (Salty Egg)

Selling price : Rp 1,750,-/ egg

Brand : Giant

Packaging : No packaging, sell per egg

Supplier : Supplier come to Central Giant in Cibitung (Bekasi), Central

Giant distribute to each branch

Sweet Potato Red AC
 Selling price : Rp 4,350,-/ kg
 Brand : No Brand
 Packaging : Use simple packaging (plastick with straples)
 Supplier : Supplier come to Central Giant in Cibitung (Bekasi), Central Giant distribute to each branch

Sweet Potato Chips
 Selling price : Rp 6,075,-/ pack
 Supplier : Supplier come from Sukoharjo (Central Java). Supplier supply to to Central Giant in Cibitung (Bekasi), Central Giant distribute to each branch

Date : September 28, 2006
Object of Research : Matahari Super Market
Data to be Collected : Selling Price

Telur Bebek Mentah (Fresh Egg)
 Selling price : Rp 6,950,-/ pack
 One pack = four eggs
 Brand : KIP
 Supplier : Supplier come to Central Matahari in Lipo Karawaci (Tangerang) Central Matahari distribute to each branch

Telur Asin Mentah (Salty Egg Before Boiling)
 Brand : KIP
 Selling price : Rp 7,250,-/ pack
 One pack = four eggs
 Supplier : Supplier come to Central Matahari in Lipo Karawaci (Tangerang) Central Matahari distribute to each branch
 Brand : EGRA
 Selling price : Rp 4,750,-/ pack
 One pack = Three eggs
 Supplier : Supplier come to Central Matahari in Lipo Karawaci (Tangerang) Central Matahari distribute to each branch

Telur Asin Matang (Salty Egg)
 Brand : KIP
 Selling price : Rp 7,950,-/ pack
 One pack = four eggs
 Supplier : Supplier come to Central Matahari in Lipo Karawaci (Tangerang) Central Matahari distribute to each branch
 Brand : EGRA
 Selling price : Rp 4,950,-/ pack
 One pack = Three eggs
 Supplier : Supplier come to Central Matahari in Lipo Karawaci (Tangerang) Central Matahari distribute to each branch

Mango Harum Manis Super
 Selling price : Rp 12,950,-/ kg
Mango Harum Manis Biasa
 Selling price : Rp 6,990,-/ kg
Mango Golek
 Selling price : Rp 11,900,-/ kg
Mango Kweni
 Selling price : Rp 9,450,-/ kg
Mango Manalagi
 Selling price : Rp 10,950,-/ kg
Mango Indramayu
 Selling price : Rp Rp 10,950,-/ kg
Sweet Potato Cilembu
 Selling price : Rp 9,950,-/ kg
 Brand : Ubi Cilembu
 Packaging : Packaging by Sucofindo
 Supplier : Supplier come from Sukabumi (West Java). Supplier supply to
 Central Matahari in Lipo Karawaci (Tangerang),
 Central Matahari distribute to each branch
Sweet Potato Jepang
 Selling price : Rp 7,550,-/ kg
 Brand : Ubi Jepang
 Packaging : Packaging by Sucofindo
 Supplier : Supplier come from Sukabumi (West Java). Supplier supply to
 Central Matahari in Lipo Karawaci (Tangerang),
 Central Matahari distribute to each branch
Chips Sweet Potato
 Selling price : Rp 9,500,-/ pack
 Brand : Ubi Ungu Chips
 Quantity : 200 gr / pack
 Packaging : Packaging by Jempol Multifood Malang
 Produsen : Jempol Multifood & Snack
 Supplier : Supplier come from Malang (East Java). Supplier supply to
 Central Matahari in Lipo Karawaci (Tangerang),
 Central Matahari distribute to each branch

Date : September 28, 2006
Object of Research : Kemiri Traditional Market
Data to be Collected : Market Channel, Buying Price and Selling Price

Mr Taruddin (Bandar from Brebes, Stay In Depok)

Kind of Product

Telur Bebek Mentah (Fresh Egg)

Buying price : Brebes Rp 770/ egg
 Cirebon Rp 800/ egg

Kerawang Rp 820/ egg
Solo Rp 700/ egg
Selling price : Rp 950,-/ egg
Supplier : Supplier come from Brebes (50 % from Farmer 50 % from
Tengkulak), Cirebon, Kerawang and Solo. Some times Mr
Taruddin buy fresh egg from Cirebon, Kerawang and Solo from
Tengkulak.
Volume of Selling : 2,000 fresh egg/ day
Telur Asin Mentah (Salty Egg Before Boiling)
Buying price : Rp 850,-
Selling price : Rp 890/ egg (retailer)
Rp 1,000,-
Supplier : Supplier come from Brebes
Volume of selling : 15 – 25 Box
One box = 350 egg
Telur Asin Matang (Salty Egg)
Buying price : Rp 1,000,-/ egg
Selling price : Rp 1,100,-/ egg
Supplier : Supplier come from Brebes