Agricultural Development Planning / Market of Agricultural Products

1) Agricultural Development in Singbebas Area

- The agricultural development policies in West Kalimantan are food security, agro business and improvement of farmers' welfare, following the national development plan.
- Each local government promote specific commodity, such as orange in Sambas and maize in Kab. Bengkayang, together with paddy production as a basic food.
- The partnership between private business sector and common farmers, such as chicken producers and maize producers, and orange traders and producers.
- To tackle slash-and-burn farming in the area, the local government got idea to introduce compost to improve land productivity in developed farms.
- The marketing research has not made by the government yet, although the project aims organic food production, export of orange, and processing of orange and pineapple.
- The standard and regulation on organic products should be established soon in Indonesia.
- As the private sector plays key role and the local government has limitation in human and monetary resources, the government should concentrate to technical support to farmers.
- The principal points relating to the project are sustainable production technique and quality improvement for orange, and increase of production and improvement of drying method for maize.

2) Maize Production and Marketing

- Maize is mainly produced in Bengkayang, especially Kec. Sanggau Ledo. <u>The short-run target is to fulfill the chicken producers' demand in Kota Singkawang.</u>
- In the maize production center, the hybrid maize is planted 2 3 times a year and its yield is more than 4 ton/ha. In other areas, local maize is planted in non-tillage method.
- After harvest of maize, farmers' groups or village collecting traders make shelling, drying and packing. The necessary equipments are continuously supplied to them by local government.
- After treatment in village, the chicken producers in Singkawang buy maize, and they sell chicken dung to farmers for manure. The bargaining power of farmers is weak.
- The moisture content of maize is sometimes higher than the standard at 14 %, because of insufficient post-harvest facilities. Mechanical or simple drying facilities for maize are necessary.

3) Orange Production and Marketing

- Orange production has been rapidly expanding in Kab. Sambas especially Kec. Tebas since 1999. The target area is 10,000 ha, and more than 8,000 ha is developed.
- Sambas government provides orange seedlings to farmers, and makes technical guidance to harvest 4 5 times a year aiming at stabilization of prices.
- Village collecting traders sort orange fruits in 4 grades in size by using simple wooden tools, and pays to farmers in cash. Buyers from Pontianak buy orange at their offered prices.
- There are 2 large-scale orange traders in Kec. Tebas and they make contract farming with local farmers in 1,000 ha. The traders have cold storage and refrigerator cars to export orange to Jakarta. In addition, there are many storage facilities for orange around Sintete port.
- The harvest area is still 30 % of orange fields, and full production will comes in a few years. As orange price could come down, the government should support farmers for large-size orange production. To export to foreign countries, the quality in taste, appearance and damage should be improved more. The role of Citrus Center in Kec. Tebas is very important from the viewpoint.

Recycling-oriented Agriculture/Processing of Agriculture Products

(1) Agriculture in West Kalimantan

- 1. Increase of production depends on expansion of cultivated acreage rather than increase of yield productivity.
- 2. The work force in a family tends to be insufficient to cultivate all one's own land.
- 3. Maize cultivation demands herbicides and fertilizers (mainly urea) alone. Insects and fungus damages have not been serious in fields. Chicken dung is often used instead of high-price potassium fertilizers. Therefore, maize in West Kalimantan is almost organically grown.
- 4. Orange cultivation requires herbicides, fertilizers (mainly urea), and insecticides during rain season.
- 5. Rice is mainly self-consumed, and application of chemical substances in rice fields is small enough to regard it as an organic product.
- 6. Herbicide application enables direct-seedlings of maize and rice with large scale, though it causes soil compactation.
- 7. Few equipment, such as a portable spryer, is used in cropping.

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(2) Evaluation for Organic Farming Proposal in West Kalimantan

- 1. The concept has not been crystallized yet, since the regulation on it has not been established.
- 2. Effect and limit of compost have not yet been studied.
- 3. Compost application is confused as organic farming itself, and countermeasures against agricultural chemicals have not been considered, yet.
- 4. Main objective of compost use seems to be saving of chemical fertilizers rather than promotion of organically grown agricultural products: organic products are nearly produced by the present method.
- 5. Extension technique has not been established, since trials on organic farming have not been completed.
- 6. Markets of agricultural organic products in the country have not been prepared, and foreign markets have not been surveyed.
- 7. Farmers have not fully understood compost making and/or agricultural organic products, and it indicates that the proposal is not based on the framers' demand.

(3) Evaluation for Requested Facilities and Equipment

(3-1) Compost making facility

- Raw materials of compost to produce equivalent amount to the efficiency of chemical fertilizers, is not enough in the project sites. Besides, constant supply of the raw materials from agro-business sectors is not ensured.
- 2. Transportation methods and the cost have not been considered.
- 3. Agricultural labor on compost application has not been considered.
- 4. Compost application is estimated much more expensive than that of chemical fertilizers.
- 5. Centralized compost making facility cannot be applicable to farmers.
- 6. Framework of the facility management seems to be fragile, because the operation will be entrusted to a farmer's group.
- 7. The operations in compost making have not been understood well.
- 8. The requested compost making system has not been established; the mixer of raw materials is once broken and is not prepared for continuous use.

(3-2) Organic framing center

- 1. The requested small equipment does not much the Japanese grant aid.
- 2. The scheme for the activities is not fully beneficial to farmers, which are targeted as main stakeholders in

the proposal.

(3-3) Demonstration farm

- 1. The requested small equipment does not much the Japanese grant aid.
- 2. The demonstration frames are not indispensable, because cultivation trials are done in farmer's fields.
- 3. Personnel and a budget for the demonstration farm have nor been fully prepared.

The above-mentioned findings result that the proposal will hardly realize the objectives.

(4) Prospects of problems

- 1. Decrease of soil fertility caused by two to three times maize cropping a year
- 2. Insects and pathological damages
- 3. Drain damage of grown orange trees
- 4. Soil erosion at mountain slopes by deforestation

(5) Provisions

- 1. Increase productivity in reclaimed land
 - Removal of tree stumps in reclaimed land
 - Use of buffalos, tractors, etc.
 - Establishment of irrigation and/or drainage systems
- 2. Improvement of product quality at farm sites
 - Construction of dryer-sheds for grains
 - Use of scissors for orange harvest
- 3. Implementation of sustainable agriculture
 - Crop rotation
 - Use of green manure
 - Compost making (EM is not indispensable)
 - Agro-pastoral system
- 4. Selection and breeding of suitable varieties to the region
 - Soybean: High yielding variety
 - Orange: Virus resistant variety

Drought tolerant variety

Suitable variety for processing

- Rice: High yielding variety

Virus resistant variety

Drought tolerant variety

Varieties with various growth durations

- 5. Fertilization trials
 - Confirmation of fertilization doses to typical soils and crops
 - Recommendation of applicable fertilization

Fertilization depending on limited potassium amount

Application combined with chemical and organic fertilizers

- 6. Improvement of cultivation method
 - Orange: Increase of large size production by control of shoot growth

Prevention form fungus on the skin

- 7. Regulation of land use
 - Forest reservation in slope land

Suggestions on the Post Harvest Treatment

Importance of Careful Handling of Commodities

If we define the Post Harvest Treatment widely, it covers all the stages from the Harvest up to the Point to be handed to consumers, i.e. Harvest; On-farm treatment; Drying; Grading; Storage; Packaging; Processing; Transportation; and Market. Post Harvest Losses will be substantial depending on commodity in Singbebas area. Losses are generally caused by farmers' or traders' rough handling. In case of some fruits and vegetables including orange, so called "Invisible Damage" should be considered. Even when some damage occurs on fruits by shock, it does not appear immediately in many cases, but it appears only after a couple of days or several weeks when it is difficult to identify the causes. This is the reason why careful handling is very important at all stages after harvest for any commodities for reduction of Post Harvest Losses. Using machines even increases a chance for commodities to be damaged sometimes.

Simple Equipment on Farm Level

It was observed in this Study that some farmers had very simple and primitive "Dryer" for corn and paddy (High-floored wooden cabin with manual-controlled movable roof). This sort of trial does not require any costly machines. Of course, such "Facility" may not function well enough, just might be "better than nothing", but, important is farmers' consciousness to try to improve the situation and overcome the constraint. Government extension activities can and should play an important role in education and dissemination for farmers in such area, giving farmers incentives. For improvement of the productivity, machines may be indispensable. In addition to using machines, however, the said sort of grass-root level improvement is also important, since overall goal of your agriculture development project should be improvement of farmers' income. We understand the majority of farmers are needy people, who can't afford to make or buy even very primitive, cheap equipment for maintaining the quality; do not have transportation means for carrying their product to dryers, graders or market; have difficulty in access to market price information. Many of them may be just waiting for traders to come, selling their products at traders' price.

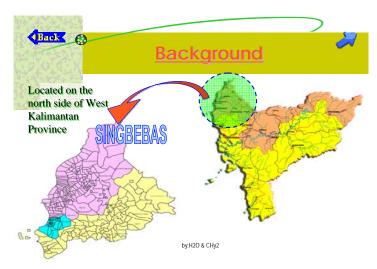
Pilot Project and Bottom-Up Approach

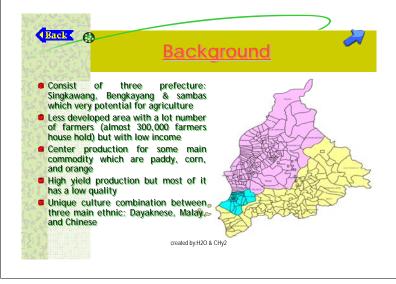
For more effective implementation of the Singbebas Project, some type of Pilot Project could be an option, where target commodity and area are to be narrowed down taking various factors into consideration. On the other hand, the said kind of grass-root level improvement needs to be strengthened as a Bottom-Up Approach.

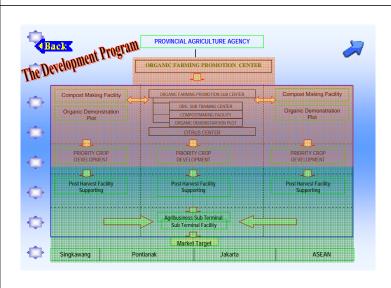


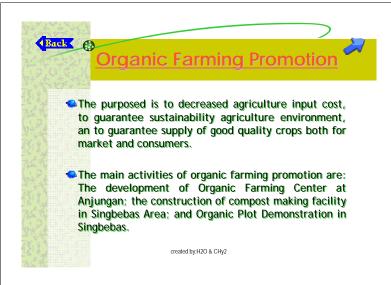


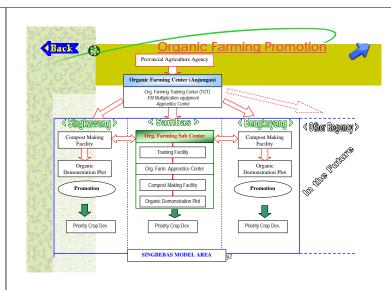






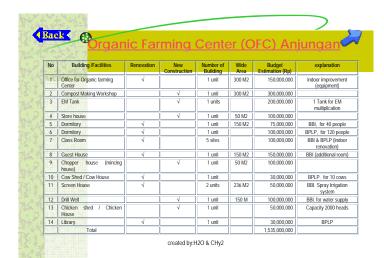




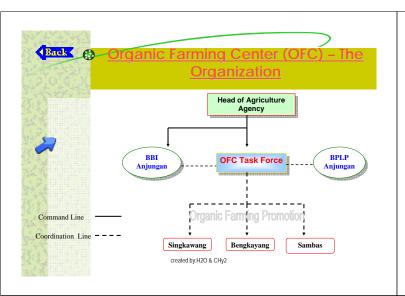






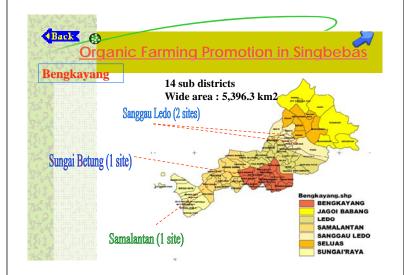


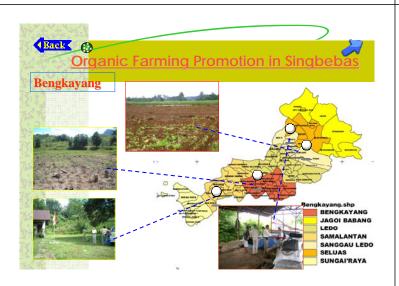


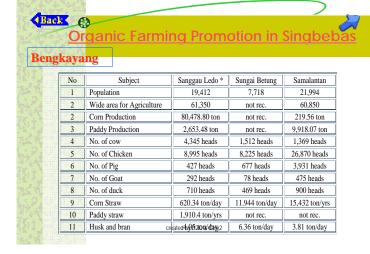


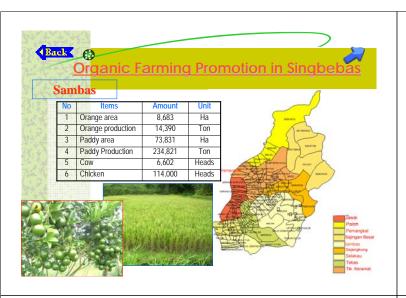














Marketing Promotion The purposed is to get new market target and stabilize for products and crops which are developed. The main activities of Marketing promotion are:

The main activities of Marketing promotion are: to construct Integrated Agribusiness Terminal and sub terminal (in Pontianak & Singbebas area), improvement in distrubution facility (sea port), and provision of some post harvest facilities in Singbebas area (most of it is agricultural machinery and processing equipments).

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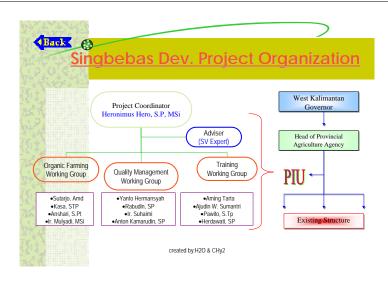












	添付資料5 収象	長資料リスト
No	Indonesian	English/Japanese
1		Singbebas Development Project Profile (Preparation
		Progress Report); West Kalimantan Provincial
	0	Agency & BAPPEDA
	Statistik Indonesia 2004; BPS	Statistical Yearbook of Indonesia 2004; BPS
3	Sensus Pertanian 2003, Hasil Pendaftaran Rumah	Agriculture Census 2003, Household, West
1	Tanggga, Propinsi Kalimantan Barat; BPS Kalimantan Barat Dalam Angka 2005; BPS	Kalimantan Province; BPS West Kalimantan in Figures 2005; BPS
	Kabupaten Bengkayang Dalam Angka 2003	Bengkayang Regency in Figures 2003
	Kabupaten Sambas Dalam Angka 2003	Sambas Regency in Figures 2003
	Kota Singkawang Dalam Angka 2003	Singkawang City in Figures 2003
	Kecamatan Singkawang Barat Dalam Angka 2003	West Singkawang District in Figures 2003
	Kecamatan Singkawang Timur Dalam Angka 2003	East Singkawang District in Figures 2003
10	Kecamatan Singkawang Selatan Dalam Angka 2003	South Singkawang District in Figures 2003
11	Kecamatan Singkawang Utara Dalam Angka 2003	North Singkawang District in Figures 2003
	Kecamatan Singkawang Tengah Dalam Angka 2003	Central Singkawang District in Figures 2003
13	Laporan Tahunan Dinas Pertanian Tanaman	Annual Report of Agriculture Agency of West
	Pangan Propinsi Kalimantan Barat Tahun 2003	Kalimantan Province 2003
14		West Kalimantan Investment Opportunity 2004
15	***; Kondisi Fisik Kalimantan Barat	Horticulture Investment Opportunity; The Physical
40		Condition of West Kalimantan
16		Proposal, Development Program for Farming
		Community Empowerment (Majority Community)
17	Profil Agribienie Lidah Ruaya Kota Pontianak English	Bengkayang Regency Agro-business Profile on Aloe Vera in Pontianak City
''	Version (CD-ROM)	(CD-ROM)
18	Presentasi Profil Agribisnis Lidah Buaya Kota	Presentation, Agro-business Profile on Aloe Vera in
.0	Pontianak English Version (CD-ROM)	Pontianak City (CD-ROM)
19	Peta Kalimantan Barat 1:925,000	Map of West Kalimantan 1:925,000
	Visi Kepala Daerah (RPJMD KALBAR 2005-2008);	Vision of Provincial Head (RPJMD West Kalimantan
	BAPPEDA	2005-2008); BAPPEDA
21	Peratuan Daerah Propinsi Kalimantan Barat Nomor	Organization Structure in West Kalimantan Province
	2 Tahyn 2005 Susunan Organisasi Perangkat	2005
	Daerah Provinsi Kalimantan Barat	
22		Singbebas Development Project Profile (Preparation
		Progress); West Kalimantan Provincial Agency &
	December 1	BAPPEDA
23	Presentasi Bupati Sambas Dalam Rangka Persiapan	
24	Proyek Pengembangan Wilayah Singbebas	Singbebas Development Project
24	Expose, Walikota Singkawang tentang Pengembangan Agribisnis Terpadu Pada Kawasan	Expose of Singkawang Mayor for Agro-business Development in Agropolitan area
	Agropolitan	Development in Agropolitan area
25	Expose tentang Rencana Pembuatan Pupuk	Expose for Organic Fertilizer Making and Agricultural
	Organik dan Alat Mesin Pertanian di Kab.	Machinery Plan in Bengkayang Regency
26	Standar Nasional Indonesia - Jeruk Keprok	Indonesian National Standard - Orange
	Standar Nasional Indonesia - Nenas	Indonesian National Standard - Pineapple
28	Standar Nasional Indonesia - Jagung	Indonesian National Standard - Maize
	Perkembangan Neraca Bahan Makanan Hortikultura	Food Balance Sheet on Horticulture 1994-2003
	Tahun 1994-2003	
	Konsumsi Perkapita Hortikultura	Consumption Per Capita on Horticulture
	Kode HS Ekspor Impor Hortikultura Tahun 2004	Export and Import of Horticulture Crops in 2004
32		Horticulture Development Program, Policies and
20		Strategies; DG Horticulture
33		Organic Agriculture Indonesia
	Pedoman Umum Budidaya Petanian Organik Pedoman Sertifikasi Petanian Organik	Manual for Organic Agriculture Manual for Certification of Organic Agriculture
36		Indonesian Horticulture at a Glance
	Pedoman Budidaya Jeruk di Lahan Pasang Surut	Manual for Orange Cultivation in Swamp Area
31	- Sasman Badidaya berdik di Edilatri asang Sulut	mandarior orango oditivation in owamp Area
		Answers to Questionnaire with supporting

