

Report

on the

Indonesian Investment Market

for

Horticultural Produce

by

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for

International Finance Corporation

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SUMMARY AND CONCLUSIONS

Indonesia, with a population of 220 million, is a large consumer market for fruit and vegetables. Consumption of fruit and vegetables is an important component of Indonesia's diet and Indonesian consumers spend a higher proportion of their food budget on fruit and vegetables compared to other Asian countries.¹

Urbanization is becoming widespread in Indonesia with people moving to the cities for better education and employment. Urban consumers are becoming more health conscious and this has opened up opportunities for the modern retail sector to offer hydroponic and organic vegetables.

The majority of the population live on the island of Java (58 percent) and Sumatra (21 percent) where the majority of fruits and vegetables are grown. The provinces on the island of Java dominate economic activity in terms of total GRDP (59 percent) and food crops GRDP (60 percent). Ninety per cent of Indonesia's GRDP is in the western part of Indonesia (Java, Sumatra and Kalimantan).

Indonesia with over 17,000 islands provides a major challenge to distribute fruit and vegetables to major urban centres. A major distribution problem for companies is the lack of refrigeration and infrastructure investment in many provinces in Indonesia. Most of Indonesia's locally produced fresh fruit and vegetables are distributed throughout Indonesia in non refrigerated trucks and destined for the wholesale markets like Kramat Jati in Jakarta.

The traditional wet markets still dominate fresh food trade but there is a trend to shopping at modern retail outlets. Modern retail growth in Indonesia is being driven by an expansion of hypermarkets and minimarkets. While the majority of the modern supermarkets and hypermarkets are located in cities on the island of Java, there are now a number of modern retailers located in provinces on the islands of Sumatra, Kalimantan and Sulawesi. The increasing wealth in these provinces offers an opportunity for further investment in the fruit and vegetable supply chain.

In 2007, Indonesia produced 25 million tonnes of fruit and vegetables; less than 1 percent was exported as fresh. Over 80 percent of all fruits and vegetables are grown on the islands of Java and Sumatra where 80 percent of Indonesia's population live.

Indonesia's fruit production has more than doubled over the last nine years to reach 16.6 million tonnes in 2007. The main fruits produced were bananas, orange and mango. The biggest growth in production over the last nine years has been with pineapple, orange and mangosteen. Over the last six years, the volume of fruit exports has been relatively stable at an average of 15,000 tonnes, mostly exported to HK / China. The main fruit exported in 2008 was mangosteen (9,465 tonnes); only about 2,000 tonnes each of bananas and mango were exported.

Indonesian fruit imports continue to expand reaching 463,000 tonnes in 2007; an average annual growth rate of 41 percent (in volume) since 1994. The main fruits imported in 2007 were temperate fruits comprising apples, pears, mandarins, grapes and oranges; these five fruits accounted for 82 percent of all fruit imports. China continues to be the major overseas

¹ Refer Table 1 in Section 2.1

supplier of fresh fruit to Indonesia with 62 percent share of the volume. Imports of tropical fruits (mainly durian and longan from Thailand) have been increasing to reach 78,000 tonnes in 2007 (17 percent of fruit imports) up from 700 tonnes in 1994.

Indonesia's vegetable production has increased by an average of only 1 percent per year since 1998 to reach 8.4 million tonnes in 2007. The main vegetables grown in Indonesia are cabbages, chili, potato and shallot/onions. Vegetable production has been relatively stable over the last nine years except with garlic which has declined from 84,000 tonnes to 17,000 tonnes. Over the last six years, the volume of vegetable exports has been relatively stable at an average of 73,000 tonnes with 50 percent of exports being cabbages in 2008, exported mainly to Malaysia. During this period exports of potato has halved while shallot exports have doubled.

Indonesian vegetable imports continue to expand reaching 504,813 tonnes in 2007; an average annual growth rate of 65 percent (in volume) since 1994. The main vegetables imported in 2007 were garlic and shallots which represented 68 percent and 21 percent respectively of all vegetable imports. In 2007, China supplied 99 percent of Indonesia's garlic imports while Thailand supplied 76 percent of Indonesia's imports of shallots.

Although Indonesia is a net importer of fresh fruit and vegetables there are good opportunities for Indonesia to expand its exports of mangosteen and vegetables like cabbage.

Mangosteen

- Production in 2007 of 112,722 tonnes; less than 1 percent of fruit production
- Production growth of an average of 42 percent per year over last nine years
- Exports in 2008 of 9,465 tonnes; 62 percent of all fruit exports
- Exports growth of an average of 50 percent per year over last four years
- Opportunity to expand exports, especially to China

Cabbage

- Production in 2007 of 1.3 million tonnes; 14 percent of vegetable production
- Exports in 2008 of 36,175 tonnes; 50 percent of all vegetable exports
- Production and export growth has been stable
- Imports are minimal
- Opportunity to develop exports into ASEAN markets

Garlic

- Production in 2007 of 17,313 tonnes down from 83,664 tonnes in 1998
- Imports in 2007 of 341,102 tonnes; 68 percent of all vegetable imports
- Import growth of an average of 81 percent per year since 1994 (29,626 tonnes)
- China supplies 99 percent of Indonesia's imported garlic
- Opportunity to produce a "Chinese" garlic variety for import replacement

Indonesia is a net exporter of processed horticulture products with exports in 2007 of 154,286 tonnes and imports of 47,400 tonnes. This difference is mainly due to the large exports of processed pineapple. In 2007, 60 percent of processed fruit and vegetable exports was preserved pineapple (91,000 tonnes); most exports were to USA, Singapore and Europe.

There are good opportunities for Indonesia's processed horticulture sector to expand exports in pineapple and mushroom and for import replacement with potatoes.

Pineapple

- Production of fresh pineapple in 2007 of 2.2 million tonnes; up from 0.3 million tonnes in 1998
- Production growth of an average of 65 percent per year over last nine years
- Exports of fresh pineapple of only 215 tonnes in 2008
- Exports of processed pineapple of 269,448 tonnes in 2008; 85 percent of processed horticulture exports
- Opportunity to expand production for exports, especially to EU and USA

Mushroom

- Production of fresh mushroom in 2007 of 48,247 tonnes; up from 10,544 tonnes in 2004
- Production growth of an average of 120 percent per year over last three years
- Exports of fresh mushroom of only 8 tonnes in 2008; down from 3,334 tonnes in 2004
- Exports of processed mushroom of 17,734 tonnes in 2008
- Opportunity to expand exports, especially to USA

Potato

- Production of fresh potato in 2007 of 1 million tonnes; similar volume since 1994
- Exports of fresh potatoes of 7,958 tonnes in 2008; down from 18,656 tonnes in 2003
- Exports of processed potatoes of 156 tonnes in 2008
- Imports of fresh potatoes of 5,559 in 2008; up from 332 tonnes in 1994
- Imports of processed potatoes of 18,953 tonnes
- Opportunity to develop a potato production business in Indonesia for french fry processing to replace imports

Over the last four years domestic investment in Indonesia has been up and down between US\$ 2.0 billion in 2006 and 2008 to US\$ 3.0+ billion in 2005 and 2007, whereas foreign investment has been increasing (except 2006) to reach almost US\$15.0 billion in 2008. In 2008, there was about seven times the value of foreign investment in Indonesia compared to domestic investment. Most of the domestic investment (across all sectors) in 2008 was spread across the provinces of Java (West Java, East Java, Banten and Jakarta) and Riau while two-thirds of the foreign investment was in Jakarta. Most of the foreign investment in 2008 came from Mauritius (44 percent)², followed by Singapore (10 percent), Japan (9 percent), UK (3 percent) and Malaysia (2 percent).

Over the last four years total investment in food crops and plantations was about US\$ 2.2 billion compared to total investment in food industries of US\$ 5.2 billion; about 50 percent each was domestic and foreign investment.

Domestic investment in the food industry has been increasing over the last four years to reach US\$ 819 million in 2008, while domestic investment in food crops and plantation sector increased to US\$ 352 million in 2007 before declining in 2008 to US\$ 118 million.

² Mauritius is a tax haven for companies

In 2008, domestic companies invested almost twice as much as foreign companies in the food industry while foreign companies invested marginally more in the food crops and plantations sector (mainly from Malaysia in the palm oil industry). Domestic company investment in the food industry and food crop and plantation sectors accounted for 46 percent of all domestic investment in 2008 compared to 4 percent for foreign investment (US\$639 million). Over the last four years there has been 7.5 times the domestic investment in the food industry compared to food crops and plantation while there has been 2.5 times the foreign investment in the food industry compared to food crops and plantation.

Over the last five years, foreign investment (like domestic investment) in food crops and plantation has mainly occurred on the islands of Sumatra and Kalimantan, mainly in palm oil plantations. During the same period, foreign and domestic investment in food industry has spread across many of the main islands of Indonesia - including Java, Sumatra, Kalimantan and Sulawesi – with most of the investment occurring in West Java, East Java, Riau and Lampung.

In 2008, Malaysia investors accounted for 50 percent (US\$73.6 million) of all foreign investment in the food crops and plantation sector and 21 percent (US\$104.7 million) of all foreign investment in the food industry. Other significant investors in the food industry in 2008 were Singapore (US\$57.5 million) and UK (US\$43.9 million).

The average domestic investment per project is US\$16.6 million for food industry and US\$29.6 million for food crops and plantation while the average foreign investment per project is US\$14.7 million for food industry and US\$11.7 million for food crops and plantation.

Domestic and foreign investment in the horticulture sector represented less than 2 percent of the total investment in the food crops and plantation sector. Over the last five years, total domestic and foreign investment in Indonesia's horticulture sector was about US\$12 million and US\$20 million respectively (according to data from BKMP Jakarta) at an average project investment of US\$1.5 million. The major foreign investors in the horticulture sector over the last four years were from UK, Japan, Taiwan and Netherlands.

Many countries (through their Embassies) have investment and trade programs to facilitate business. For example, the Private Sector Investment Programme (PSI) is a Dutch Government programme that co-finances (50 percent) private sector investments in emerging markets like Indonesia. The maximum project budget is EU\$1.5 million.³

Regional visits to East Java, South Sulawesi, North Sumatra, Lampung and Bali found that there is optimism amongst the various links in the horticulture chain about the future of horticulture. There are numerous examples of local and foreign companies engaged in the horticultural supply chain with a focus on export including:

- Jakarta – PT Yudha Mustika – exports fresh mangosteen to HK / China
- East Java - PT Java Green (Taiwan) – exports fresh vegetables to Taiwan
- East Java - PT Sumber Bumi – exports fresh mangoes to Singapore
- North Sumatra – PT Horti Jaya – exports fresh vegetables to Singapore

³ www.evd.nl/psi

A number of improvements along the supply chain have been made in the last few years due to increased efforts by international donor organisations, the Indonesian Government and private sector participants. However, many SME horticulture businesses cannot expand rapidly due to a lack of access to working capital and supply availability of “quality” produce.

There are a range of opportunities to develop Indonesia’s horticulture sector by focusing on:

1. Value – added produce – Indonesia could be a major producer and exporter (like Thailand) of high value fresh produce to meet “high end” markets (eg processed ginger to Japan; fresh mango to the Middle East; fresh strawberries to Singapore). There is a need to identify higher valued fruits or varieties that are required in export markets. There are also good prospects in the modern markets for premium class quality fruits, health drinks and organics.
2. Plantation farming - There is an opportunity for plantation farming in horticulture in a location close to major infrastructure.
3. Farmer Trader Retailer Partnerships - There is a need to build stronger links and partnerships with SME horticulture suppliers. This will require a substantial investment in a coolstorage /packing facility in a farming community and improvements in the transport delivery of fresh produce from farm to retail outlets. At the SME level, the opportunity is about supporting grower clusters with technical information and access to finance. Farmers need better market intelligence as too often there is an oversupply of a vegetable type due to lack of information on supply (plantings) and demand.
4. Linking investors – Investors do have a favorable view of Indonesia as the country is stable politically, has good economic growth and a large population. Embassies receive overseas inquiries and trade missions looking for investment and trade deals.

There are numerous Government regulations that impact on horticulture business whether exporting, importing or investing in Indonesia. The newly elected Government aims to simplify the regulations and improve the time for setting up a business in Indonesia.

1. INTRODUCTION

1.1 Background

Indonesia has a population of 220 million people and is forecast to reach 250 million people in 2015, making it a large market for companies involved in the agrifood supply chain. Indonesia is a major producer and consumer of fruits and vegetables.

Investment in horticulture supply chains in Asia occurs for many different reasons including:

- Countries with low food security looking for long term supply arrangements
- Northern hemisphere market players looking to establish formal links with suppliers to obtain “quality” tropical produce
- Modern international retailers based in Asia looking to establish formal links with local suppliers to guarantee continuity and consistency of produce
- Asian food companies looking to expand sales and growth through company acquisition

The International Finance Corporation (IFC) promotes sustainable private sector investment in developing countries as a way to reduce poverty and improve people’s lives. For IFC, investing in the fruit and vegetables sector in Indonesia can have significant development impact and create employment opportunities throughout the supply chain. This could present a range of opportunities in Indonesia for IFC to provide advisory or financial services to projects including: development / expansion of fruit processing (including juicing) and packaging facilities; development of regional agribusiness terminals; modernisation of orchards etc.

1.2 Research Objectives

The overall objective of the study is to identify suitable businesses and proposals in the horticultural supply chain for IFC to consider as a partner. The study was undertaken in two stages with specific aims as detailed below:

Stage one: Examine the key players in the horticulture supply chain. Its aims were to:

1. Gather and analyse relevant information on horticulture, especially fresh fruits and vegetables, from various sources including industry associations, Government and other networks.
2. Interview major fresh produce suppliers, importers, retailers, transportation providers, processors and Government officials to identify and profile key players. The interviews should take place at national levels and in the targeted regions.
3. Where necessary, hold workshop and group discussion with key players from both public and private sectors.
4. Identify trends and sources of foreign direct investment (FDI) and domestic investment in horticulture subsector in the last five years.
5. Identify fruit and vegetable crops that may be suitable for import replacement.
6. Highlight ways that financial institutions can complement and build on these existing relationships, and estimate the opportunities to such financial institutions.
7. In consultation with IFC staff who have knowledge of IFC sponsor requirements, identify at least five major firms (all participants of the value chain) in the horticulture subsector, which has financial and institutional capability to partner with IFC to develop the subsector further.

Stage two: Visit and profile up to five provinces that may be suitable for investment. Its aims were to:

1. Identify five provinces for regional survey, based on preliminary data analysis and research.
2. Visit and profile these provinces within the agreed timeframe.
3. In each province, obtain current and historical production and wholesale price data on a representative sample of fresh fruit/vegetable crops.
4. Prepare database of the major participants in the horticulture subsector.
5. Prepare an overview of the horticultural sector in Indonesia.
6. Identify a set of regional (ie. Singapore) businesses (likely distributors or retailers) to consider partnering with Indonesian firms. For the selected representative sample of fresh fruit/vegetable crops identified in point 3. Of this section, provide wholesale prices and estimated shipping costs to the likely markets.
7. Provide a list of major upcoming industry forums for the next 12 months with explanation that IFC Indonesia might consider attending in order to develop appropriate contacts.

1.3 Approach

During stage one, secondary information was gathered and analysed from various sources including industry associations, government and other networks. A list of references is provided in Section 11. A literature review was undertaken of several recent articles/reports on investment in Asian horticulture supply chains. These articles and reports are summarised in Appendix 1. During stage one, the key players in the horticulture supply chain were identified (Refer Appendix 2) and 20 interviews were undertaken by Phillip Morey with a sample of the major fresh produce suppliers, importers, retailers, processors, Government officials and foreign Embassies in Indonesia. This stage was undertaken from July to August 2009.

Stage two involved visits to five main horticulture provinces (besides West Java and Central Java) to obtain more detailed data on regional investment in horticulture and constraints and opportunities for further development. The regional visits and 31 interviews were undertaken by Phillip Morey from October to November 2009.

1.4 Report

This report provides an overview of the Indonesian market for horticulture investment. The consumer and distribution/retail trends are outlined in sections 2 and 3 respectively. Section 4 examines the processed food industry. In sections 5, 6 and 7 Indonesia's horticulture production, exports and imports are examined. Section 8 presents an overview of investment in Indonesia's agrifood and horticulture industries. In section 9 regional profiles on horticulture investment are presented on East Java, South Sulawesi, North Sumatra, Lampung and Bali. Section 10 outlines the Government regulations impacting on export, import and investment.

2. THE INDONESIAN CONSUMER - DEMAND FOR FRESH PRODUCE

2.1 Consumer Food Expenditure

Since the 1990's, food consumption patterns in Indonesia have changed due to increasing disposable incomes, increase in fast food outlets, strong growth in imported foods and modernization of the retail sector.

Indonesia, with a population of 220 million in 2007 is forecast to increase by an average of 1.3 percent per year over the next 10 years to reach 250 million people in 2015, making it a large consumer market for horticulture produce and other foods.

According to a U.S. Department of Agriculture report⁴, food held the major share (55 percent in 2004) of the average per capita expenditure of Indonesians; this compared to 15 percent in Australia and 10 percent in USA. The majority (33 percent) of Indonesian household food expenditure was in the category “bread & cereals” (mainly rice and noodles from wheat flour), followed by “fruit and vegetables” at 24 percent while “meat” and “dairy” consumption represented only 5 percent each of Indonesia's daily food budget. The table below shows that Indonesian consumers spent a higher proportion of their food budget on fruit and vegetables compared to other Asian countries.

Table 1: Food Budget Shares for 9 Countries *

Country	Beverage Tobacco	Breads & Cereal	Dairy	Fats & Oils	Fish	Fruit & Vegetable	Meat	Total Food Expenditure
<i>Indonesia</i>	<i>11.3</i>	<i>33.5</i>	<i>5.7</i>	<i>4.7</i>	<i>8.7</i>	<i>23.7</i>	<i>5.1</i>	<i>54.6</i>
Philippines	11.9	29.7	6.7	1.8	14.5	11.1	14.5	48.4
Thailand	28.6	16.1	5.2	2.8	3.3	16.4	18.6	28.6
UK	47.5	8.3	6.9	1.3	2.3	12.0	12.6	16.4
Australia	25.2	13.5	9.7	1.7	3.1	18.3	16.9	15.1
Japan	23.1	22.3	4.8	0.7	17.0	12.8	7.8	14.9
Singapore	25.2	10.3	5.0	1.8	15.0	18.1	13.3	13.0
Hongkong	17.9	9.0	3.4	3.3	19.7	11.8	22.7	10.3
USA	28.7	11.4	8.6	1.8	1.2	14.7	19.6	9.7

* Total food budget shares are per cent of total expenditure; food sub-groups shares are per cent of total food expenditure. Source: www.ers.usda.gov

Consumption of fresh food is increasing, mostly because fresh foods are more widely available and more people buy them for storage at home. Consumption of vegetables has been increasing, although at a slower rate compared to other horticultural products. Better logistics on the part of the seller makes fresh food more readily available to consumers. City consumers are becoming more health conscious and more aware of food safety issues. This has opened up opportunities for the modern retail sector to offer hydroponic and organic vegetables; most of it is prepacked and supplied from specialized regional producers located close to major cities.

Fruit consumption in Indonesia is increasing as local production expands and imported fruit continues to grow. Consumer demand for imported fruits has been strong due to an expansion in the modern retail sector and increasing buying power of the middle class

⁴ www.ers.usda.gov

consumers which are more health conscious and demanding better quality fruits. A number of wet markets have been refurbished and they are now selling better quality fruits with cheaper fruits sold through some hypermarkets and other wet markets.

2.2 Consumer Location

The majority of the population live on the island of Java (58 percent) followed by Sumatra (21 percent). Urbanization is becoming widespread in Indonesia with people moving to the cities for better education and employment. Urban population represented 45 percent of the population in 2005 and is forecast to increase to 52 percent in the next ten years.⁵

In 1999, the Indonesian government introduced regionalisation giving more autonomy, budget control and wealth to provincial governments. The provinces on the island of Java dominate economic activity in terms of total GRDP (59 percent). Ninety per cent of Indonesian's GRDP is in the western part of Indonesia (Java, Sumatra and Kalimantan). Outside of Java, other provinces that have strong economies are in Sumatra (Riau, North Sumatra and South Sumatra) and East Kalimantan; these provinces have abundant natural resources as their main source of income. The provinces with the highest per capita GRDP in Indonesia are: East Kalimantan (Rp. 70.1 million), Jakarta (Rp. 62.5 million), Riau (Rp. 37.2 million) and Papua (Rp. 27.4 million).

Detailed population and GRDP statistics by province are presented in Appendix 3.

“Since the middle of the twentieth century, food demand has increased at an unprecedented pace. Most of the growth has been demographic, with human numbers rising from 2.47 billion in 1950 to 6.06 billion in 2000 and 6.70 billion today. But living standards have also improved in recent decades – especially in Asia. As a result, what people consume has changed substantially. For example, fruits and vegetables are now a more important part of the diet than historically. In addition, consumption of livestock products has increased, which has driven up the demand for corn and other feed grains eaten by cattle, pigs, chickens, and other livestock.”⁶ Urbanization also plays a significant role in changing global food consumption patterns. Given different lifestyles of urban and rural residents, greater demand for urban residents' time, increased food availability, and higher purchasing power in urban areas, urban and rural diets tend to differ significantly. Closely tied to urbanization is packaging, and the use of sophisticated equipment to improve shelf life and food taste.⁷

2.3 Consumer Shopping Patterns

“As a country develops, the structure of its urban food marketing system evolves, going through three phases. Phase I, which can be found in the least developed countries, shows a predominant role held by small scale traditional distributors. Phase II is characterized by well established grocery stores and specialised shops as in many European cities of the mid 20th century. Finally, Phase III applies to cities with higher consumer incomes where highly developed integrated food retail chains are dominant.”⁸ This change in retail food marketing can lower food prices for consumers and create opportunities for farmers and processors to gain access to quality-differentiated food markets such as supermarkets and raise incomes.

⁵ “Consumer Lifestyles in Indonesia”, Euromonitor April 2005, page 28

⁶ Douglas Southgate, *Population Growth, Increases in Agricultural Production and Trends in Food Prices*, *The Electronic Journal of Sustainable Development*, (2009), 1(3), page 29

⁷ *Changing Structure of Global Food Consumption and Trade / WRS-01-1* (Economic Research Service/USDA)

⁸ Jean-Joseph Cadilhon* †, Andrew Fearne*, Paule Moustier† and Nigel Poole, *Changes in the organisation of food marketing systems in South East Asia: a preliminary assessment*,

On the other hand, it can create challenges for small retailers, farmers and processors who are not equipped to meet the new competition and requirements from supermarkets. While supermarkets' impact on suppliers is biggest and earliest for food-processing, it can also greatly affect the fresh trade. Last, "consumer habits, infrastructure gaps, and rapid growth make improving food safety in Asia a challenge. Retailers are in the best position to meet it."⁹

Today, Indonesians are working longer hours than before, and more married women with children are working and want convenience. Indonesia's middle-income shoppers (approximately 30 million of the total population's 220 million) are becoming more trend and brand conscious. Their lifestyles are changing, and part of the change is shopping in supermarkets and hypermarkets rather than wet (traditional) markets.

In the "AC Nielsen July 2009 Indonesia Market Update" report¹⁰ it stated that the value of sales of fast moving consumer goods (FMCG) showed a slight increase driven by modern markets and consumers on Java Island; 12.1 percent for modern trade versus 3.8 percent for traditional trade year to date May 2009. The FMCG sales growth is mainly driven by growth in food, particularly through the modern markets.

Although sales values were up, many categories had declined in volume, except powdered milk 1.9 percent up in volume and 9.7 percent up in value, for period January - May 2009 versus same period in 2008.

"Nielsen homepanel" tracks consumer purchase behaviour on 52 FMCG on a daily basis in 5 major cities and rural Java based on 4,400 households. Results as follows (for period January - May 2009):

- Consumer spending (value) is up 15 percent per household while units purchased was up 7 percent
 - Food comprised 52 percent of household expenditure
 - In 23 of 52 categories household spending increased
 - Food was the lowest growth in value at 9 percent while beverages grew at 28 percent compared to the same period in 2008
 - Biggest food category growth was mineral water (57 percent) and breakfast cereal (38 percent)
 - Dairy value growth was cheese (24 percent) and liquid milk (20 percent)
 - Chilled meat (17 percent)
- Only 9 of the 52 categories grew in volume
- Many categories grew mainly through price increases eg average price change over this period for cheese (up 30 percent), liquid milk (up 10 percent), and chilled meat (up 26 percent)
- Companies are using smaller pack sizes to maintain market penetration

⁹ McKinsey Quarterly, "A Safe Food Supply for Asia",

¹⁰ "AC Nielsen July 2009 Indonesia Market Update" report

3. FRESH PRODUCE MARKETING CHANNELS

3.1 Regional Distribution Issues

Indonesia with over 17,000 islands provides a major challenge to distribute perishable produce to major urban centres. Most of the distribution of local products is based around seaports and regional depots. A major distribution problem for companies is the lack of refrigeration and an inferior distribution system. In the past, there has been a lack of infrastructure investment (particularly in sea port facilities) in some provinces in Indonesia and this has resulted in problems to maintain a cold chain system for perishable products.

Many of the major food and consumer manufacturers have their own distribution companies that serve the major provinces throughout Indonesia. However, they still rely on local distributors and wholesalers to deliver their products to retailers in the outlying provinces of Indonesia.

In Jakarta there is a major wholesale market (Kramat Jati) for local fresh fruit and vegetables while most imported fresh horticulture produce is sold direct to wholesalers (operating outside the domestic wholesale market) who distribute to wet retail markets or direct to supermarkets.

Most of Indonesia's locally produced fresh fruit and vegetables are consumed locally or distributed throughout Indonesia in non refrigerated trucks. However, there is increased use of airfreight for select high value fresh fruit and vegetables for inter-island trading where there is shortage of local supplies. There is also some use of small refrigerated trucks by producers supplying high value hydroponics and organic vegetables to the modern retail and food service markets in Jakarta.

PT. Sukanda Djaya is one of the largest refrigerated food distribution companies in Indonesia. It is the only refrigerated food distribution company that operates on a national level. The company, owned by PT. Diamond Cold Storage, was established to distribute Diamond's frozen icecream and other refrigerated dairy and juice products.

The company has invested heavily in modern cold storage facilities not only in the Jakarta head office, but also in the various branch offices located in 14 major cities – Mataram, Denpasar, Surabaya, Yogyakarta, Cirebon, Bandung, Palembang, Pekanbaru, Padang, Medan, Batam, Balikpapan, Makasar and Manado. In Jakarta, all products are stored in a new 800 ton fully racked cold storage and an existing 1,200 ton cold room and 500 ton dry warehouse. A new distribution center with a total combined dry, chilled and cold storage capacity of 12,000 tons has been opened recently. In outlying areas, the company branches have approximately another 5,000 ton dry storage and cold room capacity.

All the 300 delivery vans and trucks are equipped with refrigerated units. In terms of distribution areas, it covers all the major cities in Java, part of Sumatra and Kalimantan (Borneo) from its sixteen distribution points.

All the products are either shipped in or air freighted from overseas to the Jakarta cold storage and dry warehousing facilities and from Jakarta, these dry and refrigerated products are transferred to the various branches with its own dry or refrigerated trucks. For those branches and customers in the other islands not reachable by land transport, the company will service them from Jakarta with a fleet of thirty 20ft- refrigerated containers.

3.2 Growth of Modern Retailers

The traditional wet markets still dominate fresh food trade but there is a trend to shopping at modern retail outlets. Retail growth in Indonesia is being driven by an expansion of hypermarkets and minimarkets. As the economy improves, modern retailers expect their sales to grow by 15 percent in the second half of this year from a year earlier, compared to the 10 percent growth they witnessed between the first six months of 2008 and 2009.¹¹

In 2007 in Jakarta the number of modern retailers increased by 30 percent whereas traditional markets declined by 8 percent. Supermarkets (17 percent share), mini markets (5 percent share) and hypermarkets (5 percent share) have all shown strong growth in 2007 of 7 percent, 15 percent and 25 percent respectively.¹²

According to A C Nielsen data, the modern retail market is expanding with store numbers up in 2008 compared to 2007 across all categories - hypermarket from 115 to 152 stores (32 percent growth), minimarkets from 5,528 to 6,757 stores (22 percent growth) and supermarket from 270 to 313 stores (16 percent growth).

Sales of grocery items through the national modern stores in 2007 reached Rp. 80 trillion US\$8 billion) with 70 percent controlled by the 10 large modern retailers (see table below).¹³

Table 2: Ten Biggest Retailers in Indonesia, and their Grocery Market Shares, 2007

No.	Companies	Name	Format	Market Share percent
1	Matahari Putra Prima	Matahari	Department Store	13.5
2	Makro Indonesia	Makro	Hypermarket	12.0
3	Alfa Retailindo	Alfa	Hypermarket, Convenience Store	8.5
4	Ramayana Lestari Sentosa	Ramayana/Robinson	Department Store	8.5
5	Carrefour Indonesia	Carrefour	Hypermarket	7.6
6	Hero Supermarket	Hero Pasar Swalayan	Supermarket	*
7	Indomarco Pismatama	Indomaret	Convenience Store	*
8	Inticakrawala Corporation	Indo Grosir	Supermarket	*
9	Goro Bhatara Sakti	Goro 33	Hypermarket	*
10	Lion Super Indo	Super Indo	Supermarket	19.9*
TOTAL				70.0

Source: ICC from Pricewaterhouse Coopers, 2007

*19.9 percent refers to the combined market share of retailers 6-10 in the table.

PT Ramayana, a major locally owned department store throughout Indonesia, specialises in the distribution and selling of general merchandise (mainly clothes) and some grocery food products, including fresh produce. The company has 103 stores in Indonesia, but only 40 stores include a supermarket. In 2006 the company had total sales of US\$500 million. The retail food business in Indonesia is growing and the company is looking at converting its stores to include a supermarket for food and fresh produce, as this is the fastest growing section.

While the majority of the modern supermarkets and hypermarkets are located in cities on the island of Java, there has also been a gradual increase in modern retailers opening stores in

¹¹ "Retailers Expect a Good H2", The Jakarta Post, Tuesday, August 11, 2009

¹² CIC Business Report, 25th January 2008, page 2 "Modern Market Centers Expand at the Expense of Traditional Market Centers"

¹³ CIC No. 391 – 25th March 2008

regional Indonesia to meet the increased consumer purchase power in some of the provinces. In 2006 there were 206 modern retailers operating in Indonesia with 109 based in Jakarta. This had increased to 251 outlets in Indonesia by 2009 with 125 based in Jakarta. These modern and wealthy provinces are potential targets for further investment in horticulture (see table below).

Table 3: Major Modern Retailers by Province, August 2009

City	Province	Carrefour	Giant Hyper market	Makro (Lotte)	Hyper mart	Hero	Giant Super market	Total
Jakarta	Jakarta	32	19	7	16	24	27	125
Yogyakarta	Yogyakarta	2		1		1	2	6
Semarang	Central Java	1	1	1	1		2	6
Solo	Central Java	2		1	1			4
Bandung	West Java	4	2	1	2	1	5	15
Cirebon	West Java	1						1
Surabaya	East Java	7	5	1	3	1	5	22
Lampung	Sumatra				1		1	2
Palembang	South Sumatra	1		1	1			3
Medan	North Sumatra	1		1	3			5
Makassar	South Sulawesi	3		1	2	1		7
Pekanbaru	Riau		1	1	1			3
Balikpapan	East Kalimantan			1	1	2		4
Pontianak	West Kalimantan				1			1
Banjarmasin	South Kalimantan			1	1	2		4
Samarinda	East Kalimantan					2		2
Batam	Batam				2			2
Bali	Bali	3		1	1	2	1	8
Other		2	4		8	5	12	31
TOTAL		59	32	19	45	41	55	251

Source: Supermarket/Hypermarket Flyers

The rapid growth of the modern retailers (mostly with some foreign ownership) investing in regional Indonesia has increased the competition for local retailers in regional cities throughout Indonesia. Local supermarkets (like Chandra Brothers in Lampung) have had to expand store numbers over the last five years to keep ahead of the competition.

The country's largest operator of supermarkets PT Hero Supermarket (Dairy Farm) has 241 outlets all over the country including a number of Giant hypermarkets. Hero supermarket has operated a fresh produce distribution centre with cold storage at Cibitung for almost 10 years. All fresh produce received at the distribution centre is inspected. Hero has detailed product specifications for all their fresh fruit and vegetables. Produce which does not meet the specification is rejected at the distribution centre.

Over the last two years, PT Hero Supermarket has doubled the number of hypermarkets to 32 and grown its supermarket business to almost 100 stores (55 Giant and 41 Hero); about 50 percent of these stores are now located outside of Jakarta. The Hero Group will continue to expand by opening more retail stores and refurbishment of older stores.

4. INDONESIA HORTICULTURE PRODUCTION

Horticulture is an important component of the Indonesian agriculture sector and economy. In 2003, horticulture was the second largest contributor (after food crops) to the Indonesian agriculture sector with 19 percent share. The contribution of other agricultures sectors was as follows: food crops (32 percent), estate crops (15 percent), fishery (15 percent), livestock (13 percent) and forestry (6 percent).

4.1 Indonesia Fruit Production

4.1.1 Overview

Indonesia produced 16.6 million tonnes of fruit in 2007 up from 7.2 million tonnes in 1998; an increase of 15 percent per year over the last nine years. The main fruits produced in 2007 were bananas (5.5 million tonnes), orange (2.6 million tonnes), pineapple (2.2 million tonnes) and mango (1.8 million tonnes). The biggest growth over the last nine years has been with pineapple, orange and mangosteen.

Table 4: Fruit Production in Indonesia, 1998 - 2007, (tonnes)

No	Commodity	Year					Av. Annual percent 07/98
		1998	2004	2005	2006	2007	
1	Avocado	130,950	221,774	227,557	239,463	201,635	6
2	Orange	490,937	2,071,084	2,214,019	2,565,543	2,625,884	48
3	Lansat	92,144	146,067	163,389	157,655	178,026	10
4	Durian	210,116	675,902	566,205	747,848	594,842	20
5	Mango	600,059	1,437,665	1,412,884	1,621,997	1,818,619	23
6	Papaya	489,948	732,611	548,657	643,451	621,524	3
7	Snake fruit	353,248	800,975	937,930	861,950	805,879	14
8	Pineapple	326,956	709,918	925,082	1,427,781	2,237,858	65
9	Banana	3,176,749	4,874,439	5,177,607	5,037,472	5,454,226	8
10	Rambutan	277,879	709,857	675,579	801,077	705,823	17
11	Sapodilla	46,759	88,031	83,787	107,169	101,263	13
12	Guava	148,462	210,320	178,509	196,180	179,474	2
13	Star fruit	47,590	78,117	65,967	70,298	59,984	3
14	Watery Rose Apple	49,884	117,576	110,704	128,648	94,015	10
15	Mangosteen	23,511	62,117	64,711	72,634	112,722	42
16	Jack fruit	353,981	710,795	712,693	683,904	601,929	8
17	Soursop	40,358	82,338	75,767	84,373	55,798	4
18	Breadfruit	25,816	66,994	73,637	88,339	92,014	28
19	Other fruits	129,854	N/A	N/A	N/A	N/A	-
20	Melon	221,314	47,664	58,440	55,370	59,815	(8)
21	Watermelon	-	410,195	366,702	392,586	350,780	-
22	Passion Fruit	-	59,435	82,892	119,683	106,788	-
TOTAL		7,236,515	14,313,874	14,722,718	16,103,421	17,058,898	15

Source: Statistics of Annual Fruit and Vegetable Plants, BPS (the Indonesia Bureau of Statistic) Catalogue No. 5205010

4.1.2 Regional Fruit Supply

There are 31 provinces in Indonesia that produce 19 types of fruit with 80 percent of all fruits grown on the islands of Java and Sumatra. The major fruit producing provinces are: West Java (20 percent), East Java (16 percent), Lampung (12 percent), North Sumatra (11 percent) and Central Java (9 percent); these five provinces account for 68 percent of all fruit production.

An analysis of the types and volumes of fruit produced in the major fruit producing regions of Indonesia is provided below.

West Java

- 3.3 million tonnes of fruit; 20 percent of all fruit produced in Indonesia
- Main fruits (as a percent of West Java production) - banana (44 percent), pineapple (16 percent) and mango (13 percent)
- Main fruits (as a percent of Indonesian production) – mangosteen (54 percent), avocado (37 percent) and guava (36 percent)

East Java

- 2.7 million tonnes of fruit; 16 percent of all fruit produced in Indonesia
- Main fruits (as a percent of East Java production) - banana (30 percent), orange (23 percent) and mango (22 percent)
- Main fruits (as a percent of Indonesian production) – mango (33 percent), papaya (24 percent) and orange (23 percent)

Lampung

- 2.1 million tonnes of fruit; 12.5 percent of all fruit produced in Indonesia
- Main fruits (as a percent of Lampung production) – pineapple (59 percent) and banana (30 percent)
- Main fruits (as a percent of Indonesian production) – pineapple (55 percent) and banana (12 percent)

North Sumatra

- 1.9 million tonnes of fruit; 11.3 percent of all fruit produced in Indonesia
- Main fruits (as a percent of North Sumatra production) - orange (51 percent), snake fruit (13 percent) and banana (11 percent)
- Main fruits (as a percent of Indonesian production) – orange (37 percent), snake fruit (30 percent) and durian (21 percent)

Central Java

- 1.5 million tonnes of fruit; 8.9 percent of all fruit produced in Indonesia
- Main fruits (as a percent of Central Java production) – banana (43 percent), mango (18 percent) and snake fruit (12 percent)
- Main fruits (as a percent of Indonesian production) – snake fruit (21 percent), star fruit (20 percent) and jack fruit (13 percent)

South Sulawesi

- 0.5 million tonnes of fruit; 2.9 percent of all fruit produced in Indonesia
- Main fruits (as a percent of South Sulawesi production) - banana (31 percent), mango (20 percent) and orange (8 percent)

- Main fruits (as a percent of Indonesian production) – duku (17 percent), avocado (6 percent) and passion fruit (6 percent)

Other Provinces

- West Kalimantan – 392,000 tonnes of fruit production; 43 percent of this production is orange
- West Sumatra – 273,000 tonnes of fruit production; 32 percent of this production is passion fruit; equates to 82 percent of Indonesia’s passion fruit production

4.2 Indonesia Vegetable Production

4.2.1 Overview

Indonesia’s vegetable production has increased by an average of only 1 percent per year since 1998 from 7.7 million tonnes to reach 9.0 million tonnes in 2007. The main vegetables grown in Indonesia are as follows: cabbages (1.3 million tonnes), chili (1.1 million tonnes), potato (1 million tonnes), shallot/onions (802,000 tonnes) and tomato (635,000 tonnes).

Table 5: Vegetable Production in Indonesia, 1998 - 2007 (Tonnes)

No	Commodity	Year					
		1998	2002	2004	2005	2006	2007
1	Garlic	83,664	46,393	28,851	20,733	21,050	17,313
2	Shallots	599,304	766,572	757,399	732,609	794,931	802,810
3	Cabbage	1,459,232	1,232,843	1,432,814	1,292,984	1,267,745	1,288,740
4	Cauli Flower			99,994	127,320	135,518	124,252
5	Chinese Cabbage			534,964	548,453	590,400	564,912
6	Mustard Green	462,384	461,069				
7	Leeks	287,506	315,232	475,571	501,437	571,268	479,927
8	Carrot	332,846	282,248	423,722	440,002	391,371	350,171
9	Chinese Radish	12,651	7,779	30,625	54,226	49,344	42,076
10	Potatoes	998,032	893,824	1,072,040	1,009,619	1,011,911	1,003,733
11	Red Beans	104,148	94,650	107,281	132,218	125,250	112,272
12	Chili	848,524	635,089	1,100,514	1,058,023	1,185,057	1,128,792
13	Mushroom			10,544	30,854	23,559	48,247
14	Cucumber	506,889	406,141	477,716	552,891	598,890	581,206
15	Egg Plant	311,765	272,700	312,354	333,328	358,095	390,846
16	French Beans	311,994	230,020	267,619	283,649	269,532	266,790
17	Tomatoes	547,257	573,517	626,872	647,020	629,744	635,474
18	Pumpkin	84,873	172,125	179,845	180,029	212,697	254,056
19	Swamp Cabbage	201,147	205,351	212,870	229,997	292,950	335,087
20	Spinach	98,410	71,011	107,737	123,785	149,435	155,862
21	Yardlong Beans	447,596	310,297	454,999	466,387	461,239	488,500
	TOTAL	7,698,222	6,976,861	8,714,331	8,765,564	9,139,986	9,071,066

Source: BPS - Statistik Indonesia and Directorate Gen. Of Horticulture Production Development
Catalogue BPS No. 5205009

Note: (1) No. 1 - 9 one time harvest crops
(2) No. 10 - 18 several time harvest crops

4.2.2 Regional Vegetable Supply

There are 31 provinces in Indonesia that produce over 20 types of vegetables with 86 percent of all vegetables grown on the islands of Java and Sumatra. The major vegetable producing provinces are: West Java (32 percent), Central Java (16 percent), East Java (12 percent) and North Sumatra (9 percent); these four provinces account for over 69 percent of all vegetable production.

An analysis of the types and volumes of vegetables produced in the major vegetable producing regions of Indonesia is provided below.

West Java

- 2.9 million tonnes of vegetables; 31.8 percent of all vegetables produced in Indonesia
- Main vegetables (as a percent of West Java production) – cabbage (13 percent), potato (12 percent) and tomato (9 percent)
- Main vegetables (as a percent of Indonesian production) – red beans (64 percent), mushroom (53 percent) and leek (45 percent)

Central Java

- 1.4 million tonnes of vegetables; 15.6 percent of all vegetables produced in Indonesia
- Main vegetables (as a percent of Central Java production) – cabbage (22 percent), shallot (19 percent) and potato (18 percent)
- Main vegetables (as a percent of Indonesian production) – shallot (33 percent), potato (25 percent) and garlic (25 percent)

East Java

- 1.0 million tonnes of vegetables; 11.8 percent of all vegetables produced in Indonesia
- Main vegetables (as a percent of East Java production) – shallot (21 percent), cabbage (16 percent) and small chilli (13 percent)
- Main vegetables (as a percent of Indonesian production) – mushroom (38 percent), small chilli (31 percent) and shallot (28 percent)

North Sumatra

- 0.8 million tonnes of vegetables; 9.4 percent of all vegetables produced in Indonesia
- Main vegetables (as a percent of North Sumatra production) – cabbage (18 percent), chilli (17 percent) and potato (11 percent),
- Main vegetables (as a percent of Indonesian production) – chinese radish (50 percent), cauliflower (18 percent) and chilli (17 percent)

South Sulawesi

- 0.2 million tonnes of vegetables; 1.7 percent of all vegetables produced in Indonesia
- Main vegetables (as a percent of South Sulawesi production) – yardlong bean (11 percent), leek (11 percent) and tomato (8 percent)
- Main vegetables (as a percent of Indonesian production) – red beans (6 percent), leek (3 percent) and yardlong bean (3 percent)

Other Provinces

- North Sulawesi – 257,000 tonnes of vegetable production; 43 percent of this production is potato

- NTB – 192,000 tonnes of vegetable production; 33 percent of Indonesia’s garlic production (5,699 tonnes)

The Ministry of Agriculture’s Directorate of Fruit Crops, Winny Dian Wibawa, said that the Government was focussed on improving the supply chain by promoting and encouraging grower and trader partnerships, development of farmer groups and associations, implementation by growers of Good Agriculture Practices (GAP) systems, registration of horticulture businesses and improved market access. Mr Winny said “in the last 18 months we have registered 1,800 horticulture businesses where each business must implement practices of (1) integrated pest management (IPM), (2) GAP and Standard of Procedures (SOP) and (3) maintain farm records”.

4.3 Indonesia Seed Industry

The demand for food crop seeds has increased according to the Directorate General of Food Crops of the Ministry of Agriculture¹⁴. The Indonesian Government’s determination to reach self sufficiency in food production (particularly with crops like rice and corn) has provided a boost to the seedling industry, in particular for hybrid seedlings which are forecast to increase from 7,000 tonnes in 2009 to 31,000 tonnes in 5 years. There are a range of local and foreign companies involved in seed production (mostly with a focus on rice) including:

- PT Bisi International (subsidiary of Charoen Pokphand Group) specialises in corn and rice seedling production. The company has invested about US\$40 million to boost production capacity to 60,000 tonnes. In 2009 the company will produce 35,000 tonnes of various types of seedlings.
- Dupont Indonesia has factories in Tanah Karo (North Sumatra) and Malang (East Java). The company has released a range of new hybrid corn and rice seedlings and is spending US\$100,000 for testing of 14 new strains of rice with the Rice Cop Research Institute. Dupont will invest US\$5 - 10 million to expand its factory production capacity to meet the increasing demand for seedlings.
- PT Monsanto wants to invest US\$4 - 5 million to establish a seedbed industry.

PT East West Seed Indonesia is an integrated seed breeding company that produces and sells tropical hybrid vegetable seeds under the brand “CAP PANAHERAH”. The market size is about US\$50 million and PT East West has about 20 percent share. The company employs 600 people. The company produces vegetable seeds with 4,000 farmers in East Java. The farmers are supported by 30 agro technical advisors and receive seeds, fertiliser, fixed payment and price and technical advice through grower meetings. The company sells seeds through 150 distributors from Aceh to Papua and exports seeds to SE Asian and Middle East customers.

¹⁴ CIC No.404 25th April 2009, page 45 “Investors now also interested in seedling industry”

5. INDONESIA HORTICULTURE EXPORTS

5.1 Fruit

Over the last five years the volume of fruit exports has been stable. With fruit production expanding the Indonesian Government aims to increase Indonesia's exports of horticultural products by improvements to fruit quality and better access to international markets. Most of Indonesia's fruit exports (22,333 tonnes in 2008) were destined for Asian markets and included mangosteen (9,466 tonnes), tamarind (4,297 tonnes), banana (1,970 tonnes) and mango (1,908 tonnes). Mangosteen exports accounted for 42 percent of all Indonesian fresh fruit exports in 2008, with 85 percent sold to HK and China.

Table 6: Total Export of Fruits from Indonesia, Year 2003 – 2008, by Volume (Tonnes)

Description	Year, Volume (Tonnes)					
	2003	2004	2005	2006	2007	2008
Mangoesteens	9,305	3,045	8,472	5,698	9,093	9,466
Tamarind	n.a.	n.a.	n.a.	n.a.	4,109	4,297
Banana	11	993	3,647	4,443	2,378	1,970
Mangoes	559	1,880	941	1,182	1,198	1,908
Watermelons	18	238	25	4	370	1,144
Lemons	725	146	174	274	600	896
Rambutan	604	135	-	-	396	725
Plums & Sloes	81	1	-	-	135	307
Pineapples	2,284	2,431	644	143	473	215
Avocados	169	5	5	4	42	119
Apricots	170	127	146	879	30	71
Other berries		0	10	6	12	70
Strawberries	2,302	59	47	25	48	65
Guava	48	106	15	140	37	54
Other Fruits	6,300	4,534	3,338	2,433	1,467	1,026
TOTAL	22,576	13,701	17,464	15,231	20,389	22,333

Source: The Indonesian Bureau of Statistics (BPS), Catalogue No. 8202003

Table 7: Total Export of Fruits from Indonesia, Year 2003 – 2008, by Value (US\$'000)

Description	Year, Value (US\$'000)					
	2003	2004	2005	2006	2007	2008
Mangoesteens	9,306	3,292	6,385	3,612	4,951	5,833
Tamarind	n.a.	n.a.	n.a.	n.a.	513	876
Banana	8	723	1,289	1,408	856	989
Mangoes	461	2,013	996	1,161	1,004	1,646
Watermelons	8	266	12	4	232	471
Lemons	213	19	27	137	506	487
Rambutan	959	117	-	-	294	421
Plums & Sloes	43	1	2	-	63	170
Pineapples	2,315	529	220	82	361	104
Avocados	54	1	7	9	104	144
Apricots	130	159	14	590	2	12
Other berries			1	17	36	11
Strawberries	4,961	95	74	69	43	191
Guava	50	102	20	98	52	123
Other Fruits	6,007	4,460	2,421	1,618	1,205	689
TOTAL	24,515	11,778	11,467	8,804	10,223	12,167

Source: The Indonesian Bureau of Statistics (BPS), Catalogue No. 8202003

Yudha Mustika is Indonesia's main exporter of mangosteen, commencing in 1986. The export fruit business offers more opportunities for expansion as Indonesia gains access to new markets (eg salak for China) and there is an increase in local fruit production. The export business in mangosteen is becoming more competitive as Thailand expands and the export window of opportunity for Indonesian mangosteen has been reduced from 9 months to 6 months (October to March). There are also more traders from Taiwan coming to Indonesia and building links directly with growers. Yudha Mustika has established many partnerships with mangosteen growers and collectors, however only 30 percent of the fruit produced is suitable for export.

5.2 Vegetables

Over the last five years the volume of vegetable exports has been relatively stable at an average of 73,000 tonnes. In 2008, Indonesian vegetable exports comprised three main crops with cabbages (36,175 tonnes), shallots (12,314 tonnes) and potatoes (7,958 tonnes); representing 78 percent of all vegetable exports. Cabbage exports accounted for 50 percent of all Indonesian fresh vegetable exports in 2008, with the major markets being Malaysia (47 percent), Taiwan (29 percent) and Singapore (23 percent).

Table 8: Total of Indonesia's Exports of Selected Fresh Vegetables, Year 2003 – 2008

Description	Year, Volume (Tonnes)					
	2003	2004	2005	2006	2007	2008
Cabbages	35,093	30,679	34,352	30,045	42,913	36,175
Shallots	5,402	4,637	4,259	15,701	9,357	12,314
Potatoes - not seed	18,656	16,422	13,644	n.a.	9,652	7,958
Other Leguminous	320	960	1335	1570	2,206	3,195
Kohlrabi, Kale etc	n.a.	n.a.	n.a.	2605	2,317	1,942
Mushrooms	1,595	3,334	2,644	1,012	1,694	1,646
Other Lettuce	128	671	815	620	782	890
Tomatoes	571	752	1,169	179	1,851	874
Globe Artichokes	457	198	200	92	240	873
Peas	425	1329	1542	327	917	815
Cauli. & Broccoli	1,705	1,341	3,186	1,696	2,030	808
Capsicum etc	n.a.	854	894	332	580	610
Chillies	n.a.	n.a.	n.a.	851	782	608
Aubergines	1729	1073	1122	362	274	579
Other Vegetables	9923	3231	4198	4754	3,053	3017
TOTAL	76,005	65,480	69,360	60,146*	78,648	72,304

Source: The Indonesian Bureau of Statistics (BPS), Catalogue No. 8202003; * no potato

Table 9: Total of Indonesia's Exports of Selected Fresh Vegetables, Year 2003 – 2008, by Value (US\$'000)

Commodity Description	Year, Value (US\$ '000)					
	2003	2004	2005	2006	2007	2008
Cabbages	8,368	6,919	7,910	7,903	9,242	9,981
Shallots	2,421	1,889	1,520	6,366	3,492	4,534
Potatoes - not seed	4,101	3,547	3,527	n.a.	2,855	2,340
Other Leguminous	196	431	678	788	1344	2566
Kohlrabi, Kale etc	n.a.	n.a.	n.a.	1089	732	848
Mushrooms	1,710	2,793	2,385	1,322	2,322	2,495
Other Lettuce	61	215	240	201	327	705
Tomatoes	234	318	433	92	731	520
Globe Artichokes	226	34	40	19	100	489

Peas	171	250	1134	200	305	496
Cauli & Broccoli	451	476	927	438	335	193
Capsicum etc		453	990	387	659	752
Chillies	n.a.	n.a.	n.a.	634	426	608
Aubergines	2650	1828	2573	589	107	167
Other Vegetables	5886	1238	1668	2398	1578	2180
TOTAL	26,475	20,390	24,025	22,426*	24,555	28,874

Source: The Indonesian Bureau of Statistics (BPS), Catalogue No. 8202003; * no potato

5.3 Singapore Market

Singapore does not impose import quota restrictions with most goods imported under open general licence. Import permits issued by the Singapore Agri-Food & Veterinary Authority are required for a specified list of plant and animal products. Importers must submit an inward declaration to the Import and Export Office, Trade Development Board. Fresh fruit and vegetables are subject to random inspections for pesticides and chemicals by the AVA.¹⁵

In 2008, Indonesia exported 72,000 tonnes of vegetables with about 30 percent (22,000 tonnes) destined for Singapore. Singapore imports a wide range of vegetables from Indonesia with the main products being: cabbages, potatoes, leguminous vegetables and shallots.

Table 10: Exports of Fresh Vegetables to Singapore

Description	Volume (Tonnes)		Value (US\$'000)	
	2003	2008	2003	2008
Cabbages	9,556	8,289	1,494	2,480
Shallots	1,411	1,282	761	613
Potatoes, Fresh/Chilled other than Seed	9,764	5,450	1,876	1,898
Other Leguminous Vegetables	244	2,362	119	1,523
Kohlrabi, Kale and Similar Edible Brassicas	-	260	-	179
Mushrooms	-	57	-	158
Other Lettuce	95	882	44	321
Tomatoes	160	716	56	437
Globe Artichokes	120	36	25	11
Peas	226	3	98	4
Cauliflowers & Head Broccoli	1,192	240	344	43
Fruits of the Genus Capsicum or the Genus Pimenta	-	503	-	626
Chillies, other than Giant Chillies	-	18	-	32
Aubergines (egg-plants)	-	35	-	8
Other Vegetables	1,590	1,837	1,749	1,577
TOTAL	24,358	21,970	6,566	9,910

Source: The Indonesian Bureau of Statistics (BPS), Catalogue No. 8202003 and BPS 8102

In 2008, Indonesia exported about 22,000 tonnes of fruit with about 5 percent (1,000 tonnes) destined for Singapore. Singapore imports small volumes of a wide range of fruit from Indonesia with the main products being: mango, banana, water melon and mangosteen.

Table 11: Exports of Fresh Fruits from Indonesia to Singapore

Description	Volume (Tonnes)		Value (US\$'000)	
	2003	2008	2003	2008
Mangosteens	139	131	113	167
Banana	1	220	2	130

¹⁵ AVA Website: <http://www.ava.gov.sg>

Mangoes	155	367	171	574
Watermelons	-	186	-	93
Lemons	109	38	20	9
Rambutan	1	2	1	1
Pineapples	-	12	-	15
Avocados	-	42	-	34
Apricots	1	-	1	-
Strawberries	17	54	13	160
Guava	-	27	-	56
Other Fruits Fresh	141	193	236	183
TOTAL	425	1,141	444	1,255

Source: The Indonesian Bureau of Statistics (BPS), Catalogue No. 8202003 and BPS 8102

Hupco, a major Singapore importer of fruits, imports some fruits from Indonesia including salak and mango by air. They would like to buy more fruits direct from growers or regional traders. The company has a new modern distribution centre where all containers are unloaded then the fruit is distributed to the wholesale market, supermarkets or other customers.

5.4 Constraints to Export Development¹⁶

Access to some export markets has been limited for Indonesian fruits (mangosteen) mainly because of heightened fresh fruit protocol requirements from some importing countries. Because of this, the share of Indonesian mangosteen exports going to China via Hong Kong (which has more “lenient” protocol requirements) has risen in recent years to almost 90 percent. However, despite a growing import market demand, the export level mangosteen quantity from Indonesia has not been rising as fast due mainly to on-farm production issues as well as inadequate logistical infrastructures.

The main challenges facing seafreight exporters are:

- Lack of formal market access to new markets
- Continuity and co-ordination of supply of export quality fruit

The main challenges facing airfreight exporters are:

- Cost of airfreight - the cost of airfreight to Europe is about 75 percent of the C&F fruit price.
- Availability of freight space – it can be difficult to get airfreight space when needed.
- GlobalGAP - the introduction of new certification procedures in Europe in 2005 has impacted on Indonesia’s exports.
- Supply - Indonesia needs to improve the quality and continuity of supply of fruits for export, eg, over 75 percent of mangosteen produced in Lombok does not meet export quality standards.

Hendra Joewono of PT Salitrosa Ausasia, a major fruit trader, says that Indonesia has poor infrastructure and a scattered fruit industry resulting in high internal distribution costs. Indonesian farmers are part time farmers in horticulture as they usually have other agriculture enterprises as a source of income.

¹⁶ Mangosteen Feasibility Study NTB Indonesia”, by Melanie Aube and Phillip Morey, for IFC , January 2008

The Ministry of Agriculture's Director General of Horticulture, Dr Ahmad Dimyati, said that the main challenge for expansion of exports is the high domestic prices being paid for local fruits; growers are therefore reluctant to commit fruits for export. We have had some inquiries from Singapore and Malaysia to invest in Indonesian horticulture but the prices are too high for export markets. There is a need to identify higher valued fruits or varieties in export markets.

The Government is introducing a new regulation (no. 27) that will set MRL for all fruits – imports and exports. This will mean that farmers will need to introduce IPM systems and keep farm records on chemical usage. We are also examining the use of barcodes on cartons for export and the modern markets to be able to trace suppliers re MRL.

5.5 Airfreight and Seafreight Costs for Fresh Fruit Produce

Airfreight Costs

Table 12: Airfreight Costs from Jakarta to Various Destinations, US\$ per kg

Destination		+45 Kg	+100 Kg	+250 Kg	+500 Kg	+1000 Kg
Middle East	Jeddah	2.00	1.90	1.80	1.70	1.50
Australia	Melbourne	2.00	1.85	1.75	1.55	1.30
Japan	Tokyo	2.65	2.60	2.45	2.30	2.05
	Nagoya	2.65	2.45	2.20	1.85	1.50
	Osaka	2.70	2.45	2.20	1.85	1.65
China	Canton	1.50	1.30	1.25	0.90	0.75
	Beijing	1.65	1.55	1.35	1.15	0.95
	Shanghai	1.65	1.55	1.35	1.15	0.95
	Hongkong	1.65	1.55	1.45	1.35	1.05
Thailand	Bangkok	1.20	1.10	1.00	0.85	0.85
Singapore	Singapore	0.65	0.55	0.55	0.45	0.40
Malaysia	Kuala Lumpur	0.85	0.70	0.55	0.45	0.45

Source: Garuda Cargo Office, Jakarta

Sea freight Costs

Table 13: Seafreight Costs from Jakarta to Various Destinations

From – To	Price US\$ (20' reefer container)	Price US\$ (40' reefer container)	Time to destination
Jakarta - Shanghai	1,000	1,500	14 Days
Jakarta – Hongkong	1,100	1,700	7 Days
Jakarta - Busan	1,550	2,250	10 Days
Jakarta - Tokyo	1,950	3,400	7 Days
Jakarta - Jeddah	4,000	5,100	18 Days
Jakarta – Singapore	850	1,200	3 Days

Source: PT. Mega Indah Cargo, Jakarta

6. INDONESIA HORTICULTURE IMPORTS

6.1 Overview

There are over 30 companies that are involved in the importing of fresh fruit and/or vegetables with three companies importing on average 250 to 300 containers (40 foot) per month of fresh fruit. The Indonesian Importer and Exporter's Fresh Fruit and Vegetable Association (ASSIBSINDO) have 25 members in Jakarta.

Kafi Kurnia, Chairman of ASSIBSINDO says the association is now active with new and younger members. Our agenda is (1) to make the association a more professional team in the next 5 years, (2) create a joint effort to improve infrastructure, (3) increase our CSR commitment and help local growers with education and training programs. We must change our "old" thinking to being able to cope with the new trends and challenges impacting on fresh produce business like global warming, environment, carbon trading, quality demands and food safety.

Indonesia does not operate a wholesale market for imported fruits. Most fresh fruit importers sell to wholesalers (operating outside the Kramat Jati domestic wholesale market) who distribute to wet retail markets or sell direct to retailers.

6.2 Fruit

Indonesian fruit imports continue to expand reaching 466,000 tonnes in 2008, an increase of only 1 percent on the previous year. Over the last 14 years, Indonesian fruit imports have increased by an average annual growth rate of 39 percent, up from 72,600 tonnes in 1994.

The main fruits imported in 2008 were temperate fruits comprising apples (139,818 tonnes), mandarins (109,598 tonnes), pears (86,687 tonnes), oranges (28,024 tonnes) and grapes (25,671 tonnes). These five fruits comprised 84 percent of the volume of Indonesia's fruit imports in year 2008. Most of the growth in the last year in volume of imported fruit has occurred from mandarins (up 23 percent), oranges (up 19 percent) and durian (up 7 percent) whereas imports of apples, pears and grapes all declined for the first time in a while.

Table 14: Indonesia Fruit Imports (Tonnes)

Product	1994	2004	2005	2006	2007	2008
Oranges	18,447	50,928	29,712	26,151.3	23,566.7	28,024.4
Mandarins	8,851	43,279	53,659	68,535.4	89,125.5	109,598.2
Grapes	4,792	28,715	25,330	26,365.6	27,395.3	25,671.1
Apples	31,428	114,031	126,973	122,011.4	145,301.6	139,818.9
Pears	7,743	74,277	80,395	80,657.7	94,518.6	86,687.4
Apricots	16	2	5	2.6	2.1	0.2
Cherries	20	58	41	65.6	20.6	2.7
Peaches	32	162	108	126.9	70.8	15.8
Plums	133	208	215	185.8	199.5	142.1
Strawberries	43	229	241	191.3	129.0	182.3
Kiwifruit	0	629	626	580.9	898.3	930.6
Avocados	16	30	19	19.3	17.6	34.5
Mango	8	689	869	966.3	1088.2	968.5
Lemon	127	286	562	636.0	785.4	624.1
Grapefruit	150	352	350	657.3	302.1	340.9
Water melon	140	148	668	441.8	921.2	390.2
Other melon	0	656	171	207.3	111.0	99.5

Other berries	1	98	23	15.2	33.0	12.9
Durian	432	11,087	11,351	16,334.2	23,149.0	24,679.4
Other Tropical	281	34,073	42,275	47,067.6	55,504.6	48,069.0
TOTAL	72,661	359,935	373,594	391,219.6	463,140.1	466,292.7

Source: BPS (Bureau of Statistics Indonesia), Catalogue No. 8202007

Table 15: Indonesia Fruit Imports (in US\$'000)

Product	1994	2004	2005	2006	2007	2008
Oranges	11,411.7	25,462.0	15,861.4	17,600.7	16,914.6	21,616.7
Mandarins	5,931.4	24,741.6	23,913.5	48,518.4	73,851.4	94,298.9
Grapes	7,233.2	25,641.7	30,812.3	43,638.0	49,240.3	48,312.8
Apples	26,945.5	63,353.0	66,225.1	90,097.3	111,686.2	111,688.1
Pears	6,205.2	28,420.3	33,903.3	55,812.3	68,566.9	65,628.4
Apricots	20.2	3.9	3.9	3.9	3.0	0.2
Cherries	42.0	53.3	76.1	61.5	23.4	5.4
Peaches	73.7	101.8	111.4	100.1	70.8	22.8
Plums	214.0	185.5	192.6	187.5	248.1	199.8
Strawberries	-	272.4	263.7	292.4	280.7	360.7
Kiwifruit	-	784.0	658.4	783.0	1,185.7	1,642.4
Avocados	20.5	26.1	34.1	32.6	32.7	36.8
Mango	16.6	445.7	437.3	627.2	725.4	603.7
Lemon	127.3	184.0	392.3	535.2	723.5	583.3
Grape Fruit	111.4	242.2	234.4	365.3	267.1	421.7
Water Melon	134.1	56.4	241.9	147.3	422.8	224.0
Other Melon	-	285.4	326.4	334.9	263.3	251.3
Other Berries	2.3	117.1	52.3	36.2	76.3	25.5
Durian	944.7	11,730.9	7,527.9	15,406.4	28,682.0	30,829.6
Other Tropical	267.7	22,890.8	25,268.5	34,184.5	59,564.3	50,686.1
TOTAL	59,701.5	204,998.1	206,536.8	308,764.7	412,828.5	427,438.2

Source: BPS (Bureau of Statistics Indonesia)

China continues to be the major overseas supplier of fresh fruit to Indonesia with 65 percent share of the volume of the five main temperate fresh fruit imports in year 2008, up from a market share of 13 percent in year 1994. China's fresh fruit exports increased more than 4,000 percent over this period to Indonesia, mainly due to large increases in exports of apples, pears and mandarins. China now has the major share (in volume) of imported pears, mandarins, apples and oranges with 96 percent, 89 percent, 77 percent and 50 percent respectively. Although China only supplies about 13 percent of Indonesia's grape imports (mainly Red Globe grapes) this is up from a 5 percent share in 2005.

Table 16: Indonesia's Imports of Selected Fresh Fruit from China (1994, 2007 and 2008)

Product	1994		2007		2008	
	Value US\$'000	Volume Tonnes	Value US\$'000	Volume Tonnes	Value US\$'000	Volume Tonnes
Oranges	2,999	4,504	7,0221	10,122	10,663	14,021
Mandarins	1,400	2,248	62,960	73,962	84,798	97,407
Grapes	90	56	5,725	3,401	5,488	3,224
Apples	150	164	81,827	109,388	83,112	107,345
Pears	2,123	2,770	64,822	90,660	61,535	82,824
TOTAL	6,762	9,742	222,356	287,533	245,596	304,821

Source: BPS (Bureau of Statistics Indonesia), Catalogue No. 8202007

6.3 Vegetables

Indonesian vegetable imports have increased by an average of 75 percent per year since 1994 to reach 620,000 tonnes (US\$238 million) in 2008, up from 54,000 tonnes in 1994 (US\$33 million). The main vegetables imported in 2008 were garlic (425,274 tonnes), shallots (128,016 tonnes), onions (38,898 tonnes) and carrots (18,341 tonnes). These four vegetables comprised 98 percent of the volume of Indonesia's vegetable imports in year 2008. The major suppliers of the four main imported vegetables are as follows:

- Garlic - China (99 percent)
- Shallots – Thailand (76 percent), Philippines (11 percent)
- Onions – New Zealand (40 percent), Netherlands (33 percent), India (12 percent), China (8 percent)
- Carrots – China (91 percent)

Table 17: Total of Indonesia's Imports of Selected Fresh Vegetables, Volume, 1994–2008, Tonnes

Product	1994	2004	2005	2006	2007	2008
Seed Potatoes	866	683	1,360	1,487	1,393	2,944
Potatoes	332	3,148	5,031	4,211	5,559	5,345
Tomatoes	219	120	125	228	208	142
Onions	6,340	17,385	22,133	21,247	25,449	38,898
Shallots	15,213	48,927	53,071	78,462	107,649	128,016
Garlic	29,626	243,721	283,283	296,476	341,102	425,274
Leeks	91	172	959	959	929	972
Cauli & Broccoli	161	303	616	661	616	635
Brussel Sprout	1	25	19	22	13	9
Cabbages	306	133	166	170	256	294
Cabb Lettuce	175	274	240	272	279	232
Mushrooms	80	194	226	336	608	584
Carrots	104	5,239	7,030	8,027	20,433	18,341
Asparagus	2	38	67	94	88	79
Celery	138	142	155	198	231	169
TOTAL	53,652	320,505	374,482	412,849	504,813	621,934

Source: BPS catalogue no. 8202008

Table 18: Total of Indonesia's Imports of Selected Fresh Vegetables, Value, 1994–2008, US\$ '000

Product	1994	2004	2005	2006	2007	2008
Seed Potatoes	873	454	1,010	1,115	1,025	2,015
Potatoes	164	1,217	2,248	1,959	2,687	2,880
Tomatoes	210	98	142	200	252	236
Onions	2,572	5,058	6,751	7,368	9,305	15,255
Shallots	5,964	14,240	15,412	30,106	44,097	53,814
Garlic	22,673	53,303	66,665	107,194	123,957	152,497
Leeks	94	294	571	591	668	408
Cauli & Broccoli	148	288	568	558	611	684
Brussel Sprout	1	30	24	17	16	22
Cabbages	180	165	180	174	248	278
Cabb Lettuce	271	132	224	354	437	268
Mushrooms	94	209	309	324	502	567
Carrots	86	1,708	3,043	3,549	9,172	9,415
Asparagus	3	58	90	80	82	87
Celery	118	185	722	232	264	194
TOTAL	33,451	77,439	97,958	153,820	193,323	238,621

Source: BPS catalogue no. 8202008

7. PROCESSED HORTICULTURAL PRODUCE

7.1 Overview

Indonesia is a net importer of fresh horticulture produce (fruits, nuts and vegetables) and a net exporter of processed horticulture produce (see tables below).

In 2007, Indonesia's processed horticulture exports were 154,286 tonnes and imports were 47,400 tonnes; 60 percent of processed fruit and vegetable exports was preserved pineapple (91,000 tonnes); most exports were to USA, Singapore and Europe.

Table 19: Indonesia Imports and Exports 2006 & 2007 in Volume ('000 Tonnes)

HS Code	Commodity Description	Exports		Imports		Balance	
		2006	2007	2006	2007	2006	2007
07	Edible veg. & Certain roots & Tubers	326	332	485	589	-159	-257
08	Edible fruits & nuts	438	451	416	490	22	-39
20	Prep. Of veg, fruits, nuts, part of plants	269	154	49	47	220	107

Table 20: Indonesia Imports and Exports 2006 & 2007 in Value (Million)

HS Code	Commodity Description	Exports		Imports		Balance	
		2006	2007	2006	2007	2006	2007
07	Edible veg. & Certain roots & Tubers	64	79	191	245	-127	-166
08	Edible fruits & nuts	225	280	328	435	-103	-155
20	Prep. Of veg, fruits, nuts, part of plants	172	122	43	47	129	75

Source: The Indonesian Bureau of Statistic (Catalogue No. 8202003 & 8202007)

7.2 Imports

In 2007, Indonesia imported 47,400 tonnes of prepared fruit, nuts and vegetables¹⁷ with a value of US\$ 46.8 million; this is a similar quantity to 2006 imports. Processed horticulture imports in 2007 represented only about 4 percent of the volume and 7 percent of the value of fresh horticulture imports.

The main imported processed horticulture products were potatoes frozen, fruit juices (many products) and tomato paste (see table below).

Table 21: Selected Prepared Fruit and Vegetable Imports, 2007 - 2008

Products	2007 Volume Tonnes	2007 Value US\$'000	2008 Volume Tonnes	2008 Value US\$'000
Potatoes frozen not prepared	10,581	10,453	11,121	11,745
Tomato paste, not prepared	7,115	4,371	10,403	9,784
Potatoes Chips, not frozen, not prepared	2,508	3,995	2,810	4,673
Fruit grains and pastes of mango, pineapples or strawberries	1,529	2,365	1,025	2,622
Longans prepared	2,068	1,541	2,645	1,904
Lychees prepared	1,631	1,262	1,171	939
Mixtures of juices	1,285	1,694	2,278	5,015
Other Juice of any other single citrus fruit	1,118	902	255	506
Orange Juice, frozen and other orange juice	1,592	2,340	2,364	3,092

Source: BPS Book, Catalogue No. 8202008

¹⁷ HS code 20

Frozen Potatoes

In 2007, there was a range of processed potato products imported:

- 10,581 tonnes of frozen potatoes¹⁸ (not prepared) valued at US\$10.4 million, mostly from USA and Canada
- 5,864 tonnes of frozen potatoes¹⁹ valued at US\$ 5 million, mostly from USA
- 2,508 tonnes of potato chips²⁰ valued at US\$ 4 million, mostly from USA and New Zealand

Tomato Paste

In 2007, there was 7,115 tonnes of tomato paste imported with a value of US\$ 4.4 million, mostly from China

Juice

In 2007, there were 15 categories of juices imported with a total volume of 7,745 tonnes, valued at US\$10.9 million.

Tropical Fruits

In 2007, there were 3,699 tonnes of processed longans and lychees imported with a value of US\$ 2.8 million, mostly from Thailand.

7.3 Exports

In 2008, Indonesia exported 315,418 tonnes of prepared fruit, nuts and vegetables²¹ with a value of US\$ 264.3 million; this is twice the volume and value of exports in 2007. Processed horticulture exports in 2008 represented almost 50 percent of the volume and 70 percent of the value of fresh horticulture exports.

The main processed horticulture products exported in 2008 were pineapple (85 percent of total) and mushroom (see table below).

Table 22: Selected Prepared Fruit and Vegetable Exports

Products	2007 Volume	2007 Value	2008 Volume	2008 Value
	Tonnes	US\$'000	Tonnes	US\$'000
Pineapples prepared	91,092	57,992	220,856	170,496
Pineapples juice	16,315	12,143	47,310	32,998
Mushrooms not prepared	18,234	27,350	17,734	28,227

Source: BPS Book, Catalogue No. 8202008

Processed pineapples

In 2008, there was a range of processed pineapple products exported:

- 220,856 tonnes of preserved pineapples²² valued at US\$ 170.5 million, mostly to USA and Europe
- 47,310 tonnes of pineapple juice (less than 20 brix)²³ valued at US\$ 33.0 million, mostly to USA, Netherlands and the Philippines

¹⁸ HS code 2004100000

¹⁹ HS code 0710100000

²⁰ HS code 2005201000

²¹ HS code 20

²² HS code 2008200000

²³ HS code 2009410000

- 1,282 tonnes of pineapple juice (more than 20 brix)²⁴ valued at US\$ 1.0 million, mostly to Singapore (90 percent of total)

Great Giant Pineapple, based in Lampung Province, is now the third largest producer of canned pineapple products and pineapple juice concentrate in the world. The plantation currently consists of 33,000 hectares of land with production capacity of 500,000 tons of Cayenne pineapples annually. The company's processing facilities have an annual capacity of 8 million standard cases. The company's main products are canned pineapples, pineapple juice concentrate and canned tropical fruit salad. All of GGP's products are exported to over 30 countries in Asia Pacific, North America, South America, Middle East and Europe.

Processed mushroom

In 2008, there was 17,734 tonnes of mushrooms (of the genus agaricus, not prepared)²⁵ exported with a value of US\$ 28.3 million, mostly to USA (75 percent of total).

7.4 Juices

There are three main beverage industry associations in Indonesia involved in juice activities as follows:

1. The Indonesian Beverages Association (ASRIM) has 26 members including most of the large beverage (and juice) companies.
2. The Indonesian Fruit Juice Producers Association (APSARI) represents the interest of juice manufacturers.
3. The Indonesian Food and Beverage Association (GAPMMI) represent the interest of food and beverage manufacturers (mainly the large companies) in Indonesia and have 19 fruit juice manufacturers.

The juice market in Indonesia is one of the fastest growing categories in the modern Indonesian retail sector. There are many imported fruit juices with Berri from Australia dominating the retail market for imported juice products and the chilled juice segment of the modern retail market.

Packaging trends in Indonesia are towards low cost pouches. “Tetra Pak” is a popular packaging form for small sizes packs from 125 ml to 1 litre. PT plastic packs are preferred for larger sizes.

Ultra Jaya is one of the largest juice processors in Indonesia specialising in long life tetra pack products. The company has a fruit pulping machine where it processes three local fruits and stores in aseptically packaging. The company sources fruit (guava, sirsak and mango) from Indonesian growers as well as buying imported concentrates. The company has about 70 percent share of the fruit juice market which is worth a total of about US\$75 million in 2008.

²⁴ HS code 2009490000

²⁵ HS code 2003100000

8. INVESTMENT IN FOOD CROPS AND HORTICULTURE

8.1 Introduction

This section of the report provides information on domestic and foreign investment in Indonesia's agri-food industries. The main aims were to document:

- investment trends in Indonesia
- type of investment (PMA and PMDN)
- location of investment (province)
- source of foreign investment (country and company)

The information obtained is from "BKPM, "Data Perkembangan Penanaman Modal, Statistic of Direct Investment", Dec 2008". The investment data does not include investment in oil and gas, banking, non bank financial institution, insurance, leasing, mining and portfolio.

Please note that all PMDN (domestic) figures in the tables and text of this report, which are quoted by BKPM in rupiah, have been converted to USA dollar at an exchange rate of 1US\$ = Rp. 10,000. (The original data in rupiah is presented in Appendix 4).

8.2. Domestic Direct Investment (PMDN)

8.2.1 Overview

In 2008, there were 239 domestic investment projects in Indonesia with a total investment of US\$ 2,036 million; this compares to 159 projects and US\$ 3,487 million of investment in 2007 (highest level). In 2008, total domestic investment (across all sectors) occurred mainly in West Java (21 percent), East Java (14 percent), Banten (10 percent), Riau (10 percent) and Jakarta (9 percent).

8.2.2 Agriculture and Food Industry

In 2008, the food industry was the most popular sector for investment and contributed 40.2 percent of domestic investment, while food crops and plantation was the fourth most popular sector for investment and contributed 5.8 percent of total domestic investment.

Table 23: PMDN Investment in 2008, Number of Projects and Value of Investment

Rank	Sector	No. Of Projects	Value In million USD	Contribution (percent)
1	Food Industry	49	819.29	40.2
2	Metal, Machinery and Electronic	31	238.11	11.7
3	Paper and Printing Industry	14	179.77	8.8
4	Food Crops and Plantation	4	118.41	5.8

Source: BKPM, "Data Perkembangan Penanaman Modal, Statistic of Direct Investment", Dec 2008

In 2008, domestic investment in food crops and plantation was US\$ 118 million, a 67 percent decrease from the previous year of US\$ 352 million. Whereas, domestic investment in the food industry has increased over the last four years by 82 percent from US\$ 449 million in 2005 to reach US\$ 819 million in 2008.

Table 24: PMDN Food Crops and Plantation and Food Industry, 2005 to 2008

Year	Food Crops and Plantation			Food Industry		
	Projects	Investment US\$ M	Manpower	Projects	Investment US\$ M	Manpower
2005	19	307.06	32,034	35	449.08	23,863

2006	20	344.30	34,125	19	317.53	12,734
2007	18	352.88	28,633	27	537.17	27,525
2008	4	118.41	14,045	49	819.29	13,669
TOTAL	61	1,122.65	108,837	130	2,123.07	77,791

Source: BKPM, “Data Perkembangan Penanaman Modal, Statistic of Direct Investment”, Dec 2008

8.2.3 Regional Investment in Agri-Food

Over the last five years, domestic investment in “food crops and plantation” sector has mainly occurred on the islands of Sumatra and Kalimantan; these two islands represented 94 percent of all domestic investment in food crops and plantations from 2004 to 2008. The province of Riau (on the island of Sumatra) accounted for 35 percent of total investment.

Table 25: PMDN Regional Investment in Food Crops and Plantation, 2004 to 2008, USD Million

No.	Province	2004	2005	2006	2007	2008	Total
1	Riau	0.00	85.49	106.87	193.36	26.81	412.53
2	Central Kalimantan	0.00	33.70	75.32	25.68	33.2	167.90
3	South Kalimantan	0.00	59.97	44.88	18.97	20.72	144.54
4	South Sumatra	0.00	32.51	39.39	35.72	0.00	107.62
5	North Sumatra	4.65	22.08	27.98	19.49	5.14	79.34
6	Bangka Belitung	0.00	37.49	0.00	16.3	0.00	53.79
7	Lampung	0.00	17.76	16.38	0.00	0.00	34.14
8	West Kalimantan	0.00	0.00	0.00	17.26	14.98	32.24
9	West Sumatra	21.48	0.00	4.52	0.00	0.00	26.00
10	Papua	0.00	3.67	18.8	0.00	0.00	22.47
11	Jambi	12.84	5.28	0.00	0.00	2.28	20.40
12	East Kalimantan	0.00	0.00	9.61	9.46	0.00	19.07
13	Central Sulawesi	5.45	0.00	0.00	12.7	0.00	18.15
14	Central Java	0.00	0.00	0.00	0.00	17.58	17.58
15	NAD	0.00	6.86	0.00	0.00	0.00	6.86
16	West Sulawesi	6.32	0.00	0.00	0.00	0.00	6.32
17	West Java	0.00	2.25	0.17	0.79	0.00	3.21
18	East Java	0.00	0.00	0.00	3.15	0.00	3.15
19	West Nusa Tenggara	0.00	0.00	0.37	0.00	0.00	0.37
TOTAL		50.74	307.06	344.29	352.88	120.71	1,175.68

Source: BKPM, “Data Perkembangan Penanaman Modal, Statistic of Direct Investment”, Dec 2008

Only 1 percent of this investment during the period 2004 to 2008 was in the horticulture sector; 45 percent in the province of South Kalimantan (see table below).

Table 26: PMDN Regional Investment in Horticulture²⁶, 2004 – 2008, in million USD

No.	Province	2004	2005	2006	2007	2008	Total
1	South Kalimantan	0.00	2.66	0.00	2.66	0.00	5.32
2	West Java	0.00	2.25	0.03	0.79	0.00	3.07
3	East Java	0.00	0.00	0.00	3.15	0.00	3.15
4	West Nusa Tenggara	0.00	0.00	0.37	0.00	0.00	0.37
TOTAL		0.00	4.91	0.40	6.60	0.00	11.91

Source: Badan Koordinasi Penanaman Modal (BKPM)

²⁶ Fresh fruit, vegetables and flowers

Over the last five years, domestic investment in food industry has spread across many of the main islands including Java, Sumatra, Kalimantan and Sulawesi. The province of Riau accounted for 20 percent of this investment followed by West Java and East Java with 11 per cent each.

Table 27: PMDN Regional Investment in Food Industry, 2004 to 2008, USD Million

No.	Province	2004	2005	2006	2007	2008	Total
1	Riau	8.27	102.65	107.48	112.70	159.70	490.80
2	West Java	88.09	57.63	16.69	41.30	83.58	287.29
3	East Java	15.85	50.51	5.70	87.15	127.06	286.27
4	Banten	5.74	23.51	14.80	63.19	122.37	229.61
5	Central Kalimantan	0.00	47.89	37.39	19.02	35.00	139.30
6	DKI Jakarta	86.81	5.94	0.92	27.02	18.24	138.93
7	Central Java	5.7	54.89	0.25	22.24	52.80	135.88
8	North Sumatra	41.9	15.19	22.48	29.39	20.76	129.72
9	South Sulawesi	1.81	5.72	3.69	0.00	90.62	101.84
10	South Kalimantan	2.93	24.33	20.46	15.75	37.25	100.72
11	South Sumatra	3.94	12.39	26.44	14.38	29.92	87.07
12	Papua	54.51	0.40	13.29	0.00	3.99	72.19
13	Lampung	1.3	2.05	44.32	8.44	14.38	70.49
14	North Sulawesi	0.08	2.57	0.00	62.33	4.20	69.18
15	West Sumatra	27.57	7.00	2.92	0.00	0.00	37.49
16	Bangka Belitung	0.00	16.91	0.00	14.93	0.00	31.84
17	Jambi	7.92	15.53	0.00	0.00	7.47	30.92
18	West Kalimantan	0.00	0.00	0.72	11.39	7.33	19.44
19	East Kalimantan	10.05	0.00	0.00	0.00	4.60	14.65
20	Central Sulawesi	0.00	0.00	0.00	7.95	0.00	7.95
21	NAD	0.00	3.96	0.00	0.00	0.00	3.96
22	West Sulawesi	2.76	0.00	0.00	0.00	0.00	2.76
	TOTAL	365.23	449.07	317.55	537.18	819.27	2,488.30

Source: BKPM, "Data Perkembangan Penanaman Modal, Statistic of Direct Investment", Dec 2008

8.3. Foreign Direct Investment (PMA)

8.3.1 Overview

In 2008, there were 1,138 foreign investment projects in Indonesia with a total investment of US\$14,871 million (the highest level). This is an increase from 2007 where there were 982 projects with a total investment of US\$10,341 million. In 2008, total foreign investment (across all sectors) occurred mainly in Jakarta (67 percent), followed by West Java (17 percent), Banten (3 percent), Riau (3 percent) and East Java (3 percent). Most of the foreign investment in 2008 came from Mauritius (44 percent), followed by Singapore (10 percent), Japan (9 percent), UK (3 percent) and Malaysia (2 percent).

- Mauritius investment of US\$6,478 million was mainly in the transport, storage and communication sector in Jakarta
- Singapore investment of US\$1,487 million included US\$57.5 million in food industry and US\$12.7 million in food crops and plantation
- Japan investment of US\$1,365 million included US\$2.5 million in food industry and US\$0.7 million in food crops and plantation
- UK investment of US\$513 million included US\$43.9 million in food industry and US\$9.6 million in food crops and plantation

- Malaysia investment of US\$363 million included US\$104.7 million in food industry and US\$73.6 million in food crops and plantation

8.3.2 Agriculture and Food Industry

In 2008, the “food crops and plantation” sector was ranked 15th for investment and contributed only 1 percent of total foreign investment. This compares to the food industry sector which was ranked sixth for investment and contributed 3.3 percent of foreign investment.

Table 28: PMA Investment in 2008, Number of Projects and Value of Investment

Rank	Sector	No. Of Projects	Value In million USD	Contribution (percent)
1	Transport, Storage, & Communication	35	8,529.9	57.4
2	Metal, Machinery and Electronic	141	1,281.4	8.6
3	Motor Vehicle & Other Transport Equip.	47	756.2	5.1
6	Food Industry	42	491.4	3.3
15	Food Crops and Plantation	10	147.4	1.0

Source: BKPM, “Data Perkembangan Penanaman Modal, Statistic of Direct Investment”, Dec 2008

In 2008, foreign investment in “food crops and plantation” sector was US\$147 million while foreign investment in the food industry was US\$491 million. Over the last four years there has been 2.5 times the foreign investment in the food industry compared to food crops and plantation.

Table 29: PMA Food Crops and Plantation and Food Industry, 2005 to 2008, USD Million

Year	Food Crops and Plantation			Food Industry		
	Projects	Investment US\$ M	Manpower	Projects	Investment US\$ M	Manpower
2005	17	171.5	16,876	46	603.2	13,137
2006	13	351.9	20,609	45	354.4	12,729
2007	16	219.1	13,095	53	704.1	16,845
2008	10	147.4	8,278	42	491.4	16,620
TOTAL	56	889.9	58,858	186	2,153.1	59,331

Source: BKPM, “Data Perkembangan Penanaman Modal, Statistic of Direct Investment”, Dec 2008

8.3.3 Regional Investment in Agri-Food

Over the last five years, foreign investment (like domestic investment) in “food crops and plantation” sector has mainly occurred on the islands of Sumatra and Kalimantan; these two islands represented 95 percent of all foreign investment in “food crops and plantations” from 2004 to 2008. The province of Riau accounted for 28 percent of this investment.

Table 30: PMA Regional Investment in Food Crops and Plantation, 2004 to 2008, USD Million

No.	Province	2004	2005	2006	2007	2008	Total
1	Riau	4.80	13.60	237.20	28.00	0.00	283.60
2	South Sumatra	55.20	5.40	12.30	13.50	34.90	121.30
3	East Kalimantan	64.90	0.00	18.60	35.60	0.00	119.10
4	West Sumatra	34.10	13.60	0.00	36.80	25.20	109.70
5	Central Kalimantan	0.00	11.40	8.80	34.70	50.80	105.70
6	Jambi	0.00	8.50	57.20	0.00	0.00	65.70

7	Lampung	1.90	0.00	15.00	44.70	0.00	61.60
8	West Kalimantan	0.00	24.40	0.00	6.80	25.40	56.60
9	Gorontalo	0.00	28.80	0.00	0.00	0.00	28.80
10	Bangka Belitung	0.00	26.10	0.00	0.00	0.00	26.10
11	West Java	0.00	11.70	0.00	4.70	0.70	17.10
12	NAD	0.00	0.00	0.00	11.60	0.00	11.60
13	Bengkulu	0.00	1.80	0.00	0.00	8.10	9.90
14	North Sumatra	0.10	2.20	0.00	1.80	1.50	5.60
15	East Java	0.00	0.00	1.50	0.40	0.70	2.60
16	Central Java	0.00	1.60	0.40	0.00	0.00	2.00
17	DI Yogyakarta	0.00	0.00	0.80	0.00	0.00	0.80
18	West Nusa Tenggara	0.00	0.00	0.00	0.40	0.00	0.40
19	Bali	0.00	0.00	0.00	0.00	0.10	0.10
	TOTAL	161.00	149.10	351.80	219.00	147.40	1,028.30

Source: BKPM, "Data Perkembangan Penanaman Modal, Statistic of Direct Investment", Dec 2008

Almost 2 percent of this investment during the period 2004 to 2008 was in the horticulture sector; 68 percent in the province of West Java (see table below). On average, this represents less than US\$4 million per year of foreign investment in Indonesia's horticulture sector.

Table 31: PMA Regional Investment in Horticulture^{*)}, 2004 -2008, USD Million

No.	Province	2004	2005	2006	2007	2008	Total
1	West Java	0.00	8.52	0.00	3.82	0.73	13.07
2	South Sumatra	2.39	0.00	0.00	0.00	0.00	2.39
3	East Java	0.00	0.00	0.94	0.39	0.71	2.04
4	Central Java	0.00	0.00	0.40	0.00	0.00	0.40
5	DI Yogyakarta	0.00	0.00	0.81	0.00	0.00	0.81
6	West Nusa Tenggara	0.00	0.00	0.00	0.40	0.00	0.40
7	Bali	0.00	0.00	0.00	0.00	0.09	0.09
8	North Sumatra	0.07	0.00	0.00	0.00	0.00	0.07
	TOTAL	2.46	8.52	2.15	4.61	1.53	19.27

Source: Badan Koordinasi Penanaman Modal (BKPM)

The major investors in the horticulture sector over the last five years were from UK, Japan, Taiwan and Netherlands (see table below).

Table 32: PMA Regional Investment in Horticulture^{*)} by Countries, 2004 – 2008, USD Million

No	Provinces	Countries						Total
		NL	UK	Japan	Taiwan	France	Others	
1	West Java	0	3.9	0.73	0	0	8.44	13.07
2	South Sumatra	0	0	0	0	0	2.39	2.39
3	East Java	0.71	0	0	0.94	0	0.39	2.04
4	Central Java	0	0	0	0	0.4	0.00	0.4
5	DI Yogyakarta	0	0	0.81	0	0	0.00	0.81
6	NTB	0	0	0	0	0	0.40	0.4
7	Bali	0	0	0	0	0	0.09	0.09
8	North Sumatra	0.07	0	0	0	0	0.00	0.07
	TOTAL	0.78	3.9	1.54	0.94	0.4	11.71	19.27

Source: Badan Koordinasi Penanaman Modal (BKPM)

^{*)} Horticulture includes fruits, vegetables, and flowers.

^{*)} Horticulture includes fruits, vegetables, and flowers.

Over the last five years, foreign investment in food industry has spread across many of the main islands of Indonesia - including Java, Sumatra, Kalimantan and Sulawesi – with most of the investment occurring in West Java and East Java.

Table 33: PMA Regional Investment in Food Industry, 2004 to 2008, USD Million

No.	Province	2004	2005	2006	2007	2008	Total
1	West Java	79.40	136.50	21.70	202.70	106.20	546.50
2	East Java	47.10	204.00	65.50	81.20	24.00	421.80
3	Riau	104.20	24.00	64.80	60.00	104.40	357.40
4	Lampung	19.90	15.20	85.20	74.90	63.30	258.50
5	Banten	56.60	65.50	20.70	56.90	1.50	201.20
6	DKI Jakarta	60.90	6.50	8.00	37.10	31.10	143.60
7	North Sumatra	26.30	21.60	18.70	52.30	18.40	137.30
8	South Sumatra	76.10	3.10	8.30	28.20	15.90	131.60
9	Central Java	35.30	8.10	20.60	4.10	55.20	123.30
10	Central Kalimantan	0.00	7.40	13.50	42.50	6.80	70.20
11	West Sumatra	21.50	18.10	1.60	18.70	0.00	59.90
12	North Sulawesi	19.80	2.00	0.30	0.00	35.50	57.60
13	West Kalimantan	0.00	21.00	0.00	3.20	14.10	38.30
14	Gorontalo	3.30	33.20	0.00	0.00	0.00	36.50
15	Jambi	0.00	0.00	20.10	15.50	0.00	35.60
16	East Kalimantan	8.30	0.00	0.00	18.20	0.00	26.50
17	Bangka Belitung	0.00	25.80	0.00	0.00	0.00	25.80
18	Bali	11.50	0.40	1.20	1.70	0.70	15.50
19	Bengkulu	0.00	10.50	0.00	0.00	3.60	14.10
20	South Sulawesi	1.60	0.00	0.00	1.20	4.60	7.40
21	NAD	0.00	0.00	0.00	5.70	0.00	5.70
22	Central Sulawesi	2.40	0.00	0.30	0.00	1.00	3.70
23	Maluku	0.00	0.40	3.00	0.00	0.00	3.40
24	Riau Island	0.00	0.00	0.00	0.00	2.10	2.10
25	DI Yogyakarta	0.00	0.00	0.00	0.00	2.10	2.10
26	East Nusa Tenggara	0.00	0.00	0.00	0.00	0.90	0.90
27	West Nusa Tenggara	0.00	0.00	0.70	0.00	0.00	0.70
	TOTAL	574.20	603.30	354.20	704.10	491.40	2,727.20

Source: BKPM, “Data Perkembangan Penanaman Modal, Statistic of Direct Investment”, Dec 2008

8.4 Constraints to Investment

The research has identified a range of constraints impacting on investment in the horticulture sector. These include:

1. Infrastructure – Indonesia has poor infrastructure and a scattered fruit industry resulting in high internal distribution costs. There is a lack of regional wholesale markets and coolstore / packing facilities for local fresh produce. In regional Indonesia there is a need for investment in sea ports to reduce cost of transshipment and post harvest facilities.
2. Farm size and location – Most of Indonesia’s horticulture farmers are part time small farmers in horticulture as they usually have other agriculture enterprises as a source of income. The main challenge is accessing good quality local fruits from part time

horticulture farmers who are scattered across many provinces and produce only small volumes of produce. There are no plantation fruit crops or large corporations involved in horticulture production except Great Giant Pineapple in Lampung.

3. Bureaucracy – There can be difference in interpretation between regions and Jakarta on investment laws. Also, the level of corruption impedes business as there is a need to make “extra” payments to some government departments for product registration etc. There are many Government regulations (eg no. 27 on MRL) that make it difficult to do business. Labour laws are rigid making it costly to do business and impacts on investment decisions. The lack of laws on land title and land ownership makes it difficult for investors when setting up businesses.
4. Product quality, standards, packaging and cost – There are no detailed product standards used in traditional markets so it is difficult for farmers to see the benefit in producing better quality fruits. The majority of horticulture (80 percent) is sold through traditional markets which has price fluctuations and a disincentive to produce quality produce. Inferior packaging results in damaged goods and weight losses. Only a small percentage of fresh produce is suitable for export, hence the need to establish large scale “export” grower groups. The high cost of production is due to low productivity and inefficiencies along the distribution chain. This can make it expensive to export some fresh produce.
5. Access to finance – SME businesses and farmers have limited access to bank finance and need to rely on traders to finance their production.

9. REGIONAL PROFILES – HORTICULTURE INVESTMENT

The table below shows data on population, economic activity and horticultural production in the ten main provinces of Indonesia (based on population). As a result of an analysis of this data five provinces were chosen to visit for further detailed investigation on investment opportunities in horticulture. The provinces visited were East Java, South Sulawesi, North Sumatra, Lampung and Bali.

Table 34: Population, GDP, Vegetable and Fruit Production by Selected Provinces, 2007

Province	Population (million)	GRDP (Rp. Billion)	Vegetable Production ('000 tonnes)	Fruit Production ('000 tonnes)
West Java	40.0	526,220	2,888	3,329
East Java	36.9	534,919	1,066	2,659
Central Java	32.4	312,429	1,416	1,485
North Sumatra	12.9	181,820	849	1,879
Banten	9.4	107,432	113	209
DKI Jakarta	9.1	566,449	19	11
South Sulawesi	7.7	69,272	155	482
Lampung	7.3	60,922	158	2,087
South Sumatra	7.0	109,896	108	464
Riau	5.1	210,003	86	134
Other	57.8	846,877	2,213	3,909
TOTAL	225.6	3,526,239	9,071	16,648

Source: Indonesian Population Projection 2000 - 2025 (BPS, Bappenas & UNFPA)

9.1 Province of East Java

9.1.1 People

East Java province is located on the eastern part of the island of Java and includes neighboring Madura and Bawean islands. East Java covers an area of 48,000 km² with a population of 36.9 million in 2007 (2nd largest in Indonesia). The capital city is Surabaya, the second largest city in Indonesia. There are 8 other cities and 29 regencies in East Java.



9.1.2 Economy

East Java has the 2nd highest GRDP in Indonesia of Rp. 535 trillion in 2007 and a GRDP per capita of Rp. 14.5 million. The major industry sectors by GRDP are: manufacturing (29 percent), trade/hospitality (27 percent) and agriculture (17 percent), however almost 50 percent of the workforce is employed in agriculture. East Java is Indonesia's largest province in agrifood production. In 2007, the "agriculture, livestock, fisheries and forestry" sector had

a GRDP of Rp. 89.4 trillion (with “food crops” comprising Rp. 47.6 trillion); this equates to 15 percent of Indonesia’s agrifood production.

9.1.3 Business

East Java is a major industrial city and trading port with many international links. There are currently 630,000 manufacturing businesses in East Java (about 90 percent are small and medium scale industries) with many businesses in footwear and clothing manufacturing. In East Java, 53 percent of GRDP is contributed by cooperatives and micro sized businesses.

The Sekar Group is one of the major food businesses in East Java involved in the production of shrimps, cashew nut processing, food processing and exporting, including fresh mangoes.

- *Shrimp farming - It has 700 hectares of land in Sumbawa (NTB) with 350 shrimp ponds that are now dormant. This is a main priority to reactivate this business as they have the market outlets and demand for shrimp products.*
- *Cashew nut farming - The company has a 10,000 hectare cashew nut farm near Kendari South East Sulawesi that is now dormant. It wants to reactivate this farm which was operating by local farmers as part of a nucleus farming system.*
- *Fruit processing - They have a small fruit processor and produce a range of tropical purees for export. There is a demand for tropical purees and an opportunity to grow this business through partnerships with local producers.*
- *Cassava processing - There is a shortage of good quality cassava for tapioca and crackers. .*

9.1.4 Retail

Surabaya as the second largest city in Indonesia has witnessed modern retailers expanding its business in East Java. There are now 23 modern retail stores in Surabaya with the major retailers being Carrefour (7 stores), Giant hypermarket (5 stores), Giant supermarket (5 stores), Matahari’s Hypermart (3 stores), Lotte (1 store), Hero (1 store) and Ranchmarket (1 store).

Ranchmarket has only one store in Surabaya (located in the wealthy Chinese area) and 5 in Jakarta. They buy local vegetables with orders placed weekly and twice weekly deliveries. Imported fruits come from head office in Jakarta weekly via refrigerated truck.

9.1.5 Horticulture

East Java is a major food crops and horticulture producer and exporter due to its ideal climatic conditions for growing and good seaport infrastructure. The main horticulture products are:

- Fruit - Banana (950,000 tonnes), Orange (630,000 tonnes), Mango (625,000 tonnes)
- Vegetable – Onion (230,000 tonnes), Chilies (215,000 tonnes), Cabbage (170,000 tonnes)
- Ornamental plants – Tuberose (50 million stalks), Roses (30 million stalks)
- Medicinal Plants - Temulawak (28,000 tonnes), Tumeric (24,000 tonnes), Ginger (21,000 tonnes)

a. Fruit Production

East Java is the second largest producer of fruits in Indonesia (after West Java) with 2.7 million tonnes of fruit; 16 percent of all fruit produced in Indonesia.

- Main fruits (as a percent of East Java production) - banana (30 percent), orange (23 percent) and mango (22 percent)
- Main fruits (as a percent of Indonesian production) – mango (33 percent), papaya (24 percent) and orange (23 percent)

In Probolinggo regency, Mr Suli Artawi of Sumber Bumi (a family business) is a major player in the mango industry in East Java. He heads a grower group (200 members) and grows, collects and exports mangoes to Singapore. He has a 2 hectare mango farm which is GAP accredited and another 5 hectares – 1,400 mango trees in total. The grower group members have about 60 hectares (12,000 trees) of mangoes which are all supplied to one of the 2 sorting sheds owned by Sumber Bumi.

b. Vegetable Production

East Java is the third largest producer of vegetables in Indonesia (after West and Central Java) with 1.0 million tonnes of vegetables; 11.8 percent of all vegetables produced in Indonesia.

- Main vegetables (as a percent of East Java production) – shallot (21 percent), cabbage (16 percent) and small chilli (13 percent)
- Main vegetables (as a percent of Indonesian production) – mushroom (38 percent), small chilli (31 percent) and shallot (28 percent)

Table 35: Vegetable & Fruit Production in East Java, 2007 (in Tonnes)

Vegetable Type	East Java Production	Indonesia Production	percent	Fruit Type	East Java Production	Indonesia Production	percent
Shallots	228,083	802,810	28.4	Avocado	35,392	201,635	17.6
Garlic	1168	17,313	6.7	Star Fruit	11838	59,984	19.7
Leeks	47,968	479,927	10.0	Duku	6,968	178,026	3.9
Potatoes	90,365	1,003,733	9.0	Durian	79,184	594,842	13.3
Cabbage	171,596	1,288,740	13.3	Guava	14,309	179,474	8.0
Cauli Flower	8,174	124,252	6.6	WaterRoseApple	12,201	94,015	13.0
Chinese Cabbage	42,849	564,912	7.6	Orange	608,359	2,625,884	23.2
Carrots	44,204	350,171	12.6	Mango	593,824	1,818,619	32.7
Chinese Radish	721	42,076	1.7	Mangosteen	11,053	112,722	9.8
Red Beans	630	112,272	0.6	Jack Fruit	76,625	601,929	12.7
Yardlong Bean	40,899	488,500	8.4	Pineapple	93,549	2,237,858	4.2
Chili	73,776	676,827	10.9	Papaya	149,107	621,524	24.0
Small Chilli	140,552	451,965	31.1	Banana	793,277	5,454,226	14.5
Mushroom	18295	48,247	37.9	Rambutan	84,672	705,823	12.0
Tomatoes	33,237	635,474	5.2	Snake Fruit	54,893	805,879	6.8
Egg Plant	30,244	390,846	7.7	Sapodilla	6428	101,263	6.3
French Beans	13,426	266,790	5.0	Soursop	5,470	55,798	9.8
Cucumber	32,532	581,206	5.6	Passion Fruit	43	106,788	0.0
Pumpkin	11,560	254,056	4.6	Bread Fruit	21,465	92,014	23.3
Swamp Cabbage	25,279	335,087	7.5				
Spinach	10,350	155,862	6.6				
Total	1,065,908	9,071,066	11.8	Total	2,658,657	16,648,303	16.0

Source: BPS, Catalogue No. 5205010

9.1.6 Investment

In 2008, East Java was ranked second for domestic investment (with 40 projects) and fifth for foreign investment (with 73 projects). However, investment in the agriculture sector in East Java has been minimal. According to BKPM data, from 2004 to 2008, there was less than US\$6 million investment in food crops and plantation in East Java whereas for domestic and foreign investment in the food industry in East Java there was a total of US\$286 million and US\$422 million respectively.

- In 2008, East Java had US\$279 million of domestic investment (46 percent was in the food industry – secondary sector); 14 percent of total domestic investment.
- From 2004 to 2008, domestic investment in food crops and plantation in East Java was only US\$3.15 million; one horticultural project in 2007.
- From 2004 to 2008, domestic investment in food industry in East Java was US\$286 million; 11 percent of total (3rd highest after Riau and West Java).
- In 2008, East Java had US\$457 million of foreign investment (86 percent was in the secondary sector – machinery, electronics and pharmaceutical industries); 3 percent of total foreign investment.
- From 2004 to 2008, foreign investment in food crops and plantation in East Java was only US\$2.6 million.
- From 2004 to 2008, foreign investment in food industry in East Java was US\$422 million; 15 percent of total (2nd highest after West Java).

The head of BKPM Surabaya has produced a range of investment profiles for investors to East Java covering: sweet potato flour, corn, soybean, beef cow fattening, cassava flour and potato flour. The profiles are general industry profiles and considered by local Government as a priority.

There have been many investments (foreign and local) over 30 years into East Java in the agrifood sector including: animal feed, seaweed, shrimp, coffee, spices, soft drink, chocolate, instant noodle, flour, canned tuna, cattle breeding, milk, vegetables and fruit. In Malang, a regency of East Java in the mountains, there have been 10 PMA investments in the vegetable sector with 70 percent of all vegetables destined for export. A number of foreign companies have invested in Malang to access vegetables for processing and exporting.

There are numerous examples of local and foreign companies engaged in the horticultural supply chain with a focus on exports and using different supply models. Companies in East Java include:

- PT Pancom International (Thailand) – vegetable farming
- PT Horti Bima International – vegetable farming
- PT Java Green (Taiwan) – export vegetables to Taiwan
- PT Tunas Indoland (Holland) – drying of vegetables
- PT Valor Indonesia (Japan) – vegetables
- PT Java Peppers Industry (Italy) – exports processed peppers to EU
- PT Sumber Bumi – exports mangoes to Singapore

In 2005, Java Green started operations in Malang to export fresh vegetables to Taiwan. Mr Tseng Ying-Hsiung from Taiwan set up the business and built a modern cool room and simple packing facility. The business contracts growers in the Malang regency and Batu to grow a range of vegetables. Java Green supplies the seeds (varieties from Taiwan), handbook on growing, training, money and a pre-harvest fixed price. The growers supplies their crops to the Java green packing shed and are paid on delivery (after sorting) based on quality – grade A (for export), B and C (local markets). Almost 90 percent of produce is of grade A. Vegetables include: snow peas, cabbages, Chinese cabbages.

9.2 Province of South Sulawesi

9.2.1 People

South Sulawesi province is located on the island of Sulawesi, bordered by Central Sulawesi, South-Eastern Sulawesi and West Sulawesi. South Sulawesi covers an area of 62,482 km² with a population of 7.7 million in 2007 (ranked 7th in size in Indonesia). South Sulawesi's population is scattered across 23 municipalities with the largest being Makassar (the capital) with 1.2 million people.



9.2.2 Economy

South Sulawesi has the highest GRDP in eastern Indonesia of Rp. 69 trillion and a GRDP per capita of Rp. 9 million. Agribusiness is the main business in South Sulawesi and agriculture dominates economic activity with 31 percent of GRDP and 58percent of employment.

South Sulawesi is the highest producer of food crops in the eastern region of Indonesia. The main food crops are rice, corn, cassava, tuber, and peanut while the main estate crops are cocoa and coconut. In 2007, the “agriculture, livestock, fisheries and forestry” sector had a GRDP of Rp. 20.9 trillion (with “food crops” comprising Rp. 9.5 trillion); this equates to 18 percent of eastern²⁷ Indonesia’s agrifood production.

9.2.3 Business

The Indonesian Chamber of Commerce (KADIN) has about 800 active members. Its role is to (1) link private sector companies to Government, and (2) to provide business matching for its members. There are 3,000 SME businesses in South Sulawesi. The main food businesses cover: cocoa, coffee, passionfruit juice, biscuits, noodles, soda / syrup.

South Sulawesi is considered as a centre for trading and major businesses in eastern Indonesia. Makassar is one of four port authorities in Indonesia under the control of the central Government (Medan, Jakarta, Surabaya and Makassar). Makassar port has responsibility for eastern Indonesia (from eastern Kalimantan) and covers 18 ports. The main reefer ports are: Makassar, Bitung (near Manado), Balikpapan, Sorong (Jayapura).

There are 281 exporters registered with Customs in Makassar; about 60 of them export produce (mainly seafood) in refrigerated containers. Export of produce by containers has increased from 10,682 (Teus) in 2000 to 12,283 (Teus) in 2006. The top 10 major items exported are: clinker, cocoa, marble, cement, wood & plywood, seafood, cashew, rubber, coffee and molasses.

²⁷ All provinces outside of Java, Sumatra and Bali

9.2.4 Retail

In Makassar there are nine modern retailers competing in the market: Carrefour (3 stores), Makro / Lotte (1 store), Hypermart (2 stores), D'Best (1 store) and Hero (1 store).

Diamond (D'Best) Makassar brings 1 x 20 ft reefer container per week from their head office in Jakarta of chilled produce and 1 open truck (20 tons) per week of fresh produce (vegetables etc) from Surabaya. The main vegetables issues are:

- *Consistency in quantity – lack of vegetable produce from Sulawesi, especially in rainy season. Need to bring in produce from Java.*
- *The local quality of fresh produce is not as good as from Java.*
- *Large fluctuations in price for some vegetables*

9.2.5 Horticulture

Horticulture is not a major industry in South Sulawesi and there are only few small businesses which are active in the market, mainly in passionfruit syrup or juice.

The company “Cemerlang” manufactures passionfruit pulp for export and juice / squash for local market. The main constraints are lack of access to global markets. The company has no HACCP or international QA accreditation and this will limit its export business. It needs assistance to obtain the required QA certificates. Chairul, owner, has built good relationships with the passionfruit farmer groups. When he previously exported to Australia he needed large quantities of passionfruit supply so he provided seedlings to farmer groups with guarantee of receiving 10 tonnes of passionfruit per group. He now works with 15 farmer groups; about 20 farmers per group with an average of 1.5 hectares of vines per farmer. He provides training in pruning, picking and crop management. He processes about 50 tonnes per year of passionfruit for the domestic market and can grow the business if the export demand is realised.

According to Dinas Pertanian, the regional priorities for horticulture development are:

1. Fruit - passionfruit, oranges and mango
2. Vegetables – potatoes, carrots

Other opportunities due to increased supply are:

1. Mangosteen – need for a marketing company to coordinate supply and sales
2. Salak - need for a marketing company to coordinate supply and sales
3. Rambutan – need for a canning company to invest
4. Mangoes - there have been increased plantings of mango trees
5. Potatoes - WA Department of Agriculture have been working with potato growers in Malino and supplying them with Atlantic seeds but no investment
6. Bananas – many varieties and some unique to South Sulawesi

South Sulawesi produces a wide range of fruits and vegetables but does not dominate in any one particular type.

a. Fruit Production

South Sulawesi is the largest producer of fruits in eastern Indonesia with 0.5 million tonnes of fruit; 2.9 percent of all fruit produced in Indonesia.

- Main fruits (as a percent of South Sulawesi production) - banana (31 percent), mango (20 percent) and orange (8 percent)
- Main fruits (as a percent of Indonesian production) – duku (17 percent), avocado (6 percent) and passion fruit (6 percent)

b. Vegetable Production

South Sulawesi is the third largest producer of vegetables in eastern Indonesia (after North Sulawesi and NTB) with 0.2 million tonnes of vegetables; 1.7 percent of all vegetables produced in Indonesia.

- Main vegetables (as a percent of South Sulawesi production) – yardlong bean (11 percent), leek (11 percent) and tomato (8 percent)
- Main vegetables (as a percent of Indonesian production) – red beans (6 percent), leek (3 percent) and yardlong bean (3 percent)

Table 36: Vegetable & Fruit Production in South Sulawesi, 2007 (in Tonnes)

Vegetable Type	S. Sul Production	Indonesia Production	percent	Fruit Type	S. Sul Production	Indonesia Production	percent
Shallots	10,701	802,810	1.3	Avocado	11,327	201,635	5.6
Garlic	102	17,313	0.6	Star Fruit	902	59,984	1.5
Leeks	16,386	479,927	3.4	Duku	29,472	178,026	16.6
Potatoes	6,082	1,003,733	0.6	Durian	33,549	594,842	5.6
Cabbage	9,237	1,288,740	0.7	Guava	8,813	179,474	4.9
Cauli Flower	1,046	124,252	0.8	WaterRoseApple	1,428	94,015	1.5
Chinese Cabbage	12,736	564,912	2.3	Orange	41,093	2,625,884	1.6
Carrots	7,298	350,171	2.1	Mango	96,198	1,818,619	5.3
Chinese Radish	43	42,076	0.1	Mangosteen	3,544	112,722	3.1
Red Beans	7,100	112,272	6.3	Jack Fruit	29,414	601,929	4.9
Yardlong Bean	17,080	488,500	3.5	Pineapple	2,711	2,237,858	0.1
Chili	11,102	676,827	1.6	Papaya	21,946	621,524	3.5
Small Chili	8,721	451,965	1.9	Banana	151,515	5,454,226	2.8
Mushroom	4	48,247	0.0	Rambutan	27,826	705,823	3.9
Tomatoes	12,999	635,474	2.0	Snake Fruit	10,275	805,879	1.3
Egg Plant	7,049	390,846	1.8	Sapodilla	147	101,263	0.1
French Beans	8,586	266,790	3.2	Soursop	1,751	55,798	3.1
Cucumber	2,925	581,206	0.5	Passion Fruit	6,139	106,788	5.7
Pumpkin	4,814	254,056	1.9	Bread Fruit	3,835	92,014	4.2
Swamp Cabbage	7,835	335,087	2.3				
Spinach	3,226	155,862	2.1				
Total	155,072	9,071,066	1.7	Total	481,885	16,648,303	2.9

Source: BPS, Catalogue No. 5205010

Arifuddin Siaia is head of the farmer grower groups at Malino and manages a training centre for vegetable farming. There are 20 farmer groups and many of the participants have been trained in various agricultural topics including soil management, IPM etc. Vegetable productivity has doubled over the last two years due to adoption of new and improved practices resulting from information transfer. The main problems are fluctuating market prices and access to finance.

The main challenges for horticultural development in South Sulawesi are:

1. Lack of working capital
2. Cost of money for working capital; SME bank loans at 13percent interest
3. Lack of grower champions in industries to initiate change at the village
4. Lack of access to global markets
5. No HACCP or international QA accreditation and this limits export development

There is a need to promote the opportunities in the horticultural sector in South Sulawesi as there are options for value adding of horticultural products and a need for further investment.

9.2.6 Investment

In 2008, South Sulawesi was ranked eighth for domestic investment (with 4 projects) and seventeenth for foreign investment (with 10 projects). However, investment in the agrifood sector in South Sulawesi has been minimal. According to BKPM data, from 2004 to 2008, there was no domestic and foreign investment in food crops and plantation in South Sulawesi whereas domestic and foreign investment in food industry in South Sulawesi was a total of US\$101 million and US\$7.4 million respectively.

- In 2008, South Sulawesi had US\$110 million of domestic investment (82 percent was in the food industry); 5 percent of total domestic investment.
- From 2004 to 2008, there was no domestic investment in food crops and plantation in South Sulawesi.
- From 2004 to 2008, domestic investment in food industry in South Sulawesi was a total of US\$101 million from 4 projects.
- In 2008, South Sulawesi had a total of US\$28 million of foreign investment (50% each was in the secondary eg wood industry and tertiary sectors eg transport, storage and communication); 0.2 percent of total foreign investment.
- From 2004 to 2008, there was no foreign investment in food crops and plantation in South Sulawesi.
- From 2004 to 2008, foreign investment in food industry in South Sulawesi was a total of US\$7.4 million from 5 projects.

The local Investment Board (BPPMD) has a list of all recent investments in South Sulawesi. The companies related to agri-food are outlined in the table below.

Table 37: Investment in South Sulawesi, 2005 to 2009

Year	PMA/PMDN	Regency	Company Name	Business
2005	PMDN	Makassar	Indofood	Noodles
2005	PMDN	Makassar	Japfa Comfeed	Animal feed & shrimp farms
2006	PMDN	Makassar	Maju	Cocoa processing
2006	PMA	Makassar	Makro	Retail
2007	PMA	Makassar	Unicom Kakao	Cocoa processing
2007	PMA	Maros	Satwa Utama Raya	Chicken breeding
2008	PMA	Makassar	Makassar Singapore Fishery	Fish processing
2009	PMDN	Makassar	Charoen Pokphand	Fodder
2009	PMDN	Makassar	Makassar Tene	Sugar processing

Source: BPPMD South Sulawesi

As horticulture is not a major industry (mainly home industry based) in South Sulawesi, there are only few examples of recent investment in horticulture eg Focus Malino (foreign) and Amazing Farm (domestic).

Focus Malino was set up in 2006 as a 50 percent joint venture by a Dutch person with the local government. Focus is a modern farm with a packing shed and 2 coolstores for 40 tons of produce. The company invested EU\$ 1.7 million in developing and setting up this modern facility. Focus has 30 hectares of land that it owns and contracts out to 20 farmers for additional supply. It chooses farmers that are not close to the main road as they are able to negotiate a cheaper price. The company has an opportunity of being a major hub (like a cooperative) for the district and contracting to a wider range of growers to meet their expansion plans. However, an internal dispute in 2008 caused the company to cease operations.

Amazing Farm established a vegetable farm in Malino in 2008. It produces aeroponic lettuces for the supermarkets and HRI trade in Makassar and Balikpapan (by airfreight).

9.3 Province of North Sumatra

9.3.1 People

The province of North Sumatra borders Aceh province on the northwest and Riau and West Sumatra provinces on the southeast. North Sumatra covers an area of 71,680 km² with a population of 12.8 million in 2007 (ranked 4th in size in Indonesia). The capital of North Sumatra is Medan.



9.3.2 Economy and Business

North Sumatra has a GRDP of Rp. 182 trillion and a GRDP per capita of Rp. 14.2 million, ranking it eleventh out of all the provinces in Indonesia. Agribusiness is a significant business in North Sumatra and represents 23 percent of its GRDP. In 2007, the “agriculture, livestock, fisheries and forestry” sector had a GRDP of Rp. 41 trillion (with “food crops” comprising Rp. 14 trillion); this equates to 7 percent of Indonesia’s agrifood production. North Sumatra is a major manufacturing and agriculture centre and is considered as the gateway in trading (for horticulture products) into Singapore and Malaysia.

There are a number of modern retailers operating in Medan including Hypermart, Lotte and Carrefour.

9.3.3 Horticulture

Horticulture is an important crop in North Sumatra; it is the 3rd largest province in horticultural production, after West Java and East Java. It has a strategic location as a gateway to Singapore and Malaysia as well as cool climate in the mountains (1,000 metres +) near Medan for the growing of vegetables. A lot of vegetables are exported direct to Singapore and via Malaysia (for repacking) to Singapore.

The regional horticulture priorities in North Sumatra and opportunities for development are:

1. Fruit – orange, passionfruit, avocado, pineapple, banana, mango
2. Vegetables – potato, carrot, chili, red onion, cabbage

a. Fruit Production

Over the last four years fruit production in North Sumatra has increased by 83 percent from 1,050,291 tonnes in 2003 (from 49,385 hectares) to 1,918,820 tonnes (from 48,503 hectares).²⁸

North Sumatra is the fourth largest producer of fruits in Indonesia (after West and East Java and Lampung) with 1.9 million tonnes of fruit; 11.3 percent of all fruit produced in Indonesia.

- Main fruits (as a percent of North Sumatra production) - orange (51 percent), snake fruit (13 percent) and banana (11 percent)
- Main fruits (as a percent of Indonesian production) – orange (37 percent), snake fruit (30 percent) and durian (21 percent)

b. Vegetable Production

Over the last four years vegetable production in North Sumatra has declined by 33 percent from 1,290,236 tonnes in 2003 (from 94,792 hectares) to 859,013 tonnes (from 69,701 hectares).²⁹

North Sumatra is the fourth largest producer of vegetables in Indonesia (after West, Central and East Java) with 0.8 million tonnes of vegetables; 9.4 percent of all vegetables produced in Indonesia.

- Main vegetables (as a percent of North Sumatra production) – cabbage (18 percent), chilli (17 percent) and potato (11 percent),
- Main vegetables (as a percent of Indonesian production) – chinese radish (50 percent), cauliflower (18 percent) and chilli (17 percent)

Table 38: Vegetable & Fruit Production in North Sumatra, 2007 (in Tonnes)

Vegetable Type	North Sumatra Production	Indonesia Production	percent	Fruit Type	North Sumatra Production	Indonesia Production	percent
Shallots	11,005	802,810	1.4	Avocado	6,808	201,635	3.4
Garlic	635	17,313	3.7	Star Fruit	4,915	59,984	8.2
Leeks	19,124	479,927	4.0	Duku	9,157	178,026	5.1
Potatoes	90,634	1,003,733	9.0	Durian	126,211	594,842	21.2
Cabbage	157,038	1,288,740	12.2	Guava	15,660	179,474	8.7
Cauli Flower	22,065	124,252	17.8	WaterRoseApple	10,606	94,015	11.3
Chinese Cabbage	75,111	564,912	13.3	Orange	963,140	2,625,884	36.7
Carrots	40,464	350,171	11.6	Mango	34,349	1,818,619	1.9
Chinese Radish	20,944	42,076	49.8	Mangosteen	8,613	112,722	7.6
Red Beans	3,818	112,272	3.4	Jack Fruit	22,485	601,929	3.7
Yardlong Bean	46,812	488,500	9.6	Pineapple	119,589	2,237,858	5.3
Chili	112,843	676,827	16.7	Papaya	22,154	621,524	3.6

²⁸ “Buku Lima Tahun Statistik Pertanian 2003 – 2007”, Dinas Pertanian Propinsi Sumatra Utara 2008

²⁹ “Buku Lima Tahun Statistik Pertanian 2003 – 2007”, Dinas Pertanian Propinsi Sumatra Utara 2008

Small Chili	17,541	451,965	3.9	Banana	211,974	5,454,226	3.9
Mushroom	0	48,247	0.0	Rambutan	49,544	705,823	7.0
Tomatoes	76,699	635,474	12.1	Snake Fruit	247,406	805,879	30.7
Egg Plant	39,861	390,846	10.2	Sapodilla	11894	101,263	11.7
French Beans	32,818	266,790	12.3	Soursop	1,257	55,798	2.3
Cucumber	58,000	581,206	10.0	Passion Fruit	11,197	106,788	10.5
Pumpkin	3,795	254,056	1.5	Bread Fruit	1,775	92,014	1.9
Swamp Cabbage	10,456	335,087	3.1				
Spinach	9,042	155,862	5.8				
Total	848,705	9,071,066	9.4	Total	1,878,734	16,648,303	11.3

Source: BPS, Catalogue No. 5205010

The main constraints to develop the horticultural sector are:

- Limited number of fruit processing companies
- Inferior packaging, post harvest handling and cold chain system
- Lack of land allocated for horticulture farming

c. Medicinal Herbs

In 2007 there were 9,863 tonnes of medicinal herbs grown in North Sumatra with the main crops being: ginger (3,778 tonnes), turmeric (3,258 tonnes), ginger plant (1,152 tonnes) and ginger root (900 tonnes).³⁰

9.3.4 Investment

In 2008, North Sumatra was ranked twelfth for domestic investment (with 12 projects) and eighth for foreign investment (with 18 projects). According to BKMP data, from 2004 to 2008, domestic and foreign investment in food crops and plantation in North Sumatra was US\$79 million and US\$6 million respectively. This compares to domestic and foreign investment in the food industry in North Sumatra which was US\$129 million and US\$137 million respectively.

- In 2008, North Sumatra had US\$38 million of domestic investment (54 percent was in the food industry – secondary sector); only 2 percent of total domestic investment.
- From 2004 to 2008, domestic investment in food crops and plantation in North Sumatra was US\$79.34 million; 7 percent of total (5th highest).
- From 2004 to 2008, domestic investment in food industry in North Sumatra was US\$129 million; 5 percent of total (8th highest).
- In 2008, North Sumatra had US\$127 million of foreign investment (53 percent was in the tertiary sector eg hotels and 47% was in the secondary sector eg machinery, electronics and food industries); only 1 percent of total foreign investment.
- From 2004 to 2008, foreign investment in food crops and plantation in North Sumatra was only US\$5.6 million; less than 1 percent.
- From 2004 to 2008, foreign investment in food industry in North Sumatra was US\$137 million; 5 percent of total (7th highest).

The local Investment Board has a list of all investments in North Sumatra. The companies related to agrifood industries are summarised in the table below. Over the last 40 years there have been 293 approved investment projects with a total value of US\$2,374 million at an average investment of US\$8 million; only 40 percent of the value of the projects planned was realized.

³⁰ “Buku Lima Tahun Statistik Pertanian 2003 – 2007”, Dinas Pertanian Propinsi Sumatra Utara 2008

Table 39: Investment in AgriFood Industries in North Sumatra, 1968 - 2008

No. Projects	Industry Sector	US\$ million Investment Planned	US\$ million Investment Realized	PMA / PMDN
12	Food Crops	42.8	4.4	PMA
6	Food Crops	10.6	1.2	PMDN
7	Fisheries	19.3	13.0	PMA
10	Fisheries	11.6	4.8	PMDN
4	Livestock	20.8	21.7	PMA
6	Livestock	7.5	1.0	PMDN
56	Food Industry	512.9	198.0	PMA
99	Food Industry	667.3	170.1	PMDN
29	Forestry	509.5	273.7	PMA
64	Forestry	572.2	237.0	PMDN

Source: The Local Investment Board, North Sumatra

Investment in food crops in North Sumatra from 1971 to 2007 comprised 12 PMA and 6 PMDN projects with a planned value of US\$42.8 million for PMA projects and US\$10.6 million for PMDN projects. However, only about 10 percent of these projects realized their investments – US\$4.4 million for PMA and US\$1.2 million for PMDN projects.

Table 40: Investment in Food Crops in North Sumatra, 2000 - 2007

Year	PMA/PMDN	US\$million Investment Planned	Company Name	Business
2007	PMA	2.2	PT Ejs Agro Mulia Lestari	Food crops
2007	PMA	25.0	PT Hlh-Agri Indonesia	Corn
2004	PMA	0.1	PT Uplfarms Indonesia	Food crops
2002	PMA	0.7	PT Tennen	Horticulture
2001	PMA	3.0	PT Sumatra Herbal Corp.	Medicinal plants /processing
2001	PMA	0.1	PT Hutan Wisata	Forestry
2002	PMDN	75.0	PT Mitra Saudara	Fruit and vegetables
2000	PMDN	5.0	PT Selek Tani	Food crops

Source: The Local Investment Board, North Sumatra

There have been only a few companies that have invested in horticulture. Dinas Pertanian Medan has a list of 11 companies that have invested in horticulture sector covering businesses in seed development, vegetable growing, horticultural processing and exporting to Asia.

Table 41: List of Horticulture Companies in North Sumatra

Company Name	Regency	Business
PD Agro Madear	Simalungun	Grower group
PT Selektani	Karo	Potatoes and flower seeds
PT Horti Jaya Lestari	Karo	Vegetable growing, processing and exporting to Asia
UD Bintang Tani	Simalungan	
PT Indo Yasai Wisesa	Dairi	Sweet potato processing; frozen exported to Japan
UD Dewi Sari Markisa	Karo	
UD Karona	Karo	
PT Tanindo Subur Prima	Karo	Corn, fertiliser and chemical agents
KSU MJI Sum Utara	Karo	
UD Prima	Karo	
PT Vindia Agro Industri	Simalungan	Export to Japan frozen white radish and potatoes sliced

Source: Dinas Pertanian North Sumatra

Examples of investment in horticulture include Horti Jaya and PT Agrosari Sentraprima.

Horti Jaya has 150 hectares of citrus and 50 hectares of vegetables, of which 10 hectares are in modern greenhouses and the rest are open field. Horti Jaya has a two-hectare factory area in Karo Regency which handles frozen vegetable processing for the Japan market and fresh vegetables packaged under his brand “Fresh Harvest” for NTUC supermarkets in Singapore. Horti Jaya plans to increase its exports to Singapore but needs more supply. Currently, Horti Jay exports three containers (40 foot) of vegetables to Singapore each week, and is looking at doubling the volume and shipments to Singapore once logistic and supply issues are resolved. Horti Java works with external growers for potatoes and cabbages. It has no formal HACCP

PT Agrosari Sentraprima has been operating for more than 20 years in the production and marketing of canned tropical fruits (for the domestic and export markets) and concentrated frozen purees for export to Taiwan. The factory is antiquated, uses old technology and is a long distance from the centre of fruit production. There is an opportunity for the company to build a new factory closer to the production of fruits and introduce new packaging technologies (eg aseptic packaging) to grow the business into new export markets. The company could set up a plantation farm but has no experience in this field. It will need access to finance to undertake this major project.

9.4 Province of Lampung

9.4.1 People

The province of Lampung is located in the southern tip of Sumatra. Lampung province covers a mainland area of 35,376 km² with a population of 7.3 million (eighth largest). Lampung consists of nine regencies and two cities – Lampung and West Lampung.



9.4.2 Economy and Business

Lampung has traditionally been the gateway from Java to Sumatra and vice versa. As the province has developed, international trade has been executed through the international seaport Panjang, which is the second largest seaport in Sumatra.

Lampung has a GRDP per capita of Rp. 8.4 million and a total GRDP in 2007 of Rp. 61 trillion mainly from the agriculture sector (43percent). In 2007, the “agriculture, livestock, fisheries and forestry” sector had a GRDP of Rp. 22.7 trillion (with “food crops” comprising Rp. 9.3 trillion). It is the third largest GRDP producer of food crops, outside of some of the provinces in Java, and behind North Sumatra (Rp. 14.2 trillion) and South Sulawesi (Rp. 9.5 trillion.)

In 2008, the agricultural sector was one of the main pillars of Lampung's economic growth. Lampung's agricultural sector is dominated by (1) plantation farming in palm oil, coconuts and rubber, (2) pineapple and banana plantations, (3) cattle fattening business with Australian cattle, and (4) shrimp farming and processing.

The retail business has developed quickly in Lampung over the last few years with new entrants being hypermarkets – Hypermart and Giant – and mini markets with Alfamat and Indomart (200 stores) expanding rapidly. Chandra (a local supermarket) has 13 stores.

Chandra has a total of 13 supermarkets and minimarkets. It is a family business started by Hendra's father and now involving 4 siblings (two brothers and two sisters) Ten years ago they had only one supermarket in Lampung. Chandra sells imported fruits bought from an importer in Jakarta while most of the vegetables are sourced locally; they collect vegetables twice per week from growers.

9.4.3 Horticulture

In Lampung, fruit production is dominated by two products - pineapples and bananas. Lampung is the third largest producer of fruits in Indonesia (after West and East Java) with 2.1 million tonnes of fruit; 12.5 percent of all fruit produced in Indonesia.

- Main fruits (as a percent of Lampung production) – pineapple (59 percent) and banana (30 percent)
- Main fruits (as a percent of Indonesian production) – pineapple (55 percent) and banana (12 percent)

Table 42: Vegetable & Fruit Production in Lampung, 2007 (in Tonnes)

Vegetable Type	Lampung Production	Indonesia Production	percent	Fruit Type	Lampung Production	Indonesia Production	percent
Shallots	443	802,810	0.1	Avocado	6,351	201,635	3.1
Garlic	16	17,313	0.1	Star Fruit	1,437	59,984	2.4
Leeks	3,839	479,927	0.8	Duku	4,417	178,026	2.5
Potatoes	1,175	1,003,733	0.1	Durian	27,863	594,842	4.7
Cabbage	16,830	1,288,740	1.3	Guava	3,241	179,474	1.8
Cauli Flower	71	124,252	0.1	WaterRoseApple	3,254	94,015	3.5
Chinese Cabbage	13,103	564,912	2.3	Orange	49,646	2,625,884	1.9
Carrots	4,456	350,171	1.3	Mango	17,140	1,818,619	0.9
Chinese Radish	0	42,076	0.0	Mangosteen	749	112,722	0.7
Red Beans	485	112,272	0.4	Jack Fruit	26,807	601,929	4.5
Yardlong Bean	13,220	488,500	2.7	Pineapple	1,239,107	2,237,858	55.4
Chili	15,229	676,827	2.3	Papaya	28,262	621,524	4.5
Small Chili	7,393	451,965	1.6	Banana	635,509	5,454,226	11.7
Mushroom	133	48,247	0.3	Rambutan	23,976	705,823	3.4
Tomatoes	14,861	635,474	2.3	Snake Fruit	6,828	805,879	0.8
Egg Plant	16,224	390,846	4.2	Sapodilla	9257	101,263	9.1
French Beans	8,168	266,790	3.1	Soursop	1,035	55,798	1.9
Cucumber	17,937	581,206	3.1	Passion Fruit	20	106,788	0.0
Pumpkin	13,444	254,056	5.3	Bread Fruit	2,398	92,014	2.6
Swamp Cabbage	7,608	335,087	2.3				
Spinach	3,456	155,862	2.2				
Total	158,091	9,071,066	1.7	Total	2,087,297	16,648,303	12.5

Source: BPS, Catalogue No. 5205010

The main priorities for horticultural development are:

- Bananas – home industry for drying (keripik)
- Mangosteen – farm expansion for export fresh
- Pineapple – corporate for processing and exports

Mr Hasan is a certified GAP supplier of horticulture produce and has been supplying mangosteen to Agung Mustika Seleras for the last ten years. He collects mangosteen from 300 hectares in the regency. The growers supply the mangosteens to his sorting house and they are partially sorted before being sent to Jakarta for additional sorting for export. Only about 25 percent of the fruit received is of export quality. Growers are paid an average of Rp. 7,000 per kg for mangosteen. The main challenge for the mangosteen fruit industry is diseases and a declining production.

PT Andalas Mekar Sentosa (one of the large businesses) processes bananas, pineapple and jackfruit for drying. He manufactures a wide range of dried fruits in different flavours and packages for the supermarket and oleh-oleh markets in Lampung, Pekanbaru and Java.

9.4.4 Investment

In 2008, Lampung was ranked ninth for domestic investment (with 3 projects) and eleventh for foreign investment (with 2 projects). Foreign investment in the agrifood sector in Lampung has been strong both in plantations (eg palm oil) and the food industry. According to BKPM data, from 2004 to 2008 foreign investment in the food crops and plantation sector and food industry in Lampung was a total of US\$62 million and US\$258 million respectively.

- In 2008, Lampung had US\$73 million of domestic investment (77 percent was in machinery and electronics industries); 4 percent of total domestic investment.
- From 2004 to 2008, domestic investment in food crops and plantation in Lampung was US\$34 million; 3 percent of total.
- From 2004 to 2008, domestic investment in food industry in Lampung was US\$70 million; 3 percent of total.
- In 2008, Lampung had US\$67 million of foreign investment (94 percent was in the food industry); less than 1 percent of total foreign investment.
- From 2004 to 2008, foreign investment in food crops and plantation in Lampung was only US\$62 million; 6 percent of total (7th highest).
- From 2004 to 2008, foreign investment in food industry in Lampung was US\$258 million; 10 percent of total (4th highest).

There are only a few examples of investment in the horticulture sector in Lampung with the biggest investor being Great Giant Pineapple (GGP).

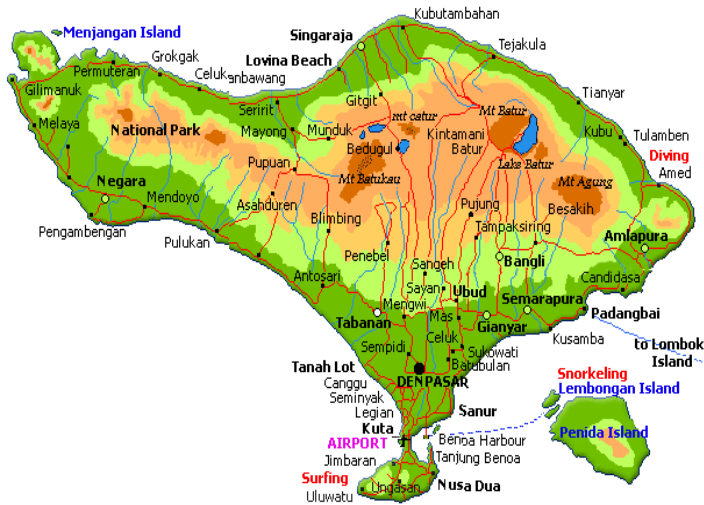
GGP was established in 1979 in Lampung Province in south Sumatra. GGP has evolved to be the world's largest fully integrated pineapple plantation and processing facility. It is now the third largest producer of canned pineapple products and pineapple juice concentrate in the world. The plantation currently consists of 33,000 hectares of land with production capacity of 500,000 tons of Cayenne pineapples annually. The company's processing facilities are ISO 9002 certified with an annual capacity of 8 million standard cases. The company's main products are canned pineapples, pineapple juice concentrate and canned tropical fruit salad. All of GGP's products are exported to over 30 countries.

PT Nusantara Tropical Fruit (NTF) is the fresh produce business of GGP and has established a business in Lampung based on banana production and marketing under the Sunpride brand. The company has 950 hectares and produces about 2 million (18kg) boxes of bananas annually. NTF works closely with the modern retail chains to develop promotional campaigns to create excitement and awareness of Sunpride bananas. NTF aims to make Sunpride an international fresh produce brand denoting “high quality”.

9.5 Province of Bali

9.5.1 People

The province of Bali has a population of 3.5 million in 2007. The capital of Bali is Denpasar.



9.5.2 Economy and Business

Bali has a GRDP of Rp. 42 trillion and a GRDP per capita of Rp. 12.2 million, ranking it fifth in economic activity from all the provinces outside of Java and Sumatra in Indonesia.

Agribusiness is an important business in Bali and represents 19 percent of its GRDP. In 2007, the “agriculture, livestock, fisheries and forestry” sector had a GRDP of Rp. 8.2 trillion (with “food crops” comprising Rp. 3.9 trillion).

In Bali there are eight modern large retailers competing in the market: Carrefour (3 stores), Makro / Lotte (1 store), Hypermart (1 store) and Hero / Giant supermarket (3 stores). In addition there are some gourmet delicatessens catering for the expatriate and tourism markets.

Bali Deli, established in 2003, is a five-star gourmet deli style supermarket that caters to the needs of expatriates by supplying a wide range of “foods from home” and hard-to-find items. Eighty percent of the goods are imported. Bali Deli aims to provide high-quality food items that are difficult to find elsewhere. This gourmet supermarket offers fresh aeroponic, organic and non-organic vegetables and fruits. The challenge is getting a supply of registered imported food products due to the difficulty at BPOM. The company now aims to source more produce locally (Indonesia) if it meets the quality requirements; for example: “Dr Rockets” organic salad vegetables from Bedugul, Bali.

9.5.3 Horticulture

Horticultural production in Bali is mainly for Balinese consumption with small quantities of some produce sent to Java if an oversupply occurs.

a. Fruit Production

Bali produces a small quantity of a wide range of fruits with only 450,000 tonnes of fruit produced in 2007; representing 2.7 percent of all fruit produced in Indonesia.

- Main fruits (as a percent of Bali production) – banana (32 percent), orange (25 percent) and snake fruit (18 percent)
- Main fruits (as a percent of Indonesian production) – snake fruit (10 percent), orange (4 percent) and banana (3 percent)

b. Vegetable Production

Bali is a small producer of vegetables in Indonesia with only 140,000 tonnes of vegetables; representing 1.6 percent of all vegetables produced in Indonesia in 2007.

- Main vegetables (as a percent of Bali production) – cabbage (26 percent), chinese cabbage (11 percent) and small chilli (10 percent),
- Main vegetables (as a percent of Indonesian production) – garlic (8 percent), cabbage (3 percent), Chinese cabbage (3 percent).

Table 43: Vegetable & Fruit Production in Bali, 2007 (in Tonnes)

Vegetable Type	Bali Production	Indonesia Production	percent	Fruit Type	Bali Production	Indonesia Production	Percent
Shallots	9,668	802,810	1.2	Avocado	1,125	201,635	0.6
Garlic	1,344	17,313	7.8	Star Fruit	456	59,984	0.8
Leeks	1,860	479,927	0.4	Duku	1,381	178,026	0.8
Potatoes	5,328	1,003,733	0.5	Durian	8,027	594,842	1.3
Cabbage	36,545	1,288,740	2.8	Guava	1,678	179,474	0.9
Cauli Flower	667	124,252	0.5	WaterRoseApple	967	94,015	1.0
Chinese Cabbage	15,656	564,912	2.8	Orange	108,913	2,625,884	4.1
Carrots	5,592	350,171	1.6	Mango	47,828	1,818,619	2.6
Chinese Radish	135	42,076	0.3	Mangosteen	1,919	112,722	1.7
Red Beans	-	112,272	0.0	Jack Fruit	18,000	601,929	3.0
Yardlong Bean	9,910	488,500	2.0	Pineapple	1,131	2,237,858	0.1
Chili	6,950	676,827	1.0	Papaya	11,620	621,524	1.9
Small Chili	14,677	451,965	3.2	Banana	143,058	5,454,226	2.6
Mushroom	-	48,247	0.0	Rambutan	14,833	705,823	2.1
Tomatoes	9,369	635,474	1.5	Snake Fruit	79,364	805,879	9.8
Egg Plant	631	390,846	0.2	Sapodilla	3,858	101,263	3.8
French Beans	8,685	266,790	3.3	Soursop	135	55,798	0.2
Cucumber	3,757	581,206	0.6	Passion Fruit	12	106,788	0.0
Pumpkin	1,960	254,056	0.8	Bread Fruit	193	92,014	0.2
Swamp Cabbage	7,291	335,087	2.2				
Spinach	807	155,862	0.5				
Total	140,832	9,071,066	1.6	Total	444,498	16,648,303	2.7

Source: BPS, Catalogue No. 5205010

The main priorities for fruit and vegetable development in Bali are:

- Fruits – mangosteen, orange, durian, mango, banana, salak and water melon
- Vegetables – potato, red chilli and red onion

9.5.4 Investment

In 2008, Bali was ranked nineteenth for domestic investment (with 2 projects) and tenth for foreign investment (with 50 projects).

- In 2008, Bali had US\$3 million of domestic investment (100% was in the tertiary sector eg hotels and restaurants); only 0.1 percent of total domestic investment.
- From 2004 to 2008, there was no domestic investment in the food crops and plantation sector in Bali.
- From 2004 to 2008, there was no domestic investment in the food industry in Bali.
- In 2008, Bali had US\$81 million of foreign investment (the majority was in the tertiary sector with 71 percent in hotels and restaurants); only 0.5 percent of total foreign investment.
- From 2004 to 2008, foreign investment in food crops and plantation in Bali was only US\$0.1 million.
- From 2004 to 2008, foreign investment in the food industry in Bali was US\$15.5 million.

The main local government investment priorities for horticulture are salak and potato.

The “Squeeze” company has been processing fresh fruit into fresh juices for 20 years. There are 16 fruit juice drinks under the Squeeze brand including salak juice. T. The company has grown from a “home industry” business to a medium size fruit processor with production of 4,000 to 5,000 litres per day in early 2000. The company wants to diversify into other markets and products. The owner wants to build a new fruit processing company in Jakarta but needs working capital. The main challenges are (1) maintaining cash flow and (2) continuity of supply.

The Bali Fruits Company is a new business investment (3 years ago) making high quality tropical jams for the expatriate (in Bali) and EU export markets. The jams (under the brand “Awani”) are made by hand and packaged in glass jars with two sizes – 28 grams and 285 grams. The main challenges for this business are: cost and availability of working capital, availability of experienced staff, access to packaging materials, continuity of supply and a lack of government support for export development.

10. GOVERNMENT REGULATIONS IMPACTING ON HORTICULTURE BUSINESS

10.1 Export Requirements and Permits³¹

The Indonesian Government's export requirements for agrifood products and export procedures are outlined below (source: Ministry of Agriculture).

An Indonesian company involved in the export of agrifood products will need to have a range of permits issued from the Ministry of Trade, the Ministry of Agriculture and other agencies as follows:

1. A Letter of Permit for Trade Business (SIUP) from Regional Office (Kanwil) of the Ministry of Industry and Trade (MOIT)
2. A Letter of Permit for Business from the technical Ministry (Ministry of Agriculture).
3. Administration of the commodities which will be exported is ruled by MOIT Decree No. 146/MPP/Kep/4/1999 on goods/commodities: Horticulture products are free to be traded and are not monitored.
4. There are a number of export documents that need to be completed for export such as:
 - a) Sales contract from exporter.
 - b) Commercial invoice from Customs.
 - c) Letter of Credit (L/C) from foreign Bank
 - d) Letter of Acknowledgment for Goods Exported (PEB) from Foreign Bank
 - e) Bill of Lading (B/L) or Airway Bill from Seaport or Airport
 - f) Packing List from Customs.
 - g) Certificate of origin from MOIT/ Regional MOIT.
 - h) Phytosanitary certificate from Quarantine agency.
 - i) Bill of exchange from foreign Bank.

Export procedures for all products can be summarised in 12 steps as follows:

1. Correspondence - between the exporter and the importer
2. Trade Contract - signed after negotiation
3. Issuing a Letter of Credit (L/C) – opening of an L/C is done by the importer
4. Preparing export goods. – the exporter prepares the goods as ordered by importer
5. Registering the commodity/ exporting goods
6. Ordering the transportation
7. Delivering the good to the Port
8. Customs checking
9. Loading the Goods to the Shipment
10. Certificate of Origin (SKA)
11. Liquidity of the L/C
12. Delivering the Goods to the Importer

10.2 Import Requirements and Permits

A report by USDA Foreign Agriculture Services³² outlines Indonesia's import requirements and procedures for processed food.

Market access of imported foods is becoming a significant issue in Indonesia. The Indonesian Government has introduced a number of new regulations which will impact on imported foods and the fresh produce trade.

³¹ "Passion Fruit Demand Study" by Phillip Morey, for IFC, October 2007

³² USDA FAS Gain Report No. ID9004 "Import Requirement and Procedures for Processed Food 2009"

1. A new Ministry of Trade regulation increases the requirements for imported products that fall under 505 Indonesian 10-digit harmonized tariff codes, including food and beverages under 188 lines. The regulation stipulates that importers of certain electronics, textiles, toys, footwear, and food and beverages must (1) obtain a special import permit from the Ministry of Trade, and (2) shipments of the selected products must be surveyed at the exporting port by a local appointee of PT Sucofindo (Persero) or PT Surveyor Indonesia, or in some cases there will be a local office representing both the Indonesian companies, effective 1st February 2009.³³
2. Indonesia's Regulation No. 12/Permentan/OT.140/2/2009, which will commence on 1st September 2009, spells out the plant quarantine procedures for importation of wood packaging into Indonesia. The aim is to prevent entry and spread of the gadfly plant quarantine organisms on timber packaging material. All exporters will need to ensure that they have a fumigation certificate, if they use any wooden packaging (including boxes, pallets and straps).
3. Indonesia's Regulation No. 27/Permentan/PP.340/2009 – "Food Safety Surveillance for Entry and Exit of Fresh Food of Plant Origin" was due to commence on 19th August 2009 but was deferred for three months. This regulation relates to residue limits on fruit, vegetables and grains imported and exported to Indonesia. The regulation will require imports to be accompanied by a certificate of analysis covering residues for pesticides, heavy metals and mycotoxins. The testing can be done either by the exporter prior to departure or by the importer on arrival. The Australian Government is negotiating with the Indonesian Government to have its food safety system (and residue testing) recognized and accepted to facilitate exports.

10.3 Product Registration

10.3.1 General

Government Regulation No. 69 (1999) stipulates that the government institution which is responsible for regulating and supervising the safety of foods and drugs in Indonesia is the Food and Drug Control Body (BPOM).

There are three types of registration numbers:

1. Training Certificate (Sertifikat Penyuluhan) – for a small company with limited investment where monitoring is done by Regional Health Service by providing guidance or training
2. MD Number – for local food and beverage manufacturer with high investment which is capable to comply with government regulation
3. ML Number – for imported processed food and beverage products

10.3.2 Fresh Food Product

There is no product registration required for fresh food products

³³ USDA FAS Gain Report No. ID9001 "New requirements for Selected Food and Beverages 2009"

10.3.3 Processed Food Products

All processed food and beverage products have to be registered before they can be distributed to the market. The registration process is articulated by the Head of BKPM in decree No. HK.00/05.1.2569, in the document “Criteria and Mechanism of Food Product Evaluation”, Chapter III Article 9.

The applicant must submit as follow:

- Registration form
- Product sample
- Labeling design and brochure if available
- Laboratory analysis
- For product manufactured locally: copy of permit or registration letter from Industrial and Trade Department, or permit from BKPM
- For repackaging product: reference letter from the origin manufacturer
- For licensed products: origin manufacturer license letter
- For imported products: distributorship letter from the overseas manufacturer, health certificate or free sale certificate.

Approval will be given at the latest 60 days after the registration documents are submitted³⁴ and BPOM RI MD or ML Number will be given.³⁵ Final labelling must be submitted not more than 3 months after the approval is given.³⁶

All products must be re-registered every five years.³⁷

10.3.4 Traditional Medicine

According to the Head of BPOM decree No. HK.00.05.41.1384 about “Criteria and Mechanism of Traditional Medicine, Standardised Herbal Medicine, and Fitofarmaka Registration” Article 2, all of traditional medicine produced and/or distributed in Indonesia must have a distribution permit granted by Head of BPOM. Exceptions made for:

- Traditional medicine that are used for the purpose of study/observation
- Imported traditional medicine with limited quantity for personal used
- Imported traditional medicine which has been registered in the original country for exhibition purposes with limited quantity
- Traditional medicine without labelling which produced by street hawker
- Raw material in form of animal or plant’s extracts

The administration requirements are:³⁸

- Industrial Permit

³⁴ Head of Food and Drug Control Body decree No. HK.00/05.1.2569 about the Criteria and Mechanism of Food Product Evaluation in Chapter V Article 15.

³⁵ Head of Food and Drug Control Body decree No. HK.00/05.1.2569 about the Criteria and Mechanism of Food Product Evaluation in Chapter V Article 16.

³⁶ Head of Food and Drug Control Body decree No. HK.00/05.1.2569 about the Criteria and Mechanism of Food Product Evaluation in Chapter VIII Article 22.

³⁷ Head of Food and Drug Control Body decree No. HK.00/05.1.2569 about the Criteria and Mechanism of Food Product Evaluation in Chapter VIII Article 21.

³⁸ http://www.pom.go.id/nonpublic/reg/Reg_OT_3.htm

- Pharmacist academic transcript, working permit, or practices permit from Health Dept Regional Office.
- Pharmacist reference letter in regards to his technical accountability
- Product and raw material sample
- Labelling proposal
- For licensed product: licensed appointment letter and free sale certificate from country origin legalized by Indonesian Consulate
- For imported product: distributorship from the manufacturer in country origin, free sale certificate, lab test certificate appointed by BPOM, and data of toxic content test for safety of the medicine which yet unknown

Technical requirements:³⁹

1. Formulation and Treatment

- Raw material composition and quantity of each
- Treatment and usage
- How to use and dosage (in detail): warning, attention, recommendation, length of usage

2. Quality and Technology

- Production method: quantity in one batch complete with how much raw material used, all production process (standard operation procedure), machinery and equipment used
- Source of raw material
- Raw material quality evaluation, organoleptic, macroscopic, microscopic, physics and chemistry test suitable for materials
- Final product quality evaluation: certificate which contains physics test, chemistry, microbe contamination, and metal contamination
- Method and stability or durability test result

As for processed food product, traditional medicine must also be re-registered every five years.⁴⁰

10.4 Labelling

10.4.1 Fresh Food Product

No labelling is required for fresh food product.

10.4.2 Processed Food Products

Processed food product labelling requirements are governed by Government Regulation No. 69 in 1999.

Label requirements are designed to ensure that the consumer can be accurately informed about the ingredients in processed food and its status as a halal or non-halal product. Post market control is maintained through sampling and testing food products. Where

³⁹ Head of BPOM decree No. HK.00.05.41.1384 about “Criteria and Mechanism of Traditional Medicine, Standardised Herbal Medicine, and Fitofarmaka Registration” and http://www.pom.go.id/nonpublic/reg/Reg_OT_2.htm

⁴⁰ Head of BPOM decree No. HK.00.05.41.1384 about “Criteria and Mechanism of Traditional Medicine, Standardised Herbal Medicine, and Fitofarmaka Registration” Chapter IV Article 30.

discrepancies occur there are powers to reprimand, order withdrawal of products from sale, or prosecute through the courts.

Key points of the current labelling requirements include:

- All packaged food products distributed in Indonesia must be labelled exclusively in Bahasa Indonesia language, Arabic numbers and Latin letters.
- The use of any other language, number and letters is permitted only where there are no substitute Indonesian words or if there is a difficulty in finding Indonesian words with a similar meaning; such approval must be obtained from the Indonesian Attorney-General.
- The use of stickers was authorised temporarily (until new legislation was enacted).
- Specific wording regarding content is required for labels of certain food items including milk products, baby food, alcoholic beverages, and halal food.
- If the product is halal, it must be certified by an approved authority.
- The expiration date of perishable food items must be shown (and imported products must be landed in Indonesia with at least 2/3 of their stated shelf life remaining).
- Food additives must be identified.
- The name and address details of the manufacturer or importer must be stated.
- There are specific requirements for labelling of products with GMO content greater than 5percent and also for irradiated products.
- SNI marks must be shown when relevant compulsory standards exist (these apply to sugar, salt and wheat flour).
- Net weight or net volume has to be stated

10.4.3 Traditional Medicine

Health Minister Regulation No. 246/Menkes/Per/V/1990 about “Traditional Medicine Manufacturing Permit and Registration, Indonesian Health Minister” Chapter VI discuss the issue of packaging and labelling.

Packaging should be made from material which will not affect the quality of the content and for the purpose to wrap the content only. All information contained in the packaging has to be labelled in Bahasa Indonesia and Latin letters.

Packaging and labelling requirements include:

- Name of the medicine
- Packaging size (net content)
- Registration Number, Name and address of the company (minimum city and country)
- Composition (Raw material in Latin according to Farmakope Indonesia Ekstra Farmakope Indonesia (Chapter 37))
- Treatment
- Usage
- Warning and Contradiction
- Production code
- Expiry date
- For local product: add the word “jamu” and placed inside a circle on top left of the packaging
- For licensed product: add “leave” logo (imported license product logo) and placed inside a circle on top left of the packaging and state the name of licensor

- For imported product: add the Indonesian distributor or importer, and information has to be written in Latin letter and in Bahasa Indonesia language next to the original language

10.5 Establishing a Foreign Investment Company

Investment in Indonesia is governed mainly by Investment Law No. 25 of 2007.

PMA (Indonesian abbreviation for FDI) as stated in Article 1 (Law No. 25/2007) is “any investing activity for running business within the territory of the Republic of Indonesia, made by any foreign investor using either foreign capital entirely or joint capital with domestic capital.”

The foreign investors may be a corporate entity or an individual. The limitation on foreign ownership:

- Allow 100 percent shares of PMA in selected areas of business. However, the said PMA must divest a portion of shares to an Indonesian party within 15 years after commencing commercial operations
- PMA can establish joint venture with Indonesian parties. The Indonesian parties at least own 5 percent at the time of establishment. In that case, the foreign company is not required to divest its shares to Indonesian parties within 15 years

The Investment Coordinating Board (BKPM) is the central authorized body receiving, reviewing, and approving investment capital applications as well as monitoring approved projects.

10.5.1 Business Fields that are Closed and Conditionally Open for Investments

In President Regulation No. 77 of 2007 concerning “Lists of Business Fields that are Closed to Investments and Business Fields that are Conditionally Open for Investments” as amended by Perpres No. 111/2007, Dec 27, 2007, there is no horticulture and processed fruit and vegetables industry which are closed to investment, except for Industries of Wine and Malt Beverages.

Business fields that open with conditions include:

1. Under reserved for small, micro, and medium enterprises and cooperatives:
 - Growing of Corn (in an area of less than or equivalent to 25 ha)
 - Growing of Food Crops other than cassava and corn, in an area of less than or equivalent to 25 ha
2. Under partnership:
 - Industries of sweetening, pickling of fruits and vegetables
 - Agriculture, plantation and fishery activities in transmigration areas
3. Capital Foreign Ownership:
 - Growing of Corn (in an area of more than 25 ha) – maximum of 95 percent
 - Growing of Food Crops other than cassava and corn, in an area of less than or equivalent to 25 ha – maximum of 95 percent
4. Special Licence/Permit:
 - Preservation of Agricultural Genetic Resources – requires a recommendation from the Minister of Agriculture based on an assessment by the national commission

10.5.2 Initial Licence (valid for 3 years)

- Foreign investors must submit an application form, so-called Model I to BKPM and include attachments as follow:
 - a. Copy of the Investors' Articles of Association (or passport/identification card in the case of individuals)
 - b. Flowchart of the production process or description of services
 - c. Power of attorney if the application is not signed and submitted by the investors themselves
- Approval (SP PMA) shall be issued by the Head of BKPM no later than 10 (ten) working days starting from the receipt of correct and complete applications
- After obtaining BKPM approval, the applicant:
 - a. can establish a limited liability company (Perseroan Terbatas – PT) by executing a Deed of Establishment in the notary public, and then submit to the Ministry of Laws and Human Rights with a proof of paid issued capital for approval.
 - b. has the obligation to register in the Company Registry maintained by Department of Trade and the Letter of Domicile to Sub District (Kelurahan)
 - c. obtain Taxpayer Registration Number (NPWP) and a taxable Entrepreneur Number (NPPKP) from the relevant tax office

10.5.3 Permanent Business Licence (IUT) (valid for 30 years)

- Submit the applications of IUT to Head of BKPM along with a Semi Annual Report of Capital Investment Activities (LKPM)
- IUT is issued not later than 7 (seven) working days after the receipt of correct and complete applications.
- IUT is issued by Head of BKPM on behalf of Minister in charge of relevant business

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12. FOOTNOTES

- ¹ Refer Table 1 in Section 2.1
- ² Mauritius is a tax haven for companies
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- ⁴ www.ers.usda.gov
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- ⁸ Jean-Joseph Cadilhon* †, Andrew Fearn*, Paule Moustier† and Nigel Poole, *Changes in the organisation of food marketing systems in South East Asia: a preliminary assessment*.
- ⁹ McKinsey Quarterly, “A Safe Food Supply for Asia”.
- ¹⁰ “AC Nielsen July 2009 Indonesia Market Update” report
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- ¹² CIC Business Report, 25th January 2008, page 2 “Modern Market Centers Expand at the Expense of Traditional Market Centers”
- ¹³ *CIC No. 391 – 25th March 2008*
- ¹⁴ *CIC No.404 25th April 2009*, page 45 “Investors now also interested in seedling industry”
- ¹⁵ AVA Website: <http://www.ava.gov.sg>
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- ¹⁷ HS code 20 (BPS)
- ¹⁸ HS code 2004100000 (BPS)
- ¹⁹ HS code 0710100000 (BPS)
- ²⁰ HS code 2005201000 (BPS)
- ²¹ HS code 20 (BPS)
- ²² HS code 2008200000 (BPS)
- ²³ HS code 2009410000 (BPS)
- ²⁴ HS code 2009490000 (BPS)
- ²⁵ HS code 2003100000 (BPS)
- ²⁶ Fresh fruit, vegetables and flowers
- ²⁷ All provinces outside of Java, Sumatra and Bali
- ²⁸ “Buku Lima Tahun Statistik Pertanian 2003 – 2007”, Dinas Pertanian Propinsi Sumatra Utara 2008
- ²⁹ “Buku Lima Tahun Statistik Pertanian 2003 – 2007”, Dinas Pertanian Propinsi Sumatra Utara 2008
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- ³¹ “Passion Fruit Demand Study” by Phillip Morey, for IFC, October 2007
- ³² USDA FAS Gain Report No. ID9004 “Import Requirement and Procedures for Processed Food 2009”
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- ³⁴ Head of Food and Drug Control Body decree No. HK.00/05.1.2569 about the Criteria and Mechanism of Food Product Evaluation in Chapter V Article 15.
- ³⁵ Head of Food and Drug Control Body decree No. HK.00/05.1.2569 about the Criteria and Mechanism of Food Product Evaluation in Chapter V Article 16.
- ³⁶ Head of Food and Drug Control Body decree No. HK.00/05.1.2569 about the Criteria and Mechanism of Food Product Evaluation in Chapter VIII Article 22.
- ³⁷ Head of Food and Drug Control Body decree No. HK.00/05.1.2569 about the Criteria and Mechanism of Food Product Evaluation in Chapter VIII Article 21.
- ³⁸ http://www.pom.go.id/nonpublic/reg/Reg_OT_3.htm, BPS - Statistik Indonesia and Directorate Gen. Of Horticulture Production Development Catalogue BPS No. 5205009
- ³⁹ Head of BPOM decree No. HK.00.05.41.1384 about “Criteria and Mechanism of Traditional Medicine, Standardised Herbal Medicine, and Fitofarmaka Registration” and http://www.pom.go.id/nonpublic/reg/Reg_OT_2.htm
- ⁴⁰ Head of BPOM decree No. HK.00.05.41.1384 about “Criteria and Mechanism of Traditional Medicine, Standardised Herbal Medicine, and Fitofarmaka Registration” Chapter IV Article 30.

APPENDIX 1

LITERATURE REVIEW - SUMMARY OF ARTICLES AND REPORTS

This review has examined a range of articles and research projects related to the development of fresh produce supply chains in Indonesia, in particular those related to investment opportunities. This is not an exhaustive review and many of the reports quoted have detailed references to other relevant studies.

Investment in horticulture supply chains in Asia may occur for many different reasons (as mentioned in some of the articles below) including:

- Countries with low food security (eg Japan and Saudia Arabia) looking for long term supply arrangements
- Northern hemisphere market players (eg UK supermarkets and EU importers) looking to establish formal links with suppliers to obtain “quality” tropical produce
- Modern international retailers based in Asia (eg Metro in Vietnam) looking to establish formal links with local rural suppliers to guarantee continuity and consistency of produce
- Asian food companies looking to expand sales and growth through company acquisition (eg Olam International (Singapore) buying Timbercorp’s (Australia) almond plantations)

A1.1 Articles on Trends in Fresh Produce Investments in Asia

- A high level Saudi business delegation visited the Philippines in April 2009 to develop investments of US\$ 45 million in bananas, US\$10 million in mangoes and US\$57 million in pineapples. (AsiaFruit March/April 2009, Issue No. 83, page ?.)
- Bahrain and the Philippines signed an agreement in March 2009 to set up a \$500 million joint agricultural company to help achieve food sufficiency in the kingdom. The Philippines government allocated about 10,000 hectares of arable land to grow rice, corn, sugar plants and pineapple in addition to vegetables. The total investment in the project is about \$500 million, starting with \$50 million for the first year and will provide jobs for 100,000 Filipino nationals. <http://farmlandgrab.org/2830>).
- Japan’s Sumitomo Corporation, which operates banana plantations in the Philippines with a local partner, plans to expand its banana plantations in the Philippines with the aim to become the largest importer of bananas into Japan within three years. (AsiaFruit July/August 2009, Issue No. 85, page 12.)
- San Miguel, a Philippines based food and drink manufacturer with operations in Indonesia, has revealed that it is interested to purchase the Asian operations of US based fresh produce company Dole Food. (AsiaFruit July/August 2009, Issue No. 85, page 6.)
- Metro Cash and Carry, a leading international wholesale chain, has established a subsidiary business “Star Farm” to source safe, quality food from Chinese producers through a modern sophisticated traceability system. (AsiaFruit July/August 2009, Issue No. 85, page 17.)

- METRO Cash & Carry in Vietnam employed Fresh Studio to develop a new vegetable sourcing system which would assure quality and food safety. The aim was to bridge the gap between the producers and modern markets by setting up a production, collection and distribution centre for fresh vegetables involving 1,000 farm contracts within 2 years. The key strategy was to get as close as possible to the farmers and involved building a fresh distribution centre (DC) in the heart of Vietnam's premium vegetable growing area. METRO can now get the vegetables in the cold chain within one hour after harvesting. The program also included investment in quality assurance systems, farmer extension programs and R&D. http://www.freshstudio.biz/joomla/view_content3c.php?xval=58
- UK's retailer Tesco has used its supply networks to launch a campaign in London to promote Thailand's exotic fruits. The "Healthy and Tasty from Thailand" campaign was launched in June 2009 and featured Thai mangoes, longan, rambutan, mangosteen, lychee and dragon fruit. The initiative was a co-operation between Tesco and the Thai Department of Export Promotion. (AsiaFruit July/August 2009, Issue No. 85, page 20.)
- Olam International, a multinational food ingredient company from Singapore, has bought the almond plantations from Timbercorp Australia for \$128 million. Olam operates in more than 60 countries with more than 6,000 customers and sales in 2008 of \$7 billion. The sale involved more than 8,000 hectares of almond groves in north-west Victoria, Australia and will produce about 27,000 tonnes of almonds per year at maturity. (The Age, September 19th, 2009.)

A1.2 Reports on Fresh Produce Supply Chain and Investment in Indonesia

1. **"Report on Investment in the Indonesian Food and Agriculture sector"** (by Bayliss Associated Pty Ltd for the Australian Department of Agriculture, Fisheries and Forestry, September 2005).

Indonesia needs to establish its own case to attract foreign direct investment as it competes for foreign direct investment with other Asian countries. The agricultural sector in Indonesia will always have sensitivities to foreign investment due to complex issues of smallholder communities, land ownership, co-operative marketing and a long history of government intervention. The food-processing sector does not have the same complexities, although local raw material supply may pose particular challenges. The report recommends that high-level visits, conferences and investment workshops can deliver impact. Companies listen to industry leaders and are more likely to act as a result of an interaction at senior executive level.

2. **"Indonesia Trade and Transport Facilitation Audit"** (by NEA for the World Bank, February 2009).

The audit aimed to provide an understanding of the supply chain management constraints in Indonesia. The main problems identified in Indonesia's trade and transport sector were: (1) Transport infrastructure - poor road infrastructure, inadequate port infrastructure, and railway infrastructure is fragmented; (2) Transport operations - dominated by domestic companies, particularly in shipping, obsolete vehicles, forward and clearing services are below standard, and cost for trade and

transport is excessively high; (3) Custom operations - lack of custom facilities, lack of coordination among inspections, and lack of cooperation between Customs and other relevant agencies; (4) Business and trade regulations - long time and costly to establish a business. (5) Regulatory framework - lack of transparency of costs, timing and access to information, lack of adequate legislation, excessive administration business regulations, and lack of enforcement of international agreements.

3. “Review of Indonesian Fresh Fruit and Vegetable Supply Chain” (by IFC Advisory Services in Indonesia, February 2009).

The key findings of this study were: (1) Farmers inability to supply to modern channels was due to: poor understanding of product quality requirements, delayed payment from supermarkets, inconsistent supply volumes, lack of access to financial services, lack of access to good farm management skills, lack of public agricultural services; (2) Traders and retailers face issues of inconsistent supplies and lack of understanding by suppliers of their product quality requirements; (3) Food Processors enter into some contract farming arrangements with suppliers. These problems relate to the lack of access to commercial loans and good agronomy practices and technology for farmers.

4. “Restructuring of Agrifood Chains in Indonesia” (by Center for Agricultural Policy and Agribusiness Studies, Padjadjaran University, Ronnie S. Natawidjaja, Trisna Insan Noor, Tomy Perdana, Elly Rasmikayati, Sjaiful Bachri, Thomas Reardon, to the Regoverning Market Programme, November 2006).

The study focuses on the rise of supermarkets, the changes in their procurement systems for fresh fruit and vegetables and the impacts of this transformation on horticulture supply chains. The study indicated that the rapid growth of supermarkets started in 1998 and was triggered by the removal of FDI restrictions, growth of urban population, and investment in property. Sales of fresh produce increased rapidly with a high share of imports. Local farmers were severely constrained by extremely poor supply chains caused by poor roads, illegal charges on the road, lacking cold chains and logistics services. There is very little reward to farmers to produce quality vegetables, since price differentiation is still very weak. Farmers only receive technical assistance from chemical companies' local agents and nearly all their credit come from local wholesalers and input supplier, family, friends and local lenders.

5. “Horticultural Producers and Supermarket Development in Indonesia” (by the World Bank, June 2007).

Modern retailing and supermarkets are booming in Indonesia, growing at 20 percent a year since the lifting of restrictions in 1998. In fact, they now account for 30 percent of the food retail business. Among the main findings of the report is the comparative disadvantage of traditional wholesale markets in competing with suppliers of better quality produce either from abroad or from smart new domestic wholesalers. Large inter-island traders and a new-generation of Indonesian wholesalers are making it harder for traditional markets to compete. While fresh fruit and vegetables account for 8 percent of supermarket sales and up to 15 percent of urban retail, a high share – 80 percent of the fruit sold and 20 percent of vegetables - are imported. At present,

the percentage of farmers participating in the new supermarket sector is around 15 percent.

6. “Indonesia Retail Food Sector Food Retail Update 2007” (by USDA FAS GAIN Report Number ID7036, Prepared by: Fahwani Y.R.)

The Indonesian retail sector began its rapid expansion in 1999, when a Presidential Decree allowed Carrefour, a French retailer, to increase outlet numbers in Jakarta. Modern retail businesses such as hypermarkets, supermarkets, and mini markets are replacing existing traditional retail outlets, including wet markets and independent small grocers. Franchising is driving the rapid growth of mini markets. Modern retail supermarkets and hypermarkets offer a wide range of food and beverage products and are generally located as anchor stores in shopping centers. An increasing number of Indonesians are shopping at these stores, particularly middle and upper income consumers. These retail stores generally contain in-store bakeries, cafés and restaurants, and prepared meals. However, the majority of Indonesians continue to shop at traditional stores conveniently located near their homes or places of work.

APPENDIX 2

LIST OF MAJOR HORTICULTURE BUSINESSES IN INDONESIA

Table 44. FRUIT AND VEGETABLE IMPORTERS

No	Name	Company Name	Address	Phone	Fax	
1	V. Ganesa Rupas	PT Bahtera Jaya Sentosa	Jle. Sunter Agung Utara I Blok A2 No. 26, Jakarta Utara	(021) 6583 2840	(021) 6583 2862	Fruit
e2	Hendro	PT SHB	Jl. Ancol Barat III No 1-12, Jakarta utara	(021) 6922664	(021) 69222632	Fruit
3	Hendra Sakti	PT Central Lucky	Jl. Bandengan Utara 85A/1-3, Jakarta Barat	(021) 6617631, 6600040	(021) 6690827	Fruit & Veg
4	Stevanus	PT Corona	Jl. Kedung Panjang No. 68A, Jakarta Utara	(021) 6690704	(021) 6695809	Fruit
5	Sonny Kurniawan / Indra Gunawan	Inti Sehat Sentosa	Jl. Kramat Jaya No. 26, Jakarta Utara	(021) 4374565	(021) 4374557	Fruit
6	Irwan Haliman	PT Linggaroran	Wisma Raya Blok A No. 5-6, Sunter Jakarta Utara Email: rolan@link.net.id	(021) 6503875-8	(021) 6509743	Fruit
7	Atek	PT Mekar Citra Abadi	Jl. Parang Tritis Raya No. 3 Jakarta Utara	(021) 6909590	(021) 6908437	Fruit
8	Taufik Mampuk	Mitra Sarana	Jl. Raya Bogor Km. 31, Cimanggis, Bogor	(0251) 87706258	(0251) 87706252, 67706258	Fruit
9	Paulus Hadri	Multi Flash	Jl. Hayam Wuruk 114 Blok A No. 4, Jakarta Pusat	(021) 6268758	(021) 6294255	Fruit
10	Lie Po Fung	PT Mulia Raya	Jl. Jembatan Genit No. 8, Kapuk Poglra, Jakarta Barat	(021) 54367553	(021) 54367558	Fruit & Veg
11	Eddi Simon Sim	Laris Manis	Jl. Beringin No.1, Pelabuhan Sunda Kelapa, Jakarta Utara	(021) 6908690	(021) 6915235, 6908689	Fruit
12	Ronny Thio	PD Hidup Segar	Jl. Ancol III Ancol Barat, Gudang ABL, Jakarta Utara	(021) 6922649	(012) 6922634	Fruit
13	Chong Teck Voon	Pincuran Mas	Jl. Indo Karya I Blok E No.6 Jakarta Barat	(021) 6509575	(021) 6509552	Fruit
14	Hendra Joemono	PT Salitrosa Ausasia	Jl. Sunter Paradise II Blok A5 No. 62, Jakarta Utara Email: salitrosa@cbn.net.id	(021) 6451468	(021) 6451469	Fruit
15	Ngalimin SE	PT Segar Manis Mata	Jl. Pegangsaan Dua Km 4 No. 89, Jakarta Timur – Indonesia Email: segarmm@cbn.net.id	(021) 4608000	(021) 4606933/4	Fruit
16	Wiharjo	Semeru Perkasa	Jl. Hayam Wuruk No. 2 WW, Jakarta Pusat 10120 Email: spp@semeru group.com	(021) 3861729	(021) 3855302	Fruit
17	Lie Kek Chyun	Semesta Segar Abadi	Jl. Mitra Sunter Boulevard Blok E1-17, Jakarta Utara	(021) 64716671,65940 89	(021) 6291320	Fruit
18	Eddy Kisnan (08164820388)	PD Sinar Baru	Jl. Agung Perkasa XI/35 A, Jakarta Utara	(021) 6510942	(021) 6514427	Fruit
19	R. Gunawan Subrata	Sunter Buah Segar	Jl. Danau Sunter Selatan, Sunter Podomoro Blok O III, Jakarta Utara	(021) 6507811- 4	(021) 6510242	Fruit
20	Wong Pai Kin / Yusuf	PT Wigah Perkasa	Jl. Ancol Barat III No.12 Gudang ABL, Jakarta Utara	(021) 6905254	(021) 6912916	Fruit
21	Josep Joemono	PT Agung	Jl. Bandengan Utara 1/5A,	(021)	(021)	Fruit

		Mustika Selaras	Jakarta Barat Email : joemono@cbn.net.id	6904140	6907311	& Veg
22	Hendra Bunawan	PT Sekawan Chandra Abadi	Jl. Hayam Wuruk - Pemuda No.1 Bandar Lampung	(0721) 269814	(0721) 269816	Fruit
23	Bugiartha Utama	PT Nusantara Tropical Fruit	Chase Plaza 20 th fl, Jl. Jend. Sudirman Kav. 21, Jakarta 12920	(021) 5706438	(021) 5706443	Fruit
24	Scott Martin	PT Pluit Cold Storage	Jl. Muara Karang Blok B Selatan No. 40, Pluit-Penjarangan, Jakarta 14450	(021) 6678443	(021) 66691456	Fruit
25	Tjitra Setiyono	CV Adithya Nugraha Lestari	Jl. Bandengan Utara No. 36A, Jakarta Barat 11240	(021) 6906517	(021) 6904939	Fruit
26	Ridwan Ngasinur	BestFresh	Jl. Lodan No. 1 FE, Ancol, Jakarta Utara Email:ridwan_ng@yahoo.com	(021) 6917973	(021) 6917972	Fruit
27	Tantio	All Fresh	Jl. Muara Karang Blok Z4 Utara No. 4-5, Jakarta Utara	(021) 5760418/78	(021) 6626087	Fruit & Veg
28	Desmon Tan	Dunia Segar Abadi	Jl. Danau Sunter Utara, Ruko Metro Sunter Blok A1 No 21-23, Jakarta 14340	(021) 6508275	(021) 6508279	Fruit
29	Norman Chen	PT Sukanda Djaya	Jl. Pasir Putih Raya, Ancol, Jakarta Utara	(021) 6405678	(021) 6402861	Fruit
30	Yuyuh Sukmana	V-19	Taman Palem Lestari – Ruko Fantasi, Jl. Kamal Raya Blok V/8 (Outer Ring Road) Cengkareng	(021) 55960190	(021) 55960193	Fruit
31	Tony Ang / Agus Setiawan Ang	PT Anugerah Buana Utama	Jl. Parang Teritis No. 3, Ancol Barat, Jakarta	(021) 6909590	(021) 6908437	Fruit

Table 45. FRUIT EXPORTERS

No	Name	Company Name	Address	Phone	Fax	
1	Martin M. Widjaja	PT. Sewu Segar Nusantara	Jl. Telesonik Dalam Kadu Jaya Curug No.18, Tangerang Jatake, Email: martin.widjaja@sunpride.co.id	(021) 590 2937	(021) 590 2935	Fruit
2	Mustofa Salim	PT. Masindo Mitra Mandiri	Jl. Nangka No.10 Tanjung Barat Jagakarsa Jakarta Selatan. Email: dorari@indosat.net.id , masikama@rad.net.id	(021) 780 4304, 780 4351	(021) 7883 5603	Fruit
3	Catherine Joemono	PT. Agung Mustika selaras	Jl. Bandengan Utara No.1/5A Jakarta Barat Email: joemono@cbn.net.id	(021) 690 6403	(021) 690 7311	Fruit
4	Made Wiratha	UD. Super Raja	Jl. Menu No.10 Singaraja Bali	(0362) 92428	(0362) 260 62	Fruit
5	Ir. Atrixto Bintono	PT. Trigatra Rajasa	Surabaya	(031) 871 3546	(031) 871 3545	Fruit
6	Erfy Lawer	PT. Agrosari Sentra Prima	Jl. Prof. M. Yamin No.23 GH Medan Sumatra Utara Email : agrosari_sentraprime@yahoo.co.id , erfy58@yahoo.co	(061) 455 1030	(061) 453 0439	Fruit

			m			
7	Monica V. Limba Jali	PT.Haraka Kitri Endah	Jl. Mojopahit No.50 Surabaya Email:hke@mitra.net.id	(031) 568 3838,7325122	(031) 567 8051, 732 5131	Fruit
8	Dewi Sutedjo	PT.Sekar Alam	Jl. Raya Darmo No.139 Surabaya Email:skamt@gmail.com	(031) 567 1317	(031) 5672318	Fruit
9	Helen Soegandhi	PT. Glen Nevis Gunung Terong	Jakarta Email. Fpatrad@indo.net.id	(021) 5367 2699, 5365 0006 Mob. 0855 115 4150	(021) 5367 8298	Fruit
10	Handoko Singopranoto	PT. Pranata Bumi Permai	Margo Mulya I D 12 Surabaya Email: javasnack@indo.net.id	(031) 744 3444	(031) 740 3835	Fruit

Table 46. FRUIT JUICE MANUFACTURES

No	Company	Address	Contact Person / Email	Phone	Fax
1	Aneka Sarivita, PT	Jl. Kesehatan Raya No. 21, Jakarta 10810	Mrs. Indrawati (Man) Indrawati_bd@yahoo.com	(021)5413522	(021)3836137
2	Berrivale Indosari, PT	Jl. MH Thamrin, Komp Mahkota Mas Blok J No. 61 Cikokol, Tangerang	Mr. Jaya Sukanto (Presdir) Ber_i_indosari@cbn.net.id	(021)5543050	(021)5543058
3	HEINZ ABC Indonesia, PT	Jl. Daan Mogot Km.12 Cengkareng, Jakarta 11710	Mr. Johnny(Presdir) Mr. Anthony H. Lee (Finance Director) Anthony.lee@heinzabc.com	(021)6195354/ 6191612	(021)5439475 8/6197531
4	Kencana Acidindo Perkasa, PT	Wisma Budi 8th Fl, Jl. HR Rasuna Said Kav C 6 Jakarta 12940	Mr. Santoso (Dir), Christine (Sec) Christine.loberto@sungaiabudi.com	(021)5313383	(021)5213383
5	Mantrust Group, PT	Jl. Raya Jatinegara Barat 124, Jakarta 13320	Mr. Johny Sutantyo (Presdir) ditalia@cbn.net.id	(021)8191408	(021)8192587
6	Ditalia Tropical Cipta Agro, PT	Janur Indah V Blok LA 16 No. 5 Jakarta 14240	Mr. Djonny Chandra (Dir)	(021)4500279 0811836448	(021)4528462
7	Great Giant Pineapples, PT	Chase Plaza Tower Lt. 20, Jl. Jend. Sudirman Kav. 21, Jakarta 12920	Mr. Achmad Setiawan (Dir) Setiawan_a@ygpc.co.id	(021)5706438 5208338	(021)5706443, 5208332
8	Buatama Indojaya, PT	Jl. Petojo Barat IV No. 4A, Jakarta 10130	Mr. Halim Riady Nugraha	(021)6322935 6310607	(021)6322965, 6319687
9	Makmur Sejati Internusa, PT	Rukan Royal Palace Blok B 38-39, Jl. Soepomo Raya No. 178 Jakarta	Mr. Sunardi Theophilus (Dir) Duma (Sec) kifa@cbn.net.id	(021)8314588	(021)8314568
10	Nutrifood Indonesia, PT	Rawabali II/3 KIP Gadung Jakarta 13920	Kwik Dien Hong (Dir) Yoanna (Sec) yoanna@nutrifood.co.id	(021)4605780	(021)4605784

11	San Miguel Indonesia Foods and Beverages , PT	Bekasi			
12	Sari Segar Alami, PT	Kawasan Industri Sentul, Jl. Olympic Raya Kav A5 Sentul Bogor 16810	Mr. Ryanto Kosasih info@countrychoice.co.id	(021)8753848/8752841	(021)8752841
13	Surya Lestari, PT	Jl Abdul Kadir Hartaco Indah Blok IAG/9 Makasar	Mr. Chairul Anwar chhalim@indosat.net.id	0411 - 869322	0411 - 883126
14	Supra Sari Lestari, PT	Gedung Graha Cipta Lt. 1, Jl. DI Panjaitan No 40 Jakarta 13350	Mr Bing A. Andimulia	021 - 8563457 8563459	021 - 8563464
15	Ultrajaya Milk Indonesia, PT	PO BOX 1230, Bandung 40012 Indonesia	Mr. A. Sabana	022 - 86700700	

Table 47. FOOD (FRUIT / VEGETABLE) PROCESSORS

No	Company	Contact Person	Address	Phone	Fax
1	HEINZ ABC Indonesia, PT	Mr. Johnny (Presdir) Mr. Anthony H. Lee (Finance Director) Anthony.lee@heinzabc.com	Jl. Daan Mogot Km.12 Cengkareng, Jakarta 11710	021 6195354/ 6191612	021 54394758 /6197531
2	PT Indofood Sukses Makmur (PT Indosentra Pelangi)	Mr. Anthony Salim (President Director) Email : ism@indofood.co.id Website: www.indofood.co.id	Sudirman Plaza Indofood Tower Jl. Jenderal Sudirman Kav. 76 - 78 Jakarta 12910, Indonesia	021 - 5795 8822	21 - 5793 5960
3	PT Aneka Food Tatarasa Industry		Graha BIP, 3rd Floor Jl. Jend. Gatot Subroto Kav. 23, Jakarta Selatan	021 5229671, 5229672	021 5229610
4	PT Ika Food Putramas	plant@ikafoods.com http://newkokita.ikafood.com	Jl. Panyaungan 6 Rancaekek, Bandung 40393	022-7797653	022-7797088
6	Inkenas Agung, PT		Jl Pulo Kambing II 20 Kawasan Industri Pulogadung JAKARTA 13930.	021-4619116, / 46833663, / 4605716	021-4600186

Table 48. RETAILERS

No	Company	Contact Person	Address	Phone	Fax
1	PT Alfa Retailindo Tbk	<ul style="list-style-type: none"> Mr. Toni Yoyo (Product Group Manager) Ms. Selvi Lolita (Category Man) 	Jl. MH Thamrin No. 9, Cikokol, Tangerang 15117 Email: Tyoyo@alfa-retail.co.id slolita@alfa-retail.co.id	(021) 55774578 (021) 55774575	(021) 5548083
2	PT Lion Superindo	<ul style="list-style-type: none"> Ms. Retno Ari Susanti (Produce Manager) Mr. Indra Sutjiadi (Produce Import Supervisor) 	Jl. Ancol No. 9-10, Ancol Barat, Jakarta 14430 Email: arirs@superindo.co.id	(021) 6905876	(021) 6905877

3	PT Hero Supermarket Tbk (Hero & Giant)	<ul style="list-style-type: none"> • Mr. Anis Setiawan (Senior Category Manager) • Mr. Gandhi Hadiwitanto (GM Fresh Merchandise) 	Hero Building 10 th Fl, Jl. Jend. Gatot Subroto 177A, Jakarta 12780 <u>Email:</u> gandhih@hero.co.id Freshero@cbn.net.id	(021) 83788054 / 83788290	(021) 83788288
4	PT Matahari Putra Prima Tbk	<ul style="list-style-type: none"> • Mr. Ong Thian Yoe (Director of Fresh Merchandising) • Budiharjo (Produce Merchandising Manager) 	Menara Matahari 18 th Fl, Jl. Bulevar Palembang Raya No.7, Lippo Karawaci 1200, Tangerang 15811 <u>Email:</u> ong.thian.yoe@matahari.co.id budiharjo@matahari.co.id	(021) 5469333 ext. 9231 / 9761	(021) 5475214
5	PT Contimas Utama Indonesia (Carrefour)	<ul style="list-style-type: none"> • Guillaume Parrain • Mustika Ekawati (National category buyer-Fresh Product) 	Carrefour Lebak Bulus 3 rd Fl, Jakarta Selatan <u>Email:</u> Guillaume_Parrain@carrefour.com Mustika_Ekawati@carrefour.com	(021) 42871417 / 27585831	(021) 27585818
6	PT Kurnia Phileo Selaras (D'Best Supermarket)	<ul style="list-style-type: none"> • Mr. Franky Liong (Director) • Ms. Caroline Ruru (Purchasing Dept) 	Mall D'Best 4 th Fl. Komplek Mahkota Mas, Jl. MH Thamrin Cikokol, Tangerang <u>Email:</u> dmjkt@centrin.net.id	(021) 5543315 (ext. 205 / 700)	(021) 5543353
7	PT Ramayana Lestari Sentosa (Ramayana Supermarket)	<ul style="list-style-type: none"> • Mr. Yohanes Sutrisna (Chief MD) 	Jl. Wahid Hasyim 220 A-B	(021) 3105563	(021) 3151563

APPENDIX 3

Table 49. Population and Gross Regional Domestic Product (GRDP) at Current Market Prices by Industrial Origin, by provinces, 2007, Billion Rupiah

Province	Population (Thousand)	GRDP Per Capita (Rp Million)	GRDP Total (Billion Rp)	GRDP Agriculture, Livestock, Forestry & Fishery Sector (Billion Rp)	GRDP Food Crops (Billion Rp)
NAD	4,224	17.3	73,196	20,339	7,729
North Sumatra	12,834	14.2	181,820	41,010	14,221
West Sumatra	4,698	12.7	59,799	14,755	7,490
Riau	5,071	41.4	210,003	43,595	2,437
Jambi	2,742	11.7	32,077	8,067	2,908
South Sumatra	7,020	15.7	109,896	20,080	5,113
Bengkulu	1,617	7.9	12,820	5,187	2,362
Lampung	7,290	8.4	60,922	22,733	9,248
Bangka Belitung Is.	1,107	16.2	17,895	3,340	748
Riau Islands	1,393	37.2	51,826	2,612	134
Sumatra	47,996	16.9	810,254	181,718	52,390
DKI Jakarta	9,065	62.5	566,449	571	263
West Java	40,329	13.0	526,220	62,895	45,560
Central Java	32,380	9.6	312,429	63,832	45,093
DI Yogyakarta	3,435	9.6	32,917	4,942	3,611
East Java	36,896	14.5	534,919	89,442	47,652
Banten	9,423	11.4	107,432	8,523	5,694
Java	131,528	15.8	2,080,366	230,205	147,873
Bali	3,480	12.2	42,336	8,216	3,944
NTB	4,293	7.8	33,519	7,181	4,459
NTT	4,450	4.3	19,137	7,706	3,980
Bali & NTB/NTT	12,223	7.8	94,992	23,103	12,383
West Kalimantan	4,179	10.2	42,479	11,437	4,036
Central Kalimantan	2,028	13.8	27,920	9,441	1,869
South Kalimantan	3,397	11.6	39,439	8,856	3,843
East Kalimantan	3,025	70.1	212,097	11,945	2,462
Kalimantan	12,629	25.5	321,935	41,679	12,210
North Sulawesi	2,187	11.1	24,274	4,945	1,884
Central Sulawesi	2,396	9.1	21,744	9,393	2,854
South Sulawesi	7,700	9.0	69,272	20,900	9,544
South East Sulawesi	2,032	8.8	17,953	6,843	1,460
Gorontalo	960	5.0	4,761	1,453	648
West Sulawesi	1,017	6.1	6,193	3,256	1,025
Sulawesi	16,292	8.9	144,197	46,790	17,415
Maluku	1,302	4.4	5,699	2,013	475
North Maluku	944	3.3	3,160	1,185	314
West Papua	716	14.5	10,370	2,762	412
Papua	2,016	27.4	55,266	5,530	2,574
Maluku & Papua	4,978	15.0	74,495	11,490	3,775
Indonesia	225,646	15.6	3,526,239	534,985	246,046

Source: PDRB Book, Catalogueue BPS No. 9302001, Statistical Yearbook of Indonesia 2008 & PDRB Book, Catalogueue BPS No. 9302001

APPENDIX 4 INVESTMENT TABLES

Table 50. PMDN Investment in 2008, Number of Projects and Value of Investment

Rank	Sector	No. Of Projects	Value In billion Rp	Contribution (percent)
1	Food Industry	49	8,129.9	40.2
2	Metal, Machinery and Electronic	31	2,381.1	11.7
3	Paper and Printing Industry	14	1,797.7	8.8
4	Food Crops and Plantation	4	1,184.1	5.8

Source: BKPM, "Data Perkembangan Penanaman Modal, Statistic of Direct Investment", Dec 2008

Table 51. PMDN Food Crops and Plantation and Food Industry, 2005 to 2008

Year	Food Crops and Plantation			Food Industry		
	Projects	Investment (in Billion Rupiah)	Manpower	Projects	Investment (in Billion Rupiah)	Manpower
2005	19	3,070.6	32,034	35	4,490.8	23,863
2006	20	3,443.0	34,125	19	3,175.3	12,734
2007	18	3,528.8	28,633	27	5,371.7	27,525
2008	4	1,184.1	14,045	49	8,192.9	13,669
Total	61	11,226.5	108,837	130	21,230.7	77,791

Source: BKPM, "Data Perkembangan Penanaman Modal, Statistic of Direct Investment", Dec 2008

Table 52. PMDN Regional Investment in Food Crops and Plantation, 2004 to 2008, Rp. Billion

No.	Province	2004	2005	2006	2007	2008	Total
1	Riau	0.00	854.90	1,068.70	1,933.60	268.10	4,125.30
2	Central Kalimantan	0.00	337.00	753.20	256.80	332.00	1,679.00
3	South Kalimantan	0.00	599.70	448.80	189.70	207.20	1,445.40
4	South Sumatra	0.00	325.10	393.90	357.20	0.00	1,076.20
5	North Sumatra	46.50	220.80	279.80	194.90	51.40	793.40
6	Bangka Belitung	0.00	374.90	0.00	163.00	0.00	537.90
7	Lampung	0.00	177.60	163.80	0.00	0.00	341.40
8	West Kalimantan	0.00	0.00	0.00	172.60	149.80	322.40
9	West Sumatra	214.80	0.00	45.20	0.00	0.00	260.00
10	Papua	0.00	36.70	188.00	0.00	0.00	224.70
11	Jambi	128.40	52.80	0.00	0.00	22.80	204.00
12	East Kalimantan	0.00	0.00	96.10	94.60	0.00	190.70
13	Central Sulawesi	54.50	0.00	0.00	127.00	0.00	181.50
14	Central Java	0.00	0.00	0.00	0.00	175.80	175.80
15	NAD	0.00	68.60	0.00	0.00	0.00	68.60
16	West Sulawesi	63.20	0.00	0.00	0.00	0.00	63.20
17	West Java	0.00	22.50	1.70	7.90	0.00	32.10
18	East Java	0.00	0.00	0.00	31.50	0.00	31.50
19	West Nusa Tenggara	0.00	0.00	3.70	0.00	0.00	3.70
TOTAL		507.40	3,070.60	3,442.90	3,528.80	1,207.10	11,756.80

Source: BKPM, "Data Perkembangan Penanaman Modal, Statistic of Direct Investment", Dec 2008

Table 53. PMDN Regional Investment in Horticulture^{*)}, 2004 -2008, in billion Rupiah

No	Province	2004	2005	2006	2007	2008	Total
1	South Kalimantan	0	26.60	0	26.60	0	53.20
2	West Java	0	22.50	0.30	7.90	0	30.70
3	East Java	0	0	0	31.50	0	31.50
4	West Nusa Tenggara	0	0	3.70	0	0	3.70
	TOTAL	0	49.10	4.00	66.00	0	119.10

Source: Badan Koordinasi Penanaman Modal (BKPM)

Table 54. PMDN Regional Investment in Food Industry, 2004 to 2008, Rp. Billion

No.	Province	2004	2005	2006	2007	2008	Total
1	Riau	82.70	1,026.50	1,074.80	1,127.00	1,597.00	4,908.00
2	West Java	880.90	576.30	166.90	413.00	835.80	2,872.90
3	East Java	158.50	505.10	57.00	871.50	1,270.60	2,862.70
4	Banten	57.40	235.10	148.00	631.90	1,223.70	2,296.10
5	Central Kalimantan	0.00	478.90	373.90	190.20	350.00	1,393.00
6	DKI Jakarta	868.10	59.40	9.20	270.20	182.40	1,389.30
7	Central Java	57.00	548.90	2.50	222.40	528.00	1,358.80
8	North Sumatra	419.00	151.90	224.80	293.90	207.60	1,297.20
9	South Sulawesi	18.10	57.20	36.90	0.00	906.20	1,018.40
10	South Kalimantan	29.30	243.30	204.60	157.50	372.50	1,007.20
11	South Sumatra	39.40	123.90	264.40	143.80	299.20	870.70
12	Papua	545.10	4.00	132.90	0.00	39.90	721.90
13	Lampung	13.00	20.50	443.20	84.40	143.80	704.90
14	North Sulawesi	0.80	25.70	0.00	623.30	42.00	691.80
15	West Sumatra	275.70	70.00	29.20	0.00	0.00	374.90
16	Bangka Belitung	0.00	169.10	0.00	149.30	0.00	318.40
17	Jambi	79.20	155.30	0.00	0.00	74.70	309.20
18	West Kalimantan	0.00	0.00	7.20	113.90	73.30	194.40
19	East Kalimantan	100.50	0.00	0.00	0.00	46.00	146.50
20	Central Sulawesi	0.00	0.00	0.00	79.50	0.00	79.50
21	NAD	0.00	39.60	0.00	0.00	0.00	39.60
22	West Sulawesi	27.60	0.00	0.00	0.00	0.00	27.60
	TOTAL	3,652.30	4,490.70	3,175.50	5,371.80	8,192.70	24,883.00

Source: BKPM, "Data Perkembangan Penanaman Modal, Statistic of Direct Investment", Dec 2008

^{*)} Horticulture includes fruits, vegetables, and flowers.