

INDONESIA Agriculture

Investment Opportunities in Agribusiness



KEMENTERIAN PERTANIAN

Published by :



PT. Fery Agung Corindotama (FERACO)

Puri Sentra Niaga B-42, Jl. Raya Kalimalang, Jakarta Timur 13620

Telp. (021) 860 6819 (Hunting), Fax. (021) 8660 5154

Email : feraco@indosat.net.id

In cooperated with :



Center for Permit and Investment Services

Ministry of Agriculture

Republic of Indonesia



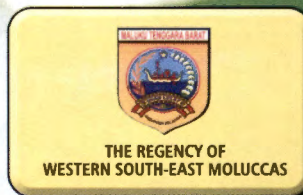
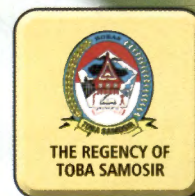
ISBN 979-3824-16-6



9 789793 824161 >

INDONESIA AGRICULTURE: Investment Opportunities in Agribusiness

Supported by :



Published by :



FERACO

PT. Fery Agung Corindotama (FERACO)

Puri Sentra Niaga B-42, Jl. Raya Kalimalang, Jakarta Timur 13620

Telp. (021) 860 6819 (Hunting), Fax. (021) 8660 5154

Email : feraco@indosat.net.id

In cooperated with :



**CENTER FOR PERMIT AND INVESTMENT SERVICES
MINISTRY OF AGRICULTURE, REPUBLIC OF INDONESIA**

Message from Secretary General of Ministry of Agriculture



Indonesia is an agro-based country which is blessed a huge potential. With a professional management the agriculture development will be able to give significant contribution to the national economic development. Since the beginning of Indonesian development, agribusiness has a strategic role as a prime mover of the national development.

Furthermore, agribusiness development in Indonesia has a bright prospect as it has competitive as well as comparative advantages. The prospects are indicated, such as: the wide availability of land and water, fertile land, suitable agro-climate, rich of bio diversity, etc. These natural and agro potential have to explore and inform to the agribusiness player in both domestic and foreigners.

When the above factors managed professionally, Indonesian agribusiness products will be able to meet both domestic and international markets.

On behalf of Ministry of Agriculture, I would like to extend my appreciation to all parties including local government for providing this valuable information and hoping this effort will give a valuable contribution to the Indonesian agribusiness development through investment activities.

For further information regarding agribusiness investment please contact Centre of Permit and Investment Services of the Ministry of Agriculture or related local government.

Finally, I also extend my deepest gratitude to management of PT. FERACO for publishing this important book.

Thank you.
Sincerely,

Dr. Ir. HASANUDDIN IBRAHIM, Sp.I



Foreword from Director of Center for Permit and Investment Services Ministry of Agriculture



*F*irst of all, I would like to thank to all parties, especially to management PT. FERACO for publishing this book in cooperation with Center for Permit and Investment Services. The cooperation is dedicated to provide information for agricultural investment potential and its opportunities in Indonesia.

Furthermore, this book covers information about food crops, horticulture, estate crops and livestock which require such development and investment. This is a live document that will be improved regularly as needed.

I hope this book will become useful information in boosting the Indonesian agriculture development.

Should any investor be increased in further information concerning in agricultural investment opportunities, please do not doubt contact my staffs at the Center.

Thank you.
Best regard,

A handwritten signature in black ink, appearing to read 'Mohammad Dani'.

Dr. MOHAMMAD DANI



A Note From Publisher



Assalamu'alaikum Wr. Wb.

Agricultural development in Indonesia through agribusiness currently indicates significant results such as GDP growth, production increase, export improvement, and established food security. However, agricultural development deals with some constraints and problems urgently to solve. Thank the almighty God for His blessing that finally our effort to publish a book entitled **"INDONESIA AGRICULTURE: Investment Opportunities in Agribusiness"**. This book is published to promote agribusiness investment opportunity in each Province, Regency and City in Indonesia. In addition, this book aims at disseminating information on agriculture sector policies and development to optimize the potential and opportunity.

Our deepest gratitude to the Department of Agriculture of the Republic of Indonesia, for authorizing PT. Fery Agung Corporation (FERACO) to publish this book. We also thank a lot of to the Government of Provinces, Regencies and Cities and all parties who participate in publishing the book. It is expected that the book is useful for promoting investment and agribusiness development.

We have done our best for comprehensively and accurately to present this book exclusively. However, we are aware that most probably there are still some weaknesses of the book. We, therefore, expect constructive critics for improvement of the next edition.

Wassalamu'alaikum Wr. Wb.

Jakarta, July 2007

PT. Fery Agung Corindotama

A handwritten signature in black ink, appearing to read 'M. Ruslim'.

M. RUSLIM
President Director



INDONESIA AGRICULTURE:

Investment Opportunities in Agribusiness

Published by:

PT. FERY AGUNG CORPORATION

Advisor :

Dr. Ir. Hasanuddin Ibrahim, Sp.I
(Secretary General of Ministry of Agriculture)

Chairman:

M. Ruslim

Chief Editor:

Dr. Mohammad Dani
(Director of Center for Permit and Investment Services Ministry of Agriculture)

Publishing Manager:

Mulyanto

Editor:

Imam AR.

Outsourcing Team:

Mulyanto, Edy Aprilia, Abaruddin,
Taufan Miftah Rizky Achmad, Deddy Saefudin

Graphic Design:

Andis Razan Maulana

Administration:

Iwan Setiawan, Fitri

Publisher Address:

PT. Fery Agung Corporation
Puri Sentra Niaga B-42, Jl. Raya Kalimalang, Jakarta Timur 13620
Phone : (62-21) 860 6819 (hunting)
Fax : (62-21) 8660 5154
E-mail : feraco@indosat.net.id

ISBN : 979-3824-16-6



Table of Contents

Message from Secretary General of Ministry of Agriculture	ii
Foreword from Director of Center for Permit and Investment Service Ministry of Agriculture	iii
A Note from Publisher	iv
Team Publisher	v
Table of Contents	vi

DEVELOPMENT OF AGRIBUSINESS IN INDONESIA

■ CHAPTER I : GENERAL INFORMATION OF INDONESIA	2
1.1. General Description	2
1.2. Economy	4
1.3. Condition of Infrastructure	5
1.4. Investment Performance	10
■ CHAPTER II : THE ROLE OF AGRIBUSINESS	12
2.1. Strategic Position of Agribusiness in Economic Development in Indonesia	13
2.2. The Role of Agribusiness in the National Economy	16
■ CHAPTER III : PROBLEMS AND CHALLENGES OF DEVELOPMENT OF AGRIBUSINESS AND AGRIBUSINESS ENTERPRISES SYTEM	19
3.1. The Weakness of Development of Agribusiness System in the Past	19
3.2. Challenges of Development of Agribusiness System and Enterprises	21
■ CHAPTER IV : VISION, MISSION AND OBJECTIVE OF DEVELOPMENT OF AGRIBUSINESS SYSTEM AND ENTERPRISES	24
4.1. Development of Agribusiness System	24
4.2. Development of Agribusiness Enterprise	26
4.3. Direction of Development of Agribusiness System and Enterprise	26
■ CHAPTER V : POLICIES OF DEVELOPMENT OF AGRIBUSINESS SYSTEM AND AGRIBUSINESS ENTERPRISE	30
5.1. Macro Policy	30
5.2. Policy of Development of Industry	32
5.3. Trade/Marketing Policy and International Cooperation	33
5.4. Policy on the Development of Infrastructure	34

Table of Contents

5.5. Policy for Institutional Development	34
5.6. Utilization of Natural Resources and Environment	38
5.7. Development of Regional Agribusiness Centers	40
5.8. Policy on the Development of Food Security	41
■ CHAPTER VI : MANAGEMENT OF DEVELOPMENT OF AGRIBUSINESS SYSTEM AND AGRIBUSINESS ENTERPRISE	42
6.1. Map of Authority	42
6.2. Management Mechanism	43
■ CHAPTER VII : POTENTIAL AND OPPORTUNITIES OF AGRICULTURE RESOURCES IN INDONESIA	46
7.1. Agribusiness Opportunities in Food Crops	48
7.2. Agribusiness Opportunities in Horticulture Crops	49
7.3. Agribusiness Opportunities in Plantation	50
7.4. Agribusiness Opportunities in Animal Husbandry Sector	52
INVESTMENT OPPORTUNITIES IN AGRIBUSINESS IN SELECTED AREA	
● The Regency of Banggai	56
● The Regency of Bener Meriah	62
● The Regency of Indragiri Hulu	68
● The Regency of Jember	73
● The Regency of Kuantan Singingi	80
● The Regency of Muara Enim	85
● The Regency of Nabire	91
● The Regency of North Hulu Sungai	97
● The Regency of Pulang Pisau	104
● The Regency of Semarang	110
● The Regency of South Bangka	116
● The Regency of Toba Samosir	122
● The Regency of Way Kanan	129
● The Regency of Western South-East Moluccas	134
APPENDIX	
Association in Agriculture Sector	142
Institutions of Agribusiness Services	147





Development of Agribusiness in Indonesia





General Information of Indonesia

1.1. General Description

The Republic of Indonesia is the largest archipelago country in the world, comprising 17,508 islands stretching along 5,120 kilometers from east to west, and 1,760 kilometers from north to south. The islands scatter over more than one tenth of the equator between Southeast Asia and Australia, covering a land area of around 2 million square kilometers and territorial waters nearly four time of that size. There are six main islands, namely Java, Bali, Sumatera, Kalimantan, Sulawesi, and Papua. There are also two large groupings of smaller islands, namely Moluccas and Nusa Tenggara. Jakarta, the capital city of the Republic of Indonesia located on the north west

coast Java, is the government and an economic center of Indonesia. Surabaya, Indonesia's second largest city located in East Java, is a leading industrial center and port. Medan in North Sumatera, is the third largest city near of Singapore/Malaka Strait. Other important cities are Bandung, Denpasar, Semarang, Yogyakarta, Padang, Palembang, Makassar, Manado, Banjarmasin, Balikpapan, and Jayapura.

A. Demography and Human Resources

According to the Population Census 2000, the total population of Indonesia is 203,456,005. The distribution of population, however, is not even. The island of Java with less than 7 percent of total land area is the home of almost 60 percent of the total population, while the island of Papua that covers

almost 21 percent of total land area is inhabited by only 1 percent of the total population. In the demographic development, although the number of people in Indonesia continues growing from year to year, the growth rate of the population trend to decrease, from 2.30% during 1971-1980 period to become 1.30% during 2000-2005 period. The decrease of birth rate has brought about structure of age of the people. Productive age of the population (15-64 years) increased to become 62.63% in 2005.



The map of Indonesia.

B. The Archipelago

The archipelago of Indonesia comprises about 17,508 big and small islands, of which only about 6,000 are inhabited. Five main islands and 30 smaller island groups are home to the majority of the population. The main islands are Sumatra (425,606 km²), Kalimantan (539,460 km²), Sulawesi (174,219 km²), Papua (421,981 km²), and Java (129,187 km²) which is home to about 70% of the country's population. The archipelago lies on tropical zone of Southeast Asia. The equator passes through the islands of Sumatra, Kalimantan, Sulawesi, and Halmahera. Geographically, the archipelago is situated between 06°08' north latitude to 11°15' south latitude and 94°45' to 141°05' east longitude; between two continents: Asia and Australia; between two oceans: Indian and Pacific; and on the traditional trading crossroads.

Stretching along the equator of about 8,000 km long, it is the same width to the North American Mainland, or Australia Continent, or West European Continent. Total territorial area is 9.8 million km², a large part of which (7.9 million km² or 81%) is sea, while the rest (1.9 million km² or 19%) is terrestrial land. Total coastline length of all islands is 54,716 km. Having such figures, Indonesia is recognized as the greatest maritime country in the world.

C. Physiography and Geomorphology

The archipelago of Indonesia is situated on the matching point of the two world greatest volcanic ranges, the Mediterranean from the west and Circum Pacific from the northeast, by which the volcanic pattern, physiography, and geomorphology of the archipelago are strongly influenced. There are about 400

mounts, most of which are volcanoes - either active or inactive ones - forming a bow of mountain ranges along the array of islands on the southern archipelago stretching from Sumatra, Krakatau on the Straits of Sunda, Java, Bali, Lombok, Sumbawa, and Flores. Kalimantan is the only island where volcano does not exist; instead, dense tropical rainforest naturally developed on the middle-range and peat-swamp ecosystems on the lowland. The highest summit of the archipelago is Mount Jayawijaya, about 5,000 m above sea level, where snow can be permanently found.

Facing the Indian Ocean, most of the coastlines of these islands are steep cliffs with very limited sand dunes. On the other hand, the inner northward coastlines are relatively flat, with substantially rapid coast expansion due to excessive sedimentation. On this type of coastline, mangrove forest communities exist, and brackish-water fish culture takes place on relatively developed areas.

D. Administrative Divisions

The capital of the Republic of Indonesia is Jakarta, the biggest and most densely populated city in the country, located on Java Island. Administratively, Indonesia is divided into 33 provinces, led by a Governor. Of all provinces, there are three special provincial territories, i.e.: Nangroe Aceh Darussalam, Daerah Istimewa Yogyakarta (DI Yogyakarta - Yogyakarta Special Territory), and *Daerah Khusus Ibukota Jakarta* (DKI Jakarta - Jakarta Metropolitan Special Territory). Each province is divided into some *kabupaten* (regency) and *kota* (city). Regency com

monly covers a capital town and surrounding area as well as a great area of hinterlands; it is led by a *Bupati* (regent). Whereas, city covers big city, including its sub-urban areas; it is led by a *Walikota* (mayor). Regency and city have the same level of governmental hierarchy.

Within regency or city there are some *kecamatan* (sub districts), led by a *Camat*. Each sub district is divided into some *desa/kelurahan* (villages). *Desa* is village within a regency, and it is led by a *Kepala Desa* (village chief); while *kelurahan* is village within a city, and it is led by a *Lurah*. Village is the lowest level of governmental organization structure. Within a village there are some voluntary social organizations called *Rukun Kampung* (RK - Hamlets within a village) or *Rukun Warga* (RW - Hamlets within a *kelurahan*), each is led by a voluntary social leader called *Ketua RK* or *Ketua RW*. Within each RK or RW, there are also some *Rukun Tetangga* (RT - Neighborhood). Led by a *Ketua RT*, each RT covers some neighboring households.

E. Climate

■ Climate and Weather Characteristics

The archipelago of Indonesia belongs to the Austral-Asiatic tropical zone. Climatic and weather condition of the archipelago is characterized by an equatorial double rainy season. Its variation is caused by the equatorial circulation and the meridional circulation. Displacement of the meridional circulation is closely related to the north-south relative movement of the sun and its position at a certain period with regard to the earth and the continents of Asia and Australia. These factors contribute to the displacement and intensity of the Inter-Tropical Convergence Zone being an equatorial trough of low pressure. This characterizes the weather of Indonesia; while the prevalence of the west monsoon and the east monsoon (wet and dry seasons) are characterizing the climate of Indonesia.

■ Monsoon and Rainfall

When relative position of the sun is on the north hemisphere from mid-March to mid-September, relatively dry winds blow over the archipelago from the southeast - the arid continent of Australia; and east monsoon characterizing dry season takes place on a large part of the archipelago. The dry season is generally prevailing from May to September. On the other hand, when relative position of the sun is on the south hemisphere from mid-September to mid-March, wet

winds blow over the archipelago from the northeast - the humid continent of Asia; then west monsoon characterizing wet season takes place in most parts of the archipelago. The wet season is generally prevailing from December to March.

However, these patterns do not always rigidly take place since a large part of the archipelago is covered by sea and diurnal differences are not significant, which makes precipitation be possible anytime. Sunshine is abundant, but rainfall - either heavy or light storms - can also drop in the dry season period. Rain even falls nearly all the year round on the islands where equator passes through, and this had resulted in dense natural tropical rainforest on the islands of Sumatera, Kalimantan, Sulawesi, and also in Papua.

■ Humidity and Temperature

Being within the humid equatorial zone, Indonesia has a high degree of air relative humidity with an average minimum of 60%. A minimum of 20% was observed in Jakarta in 1972. On the average, the mean annual air relative humidity ranges around 80-90%. The annual mean air temperature in Indonesia is around 33° C. As for the higher mountainous region, the monthly mean air temperature ranges approximately 25-28° C. The mean maximum temperature can reach 33° C, whereas the mean minimum air temperature is 21° C.

■ Wind and Storm

The average wind velocity is generally less than 15 knots per hour. Strong wind may be blowing occasionally in any parts of Indonesia that is usually closely related to tropical storms. Wind velocities of 45 knots per hour were reported from Rembiga in January 1976, caption from Surabaya in January 1973, and from Ujungpandang in January 1974. Nevertheless, the tropical storms are rare in Indonesia as it is anticipated that these would not develop in land areas within the latitude of less than 70o. Despite this anticipation, however, reports of tropical storms were recorded at Banda area in April 1778, at the islands of Rote and Timor in April 1843, and the giant ones at Timor in 1918 and on the island of Flores in 1973 and 1993.

1.2.Economy

Indonesian economy is predicted to be better in 2007 than that of 2006. The prediction is based on the fact that during 2006 economic condition was still

colored by domination of negative impacts of fiscal policies resulting on the increase of oil and gas price on 1 October 2005, where the influence continues to be felt along year 2006. In 2007 the buying power of people is predicted to start increasing, although slowly and by phases. Inflation in 2006 reached 6.6%. This condition is clearly in contrast with previous inflation that reached 17.11%. Meanwhile, Rupiah's exchange rate, which was stable at Rp. 9,100/USD level in 2006 if compared to its position in December 2005 - especially approaching economic cabinet reshuffle - where the exchange rate of Rupiah nearly reached Rp.12,000/USD. Added with impressive performance of export in 2006 (exceeded USD 95 billion) and strong reserve of foreign exchange (USD 40 billion) so that IMF loan can be paid, the ammunition of Indonesian economy is quite abundant to face year 2007.

One of economic problems of Indonesia that still need to be improved is the still small number of investment approval and realization, both foreign investment and domestic investment, which remain the biggest problem that may cannot be solved in 2007 yet. Although the interest rate has been lowered gradually from BI rate of 12.75% during December 2005 until April 2006 to single digit level of 9.75% in December 2006, respond of investment have not been appropriate enough. However, in general - based on condition of 2006 and government agendas and strategies - economic prospects of 2007 is predicted to be better.

1.3. Condition of Infrastructure

To support agribusiness development, the government enhances development of infrastructures including transportation, electricity power, energy, telecommunication and informatics, water resources and housing, drinking water and environmental sanitation. In 2005-2006, infrastructures development is mainly focused on maintenance and rehabilitation of public infrastructures to maximally facilitate community's economic activities. In the medium term, along with improved financial capabilities of the central and local governments, the development will be directed toward economic infrastructures development in the potential developing regions, the national food producing centers, the undeveloped regions, and the bordering regions. Along with those development activities, roles of private sector in providing infrastructures are enhanced through lessening monopoly in infrastructures development.

A. Transportation Development

Development of transportation given high priority for example to improve condition of infrastructure and facility quality especially to eliminate backlog of maintenance and rehabilitation.

■ Land Transportation

The Directorate of Land Road Services (Bina Marga) of the Ministry of Public Works has allocated budget



Land transportation facility.



Local transportation.

amounted to Rp 9.8 trillion during fiscal year of 2007 to accelerate development of sophisticated and accountable road and bridges. This effort is made as the people put their hope much on the availability of better roads and bridges that function properly. To improve its performance, the Directorate General of Road Affairs has established Balai Pelaksana Jalan Nasional (National Center of Road Development) in regions. Hopefully, with the existence of those centers regional government will be capable to cooperate in, among others, re-evaluating the status of land clearance in order that the development can run as the plan.

Meanwhile, the policies of 2007 fiscal year comprises giving priority on rehabilitation/maintenance of roads and bridges, maintenance of road condition in order to function properly, coordination between central government, national center of road development, working units, and related governmental offices, improvement of professional attitude and institutional independency as well as human resources in road development, improvement of accountability of activities which is based on well-ordered administration system, as well as improvement of capability and skill of human resources by assigning them to field. During 2007 program, there are 55-multi years package with total budget amounting to Rp 1,385 trillions. Relating to this, acceleration of application of road development can be carried out by keeping the consistency acceleration of multi year contract in the field application. Therefore, contractors and consultants must be treated as professional working partners. Some straits in Indonesia will enable to acceler-



Activity in seaport.

ate agribusiness products transportation if they are connected with bridges among the corresponding islands. There are inter island bridges to be established, namely in Madura, Bali, and Sunda Straits.

■ Sea Transportation

Indonesia has 2,061 ports, among others have a container facility such as in Belawan, Batam, Tanjung Priok, Tanjung Emas, Tanjung Perak and Makassar. Other strategic ports in Indonesia are Dumai, Lhokseumawe, Pekanbaru, Panjang, Palembang, Teluk Bayur, Pontianak, Jambi, Banjarmasin, Benoa, Tenau, Sampit, Balikpapan, Samarinda, Bitung, Ambon and Sorong. Some regions built seaports as one of essential infrastructures to boost economic development, including agriculture sector. In the framework of regional autonomy, currently the regions are authorized to manage seaports in their own regions. Some regional governments plan to have their own ships in order to accelerate trade and it is cheaper than they have to rent. According to PT PAL (2004), some regencies have ordered ships to this company, namely Jepara, Cilegon, and Merauke Regencies.

■ Air Transportation

Among 150 airports in Indonesia, there are international airports including Soekarno-Hatta and Halim Perdanakusuma in Jakarta, Husein Sastranegara in Bandung, Adisumarmo in Surakarta, Juanda in Surabaya, Ngurah Rai in Bali, Sultan Iskandarmuda in Banda Aceh, Polonia in Medan, Hang Nadim in Batam, Sultan Syarif Kasim II in Pekanbaru, Tabing in Padang, Kijang in Tanjung Pinang, Supadio in Pontianak,

Sepinggan in Balikpapan, Hasanuddin in Makassar, Sam Ratulangi in Manado, Frans Kaisiepo in Biak, and Selaparang in Mataram. Among domestic airports are Sultan Mahmud Badaruddin II in Palembang, Adisutjipto in Yogyakarta, Syamsudin Noor in Banjarmasin, Ahmad Yani in Semarang and Pattimura in Ambon. Some regional governments establish airports or improve and extend the runways such that the bigger airplanes could land. For example, Government of North Tapanuli Regency established Silangit Airport in Siborong-borong with runway of 2,350 meters that is feasible for landing of Boeing 737.

B. Power Generating Development

For the infrastructure, the availability of electricity is essential for sustaining state economy development. State Electricity Company as a state enterprise dealing with electricity business has a responsibility as a Right Holder of electricity industry (PKUK) for providing electricity for public use. Until the year of 2004, total capacity of the installed power is as big as 25,320 MW consisting of state electricity company as a number of 22,073 MW and private electricity as a number of 3,247 MW mostly installed in Java - Bali as a number of 2,950 MW.

In line with the increase of electricity demand caused by population growth and investment development either in industrial or in other sector, the total capacity of the installed power in Java - Bali or away Java- Bali is going to be continuously developed.

In accordance with government act, Government Decree No. 10/1989 about Supply and Useful of Electric Energy and President Decree No. 37/1992 about Business of Electric Energy Supply by Private, that give opportunity for the private in terms of electricity supply, the role of private sector is still necessarily expected in planning and developing power plants.

In order to fulfill electricity demand as long as the period of 2005-2009, it is projected that a 13,272 MW additional power capacity will be installed consisting of 7,932 MW autonomously developed by the state electricity company, and 5,340 MW given to the private. The development will mostly be the gas or coal powered generator, one of which is for Java - Bali system known soon as PLTGU (Gas or Coal powered generator) Cilegon with as much as 500 MW (in 2005) and 230 MW (in 2006), and PLTGU Muara Tawar with 145 MW (in 2006) and 225 MW (in 2007), while the private electricity generator is such as PLTU (steam powered generator Tanjung Jati B with a capacity of 1,320 MW(in 2006) and PLTU Cilacap with a capacity of 600 MW (in 2006).

Involving the private contribution in providing electricity indicates that the state electricity is still committed to inviting the private investment in Indonesia's electricity business, besides also is determined to be humble and flexible Right Holder of electricity industry. Accordingly, the investment plan in electricity business would still be rising to sustain Indonesia's economy.



Electricity facility.



Seaport.

C. Water Resources

■ Clean Water Supply

Clean water is natural resource needed by all living organisms. Clean water is used for drinking, sanitation, agriculture, industry, towns' development, electricity generating power, fresh water fish culture, transportation, tourism, and many other activities. Clean water existence needs protection to make it useful for human and other living creatures. It indicates that water should be used wisely with taking into account the current and future generation. To sustain use of clean water with required quality, water pollution control is very essential. In connection with water crisis, it is necessary to exploit new springs and its utilization. It is in accordance with progress and increase of human welfare which need more clean water. More clean water is required either for direct need of households or the other indirect needs, such as processing manufactures, irrigation, electricity generating power, among others.

Many attempts could be done to obtain new sources of water. *First*, looking for new sources of water (ground water, lake water, running water, etc). *Second*, processing and freshening sea water or sources of salty water. *Third*, processing and purifying polluted water. *Fourth*, processing and purifying rain water. In addition, it is necessary to take joint actions to overcome worsening water crisis. *First*, complying with the rules of ground water suction according to necessities and not degrading environment. *Second*, limiting all types of pollution directly and indirectly degrading water quality. *Third*, developing bare land as the water absorbing spots. *Fourth*, avoiding forest logging, cementing open land, or constructing buildings on the water absorbing areas.

■ Irrigation Construction

Irrigation system development is highly required especially for agricultural sector development, clean water provision, electricity generating power, etc. Irrigation development in Indonesia toward advanced, strong irrigation system is related with traditional ir-



Irrigation facility.

rigation developed since thousand years ago. Advanced or modern irrigation could appear due to improvement or continuance of the existing tradition and in general it is much affected by local geographical

characteristics and agricultural practice development. Irrigation system in Indonesia is mainly developed for lowland irrigation, even though not all lowland areas get water from the irrigation system. Lowland areas are developed gradually by along with community's abilities to respond feedback coming from production environment. Toward take-off era, irrigation system in Java Island and certain regions outside Java are observed as



Water supply.

more prepared to give better responses to production technology development and more established in supporting crops diversification in irrigated areas. Along with increasing people's income including farmers there will be changes in land utilization according to economic of scale with higher economic value crops.

Irrigation is basically attempts to water crops in terms of wet soil according to requirements for crops' growth and development. Crops will stress and finally die if water is not available sufficiently. Conversely, too much water will make soil too wet and the crops will die. Thus, in modern irrigation is how to control soil vapor such that it is in accordance with crops'

requirement. This concept leads to improved efficiency and effectiveness of irrigation in term of saving-water technology. To facilitate strong irrigation system, the government has established some dams or man-made lakes in Indonesia. One of those constructions is Sutami Dam (Karangkates) with unique feature, namely interconnected with Lahor Dam using a channel. This dam was constructed to control flood water of Kalibrantas River, Electricity Generating Plant using Water Power (PLTA) with potential power of 2 x 3,500 KW, irrigation for 34,000 hectares of lowland areas, fresh water fisheries, and tourism. In addition, Panglima Besar Soedirman Dam in Mrica, Purbalingga, was established to irrigate lowland areas of 4,885 hectares, and also for tourism, freshwater fisheries, clean water provision, and PLTA. Wadas Lintang Dam is the biggest dam in South East Asia and the highest in Indonesia, is used for irrigating lowland areas of 31,634 hectares, PLTA, tourism, and freshwater fisheries. Wonorejo Dam in Tulungagung is used for irrigating 8,000 hectares of lowland, fisheries, and tourism.

Batutegei Dam in Way Sekampung functions as a source of irrigation water for 66,000 hectares of lowland, PLTA, fisheries, and tourism. Sigura-Gura and Tangga Dams in Asahan River is the outlets of Lake Toba in North Sumatra is used for PLTA. Saguling Dam in Bandung Regency is used for PLTA, tourism, and fisheries. Cirata Dam in Purwakarta is utilized for PLTA, tourism, and fisheries. Batu Bulan Dam in Sumbawa is used for irrigated lowland of 5,576 hectares.

D. Industrial Estates

Industrial estates are available in almost all



Activity in a industrial estate.

provinces of Indonesia. The large scale industrial estates are found in Jakarta, West Java (Bekasi, Karawang, Purwakarta), Banten (Tangerang, Serang), Central Java (Semarang, Cilacap), Yogyakarta (Piyungan), East Java (Surabaya, Gresik, Sidoarjo, Pasuruan, Probolinggo), North Sumatera (Medan), West Sumatera (Padang), Lampung, Riau (Batam Island, Bintan Island), South Sulawesi (Makassar) and East Kalimantan (Bontang).

E. Bonded Zones

Bonded Zone means a zone with particular boundaries within which processing of goods and materials, construction designing, engineering activity, sorting, preliminary inspection, final inspection and packing of imported goods and materials from the other areas within Indonesian Custom Territory (Daerah Pabean Indonesia Lainnya/DPIL) are carried out with purpose mainly for export. On the importation of goods and/or material for the production process in Bonded Zone certain facilities can be granted such as postponement of import duties, excise free, value added tax (PPN), sales tax on luxury goods and income tax of article 22 shall not be collected

Foreign Investment (PMA) as well as Domestic Investment (PMDN) Companies, Limited Companies of Non PMA/PMDN and Cooperatives with legal status are able to obtain approval as an Operator of Bonded Zone and Companies Operating in Bonded Zones. Operator of Bonded Zone (Penyelenggara Kawasan Berikat/PKB) shall be a limited company, a cooperative with legal status or a foundation which owns, controls, manages and provides facilities and infrastructure in the interest of other parties in Bonded Zone he operates on the basis of an agreement. Meanwhile, Companies Operating in Bonded Zone (Pengusaha di Dalam Kawasan Berikat/PDKB) shall be limited companies or Cooperatives undertaking a processing of goods and materials in a Bonded Zone. There are 15 Operators of Bonded Zone (PKBs) spread in Jakarta (Cakung, Marunda and Tanjung Priok operated by government), Bogor, Purwakarta, Karawang, Semarang, Pasuruan, Medan, Mojokerto, Bintan Island, Aceh, and Batam Island and 426 Companies Operating in Bonded Zone (PDKBs).

F. Banking, Insurance and Leasing

Bank Indonesia (BI) as an independent state institution is fully autonomous in formulating and implementing each of its task and authority as stipulated in the new Central Bank Act, Law No. 23/1999.



Bank of BNI.

As a central bank, BI has a single objective of attaining and maintaining stability of the rupiah value. In the pursuit of the objective, it is supported by 3 sectors of task which are formulating and implementing monetary policy system, regulating and ensuring a smooth payment system, developing sound banking and credit systems by building and supervising banks. BI does not perform the commercial activities of banks in general, of commercial banks as well as of rural credit banks. Therefore, BI cannot serve saving and checking accounts as well as deposits from the public. In addition the public cannot directly request for credit from BI. Relating to foreign investment, BI plays the following roles:

- a. Issuing a letter of clearance for final draft loan agreement of Foreign Direct Investment (FDI) companies.
- b. Monitoring the FDI accounts.
- c. Ensuring that the capital for FDI projects originates mostly from offshore.
- d. Registering all offshore loans received by FDI companies.

To support business activities in Indonesia, there are foreign banks operating in Indonesia such as ABN AMRO Bank, American Express Bank, Bank of America NA, Citibank NA, Deutsche Bank AG, JP.Morgan Chase Bank, Standard Chartered Bank, The Bangkok Bank Comp. Ltd., The Bank of Tokyo-Mitsubishi Ltd., The Hong Kong and Shanghai Banking Corp.

Besides there are 5 (five) state-owned banks, namely PT. Bank Ekspor Indonesia (Persero), PT.Bank Mandiri (Persero), PT.Bank Negara Indonesia (Persero), Tbk., PT. Bank Rakyat Indonesia (Persero), and PT.Bank Tabungan Negara (Persero). In addition,



Bank of BCA.

there are 36 (thirty six) Devisa National Private Banks, 40 (forty) Non Devisa National Private Banks, 26 (twenty six) Region Development Banks, and 24 (twenty four) Joint Ventures Banks. Other financial institutions include 176 insurance companies both international and national, and 145 leasing companies in Indonesia.

1.4. Investment Performance

The following data on investment in the report submitted by Investment Coordinating Board (BKPM) does not reflect the whole investment activities in Indonesia as the data does not include investment in mining and energy, banking, non bank financial institution, insurance, leasing, mining under working contracts (KK), Working Agreement of Coal Mining Exploitation (PKP2), investment where the permit is issued by technical offices/ sectors, portfolio investment and household investment.

Domestic investment approved by BKPM during 1 January until 30 November 2006, were 192 projects with investment plan value of Rp. 157,528.3 billion. There were also 112 approved projects for business expansion of the existing domestic investment with total investment plan of Rp. 26,500.5 billions. This figure shows that beside the interest of domestic investment to make new investment, the domestic investment companies currently operating in Indonesia can also develop and expand their business.

Foreign Investment approved by BKPM during period of 1 January until 30 November 2006 were as many as 1,382 projects with total value of investment plan of US\$. 13,212.2 millions. There were 383

Comparison of Approval of Domestic Investment Plan of 2006 and 2005

Kinds of Approval	1 Jan - 30 Nov 2006		1 Jan - 30 Nov 2005		Ratio (%)	
	Project	Value (Rp. Billion)	Project	Value (Rp. Billion)	Project	Value
New Project	169	129,610.4	171	31,447.4	98.8	412.1
Expansion Project	112	26,500.5	111	13,587.0	100.9	195.0
Change of Status	23	1,417.4	25	697.3	92.0	203.3
Total	192	157,528.3	196	45,731.7	98.0	344.5
Employment absorption plan	16,033 workers		104,547 workers		159.8	

Source: BKPM 2007

Note:

- Does not include Data 1 on the approval of Domestic Investment Plan issued by BKPM of June 2005 in fertilizer and organic basic chemical industry which are sourced from fuel oil and earth gas as well as electricity power plant in Papua Province with total investment value of Rp. 162.27 trillion

Comparison of Approval of Foreign Investment Plan of 2006 and 2005

Kinds of Approval	1 Jan - 30 Nov 2006		1 Jan - 30 Nov 2005		Ratio (%)	
	Project	Value (US\$ Million)	Project	Value (US\$ Million)	Project	Value
New Project	1,325	4,019.0	1,326	4,307.1	99.9	93.3
Expansion Project	383	5,315.5	348	5,529.5	110.1	96.1
Change of Status	221	4,554.9	156	1,855.9	141.7	245.4
Total	1,546	13,889.4	1,482	11,692.5	104.3	118.8
Employment Plan	312,977 workers		245,805 workers		127.3	

Source: BKPM 2007

approval of expansion projects of the existing foreign investment companies with total value of investment plan of US\$. 5,315.5 millions. This condition shows that investors are still interested to make new investment in Indonesia, while the existing foreign companies operating in Indonesia can still develop and expand their business in Indonesia.

A. Investment Development in Agriculture

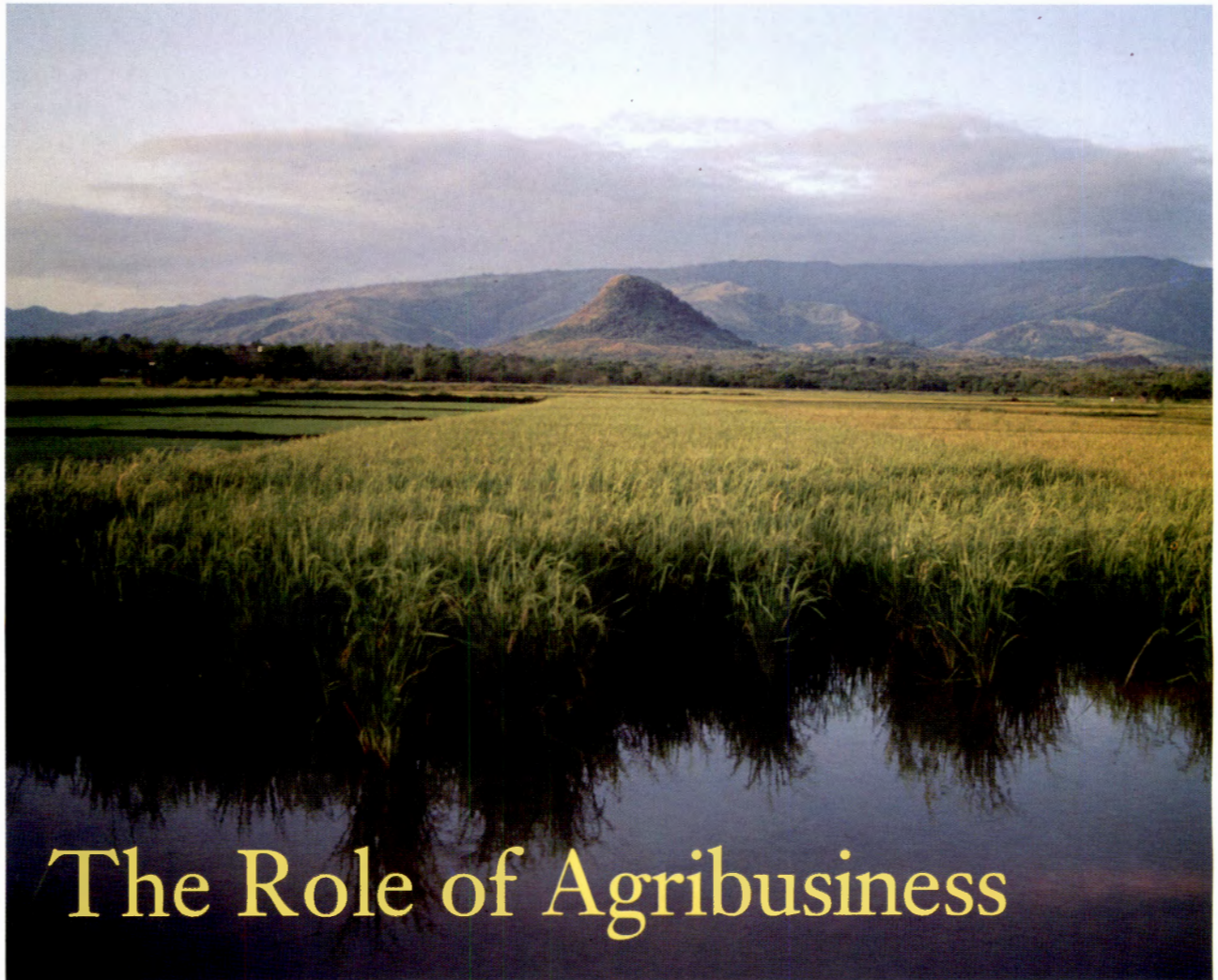
Investment in agriculture sector during 2006 grew rapidly as can be seen from the number of approval of Domestic Investment (PMDN) and Foreign Investment (PMA) that increased than the previous year. Up until August 2006, approval of Domestic Investment increased by 30.6 percent, while for Foreign Investment increased by 9.1 percent if compared to the same period of 2005. Total number of projects of domestic investment and foreign investment approved by the government also increased, each by 38.64 percent and 87.63 percent respectively. This condition shows that policies issued by Department of Agriculture have been capable to create conducive climate for investment in agriculture sector.

During 2004-2006 total value of domestic investment (PMDN) increased more than two fold, from Rp 1.9 trillions to become Rp 4.3 trillions in 2005. The figure, once again, increased to become Rp 9.2



Oil palm processing industry.

trillions in 2006. Similarly, total value of foreign investment (PMA) approved by the government also increased by 127 percent, from US\$ 208.3 millions in 2004 to become US\$ 461.8 millions in 2005 and US\$ 848.7 million in 2006. Meanwhile, based on data from Center for Statistical Board (BPS), trading balance sheet for export of agriculture commodities in 2005 reached US\$ 11.58 billion, gaining surplus of US\$ 6.45 billions. Meanwhile, in 2006 total export value of agriculture products reached US\$ 14.86 billion or increased by 28.30 percent. Consequently, surplus balance also increased to become 38.07 percent to become US\$ 8.90 millions. ■



The Role of Agribusiness

Agribusiness in a system and enterprise is a new approach in agriculture development. It is believed that important role of agribusiness may become alternative of solutions of various economic problems of Indonesia and is capable to lead the country out of long economic crisis. The main problems that become important focuses to solve include poverty, unemployment, low income, economic gap, poor food security, excessively huge foreign debt, the drop of quality of living environment, and the lagged behind regional economy.

In overcoming those economic problems, strategies to be adopted must have specific attributes, namely: The First, it must have vast coverage of economic problem solving at such so that once the strategy is implemented, it will solve most of economic problems. The Second, it does not recommend to use too much external funding (foreign debt and import). Third, it does not necessary to start from zero point, rather, it could utilize previous achievement of development at such so that, beside it will not give doubtness to the people, previous achievement of development can still be utilized. Fourth, it must be capable to bring Indonesian economic into a better condition that is capable to become interdependency economy, not dependence economy to other countries.

Development strategy that match with the above characteristics is *Agribusiness Led Development*, that is an economic development that integrates overall agricultural development strategy (estate crops, livestock, fishery and forestry) with upstream and

downstream agricultural industry development including their related service sector. The choice of agribusiness is only appropriate due to the important roles of agricultural sector in Indonesia's economy as indicated by significant contribution of this sector in the formation of Gross Domestic Products (GDP).

Characteristic of development of agribusiness system is among others based on utilization of diversity of resources in each region (*domestic resource based*), is accommodative toward diversity of quality of human resources, is not rely on imports and huge foreign debts, utilize domestic as well as export market, and is predicted to be capable to solve most of economic problems. In addition, development strategy of this agribusiness system will phase by phase move from development that rely on natural resources and unskilled human resources (factor driven) to agribusiness development that is generated by capital and more skilled human resources (capital driven), and then to development of agribusiness generated by science and technology, and skilled human resources (innovation driven). With all those characteristics, important roles of agribusiness are believed to be capable to bring Indonesian economy to have competitiveness and to move synergically with the World's economy.

In an effort to develop national economy, a number of fundamental issues that need to be considered are the potential and competitiveness of resources existed, condition of strategic environments, target to be achieved and strategies to be applied to achieve the target. Seen from competitiveness of Indonesia as an agricultural and maritime country, the role of agriculture and agribusiness up until at present, as well as opportunities and challenges in the future, it is no doubt that agribusiness will become the back-



Carrot.

bone of our national economic development. Agribusiness is capable to accommodate the urge that national economy should continually grow and fulfill people-based, sustainable and equal distribution either among individual, or among region altogether. Based on this ideas, development of agribusiness system and ventures is considered - up until at present as the most appropriate approach for economic development in Indonesia.

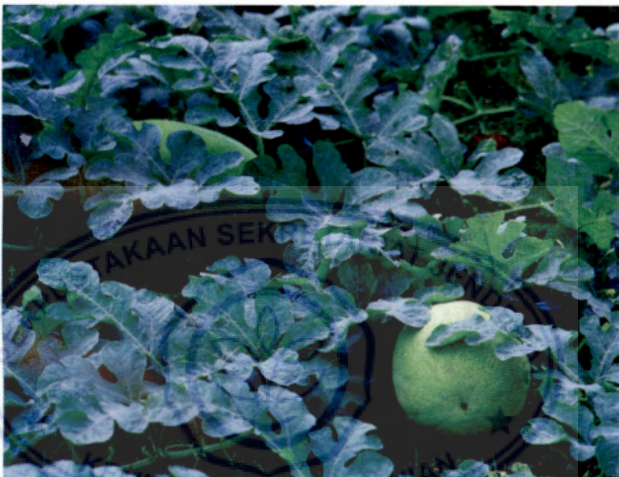
However, development of agribusiness system and ventures that comprises grand strategy need various supporting policies, either macro policies, regional policies, as well as special policies to strengthen each sub system included in agribusiness system. Those policies will surely involve roles and authorities of various institutions or organizations, either governmental, private as well as social organization, so that the operational of development strategy of agribusiness system and ventures must be well coordinated, both horizontally as well as vertically.

2.1.Strategic Position of Agribusiness in Economic Development in Indonesia

Development of agribusiness has strategic position in economic development in Indonesia. This fact can be seen either from constitutional side, theoretical ground, and empirical facts about the urgency of agribusiness sector as prominent sector, as well as its roles in Indonesian economy.

A. Constitutional Obligation and Political Base

Indonesia as a country which is established through UUD 45 Constitutions, should based its devel



Water melon.

The Role of Agribusiness

opment, including in economic field, on the mandate of the constitution. Hence, modern economic which is developed in Indonesia must be in consistent with the objective of the establishment of the Republic of Indonesia. In economic field, Article 33 of 1945 Constitution stipulated that economic system developed in Indonesia is economic democracy, that is people-oriented economic development.

Development of economy should use resources owned or maintained by people. Resources possessed by Indonesian people is human resources (power, idea, time, values and others), and natural resources (land, bio-diversity, tropical agroclimate, and others). Both of the resources are comparative advantages of Indonesia. This means that development of Indonesian economy should be based on utilization of the existing human and natural resources. It is only with the people-oriented economic development that number of people, social and cultural diversity of the people, and natural resources may become subject and capital asset of economic development.

Development of people-oriented economy does not put utilization of capital resources, advanced technology, information technology, and modern management science aside. Capital and technology resources are clearly and must be needed. However, their utilization remain under the framework of utilization of natural resources through utilization of capability of human resources. Similarly, import resources is also clearly needed, especially those



Paddy harvesting.

that can not be produced domestically yet. However, utilization of import resources remain under the framework of efforts to strengthen the capability of domestic human and natural resources.

The economic player in people-oriented economic development is the people themselves, either individually or in form of economic organization like cooperative, small scale industry, medium scale industry, large scale industry and regional government-owned and state-owned enterprises (BUMD/N). Development of economy that places people only as supplement is clearly against the stipulation of constitution. In its implementation, it does not mean that private foreign companies are not allowable to play its roles as national economic player. Participation of foreign private entities is clearly allowable in national economic development, however, it must remain under the framework of strengthening people economic organization, not replacing and expelling them away.

National economic development is dedicated mostly for the welfare of people in general. This is immediate consequence of people-oriented economic development, namely through income of production factors owned by people and the profit of economic player (economic organization). If development is carried out by using domestic resources under the framework of people-oriented economic organization, then the outcome of development in form of salary, wage, royalty, rent, and profit will be automatically accrued to the people of Indonesia.

Politically those above stipulation of the constitution is stressed further in the State Guidelines (GBHN) of 1999-2004 that stipulates direction of national



Vegetable products.



Economic development as follows: (1) To develop global-oriented economy in accordance with advancement of technology by developing competitive advantages that is based on comparative advantages as maritime and agrarian country in accordance with competency and competitive products in each region (especially products of agriculture in broader sense); (2) To empower small, medium scale businessmen as well as cooperative in order to become more efficient, productive, and competitive by creating conducive business climate and business opportunities as vast as possible; (3) To develop food security system which is based on diversity of foodstuff resources, institution, and local culture; (4) To improve mastery, development, and utilization of science and technology, including local technology in business ventures, especially small, middle industries and cooperative to improve product competitiveness which is based on local resources; (5) To accelerate effective and strong regional economic development by empowering players and potential or regional economy so that equal distribution of economic growth will occur in accordance with application of regional autonomy; and (6) To accelerate rural development in order to empower people, especially farmers and fishermen, through supply of infrastructure, development of agribusiness, small industry and handicraft industry of the people.

Considering that resources maintained by people in each region are agribusiness resources (human resources, land, water, bio-diversity and others), and almost 90% of the resources comprises small, medium scales industry, and cooperative, which are all within agribusiness scope, development of national

economy which is in accordance with the stipulation of the constitution is agribusiness system development.

B. Theoretical Ground and the Supporting Emphy-rical Facts

The prominent sector of the economy is characterized by its strength and high capability to produce products, so that it can be considered as a reliable income to depend on, and can be expected to develop further to realize national objective. The prominent sector is the backbone and accelerator of the national economy so that it can also be said as the key sector or a leading sector of national economy. Therefore, reliable sector is a reflection of an economic structure that can also be considered as an identifying aspects or a characteristic of an economy.

In general, a prerequisite in order that a sector can be attributed as a prominent sector of national economy is that the sector has dominant contribution, either directly or indirectly in the attainment of objective of national economic development.

Agribusiness sector clearly has dominant roles, especially in establishing food security, in poverty alleviation, in creating employment, and in equity distribution of income. All of them are important objectives of economic developments, even more important than their roles to contribute to the growth of GDP where, at present, contribution of agribusiness sector in GDP is no longer dominant and tend to slow down.

In detail, there are 5 requirements in order that a sector can be attributed as a prominent sector in national economy, namely resilient, progressive,



Green apple.

The Role of Agribusiness

huge in size, articulative and responsive. Those five special requirements must be fulfilled in order that a sector can be said as prominent sector of national economy. Development of agribusiness is strongly believed to be capable to fulfill such requirements, so that it is expected to be capable to ensure sustainability of national economic development. Development of agribusiness as a prominent sector is expected to be capable to reach economic growth, equity and environmental sustainability in inclusive and integrative fashion.



Medicine herb.

roles can also be seen from its contribution in regional development, in national food security, and in living environment sustainability.

A. The Role in GDP Formation

Agribusiness sector is the fairly huge contributor of value added in national economy. Around 13.1% of the total added value accumulated in the national economy during 2005 was resulted from agribusiness sector. In 2006 contribution of agribusiness sector in added value creation dropped to become 12.9% of the total added value accumulated. This means that agribusiness sector is the third largest contributor in the formation of total added value (GDP total), after processing industry (28,1%) and trading, hotel and restaurant sector (14,9%). During period of 2005-2006, based on constant price of 2000, the GDP of agriculture sector increased to as much as 3.00% per year, namely from Rp 253,7 trillion to become Rp 261.3 trillion. Mean

2.2.The Role of Agribusiness in the National Economy

Contribution of agribusiness sector to the national economy can be measured by various indicator, among others, its contribution to the GDP, to create employment, and in international trade. Besides, its



Various fruit products.

while, as a whole, the economic sector increased as high as 5.5% per year.

B. The Role of Agribusiness in Absorption of Employment

Contribution of agribusiness sector in the absorption of employment during 2006 reached 42.3 million of people or account for about 44.5% of total number of national man power. This means that development of agribusiness is still the effective choice to improve employment and business opportunities in Indonesia.

C. The Role of Agribusiness in Trading Sector

In 2006, total export value of agriculture sector, including fishery and forestry sector reached USD 3.4 billions or grew by around 18.2 percent if compared to those of 2005 that reached USD 2.6 billion at the same period. Meanwhile, contribution of export of agriculture products for total non-oil and gas export reached around 3.4 percent. A number of commodities that became the source of the export was resulted from plantation and fishery sector. Empirical evidence of the contribution of agribusiness to Indonesian economy above reveals that any economic development having the objective of improving economic growth, expanding business and employment opportunities and improving foreign exchange earning of the country in Indonesia can be reasonably reached through development of agribusiness.

D. The Role of Agribusiness in Regional Economic Development

The main objective of the adoption of regional autonomy program is to accelerate regional economic

development. The most efficient and effective way to develop regional economy is through utilization of various economic resources existed in each region. Currently, economic resources possessed by each region and are ready to be utilized for regional economic development is agribusiness resources such as natural resources (land, water, biodiversity, agro-climate), human resources in agribusiness sector, technological resources in agribusiness field, and others. Therefore, the most rational choice for regional economic development is through acceleration of agribusiness development. In other words, development of agribusiness is made to become a pillar of economic development of the regions.

Development of agribusiness as a regional economic development also become more relevant considering that, at this moment, agribusiness sector is the largest contributor to the economic structure of each region. Agribusiness sector is the largest contributor in regional GRDP and export. Similarly, agribusiness sector has the largest share in regional employment, and in providing business opportunities. Therefore, through acceleration of modernization in agribusiness field in each region will directly modernize regional economy and will be capable to solve most of regional economic problems.

E. The Role of Agribusiness in Food Security

The course of history of the nation of Indonesia shows that food security has close relation to socio-security, economic stability, political and security stability or to national security as a whole. The weakness in establishing food security will easily shake social security, economic security, and political and national security. Besides, food security in terms of food accessibility is also closely related with the efforts to improve quality of Indonesian human resources. Without support from adequate and good quality of food, no quality human resources will be produced. Hence, developing strong food security system is compulsory prerequisite in the national development.

In the development of food security, procurement of food can be carried out through import. However, as the case of Indonesia where the number of population is quite huge, and its socio-cultural condition is quite vast diversified, relying supply of food stuff from international will bear high risk. Beside requiring large amount



Protected forest area.

The Role of Agribusiness

of foreign currencies, we will also have to face the thin market of world's main food where the food stuff traded in international market is very small (around 10-20% of the total world's production). Therefore, there is no other choice for Indonesia but developing food security system which is deep rooted on the diversity of food resources, local institution and culture.

Domestic production of food has supported the larger part of supply of various national food. A number of main food commodities like rice and corn has been capable to adequately fulfill demand of the people, while sugar and soybean are still in deficit condition. Even, supply of cassava have been highly surplus. Equilibrium between food production and demand can be used to measure degree of self-sufficiency of food.

Development of agribusiness has significant roles in supporting the realization of a strong food security system. Through development of agribusiness which is based on bio diversity of each region, and improvement of welfare of people on consumption pattern and nutrient balance that considers local culture and institutions, a strong *built-in* food security will be established.

F. The Role of Agribusiness to Sustain Living Environment

At present, concern of the drop of quality of living environment is no longer a local or national issue, but it has become the concern of international

society. The drop of quality of living environment at present has come to an alarming level that threat continuity of human life on earth. Therefore, concerted international, regional, and local efforts to control the worsening quality of living environment are deemed required.

Development of agribusiness has the potential to prevent and to improve the worsening quality of living environment in the following ways: *First*, development of agribusiness will open vast economic opportunities in each region (living space). Those economic opportunities will affect on the distribution of population and their activities. Hence, population pressure in a certain space can be lessened; *Second*, the existing agribusiness development is basically utilized bio-diversity, is capable to resist bio-diversity; *Third*, Development of agribusiness which, among others, utilizes the growth of diversity of plant, basically serves as "carbon plant" which is very effective to reduce emission of carbon to the atmosphere, one of the main causes of global heating; *Fourth*, development of agribusiness will produce bio-degradable products that can be naturally dispersed. These bio-degradable agribusiness products will be capable to reduce application of non-biodegradable petrochemical products; and *Fifth*, development of agribusiness that moves from *factor-driven* to *capital driven* and then to *innovation-driven* in producing added value will be capable to reduce pressures of natural resources and living environments.

Planners of agriculture development have been capable to acquire strategy to create and to apply various environment-friendly agriculture technology. Various kinds of environment-friendly agricultural technology have been available and ready to be applied in the field, are, among others: (a) Soil conservation-based farming system which covers terrace making, managing organic matters, alley cropping, rehabilitation of land using cover crops, where agriculture commodities serves as a part of sub system; (b) Low input sustainable agriculture system, that is a system carried out through efficiency of usage of easy to disappear fertilizer (nitrogen) and application of green manure; and (c) Agroforestry, namely application of erosion control, preservation of biodiversity, and conservation of organic carbon, and restoration of nutrient balance. ■



Red apple.



Problems and Challenges of Development of Agribusiness and Agribusiness Enterprises System

3.1. The Weakness of Development of Agribusiness System in the Past

Development of agribusiness in the past had three basic weaknesses, the root of most agribusiness weaknesses existed so far. The fundamental weaknesses are: *First*, Development of agribusiness in the past focused more on the development of on-farm agribusiness with production improvement as the main target. Almost all programs and development of agribusiness in the past are aimed at developing on-farm agribusiness. On the other hand, upstream agribusiness industry, namely industry that produce capital goods like seedling industry, agrochemical industry, agro-automotive industry) and downstream agribusiness industry-industry that processes and markets agribusiness products were outside the focus of agribusiness development. Inadequate availability of capital goods needed by farming enterprises resulting on its relatively low productivity. As the consequences, production of agribusiness in Indonesia is very prone to the change of climate and economic condition.

Meanwhile, the slow development of processing industry relating to production

farming enterprises affects on the market absorption of farming products either because production of the farming enterprises does not suit the market demand or because market information was not transformed to farming enterprises. As the result, excessive production or shortage production of certain commodities in certain period occurred oftenly. The lack of attention on the development of downstream industry also weakened capability to penetrate agribusiness market in Indonesia. Although Indonesia was capable to become one of largest producers of various commodities in the world like palm oil, coconut oil, natural rubber, cocoa and others, however, those products did not have bargaining position in international market. As a whole the above issues result on the weakness of competitiveness of Indonesian agribusiness.

Relating to development of agribusiness that focused on farming enterprises, this condition also restrict development of economic organization of farmers. Farmer organization such as farmers cooperative were generally operated on farming enterprises and less developed to handle mainstream and downstream agribusiness industry. Almost all of the existing processing industry of agribusiness products and agribusiness mainstream industry did not involve economic organization of farmers. As the result, in input market, farmers had to face monopolistic power, while in output market of farming enterprises, farmers had to face monopsonitis power. This structure caused farmers maintains only market chain having small added value and bearing high risk, namely on



Plant of dragon fruit.

farm. Hence, income of farmers remained low.

Second, agribusiness development approach applied in the past was very centralistic and top-down. Planning process of agribusiness development in the past is carried out through centralized model, less involving people participation in regions, applied nationally and largely used formal governmental institutions as the channel for its development program. The long lasting centralistic and top down development approach had caused on various consequences that weaken development of agribusiness itself, namely: (1) Creativity of people, especially farmers, was less developed and tended to grow dependency attitude on government aids; (2) Creativity and wisdom of local institution did not well developed, and even many disappeared; (3) Agribusiness development programs became very inefficient and ineffective as such approach need relatively big organization and governmental bureaucracy cost; and (4) Many of agribusiness development program which was designed and applied nationally were not suitable with local condition of each region. As the result, commodities/products that have comparative advantage in each region did not developed and even moved aside by commodities appointed from the top.

Third, Agribusiness development in the past was not appropriately supported by conducive macro economic policies. Monetary policies (such as interest rate of credit) and fiscal policies (such as allocation of budget for agribusiness



Tea plantation area.

sector) in the past were not supportive enough to agribusiness sector. Trade policy that combined import tariff, or export tax with overvalued rupiah exchange rate tended to have negative impact on agribusiness development and positive effect on non-agribusiness sector and import. In general, protection level of industry is 10 times larger than agribusiness protection. As the result, the exchange barter value of agribusiness for industry dropped from year to year. As the exchange barter value can become one of reflection of relative, then the drop of the exchange barter value reflects that profit from investment in agribusiness field was only a half of profit of investment in industry. Hence, new investors are reluctant to involve their investment in agribusiness sector. On the other hand, investment flows largely to non agribusiness sectors that makes conversion of land was easy to occur, and agribusiness itself come to the state of capital drain and brain drain of human resources.

The lower relative advantages also influenced credit allocation from banking industries to agribusiness sector. This condition was also worsened further by branch banking system of out banking industry where the plan of credit scheme less accommodating characteristic of agribusiness in regional level. As the result, allocation of credit distributed to agribusiness ranged only about 10-20 of the total credit distributed by bank. This condition slowed capital accumulation of agribusiness down that further resulted on slow improvement of productivity. Therefore, to support agribusiness development in the future, neutral economic-either between domestic sectors or between countries is deemed required.

3.2.Challenges of Development of Agribusiness System and Enterprises

In facing the future, agribusiness development in Indonesia has to face some challenges resulting from changes occurred in international environment or in domestic environment.

A. The Changes of International Environment

Liberalization of world trade that occurs today and will take in the future is among challenges to be faced by development of agribusiness in the future. Commitments materialized in WTO/GATT to lower down forms of protections (either tariffs and non tariffs protection of trading of agribusiness products provide opportunities and challenges altogether. Coun-



Cashew nut.

tries that have been capable to improve their competitiveness will have opportunities to enlarge their market share, either in international or in domestic market place. On the other hand, countries which do not have ability to improve their competitiveness will be put aside by their competitors. Therefore, to face the trade liberalization, there is no other choice for Indonesia except accelerating improvement of competitiveness. Competitiveness can be defined from demand side and from supply side.

From the demand side, capability to compete will infer that agribusiness products sold must be the ones which match with attributes required by consumers or products which consumers perceive to have high value (*consumer's value perception*). Relating to this phenomenon, there have been a number of changes of values on consumers that influence behaviour in



Dragon fruit.

buying products of agribusiness. The changes are as follow:

First, The improving awareness of consumers on the importance of relation between health and fitness and food consumption has strengthen demand from consumers of nutritional content of healthy and safety food that support body fitness. **Second**, The change of life style of the society has changed consumption pattern and trend of agribusiness products which are not only have physiological dimension but has widened to psychological amenity dimensions. These changes has resulted on the increasing demand for diversity of products and satisfaction. **Third**, The growing awareness of international society of the relation between preservation of living environment with people's welfare on earth planet has encouraged inclusion of environmental aspects in economic decision making. Any agribusiness products where during their production process and or during their consumption process cause the drop of quality of living environment (water, soil, air) will be considered as inferior products. On the other hand, products where during their production or consumption processes are capable to improve the quality of living environment will be considered as superior products, and **Fourth**, the improving awareness of international society for human rights as one of common global value which is also taken into consideration in any economic decision. Agribusiness products which are directly or indirectly violate human rights in their production process will be boycotted in international market.

All of four changes above have shifted consumer behaviour in evaluating products they will purchase. In the past consumer only evaluated a product from its main attribute, namely its type and its price, but today - and evenmore in the future, consumers demands more detailed attribute, namely (1). Safety attribute of products; (2) Nutritional attribute of products; (3) value attributes of products; (4) Packaging attribute of products; (5) Eco-label attribute of the products; and (6) Humanistic attribute of the products. Those attributes have been institution-



Red chilly.

alized internationally (for example sanitary *sanitary* and *phytosanitary* attributes set by WTO) or individually by countries (become a quality standard of agribusiness products in each country. Meanwhile, from the supply side, capability to compete of agribusiness product relates to capability to respond efficiently the changes of product attributes required by consumers. The capability to respond involves two main issues.

First, vertical integration of commodities produced by agribusiness system in a product line. Attribute of an agribusiness final product is a cumulative result of all agribusiness system from upstream to downstream level. Therefore, vertical integration management of agribusiness system that ensure transmission of market information perfectly and quickly from mainstream to down-

stream level will minimize double margin and determine accuracy and speed to respond market changes.

Second, Source of power of agribusiness system and enterprise to respon market changes. To give respond to product attributes required by consumers, agribusiness system can not only rely on natural power and uneducated human resources (*factor driven*). Market changes can only be encountered with the power of capital goods and more educated human resources (*capital driven*) and rely on science and technology and skilled human resources (*innovation driven*).

The above issueas are challenges of agribusiness development in facing basic and rapid market changes.



Orange.

Management of agribusiness development have to be capable to develop comprehensive and integrative product line as well as to make skilled human resources, capital goods and innovation of technology as sources of productivity improvement, added value altogether as the power to respond market changes.

B. Changes in Domestic Environment

First, within the context of application of regional autonomy in Indonesia, several important changes will occur. In the past, the role of the government in agribusiness development was very dominant, today the role have shifted to become a facilitator, a stimulator or a promotor of agribusiness development. Development of agribusiness in regional autonomy era will rely more on creativity of people in each region. Besides, if in the past the role of central government was more dominant than the role of regional government, the application of regional autonomy will expand the authority of regional government. The central government will only handle aspects of agribusiness development which the region

cannot handle effectively and efficiently or only handle aspects of agribusiness development that involve the interest of some regions or national interest. In addition, today's era requires more dominant roles of people than the roles of the government.

The above changes bring about important implication in management of agribusiness development, namely: (1) Development of agribusiness will be determined by economic actors, namely agribusiness enterprises that ranges from household (farmer) enterprise, small-medium scale enterprises, cooperative, and large enterprises. Therefore, the government-both regional and central government-need to facilitate development of agribusiness enterprises, especially household enterprises, small-medium scale enterprises and cooperative; (2) The central government must be capable to empower regional government in managing agribusiness development, and (3) The capability of the government in orchestrating all potential of agribusiness development need to be improved so that program synchronization-either type, spatial, as well as time can be realized to encourage creativity of agribusiness players.

Second Considering that, up until today, the largest group of the society is farmer group which have so far less capability in economic field, development of agribusiness in the future must be focused on efforts to empower farmers and their economic organization. Considering that the scale of enterprise managed by farmers are generally small ones, it is impossible to rely on small piece of land to increase the income of farmers. Therefore, if possible, effort to re-distribute land and to prevent fragmentation need to be made. Other alternative effort is that improvement of farmer's income need to be shifted from expansion of land to productivity of land either through utilization of capital goods (capital driven) or through innovation of technology (*innovation driven*). In addition, economic organization of farmers need to be developed to be capable to take part in agribusiness mainstream and downstream industry so that added value existed in agribusiness mainstream and downstream industry can also be enjoyed by farmers who, individually, maintain on-farm enterprises. Such development of farmers organization can also strengthen *bargaining power* of farmers in input as well as in output market of agribusiness products. ■



Papaya.

Vision, Mission and Objective of Development of Agribusiness System and Enterprises

the previous one. Hence, development of agribusiness system and enterprises is aimed at utilizing comparative advantage of Indonesia to become competitive advantage.

4.2. Development of Agribusiness Enterprise

Agribusiness system can not develop in the absence of supports business enterprises. They are the businessmen that design, engineer, and carry out the agribusiness process itself, from marketing process to production process. Therefore, the government must encourage development of agribusiness enterprises. The enterprises refers to in this case household-scale enterprise such as household farming enterprises, home-industry, cooperative, group enterprise, small scale enterprises, medium scale enterprises, as well as large-scale enterprises that involve in upstream, on-farm, as well as in downstream agribusiness system. Development of agribusiness enterprises is then translated as improvement of management quantity and quality, and capability to run enterprises independently by utilizing market opportunities. In the future, agribusiness enterprises will play dominant roles.



Durian fruit.

4.3. Direction of Development of Agribusiness System and Enterprise

Agribusiness system and enterprises developed in the future is a strong one having the following four characteristics, namely (i) having competitiveness (ii) people-oriented, (iii) sustainable, and (iv) decentralized.

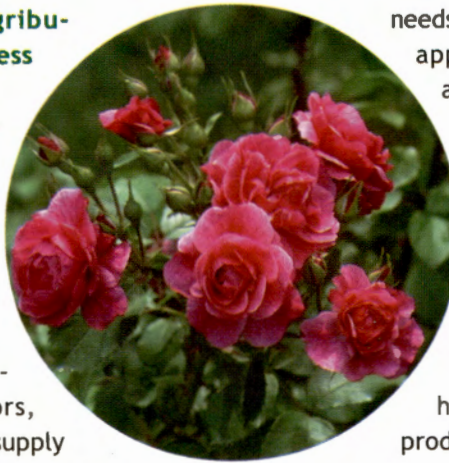


Tomato.

A. Developing Competitive Agribusiness System and Agribusiness Enterprise

Competitiveness is characterized by level of efficiency, quality, price, and production cost, as well as capability to penetrate market and expand market share and provide professional services. Developing system and enterprise that maintain competitiveness is influenced by two strategic factors, namely (i) Demand side, and (ii) supply side. From demand side, wide market opportunities are open as the result of globalization. Opportunities resulted from the openness of market must be capable to be translated into development of market driven agribusiness development. The market changes quickly, demanding products that relates to processed and quality products that also need equally quick product development. Such rapid market changes, either export or domestic market must be appropriately explored in order that producers are capable to adjust their products to market trend. Paradigm of product orientation that have been long established must be shifted to market orientation to produce products demanded by market (from *what you can produce* to *produce what you can market* model).

From supply side, agribusinesses businessmen must be capable to produce agribusiness products that capable to compete. The shorter Product life cycle



needs product development that requires application of technology. Therefore, agribusiness businessmen must be proactive enough to utilize innovation and technology as sources of competitiveness. In addition, quality products also must be accompanied by competitive price, product continuity, proactive promotion and development of marketing distribution network in order to have high mobility of agribusiness products in rural areas to consumption areas.

To develop competitive agri-business system agribusiness enterprises, there must be breakthrough policies in order that our current system that relies on the abundance of natural resources and uneducated human resources (*factor driven*) must be transformed into a system moved capital strength (*capital-driven*) as soon as possible through acceleration of development and through deepening of processing industry and upstream industry. Further transformation process is development of agribusiness system that is moved by innovation strength (*innovation driven*) through improvement of technology in each agribusiness subsystem in each group of agribusiness, accompanied by capability of human resources to match with the existing development of technology.

In effort to create competitive agribusiness enterprises, policies to encourage the growth of



Paddy area.

independent businessmen who do not rely themselves to the government must be made. The government needs to create conducive business climate and provide management training to encourage the growth of strong agribusiness enterprises. Through such phase-by-phase transformation process, contents of capital, technology, innovation, and quality of human resources will become characteristic of agribusiness system in the future that capable to compete in global market.

B. Deceloping People-oriented Agribusiness System and Agribusiness Enterprises

Peple-oriented system is characterized by the existence of a developing system of productive enterprise that involves wide ranges of people either in terms of business opportunities, employments, as well in obtaining their added value of income. This does not mean that we only focus on the developmen tof small scale and middle scale enterprises but also large scale enterprises through partnership concepts (*Win-Win Innelition*) with small scale and medium scale enterprises and having big multiplier effects. The role of central as well s regional government will be aimed at empowering and facilitating the growth of crativity of people in all regions.

In realizing a people-oriented agribusiness, improvement of capability of human resources and economic organization (like those of household scale organizaiaon, cooperative/groups, small scale enterprise, medium scale enterprise, and their business network become the main focus that the government need to promote. In the past time, farmers - the largest group of Indonesian people - only cultivated

and maintained economic chain that give the smallest added value, namely on-farm sub system. Ranges of chain of agribusiness that give the largest added value - namely upstream and downstream agribusiness susystem never involve farmers. As the result, the income our farmers remain low and their farming ventures can be easily played-down by monopolistic and monopsonistic power existed in upstream and downstream agribusiness subsystem. Therefore, in the future, the government need to empower, to encourage, and to facilitate, the growth of people's creativity in all regions to develop their economic organization and their business network to take part in handling economic activities in upstream and downstream agribusiness subsystem. One of the ways is by giving opportunities (for example providing credit scheme) to small and medium scale enterprises and cooperative to purchase shares of state-owned enterprises in agribusiness sector that have went public or will go public.

Participation of private foreign investment company in the development of agribusiness system is placed in the framework of strengthening people economic organization, not replacing or putting people economic organization away. Therefore, joint opration or joint venture scheme between small-medium scale enterprises and cooperative and Foreign Investment Company in agribusiness system need to be developed.

C. Developing Sustainable Agribusiness System and Agribusiness Enterprise

Sustainable can be defined as capability to improve greater capacity of agribusiness resources from

time to time that will, in turn, give more welfare to the people economically, socially and environmentally. As there is a strong relation of interest among the players - among others including the consumers - in agribusiness sytem and agribusiness enterprises, hence the distribution of economic incentives and benefits among agribusiness players comprises the mian factor in keeping the sustainability of agri-business system and agribusiness enterprises.

Developing sustainable agribusiness system and agribusiness enterprises has wider spectrum of dimension in term of organization, institutions, economic, technology and ecology. Organization and institutions, either in economic field or in man



Water melon.



Sweet orange.



Various fruit products.

agement of development must be developed by creating hybridization of local-traditional organization and institution with modern organization and institution so that a system which has strong root in local culture but accommodative enough toward advancement of era will be built.

Economy which is developed through agribusiness system and agribusiness enterprise model is a system which has a strong root in the diversity of resources existed in each region, with economic player who does not only sees short term interest (myopic) but also sees long term interest. Therefore, incentives in developing innovation of technology must be continually given to become the source of sustainable growth. Development of technology in agribusiness system - from upstream until downstream industry need to be directed to environmental-friendly technology (*green industry*) in the effort to create environmental-friendly industry. Hence, the whole economic activities being developed will be heading to an economic system that accommodate environment preservation (*green economy*).

D. Developing Decentralistic Agribusiness System and Agribusiness Enterprises

Decentralization refers that economic activities is defined by the people as the player in accordance with condition of their regions, based on comparative advantages and aspiration of the local people. There-

fore, governmental service system, supporting system, and empowerment of people will have local and diversified characteristics and are carried out by the local area. Hence, naturally development of agribusiness system is basically development of regional economy. This condition is in accordance with the essential of regional autonomy, namely carrying out decentralization and equal distribution of fair development.

In the framework of empowerment of economic organization of people as the main player of agribusiness system, division of tasks and responsibility of regional government (province and regency/city) need to be made. Tasks and responsibilities of central government will be focused on four main issues, they are : (1) To empower regional offices in order to be capable to manage development of agribusiness system and agribusiness enterprises in their respective regions; (2) To arrange development of agribusiness system among region (provinces) in order to be capable to run synergically and harmoniously; (3) To undertake aspects of development of agribusiness system that involve the interest of a number of regions and to handle aspects of development of agribusiness system that are no longer effective and efficient to be handed over to a region (province), and (4) To handle and to coordinate sectoral economic policies, inter sectors policies, macro economic and trading/international cooperation sector. ■



Policies of Development of Agribusiness System and Agribusiness Enterprise

In order to carry out mission of development of agribusiness enterprise discussed earlier, a number of the following policies need to be carried out.

5.1. Macro Policy

Macro policy refers to in this case is effort to create conducive economic climate for development of agribusiness system and agribusiness enterprises. Policies carried out through macro economic instruments, either monetary or fiscal instrument.

A. Monetary Policy

Monetary instruments such as interest rate, circulated money, and exchange rate can be used as policy instrument to stimulate development of agribusiness system and agribusiness enterprise. By setting low interest and providing special credit for investment or working capital of business unit involving in agribusiness sector, the growth of business unit of agribusiness sector can be speed-up.

Other issues that need to be considered in interest rate and credit policies are equality of credit allocations among upstream agribusiness subsystem, on-farm agribusiness subsystem and downstream agribusiness subsystem at such so the the three subsystems develop equally. Monetary policies that enable availability of capital for agribusiness ventures easily need to be designed.

B. Fiscal Policy

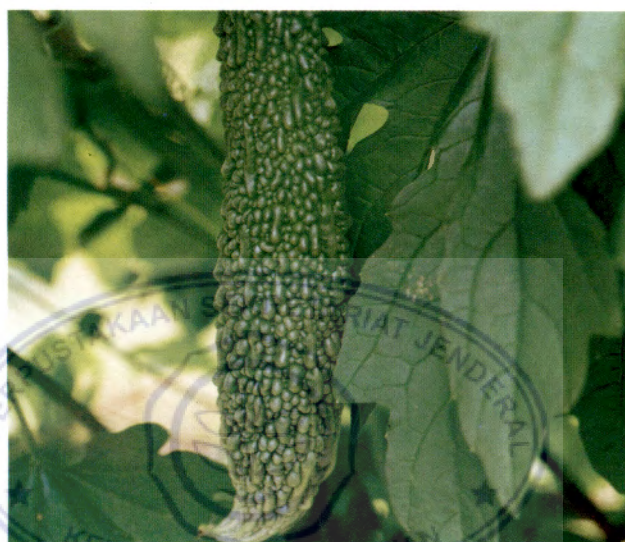
Two important instruments of fiscal policy that the government need to carry out are budget allocation of the government for development and tax treatment. Tax policy to obtain budget of development must be carried out wisely in order to be capable to stimulate business circles involving in agribusiness sector. Similarly, expenditure of government budget (government investment) must be heightened more on development of real sector directly related to development of agribusiness system and agribusiness enterprise.

Beside government investment, there are other investment which may influence agribusiness system and agribusiness enterprises. Those investment include Domestic Investment and Foreign Investment. Indeed the government can not thoroughly regulate Foreign and Domestic Investment as it depend on the related businessmen themselves. However, the government can influence decision of private investment through allocation of government investment on agribusiness and other forms of promotion programs. Allocation of investment of the government need to take development of agribusiness system into con-

sideration. If in a region, take for example Eastern Area of Indonesia where the phase of development of agribusiness system and agribusiness enterprises is still under initial phase (*natural resources and unskill-labor based*), the government investment need to be focused on development of infrastructure such as road, ports, irrigation, and others and in investment in the nursery of local institution and guidance. Allocation for investment of the government to develop the public infrastructure will stimulate inflow of private investment, including foreign investment.

In region where the phase of its agribusiness development has entered into second phase (*capital and skill labor based*), government investment need to be prioritized on development of technology so that it become the source of new growth for agribusiness in the region to enter development phase of agribusiness which is generated by investment/technology. In addition, policies formulated to attract private investment (foreign and domestic investment) in agribusiness system and agribusiness enterprises are required so that inflow of foreign investment in Indonesia really will support development especially agribusiness development. Promotion policies to attract foreign capital to Indonesia without considering which economic sector to invest (as popularly occurred in the past time) need not to be occurred again as it is proved to be will not give benefit to Indonesia.

In supporting development of agribusiness system and agribusiness enterprises, tax policies need to be focused to accelerate transformation of comparative advantage to become competitive advantage. Therefore, tax policies also need to consider charac



Bitter melon or momordica.



Rambutan.

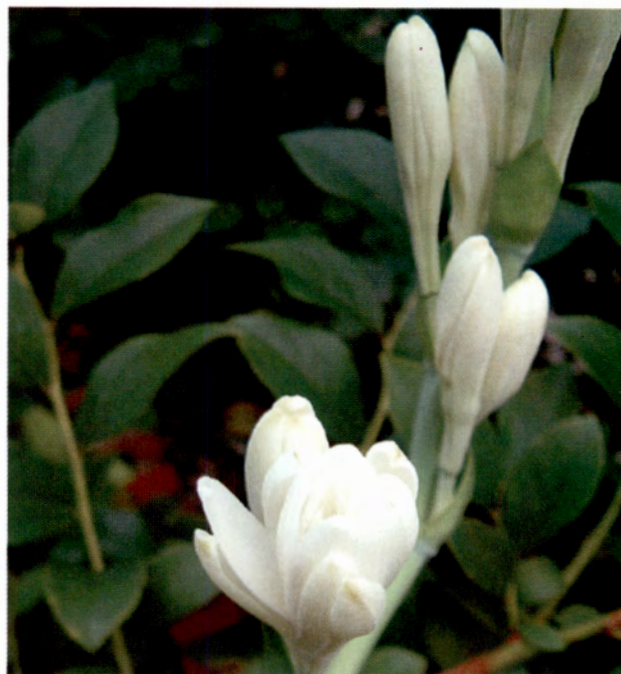
teristic and phases of development of agribusiness system. Tax levies or tax incentive facilities since an investment starts until it reaches break even point (*gestation periode*) for companies developing upstream and downstream agribusiness industries can also become incentives for companies to develop agribusiness.

Further, to accelerate development of agribusiness technology and improvement of human resources, conducive taxation policies need to be made. Agribusiness enterprises that allocate their profit to conduct research and development of technology (R & D) and improvement of skill of their human resources need to be provided with tax incentives or to be calculated as cost (non-taxable profit). With such taxation policies, it is expected that agribusiness enterprises will be stimulated to strengthen their R & D and *Human Resources Development* (HRD).

5.2. Policy of Development of Industry

Policies of the development of industry should be directed more to make sector of industry the backbone of activities of agribusiness system and agribusiness enterprises, especially to strengthen the upstream and downstream of agribusiness system. Relating to this phenomenon, development of industry must be directed more to development of agro-industry that support development of reliable agriculture commodity of most farmers and is capable to fulfill quality standard requirement of the market. Policies to focus choice of agro industry in for development of industry is basic policies that need wisdom of decision maker in order to synchronize the overall development nationally.

To transform comparative advantage to become competitive advantages, the future development of agribusiness system (besides developing various commodities that maintain comparative advantages) need to be encourage to accelerate the deepening of industrial structure either toward downstream or toward upstream. Special characteristic of primary agribusiness products which are different from those of non agriculture products is that their perishable characteristic, have variability in term of quality and quantity, and *bulky*, with high risk of price fluctuation. To improve competitiveness of agriculture products with the above characteristics, development of upstream and downstream industry is deemed required. Furthermore, the deepening of agribusiness structure of industry is needed to strengthen com-



Flower of "Sedap Malam"

petitiveness. If we only rely on primary agriculture commodities, Indonesia will tend to continually acts as price taker in international market.

The deepening of structure of agribusiness industry toward downstream industry is carried out by developing industries that process primary agriculture products to become processed products either intermediate product, semi-finished product and especially final products. Palm oil-based agribusiness need to be deepened to its downstream by developing various kinds of food-oleo industry and various oleo-chemical industry. Downstream industry of natural rubber-based agribusiness need to be deepened by developing rubber processing industry such as automotive tire and rubber goods industry. For herbal medicine crops, the downstream industry is expanded to develop pharmaceutical industry for human being, animal and plants.

The deepening of structure of downstream industry of marine fishery-based agribusiness is carried out by developing processing industry of fish and other marine products. Similarly, other potential agribusiness such as horticulture agribusiness (fruit, vegetable and flower), food crop-based agribusiness, animal husbandry-based agribusiness, forest wood-based agribusiness, and others the deepening of structure of their downstream industry need to be accelerated. The deepening of structure of industry to the downstream industry is carried out by accelerating development of seedling industry/cementing industry

of all potential agribusiness commodities of Indonesia, development of agro-automotive that produce machinery and equipments needed by either on-farm agribusiness subsystem or by downstream agribusiness subsystem (processing industry), as well as development of agro-chemical industry like fertilizer industry, pesticide, and animal medicine/vaccines industry.

Development of seed/seedling and parent stock industry is urgently need to become a source of productivity growth of farming ventures. At present, seed/seedling industry is one of weak chain of agribusiness system. Meanwhile, vast biodiversity existed in Indonesia are asset that can be utilized to develop seed/seedling industry in Indonesia. Development of agro-automotive industry can be carried out by focusing from the existing machinery and basic metal industry, so that the need for machinery and equipments from agribusiness sector can be fulfilled. Similarly in the development of agro chemical industry, where the existing basic chemical industry can be focused on agro chemical industry. Development of bio-fertilizer and bio-pesticide have been developed and they need supports from related parties.

5.3.Trade/Marketing Policy and International Cooperation

Trading/marketing of agribusiness commodities is usually activity which is integrated with processing industry (agro industry). However, such the trend of opinion causes trading/marketing activities to become

only continuation part of activities after the commodities are produced. In fact, trading/marketing has many functions besides selling goods. Function of information about specification and quantity of products demanded by consumers, the price and trend of changes of kinds and consumers choices are among example of the function of marketing of which the information is needed to develop agribusiness system and agribusiness enterprises. Considering that up until at present there are still many weaknesses and distortions in domestic trading/marketing, various policies that are capable to make trading/marketing function run effectively are needed to smoothen the flow of goods and services. Transparency mechanism of price discovery is one of approaches that can be used to improve marketing effectivity. Kinds of market like stock exchange and auction market are among types of market that need to be developed. Surely, improvement of exchange capability of farmers have to become priority of concern in this trading policy.

Position of Indonesia in global trade must be placed in the framework of economic development of Indonesia. Trading instruments like import duty, and export taxation must be designed to strengthen structure of industry - including agroindustry and to stimulate the growth of national agribusiness enterprises. There must be tariff policy to provide appropriate protection for local agribusiness products. In the context of cooperation like AFTA, APEC, the interest of national economy have to become a focus that need to be positioned.

To support agribusiness development, Indonesian



Legume bean

representative office in foreign countries (embassies and consulate general) need to be empowered to support development of agribusiness in Indonesia beside foreign political affairs. Those representative offices have to become center of promotion of agribusiness products of Indonesia in the respective country. Hence, Indonesian representative office overseas will become entry point of Indonesian agribusiness enterprises to enter market of other country. In addition, out representative offices need to proactively act as “market intelligence”, among other carrying out monitoring activities to seek prospective market opportunities and companies that can be invited to partners with Indonesian businessmen in agribusiness industry.

Beside domestic policies, policies of other countries that export their agribusiness products to Indonesia need to be taken care of in management of international trading. Agribusiness products that apply dumping so that the price will become competitive in Indonesian market need to be taken care of. Therefore, anti-dumping law or regulation in Indonesia need to be made as soon as possible.

5.4. Policy on the Development of Infrastructure

Infrastructure is not only needed to support the existing agribusiness enterprises, but it also stimulates the growth of new enterprises needed in the development of agribusiness system and agribusiness enterprises. Development of infrastructure as a part of public services will become more effective if the infrastructure is: (a) match with public need/interest, (b) capable to support development of enterprises carried out by many people, and (c) capable to stimulate the growth of new enterprises or new investment which are capable to accelerate development of regional economy. Relating to development of agribusiness system and agribusiness enterprises, policy of development of infrastructure need to be focused on the development of infrastructure needed by many agribusiness players and are capable to stimulate investor to develop agribusiness enterprises. Infrastructure like irrigation and drainage, road, electricity, farm road, seaport (especially new export

seaport in Eastern Indonesia Area), transportation and telecommunication are all essential infrastructure badly needed in the development of agribusiness system and agribusiness enterprise.

5.5. Policy for Institutional Development

In the development of agribusiness system and agribusiness enterprises, things that need to be developed are not just only unsustainable physical business units, rather, they must be business units which are capable to develop because they are needed as a part of the continuity of agribusiness system and agribusiness enterprise. In other words, various functions and enterprises that have institutional characteristic need to be institutionalized through various policies. Those policies are, among others:



Strawberry.

A. Development of Financial Institution

The need for capital in agribusiness system and agribusiness enterprises will always exist along with the development of the enterprises. The policy of direct credit program in form of solely capital assistance may result on the dependency of agribusiness player on the government's help. Therefore, the oncoming focus of policies need to be directed more on the development of financial institution to become the source of capital for agribusiness enterprises. Special for farmers as the player of agribusiness provision of credit in simple procedures, conducive rate of interest, and simple collateral that farmers can fulfill need to be formulated.

To support development of agribusiness system and agribusiness enterprises, banking industries need to develop credit schemes (kinds, amount and requirements) which are suitable with the need of agribusiness sector in accordance with the phase of development of agribusiness. Therefore, policies that direct banking system to the regions by developing unit banking system to replace current branch banking system need to be formulated. Business enterprises currently carried out by Indonesian people at present largely belong to micro, small, and medium scale enterprises where generally those enterprises have not been capable to be served by banking

institutions (public bank). Therefore, ideal financial institution to develop to overcome the problems is micro financial institution in rural areas. Of course, this effort must be supported by comprehensive policies and strategies of development of micro financial institution.

Kinds of rural micro financial institution (LKM) that can be developed or revitalized (as they might be existed previously) include BPR-BKD (Rural Credit Board/ BKD, Non BKD People Credit Institution / BPR like village Bank, Market Bank and Rural Credit Funding Institution (LDKP). Financial institutions that have been existed regionally such as *lumbung pitih nagari*, Sub-district Credit Body (BKK), People's Small Enterprises Credit (KURK), Sub District Credit Body (LPK), Rural Credit Body (LKP), Sub District Credit Institution (LKK), Simpan Pinjam (saving and lending) cooperative, and saving and Lending Unit need to be resisted and modernized.

B. Development of Research and Development

With the shift of government's roles in the future's process of development, functions of the government in producing technology and various models of institutions of agribusiness system will become more strategi in the development of agribusiness system and enterprises. Indeed, at present research function is still dominated by government-owned research institutions. But in the future, with the limitedness of research resources owned by the government, the involvement of private entities, professional organization, non-governmental organization and farmers organization are deemed required. Therefore,

various policies that stimulate involvement of non-governmental entities in conducting research and development activities that support development of agribusiness system and agribusiness enterprise are needed. Special for technology directed to be adopted by famers, the planning process and undertaking of participative research must become a strategy to produce technology that match with farmer's demand.

The deepening of structure of agribusiness industry must be supported by policies of development of technology. To support the deepening of structure of agribusiness industry. Development of bio-technology need to become one of alternatives. Bio-technology has wide application in the development of agribusiness, namely it is needed in the development of seed/seedling industry, pharmaceutical industry, food and beverage industry, processing industry of biological wastage, and others. In addition, development of agro-automotive technology and agro chemical technology are also equally very important. In other words, to develop agribusiness, those three aspects of technology - namely bio-technology, agro-automotive technology (mechanical), agro-chemical technology - need to get the first priority.

Besides development of bio-technology, application of network culture technology which is aimed at developing quality seed/seedling also needs to be taken care of. This technology is very important as seed/seedling is the blueprint of nutrition attribute of agribusiness products to be produced. For example, mango commodities with sweet, aromatic, rich of vitamin C, rich of natural fiber, demanded by consumers can only be produced if the seed of the mango contains those blue print. In short, development of culture network in upstream agribusiness sub sector is aimed at developing seed/seedling that contain attributes demanded by consumers besides maintaining capability to have high productivity.

On farm agribusiness sub sector, development of technology is focused on the application of *eco-farming* and *organic farming* technology such as *zero/minimum tillage* technology, soil and water conservation technology, technology to eradicate plant and animal disease biologically, and other technologies. Hence, primary commodities produced by on-farm agribusiness sub sector will fulfill the urge of *eco-labeling* and *food safety*. Furthermore, development of processing technology and products of downstream agribusiness sub



Soybean.

sector (downstream agroindustry) is focused on improvement of efficiency, development of diversification of processing technology to produce product diversification, to minimize waste and pollutant, to develop technology of products that accomodate value *attributes* and *package attributes*.

In the effort to accelerate and to sharpen development visions and application of technology needed by this agribusiness sector, it has been the time that today we have “umbrella” of prioritized national Agribusiness Research and Technology. In this case Research and Development Body of Agriculture may take roles as the planner, coordinator and evaluator of technological research and Development activities (*R&D technology management*), while Research Center of Technical Department (as the center of R&D technology) and Reserach Center of Universities act as the implementor. Result of the R&D technology are then disseminated and applied to the direct user by agriculture center/sub center, Technical Application Unit (UPT) of research and by R& D division of agribusiness enterprises. Hence, the whole activities of the existing R&D of technology will be located in a *network* of R&D that support each other in the development of technology needed by national agribusiness sector to face the future challenges.

To support the *network* R&D technology, development of system of information technology that plays its role to communicate market information of agribusiness products to *network* R&D, make the information between component of *network* R&D effective, to communicate result of R&D to the direct users, and to communicate concepts and attributes of agribusiness products to consumers (through advertising activities) are deemed required. In developing this



Paddy seeding.

system of information technology, we can utilize internet technology, mass media and others

C. Development of Human Resources

Development of human resources (HR) is an important aspect that need to be considered in the development of agribusiness system and agribusiness enterprises. This is because in the development of agribusiness system and agribusiness enterprises, HR do not serve merely as production factors, rather more importantly they are the direct player of the development of agribusiness system and agribusiness enterprises. To develop agribusiness system, there are at least three important objectives of the development of agribusiness human resources in Indonesia. The **First** is to develop capability to master technology and science in order to become in the same direction with the development of technology in agribusiness system and agribusiness enterprise; the **Second** is to develop entrepreneurship capability in order to become reliable economic player and the **Third** is to develop teamwork skill. Agribusiness human resources - in this case involve the direct player of agribusiness human resources such as those working in downstream agribusiness sub sector, in *on-farm agribusiness* sub sector and in downstream agribusiness sector as well as supporting human resources of agribusiness such as bureaucrats in central government level up until regional level, banking human resources and human resources that provide services for agribusiness sector.

Special characteristic that agribusiness has such as strong interdependency among the sub sectors, among units of activities in one sub sector or enterprises; biological characteristic of products, are all



Plant of durian fruit.



Melon.

need harmonious teamwork of agribusiness human resources. Various forms of inefficiency and slow development of agribusiness in the past (also the experience of agribusiness development in the United States, Australia and Canada), were resulted from disharmonious teamwork of human resources. Economic player of upstream agribusiness sub sector that tend to act only for the sake of their interest and does not consider the consequences of his conducts on *on-farm agribusiness* sub sector and on downstream agribusiness sub sector, often give rise to economic conflicts in agribusiness sector itself. Similarly in the case of economic player in downstream agribusiness subsystem who acts only for the sake of their interest and does not consider consequence of his conducts on *on-farm agribusiness* sub sector also often causes economic conflict in agribusiness sector as a whole. This condition is worsened further by policies of services provided by service provider of agribusiness sector (the government, banking and others) which are not integrated enough - seen from the urge of agribusiness as a system - so that it often causes optimism in certain subsectors and pessimism on other sub sectors. As a whole, those conditions disadvantage development of agribusiness that certainly will also disadvantage all agribusiness player as a whole.

With varied background of formal education and experiences of agribusiness human resources, indeed it will be uneasy to develop a harmonious teamwork. In the past, recruitment of human resources for enterprises and or departement also included *on-the job training*. However, such model of recruitment is not enough to develop harmonious teamwork.

To develop a harmonious teamwork, each human resources of agribusiness has to maintain *cross-job* insight, deep insight of his position in a company/department, vast insight of the company in the industry (*micro-behaviour*), physiological insight and market dynamics, insight about the position of agribusiness sector in economic structure (*macro behaviour*) and even vast insight about global economy. To create agribusiness human resources that maintains such capabilities, *on-the job cross training*, need to be added to *on-the job training* existed so far. The essential of this *cross training* is to educate agribusiness human resources to maintain *how to do each other's job* insight through *on-the job cross-training exercise* simulation. For the purpose, the government need to formulate policies that stimulate the growth of training service providers in agribusiness field, especially in regional level.

In the effort to develop national agribusiness human resources, we need to sharpen education program of agribusiness human resources by utilizing education and training centers of technical departments, human resources development centers of universities and companies in well-planned and well-focused ways. In this case, Ministry of Manpower can function as coordinator, planner and evaluator of education program of agribusiness human resources in national as well as global scope, which is then translated into more specific programs in training and education centers of technical departments and further on the development of human resources on company's level or agribusiness nursery center level. In other words, we need system of national education and training of human resources which is capable to improve *micro-macro-global behavior* insight of agribusiness



Krissan flower.

human resources at such so that a harmonious teamwork can be operated.

Quality and capability of officials capable to improve creativity of human resources - the player of agribusiness - is unseparable part of the development of the development of agribusiness system and agribusiness enterprise. Development of phases of advancement of agribusiness system depends much on the level of skill maintained by agribusiness players. Therefore, various policies that are capable to make function of education effective need to be made with special focus on the development of agribusiness system and agribusiness enterprises. The target of education/nursery need to be broaden, not only for farmers but also other agribusiness player as well. Similarly, the scope of education/nursery also need to include mainstream agribusiness, on-farm agribusiness and downstream agribusiness (including marketing). In addition, education/nursery conducted to develop economic institution of farmers also need to be carried out. Special for education/nursery with farmers - as one of agribusiness players - as the target, participative approach of education need to be formulated as a policy for development of education/nursery.

D. Development of Farmer's Economic Organization

Development of agribusiness system and agribusiness enterprises which come from people, done by the people and for the sake of the people in each region need development of economic organization and institution. The past development paradigm has caused the damage and disappearance of some local/traditional institution which were formerly a part of local economy. Therefore, local/traditional institution need to be resurrected and empowered to develop agribusiness system and agribusiness enterprise.

Traditional food institution like village/family rice barn (lumbung desa/keluarga) in each region need to be re-developed and made them as national food security institution. Food institution system which is based on food diversity and local culture will be capable to become a strong and efficient national food security system. Therefore, such food institution need to be re-developed.

Development of people's economic organization and its business network need to be developed further. Development of economic organization like agribusiness cooperative need to be encouraged as the farmer's economic organization. Development of agribusiness

cooperative in the future need to be directed as farmer's economic organization in upstream agribusiness system, not only as on-farm subsystem. Agribusiness cooperative on downstream and mainstream agribusinesses sub-system may develop business network (in form of joint venture) with private companies (foreign and domestic investment companies). With such a way of development of agribusiness cooperative, although farmers remain in rural areas, their economic organization reach other countries. Hence the added value existed in upstream and downstream agribusiness subsystem can be felt by people in the regions through their cooperatives. Agribusiness cooperatives that need to be developed are cooperative of farmers group that grows through common activities and common economic interest in on-farm activities. Therefore, farmers group that have functioned as asset of cooperation, as teaching and learning class, and as production units need to be developed as agribusiness-oriented business group and grow into agribusiness cooperative with legal status.

It is expected that with such development of agribusiness cooperative, many people will have share ownership of fertilizer industry, agro-automotive industry, agro-chemical industry, and processing industry of agriculture commodities through their cooperative. Hence, people in many regions will participate along in each phase of better development of agribusiness.

5.6. Utilization of Natural Resources and Environment

Development of agribusiness system and enter



Pine forest area.



Longan fruit.



Grater galingale.

prises that utilizes diversity of natural resources will not be sustainable if bio-diversity is not well-preserved. Therefore, efforts to preserve bio-diversity resources need to be placed as an integral part of the development of agribusiness system and agribusiness enterprises. In the preservation of bio-diversity resources, forms of preservation of bio diversity need to be developed, either in form of germ plasma collection garden, or in form of preservation of original habitat of ecosystem of plants in each region. The germ plasma garden and original habitat of plants serve as genetic banks that functions as the provider of genetic material to renew and to diversify commodities/products of agribusiness. Germ plasma garden need to be managed as a part of seed/seedling industries or technological research centers.

Besides preservation of natural resources in form of germ plasma garden, preservation of forest, soil, water and public waters also need to be taken care of. Therefore, development of local institutions and legalizing *ulayat* (original) right of local people also

need to be carried out. In efforts to preserve natural resources, property right issues becomes very important, as it involves preservation responsibility issues. So far, there are many natural resources like forest area where the ownership of which is unclear, except the state. State-owned model of ownership of public domain is not conducive for preservation efforts of natural resources as it will be stuck on what is called a *tragedy of common* (all parties feel to have the right to use, but no one is available to preserve them). Therefore, for natural resources which is still under such condition, the ownership of which need to be clarified so that there will be parties who is responsible for its preservation.

In addition, protection of agriculture land also need to be carried out. This protection is important as there have been about 1 million hectares of productive paddy field have shifted their function during 1983-1993. Protection of agricultural land has close relation to macro economic policies that give pressure on agribusiness like those of pro-import trading regime, high-interest policies, all will make

agriculture land under valued that can easily transformed into non agriculture allocation. Therefore, such above policies need to be avoided.

Policies that draw high-taxation rate on “abandoned” land need to be made to optimize utilization of natural resources. In addition recognition or award given to those preserving natural resources, and legal sanction given to those doing harm to environment need to be materialized in a binding legal products. Protection of fertile agricultural land such as paddy field, need to cover their ecosystem, including their catchment areas. This action is required because it is useless to protect paddy field area when its irrigation catchment area can easily be transformed for other functions. Therefore, principles of integrated management of natural resources need to be developed.

5.7. Development of Regional Agribusiness Centers

The overall policies of development of agribusiness system and agribusiness enterprises previously discussed will operationally occurs in the region as the resources are there. To operate development of agribusiness system and agribusiness enterprise, forms



Fruit products.

of agribusiness growth centers in regional level need to be developed/organized in accordance with competitiveness of each regions. Development of the agribusiness centers must be related to regional economic at such so that gradually agribusiness in related region will be more integrated with regional economy and world economy. Of course, besides the growing of agribusiness centers physically, development of agribusiness information system is also equally important.

The agribusiness growth centers are also need to be equipped with appropriate infrastructure needed like road - either those connecting processing industry to on-farm subsystem or among agribusiness growth centers to export seaport. In addition, warehousing facilities, agribusiness terminals, and commodity exchange/agribusiness product and other facilities needed in the development of agribusiness system and agribusiness enterprises also need to be developed.

Development of this regional agribusiness growth centers must be inclusive with the development carried out in the respective regions. Development of exclusive integrated economic development zone (IEDZ) in the past need not to be repeated. The IEDZ that need to be developed in the future is agribusiness IEDZ which is well-integrated with the economy of regional people. Hence the existence of agribusiness IEDZ can be truly facilitate development of regional economy. In addition, agribusiness IEDZ can also be in form of Inte



Mango.

grated Agroindustry Zone (KAT), and development of Agribusiness Center of Reliable Commodities (PPAKU), dan Reliable Zone (KADAL). Incentive schemes capable to stimulate investment on agribusiness field by local businessmen in the agribusiness IEDZ need to be created, especially by regional government.

5.8. Policy on the Development of Food Security

As stipulated in Law number 7 Year 1996 about food, the government together with the people is responsible to develop food and farmer's welfare. The role of the government is to regulate and to control in order that management food which is fair and responsible can be created. Food security is the fulfilment of food, in term of quntity, quality, safety, and suitability to the socio cultural condition, can be accessed physically or economically; and can be utilized in accordance with individual needs, every time in order to be healthy, to grow and to be productive. The main element of food security is availability of adequate food, distribution that ensure that each individual can access them, as well as consumption that ensure that each individual get appropriate and equal intake of nutrient. Under such definition, agribusiness of food commodities which is based on local resources that produce, proccess, and markets various food products and provide income for people, give large contribution to the creation of food security.

The state guideline (GBHN) of 1999-2004 stipulates to "Develop food security sytem which is based on diversity of food resources, institu-tions, and local culture in ensuring the availability of affordable food, by considering improvement of income of farmers/fishermen as well as production which is regulated by law". Components of food security system comprises availability, distribution, and consumption are none other than agribusiness-based activities. Based on those facts, improvement and stabilization of food security is carried out through agribusiness system approach that comprises integrated series of chain of upstream subsystem, on-farm subsystem, downstream subsystem, and service subsystem. With this approach, policies of food security are focused on (a) diversity of resources,

institution and local culture (b) economic efficiency and regional competitive advantages (c) arrangement of food distribution that refers to competitive market mechanism (d) as a part of efforts to improve income of farmers. Considering that the actors of food security system are business players, namely producers, processors, and distributors that mostly comprises small scale enterprises, hence efforts to improve food security are carried out in the framework to empower groups of people in order to be capable and independently develop their enterprises sustainably in an economic system that follow fari market mechanism.

Food security policy is a policy that harmonize acrivities that support availability, distribution, and consumption of food in order that each individual can access food and manage their consumption to fulfill appropriate intake of nutrient. In terms of food security subsystem, policies that need to be carried out is to harmonize production, export, import, and consumption so that there will be equilibrium in accordance with the need in related regions and among regions from time to time in proportional level of price. Policies of food distribution subsystem is focused to encourage smooth proccess of distribution from producers' location to consumers' so that people in all regions can access food from time to time in accordance with their need. In addition, policies of food consumption subsystem need to be focused to encourage people in order to be capable to utilize their resources to obtain and to consume food so tat each individual will get appropriate and equal nutrient intake. ■



Sweet potato.



Management of Development of Agribusiness System and Agribusiness Enterprise

*D*evelopment of agribusiness system and agribusiness enterprise is a great and complex jobs that involves various related government authorities and institutions. Therefore, it needs good management to orchestrate development process harmoniously.

6.1. Map of Authority

Management of development in central and regional government level is based on authority stipulated in Law Number 22 Year 1999 (which was later accomplished by Law Number 32/2004) and Government Regulation (PP) number 25/2000. The spelling out of the development program of agribusiness system and agribusiness enterprise is placed in accordance with the map of authority by giving more opportunities for active participation of the people.

A. Authority of the Central Government

Authority of the central government is in the field of foreign political affairs, defense

and security, monetary and fiscal, and religion affairs. More detailed issues that become the authority of central government are policies on national planning and control of macro national development, budget balance between central and regional government, state governmental administration and state economic institution, education and empowerment of human resources, utilization of natural resources and strategic high technology, conservation and national standardization. In broaderline, the authority of central government are limited to guideline decision, technical standard and norms.

B. Authority of Provincial Government

Authorities of provincial government as autonomous regions consist of cross regency/city governmental affairs and other specific governmental affairs. In addition, provincial government may performs authority that regency/city does not carry out or has not been capable to perform. The Provincial authorities include setting of technical service standard, supervision, and controlling.

C. Authorities of Regency / City

Considering that the stressing point of regional autonomy is on regency/city, the authorities attributed to Regency/City are much more in form of



Banana fruit.

execution authorities. The number of the authority is very large but excluding authorities attributed to central government and provincial government

6.2. Management Mechanism

A. Planning

Planning mechanism is designed through integrating bottom-up mechanism and top-down mechanism. In the Regency/City and provincial government level, Coordinating Meeting Forum for Agriculture Development Level II Region (Rakorbangtan II) and Coordinating Meeting Forum for Agriculture Development Level I Region (Rakorbangtan I) have been established. Both of the forum need to adjust their program each other in order that cross sub-sectoral and cross-sectoral substances discussed will comprise activities of agribusiness system and agribusiness enterprise that will be carried out.

Planning in farmer level is carried out through participative method, namely placing farmer as the most important part of business enterprise, providing them with opportunities to act their roles as the owner, the player, and the manager of business enterprise. Through the participative planning, farmers will directly involve in preparing Agribusiness Development Plan through concensus making facilitated by agriculture tutor (penyuluh pertanian).

B. Organizing

At central governmental level, Office of the Coordinating Minister of Economic Affairs coordinates planning for development of agribusiness system and agribusiness enterprise. It is deemed necessary that a forum that formally coordinates various matters relating to national agribusiness development be



Various of horticulture products.

established. The forum is Coordinating Forum of National Food and Agribusiness (FKPAN) which is chaired by Economic Coordinating Minister, with Minister of Agriculture, Minister of Industry, Minister of Trade, Minister of Cooperative, Minister of Small-Medium Scale Industry and Cooperative Affairs, Minister of Public Works, Minister of Finance, Chairman of National Development Planning Board, Minister of Home Affairs, Minister of Manpower and Transmigration, Chairman of National Land Affairs Body (BPN), National/Regional Chamber of Commerce and Industries, and related associations as the members. In regional level, similar forum, namely Regional Coordinating Forum of Food and Agribusiness (FKPAD) also need to be established.

The tasks of FKPAN are as the following:

1. To coordinate planning, executing and supervising development of national cross sectoral agribusiness system and agribusiness enterprise integrally
2. To make support of related sector effective in realizing development of agribusiness system and agribusiness enterprise
3. To seek for solution when conflicts occur in the operation, if support from central government is needed.

In regional level (Province and Regency/City), management of development of agribusiness system and agribusiness enterprise is coordinated through Regional Coordinating Forum of Food and Agribusiness (FKPAD) by involving Regional Chamber of Commerce and Industry, Universities, Non-Governmental Orga-



Tomato.

nization, and related association. The tasks of FKPAD are as the following:

1. To coordinate planning, executing, and supervising development of cross sectoral agribusiness system and agribusiness enterprise integrally
2. To make support of related sector effective in realizing development of regional agribusiness system and agribusiness enterprise
3. To synchronize the operationalization in the field

C. Executing

Basically, development of agribusiness system and agribusiness enterprise does not recognize governmental administration restriction (province, regency/city) and cross sectoral in nature. Therefore, synchronizing of activities of development of agribusiness system and agribusiness enterprise is needed. The synchronization of activities of development of agribusiness system and agribusiness enterprises covers: (1) Synchronization among central level department/institution including representative in foreign countries (2) Synchronization of development activities of agribusiness system and agribusiness enterprise between central and regional government (3) Synchronization among regional offices (province and regency/city) in the field of agribusiness system and agribusiness enterprise, and (4) Synchronization among region/territory (among provinces, among regencies/cities and among provinces and regencies/cities).

Synchronization activities is aimed at developing commitment of each stakeholder involved in the development of agribusiness system and agribusiness enterprise. Steps need to be taken to develop commitment



Cabbage.



Various fruit products.

are: (1) Socializing development program of agribusiness system and agribusiness enterprise, (2) Preparing integrated planning which is agreed upon, (3) Developing networking among stakeholders of development of agribusiness system and agribusiness enterprise, and (4) Preparing action plan integrally. Execution of development of agribusiness system and agribusiness enterprise is delivered to the people in accordance with their capability and is facilitated the government which is supported by the existence of Political Will consistently and sustainably. For development of wide-scale agribusiness of the people, the government will encourage movement raised from the people through empowerment of people institution and to grow independency of farmers in agribusiness field. Instruments needed to synchronize the execution are FKPD and FKPD.



Corn.

D. Monitoring and Controlling

Monitoring is basically an observation or checking of activities, its results and its impacts. The purpose of monitoring is to: (1) ensure that input, schedule of activities and the output that have been previously planned run in accordance with the plan, (2) provide data of the use of input, activities and output, and (3) avoid the occurrence of deviation from the objective and result expected.

Controlling is basically efforts to watch, to evaluate, and to improve application of activities in order to run in accordance with its objective effectively and efficiently. Monitoring and controlling are parts of planning management cycles. Results of monitoring and controlling will be useful as efforts to improve the on-going activities and as input for the future's planning of activities. Monitoring and controlling of development of agribusiness system and agribusiness enterprise is carried out by each level of administration in accordance with their authorities. To ensure transparency and public accountability, monitoring and controlling must involve all stakeholders of development of agribusiness system and agribusiness enterprise (farmers, private sectors, public, Non-Government Organization, and the government).

To support monitoring and controlling activities, an effective reporting and evaluating system need to be established in order to secure the application of development of agribusiness system and agribusiness enterprise, and to give feed back for the on-coming planning. In addition, participative model of monitoring and controlling by the people to realize sustainable development need to be encouraged. ■



Mangosteen.



Potential and Opportunities of Agriculture Resources in Indonesia

Seen from the potential and capabilities of resources existed, the trend of policies and the World's competition map, Indonesia has prospects for agribusiness development. From the market demand side, development of agribusiness system in Indonesia is also equally prospective. This condition is based on the spending of the World's population where mostly dominated by 5 product groups, namely foodstuff (food and beverage), clothing, shelter/housing (wood/paper construction), energy, and pharmaceutical and cosmetics products. The five products groups, which become the basic need of the World's population, are mostly produced by agribusiness sector. Furthermore, seen the trend of changes in the future, agribusiness is the only hope to provide the five groups of products.

In food field, capability of advanced country to produce foodstuff is decreasing, either due to rare availability of land or incapable to compete with non-agribusiness products. A study conducted by FAO revealed that production growth of the World's food will slow-down in the future. During period of 1970 - 1990, the growth of the World's food still reached 2.3 % per year, and during period of 1990 - 2010 the food growth of the world is predicted to drop by 1.8 % per year. Special to fulfill demand for food, especially rice, development of agribusiness is believed to be capable to solve problems of Indonesia which, so far, still import rice.

In addition, domestic market of Indonesia is still largely available for agribusiness products. Consumption of agribusiness products of Indonesian people is still the lowest in

the world, except for rice commodity. Therefore, market for agribusiness products in Indonesia will continue developing, at least for the next 20 years. With the fourth largest population in the world, adding with the increasing income of the people (after recovering from economic crisis), domestic market of Indonesia for agribusiness products with huge market size.

The drop of the World's food products is predicted will soon occur for production of fish and meat cow commodities. Of the 17 World's fishing ground, there are only 3 fishing ground areas (including Indonesian seawater) that are still under fishing, while the others have been over fishing. Meanwhile, the drop of the World's meat cow production is predicted to occur especially as the result of the appearance of mad cow disease, mouth disease and anthrax that spread recently in Europe. We need to note that there are only 5 countries, namely the US, Australia, Canada, New Zealand, and Indonesia, which are acquired in the world as countries, which are free from dangerous animal disease. This means that only those 5 countries are allowable to export meat cow to other countries freely.

The trend of the future's situation of world's food supply provides opportunities for agribusiness in



Oil palm area.

Indonesia. Indonesia, which still has spacious areas for development of food crops agribusiness, has wide opportunities to enlarge its market share international market. In fiber goods field (textile, rubber goods, paper, and wooden construction material), there are some changes taking place that will benefit Indonesia in the future. The growing awareness of the world's society on the importance of sustainable living environment has encouraged the world's consumer to consume biodegradable products. This trend will replace the use of petro-fiber products to bio fiber products applied in textile industries and rubber goods industries. The use of synthetic rubber, which currently accounts for 60% in world's rubber goods industries, will be replaced by the use of natural rubber. Similarly the use of petro-fiber that dominate various raw material of fiber of the world's textile industry will be replaced by bio-fiber like rayon. Meanwhile, production of the world's paper is also shifting, from domination of Scandinavian countries to tropical countries including Indonesia. The trend of such world market of fiber will provide opportunities for Indonesia, which maintains comparative advantages in production of natural fiber.

In the World's energy sector, fundamental changes is also taking place. The deposit of the main source of energy which has been dominated by mineral resources ((petroleum), is decreasing. Even, according to OECD Outlook 2001, supply of the World's oil in 2001 is the lowest. Meanwhile, alternative energy like nuclear energy has been proved to be high risk (the case of Russia and Japan). The scarcity of the World's energy will give a way for development of bio energy like palmoil diesel (derived from oil palm),



Sweet corn.

and ethanol (derived from sugarcane crops). This condition gives new prospects for Indonesia as one of the World's largest supplier of palm oil. Further the scarcity of the petro-energy will also affects on petro-chemical-based industries such as fertilizer, pesticide, detergent industries and others. Petro-pesticide industries will shift to bio-pesticide industries, petro-detergent industries will shift to bio-detergent industries, and petro-fertilizer industries will shift to bio-fertilizer industries. Such trend will also provide opportunities to agribusiness countries like Indonesia.

Furthermore, in pharmaceutical and cosmetics field, changes that gives more benefits to agrarian country like Indonesia is also taking place. The increasing demand for fitness of the body as well as the urge for healthy and beautiful living will increase demand for pharmaceutical products, toiletries (beauty soap, shampoo, detergent, tooth paste, and others) and decorative products (perfume, mascara, lotion, deodorant and others). Indonesia that maintains the largest diversity of biofarmaka such as plants, medicinal herbs, atsiri oil and the producer of olein (palm oil and coconut oil), has vast opportunities to become the global player in pharmaceutical and cosmetics fields.

7.1. Agribusiness Opportunities in Food Crops

A food crop has significant and strategic roles in the national development. Therefore, we need to continually increase production of competitive food products to fulfill domestic demands in order to attain food independency and national food security and to utilize domestic market of raw material for processing industry and export opportunities. There are three groups of food crops commodities, namely: 1) Cerealia, which includes paddy and corn, 2) Pulses, that comprises soybean, peanut, and corn, and 3) Tubers, which comprises cassava, and sweet potato.

Some of the food crops commodities are related to basic food such as rice, corn and cassava. Other than as basic food, food crops like soybean, mungbean and sweet potato also cultivated by people to support household economy. As basic food, production of food



Wet land paddy area.

crops has to be continually improved. Production of paddy during 2006 (temporary figure) reached 54,4 million tons of dry paddy (GKG) or increased by 0.5% than the previous year that only reached 54.2 million ton of dry paddy (GKG). Production of soybean and corn reached 0.75 million tons and 11.6 million tons. Production of cassava increased from 19.3 million tons in 2005 to become 19.9 million tons 2006 or increased by 3.1%.

The people have long carried out processing of food crops commodities. Household scale processing of the commodities includes corn processing to become fried corn (marning), soybean to become tofu/tempeh, cassava to become gaplek (dried cassava), cassava powder, snack, and tape (fermented cassava). Meanwhile paddy/dried paddy is processed further to become rice through rice milling. One type of food crops commodity can be processed to become a number of processed products through application of simple until sophisticated technology. Peanut commodity in Indonesia has become food supplement, which is processed, in more modern method. Similarly corn, soybean and cassava. Diversification of processing of food crops products has developed at such so that kinds of its processed products are quite varied that can give enough added value to increase income of farmers.

Investment opportunities for processing and marketing activities of food crops commodities are

Harvested Area, Yield Rate and Production of Food Crop in Indonesia (2006)

Commodity	Harvested Area (Ha)	Yield Rate (Qu/Ha)	Production (ton)
Paddy	11,780,374	46.18	54,402,014
Maize	3,346,427	34.70	11,610,646
Soybean	581,615	12.88	749,038

still potential enough considering food crops commodities are still badly needed by people. Various processed products can be produced from food crops commodities in accordance with demand from the people, from lower class of people, middle class up until upper class of people. As food crops commodities are cultivated and needed by many people, transaction value of food crops commodities are high enough. The huge sale value of food crops commodities provide opportuni-

ties for the development of investment in their supporting sectors as the multi effects of investment of food crops commodities.

7.2. Agribusiness Opportunities in Horticulture Crops

In accordance with the decree of the Minister of Agriculture Number 74 year 1998, commodities

Production of Vegetables in Indonesia (2003-2005)

Commodity	Production (ton)		
	2003	2004	2005
Shallots	762,795	757,399	732,609
Potatoes	1 009,979	1 027,040	1 009,619
Cabbages	1,348,433	1 432,814	1 292,984
Chili	176,264	194,588	187,236
Mustard green	459,253	534,964	548,453
Carrots	355,802	423,722	440,002
Garlic	38,957	28,851	20,733
Leeks	345,720	475,571	501,437
Cauliflower	86,222	99,994	112,927
Chinese radish	26,313	30,625	54,226
Red/kidney beans	90,281	107,281	132,218
Yard long beans	432,365	454,999	466,387
Tomatoes	657,459	626,872	647,020
Egg plant/auvergin	301,030	312,354	333,328
French beans	247,782	267,619	283,649
Cucumber	514,210	477,716	552,891

Production of Fruits in Indonesia (2003-2005)

Commodity	Production (ton)		
	2003	2004	2005
Mango	1 526,474	1 437,665	1 412,884
Orange	1 529,824	2,071,084	2 214,020
Papaya	626,745	732,611	548,657
Banana	4,177,155	4,874,439	5,177,607
Pineapple	677,089	709,918	925,082
Durian	741,831	675,902	566,205
Mangosteen	79,073	62,117	64,711
Avocado	255,959	221,774	22,577
Star fruit	67,261	78,117	65,967
Duku/langsat	233,086	146,067	163,389
Common guava	239,107	210,320	178,576
Watery rose apple	115,209	117,576	110,704
Jackfruit/champedak	694,654	710,795	712,693
Salak	928,613	800,975	937,930
Rambutan	815,438	709,857	657,579
Sapodilla	83,877	88,031	83,787
Soursop	68,426	82,338	75,767
Passion fruit	71,899	59,435	82,892
Bread fruit	62,432	66,994	73,637
Belinjo	244,864	209,630	210,836
Watermelon	455,466	410,195	366,702

Production of Ornamental Plants in Indonesia (2003-2005)

Commodity	Production (ton)		
	2003	2004	2005
Orchid	6,904,109	8,127,528	7,902,403
Anthurium	1,263,770	1,112,724	2,615,999
Gladiolus	7,114,382	14,416,172	14,512,619
Heliconia	681,920	823,747	1,131,568
Chrysanthemum	27,406,464	29,503,257	47,465,794
Rose	50,766,656	57,983,747	60,719,517
Tuberose	16,139,563	33,226,112	32,611,284
Jasmine	15,740,955	21,622,699	22,552,537
Palm	668,154	445,126	751,505
Dracaena	2,553,020	1,778,582	1,131,621
Anyelir	2,391,113	2,196,377	2,216,123
Hebras	3,071,903	2,349,399	4,065,057

Production of Medicinal Plants in Indonesia (2003-2005)

Commodity	Production (ton)		
	2003	2004	2005
Ginger	125,386,480	104,788,634	125,827,413
Galingale	24,588,226	24,298,854	36,292,530
Greater galingale	19,527,111	22,609,057	35,478,405
Turmeric	30,707,451	40,467,232	82,107,401
Zingiber aromaticum	4,684,297	6,025,358	8,896,585
Wild ginger	11,761,984	16,666,504	22,582,041
Curcuma aeruginosa	4,490,430	6,174,186	7,724,957
Verbenaceae	710,998	699,695	1,348,438
Acorus calamus	495,277	257,380	417,566
Cardamom	3,563,118	4,218,038	7,179,325
Morinda citrifolia	1,910,000	3,509,087	9,820,799
Sambiloto	231,024	566,956	2,150,885
Medicinal Root	654,864	1,438,138	2,562,532

included into horticulture groups are 39 kinds of vegetable, 56 kinds of fruits, 78 kinds of ornamental plants, and 42 kinds of miscellaneous plants. Vegetables of highland area are, among others cabbage, potato, cauliflower, garlic, carrot, mushroom, and others. Lowland vegetables comprise kangkung (leafy vegetable), amaranth, squash, legumes, and others. Highland fruits are, among others passion fruit, kelengkeng (longan), apple and mangosteen, while lower land fruits are, among others, banana, orange, watermelon, mango, and others. Ornamental plants consist of ornamental plants for cutting flower like Gladiolus, orchid, Anthurium, Chrysanthemum and others, and ornamental plants like palm, soka, rose, and various other leafy ornamental plants. Meanwhile, curcuma, morinda, turmeric, kapulaga (cardamom), and others are included as miscellaneous plants.

Up until at present, trading of horticulture commodities is not only in form of fresh products but

also processed ones. Among processed vegetable and fruits generally marketed are, canned mushroom, canned pineapple, apple juice, jackfruit snack, and others. Opportunities for investment are widely open as over-production sometimes occurred, so that opportunities are open for development of vegetable/ fruit processing industry. In addition, with the occurrence of today's economic globalization era, import of processed commodity floods the market. This condition gives negative impacts for Indonesia in the future. Therefore, investing in horticulture crops, especially for commodities produced in large number in Indonesia is quite appropriate.

7.3. Agribusiness Opportunities in Plantation

Based on the decision of the Minister of Agriculture Number 74 year 1998, there are 145 kinds of commodities included in plantation commodities.



Pepper.

However, there are only 20 kinds of the commodities that become competitive commodities and are cultivated in large scale by people and private sectors. Plantation commodities are largely comprises export-oriented products that generate foreign exchange earning for the counrty from no-oil and gas sector. Those commodities are, among others, coconut, oil palm, coffee, cocoa, rubber, tea, cashew nut, clove, pepper, tobacco, sugarcane, cinnamon, ginger, and atsiri oil. Most of the plantation products are exported as raw material, not processed products. As the result the sale price are still less economic.

To increase added value of those commodities, development of effective and efficient technology for small scale and medium scale enterprise and household scale are required. Some of research center (balai penelitian) have developed technology to process plantation products. However, the problem found in the field is that such the processing technology is still too expensive for farmers - which is still short of capital - to afford. Simple technology developed to produce good quality products are, among others, copra drying using solar energy, refinery of patchouli oil using aluminum material, coffe dryer, processing of coconut fibre to become a number of products (car seat, polybag, plant media and others), and mini processing facility of palm oil and others. At present, diversification of processing of plantation products also have been developed such as products of coconut fibre, products from coconut water to become nata de coco, coconut shell to become carbon powder, active carbon, and household ornament, coconut wood

can be processed to become furniture. Meanwhile, cashew nut commodities, beside its nut for frying, the meat can also be processed futher to become fruit jam and syrup. Cashew nut shell can also processed further to derive its oil (CNSL) to be used as additive of break oil.

As we all know, plantation sector plays significant role for our national economy, especially in providing employment, source of income for the people, source of foreign exchange earning, and source of economic growth. In 2006, production of main plantation commodities like oil palm, rubber, cocoa, coconut, coffee, tobacco, and sugarcane reached 16.2 million ton, 2.4 million ton, 779.5

thousand ton, 3.2 million ton, 653.4 thousand ton, 177.9 thousand ton, and 2.3 million ton respectively, or each increased by 23.4%, 4.2%, 4.1%, 1.9%, 2.0%, 15.9%, and 1.1%. Plantation sub sector has huge potential to be developed. This condition is based on the fact that: (1) Indonesia has diversity of germ plasma widely known as mega-biodiversity with more than 30 thousand species (2) Indonesia has sub-tropic agro-climate with wet climate and diversified geographical structure that give opportunities for development of various specific tropical plantation commodities. (3) Human resources potential with more than 200 million of population, they can play their role as productive employees and market for agriculture altogether. With all these comparative



Beef cattle.

advantages, the future challenge is how to improve competitiveness of plantation commodities both in domestic and in international market.

Development of plantation is carried out by referring to Law Number 18 Year 2004 which is aimed at increasing income of the people, increasing the state income, increasing foreign exchange earning of the state, increasing employment, improving productivity, improving added value and competitiveness, fulfilling domestic consumption of raw material for industry, and optimizing utilization of natural resources in sustainable ways. In line with the vision of development of agriculture, development of plantation is designed to have economic, ecological, and socio-cultural functions. During 2005-2009, production of plantation sub sector is predicted to increase by 5% per year, real income of farmer will increase by 3.5% per year, and total export value of agriculture products will increase to become 9 billion in 2009. Among main commodities to be developed through development of plantation sub sector include rubber, coconut, oil palm, coffee, tea, pepper, cocoa, cashew nut, sugarcane, tobacco, and cotton.

7.4. Agribusiness Opportunities in Animal Husbandry Sector

Demand for animal-derived food products is continually growing, along with the increasing number of population, income of the people, and the growing awareness of people on the importance of consuming animal-derived products. Supply for animal husbandry commodities are fulfilled by domestic products as well as imported products. As domestic production can not match with the increasing demand, import continue increasing each year as the consequences. This condition will surely threaten domestic products, as usually imported products are more competitive, both in term of quality and the price offered. With the soon-oncoming global trade, requirement applied to domestic (local) products must be the same as those of imported commodities. This will mean that local products must be competitive as the flow imported products can not be restricted. Therefore information functions become one of factors that can not be neglected if we want to compete with imported commodities. Current trend shows that import of livestock products continue growing, while export for livestock products tends to decrease.

Production of important animal husbandry



Traditional land processing.

products like meat, eggs and milk during 2006 reached 2.1 million ton, 1.1 million ton, and 577.6 thousand ton respectively or each increased by 13.9%, 7.8%, and 7.8%. Marketing of animal husbandry products is generally still inefficient, especially for large ruminant and broiler chicken (live). Each region of Indonesia has certain potential that can be developed. Those potential are usually related to geographic factor, livestock population, and human resources factor. For Eastern Indonesia Area like Ende, East Lombok, and Donggala Regencies, development of large ruminant like cow and buffalo are potential to carry out. Meanwhile Blora and Temanggung Regency of Central Java Province are potential for development of poultry or goat and sheep.

In later development, animal husbandry development faces various obstacles, especially in improving production of meat and milk. In 2009 product of



Goat.



Laying pullet.



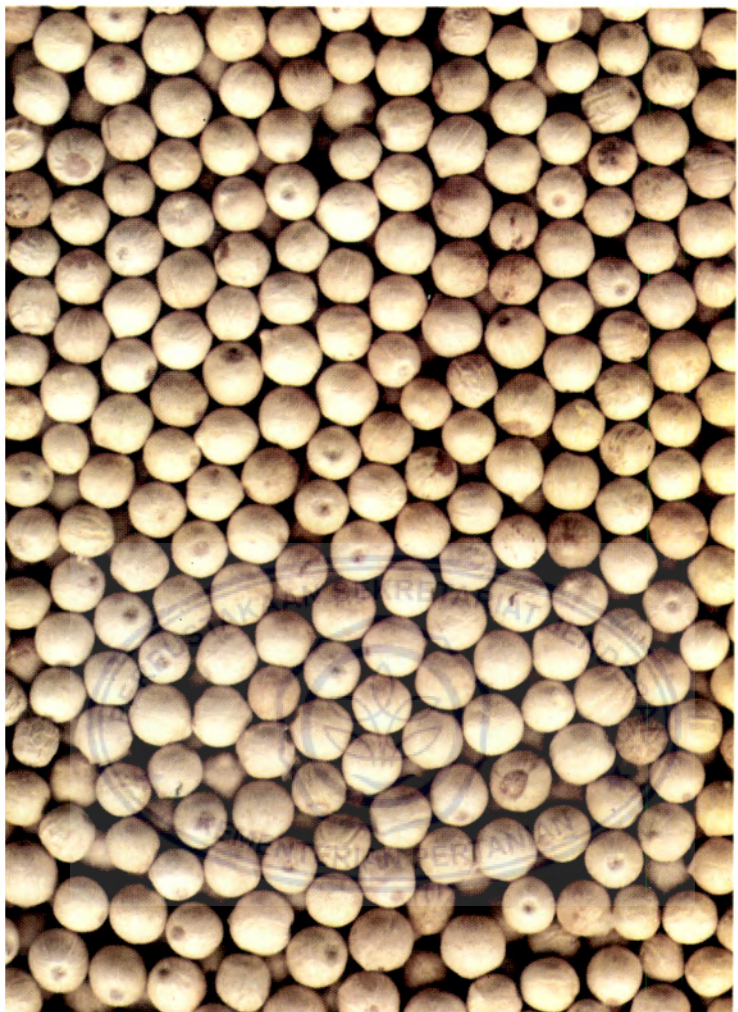
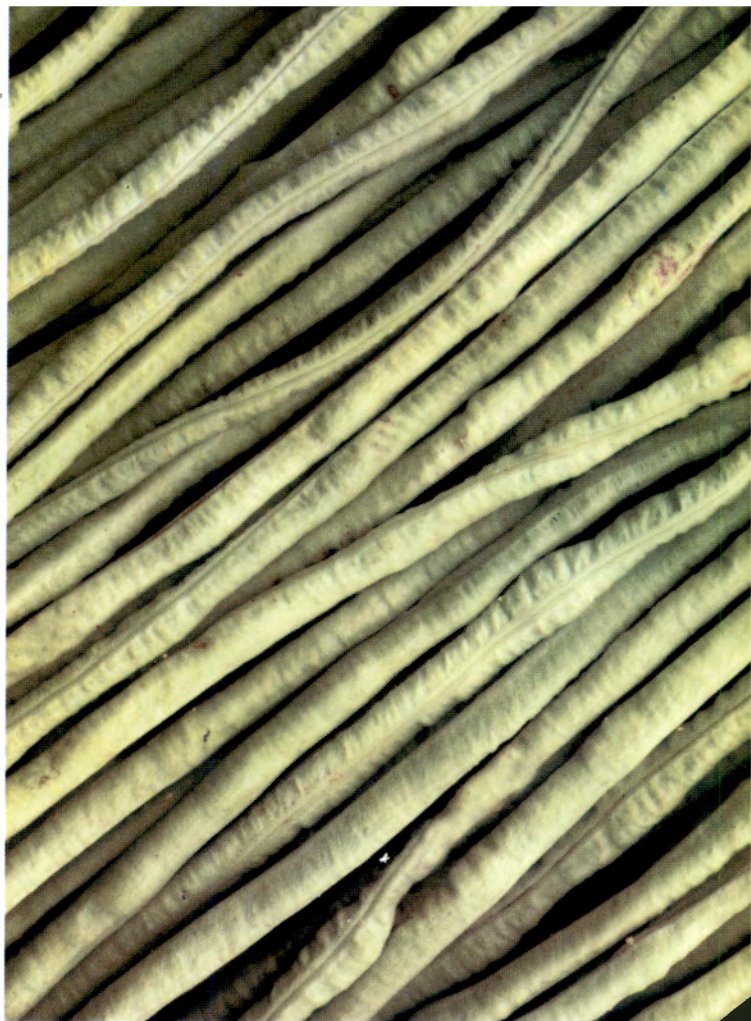
Beef cattle breeding.

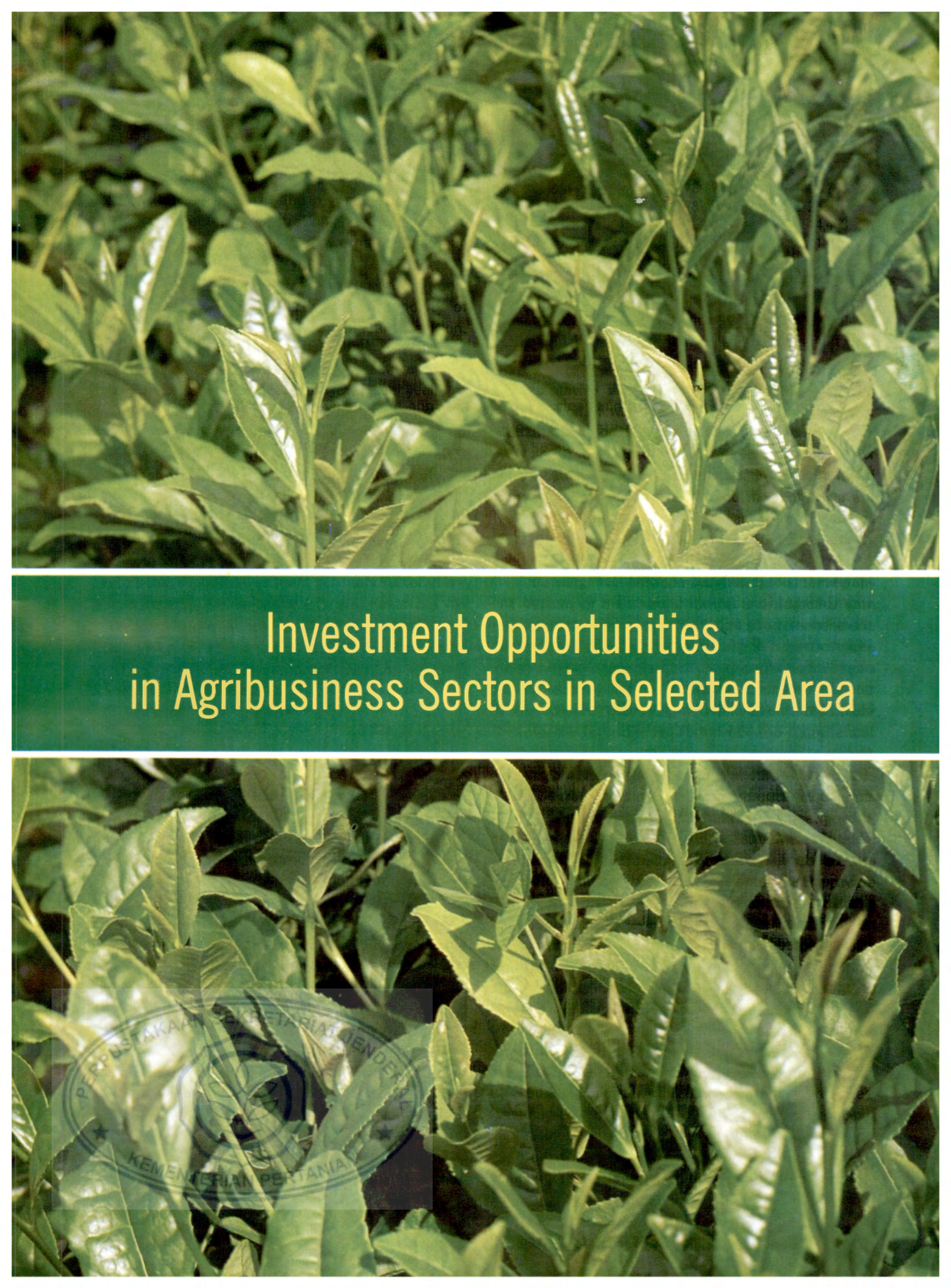
cow meat is predicted to be capable to meet 80% total consumption. In other words, population of cow is predicted to reach only 12.4 million units. On the other hand, the expected ideal population number of cow is 14.6 million units. This means that there will be population deficit of 2.2 million units in Indonesia. This condition can not be solved by technical policies alone (seedling, food, farming and animal health aspects), rather, there must be efforts that encourage private sector and people to actively involve in meat cow farming business. In addition, efforts are also needed to change habit that meat cow farming is merely part time work but in fact it become the main job. Indonesia has many government-owned and privately owned oil palm and rubber plantation estates that can be used for the base of animal husbandry cultivation of cow commodity through integrated farming system pattern. Hence there will be improvement of efficiency and income from the corporation's side. Meanwhile from the farmer and employees' side, there will be incentive, increase of income and improvement of their welfare.

In domestic milk industry, Indonesia has only been capable to supply 20%-30% of total milk needed by milk processing industry (IPS). The majority of the demands are in form of powdered milk. Hence, efforts to increase production of fresh milk without improvement of capacity of processing industry of powder milk will face obstacles. For domestic poultry industry, Indonesia still rely on imported agro-input, especially for raw material of corn and soybean. For raw material of dairy food, the government will soon make improvement, especially from the characteristic side of the industry where the industry must be capable to ensure its continuity and in-time supply.

Meanwhile, increase of poultry production can not be accelerated (although the production potential can be improved up until 42%) due to the limited demand from domestic market, while export have not been possible due to the widespread Avian Influenza disease in Indonesia. The Avian Influenza epidemic that started to spread in Indonesia at the end of 2003 may become a serious threat for the performance of animal husbandry sub sector. Poultry industry that has started to recover will be damaged if avian influenza epidemic continues. Incentive granting strategy to encourage integrator to penetrate export market is among the choices. In this way, production potential of animal husbandry can be continually fostered.

The most potential livestock to develop in Indonesia are goat/sheep. It is widely known that production of goat/sheep is surplus nationally, while demand from export market - especially from Middle East and Malaysia during Al Hajj season is very promising to tap. So far the export demand can not be fulfilled due to problems of supply continuity and weak institutional problems. As the result export market can only be fulfilled Australia and New Zealand. In the future, institutional building need to be improved, so that as soon as there is export enquiry, it can be promptly fulfilled. Animal husbandry sub sector is also the main reliable source of high growth of agriculture sector. Evenmore, it has become a global phenomenon that animal husbandry sub sector is the accelerator of growth of agriculture sector through what is called to be Livestock Revolution. Indonesia is not excluded from the phenomenon, as Livestock Revolution has lasted since 1980-es through rapid development of pure-bred chicken farming industry. ■



The background of the entire slide is a lush green tea plantation. The top half shows a close-up of tea bushes with bright green, glossy leaves. The bottom half shows a similar view but with a faint, circular official stamp overlaid on the left side. The stamp contains the text 'PERPUSTAKAAN KEMENTERIAN PERTANIAN' and 'KEMENTERIAN PERTANIAN' around a central emblem.

Investment Opportunities in Agribusiness Sectors in Selected Area

Development of Total Planted Area and Production of Food Crops

Commodity	Total Planted Area (Ha)			Production (ton)		
	2004	2005	2006	2004	2005	2006
Wetland Paddy	34,932	39,711	33,143	110,865	120,215	124,469
Upland Paddy	1,562	2,147	2,468	2,955	5,067	495,235
Corn	2,359	3,152	2,565	3,982	7,573	568,314
Pulses	2,421	3,553	2,950	1,877	3,961	409,346
Cassava	726	540	415	5,346	5,824	575,586
Sweet Potato	628	519	166	4,512	3,849	145,091



Banggai Regency is the main producer of rice in Central Sulawesi Province.

include corn, peanut, soybean, mungbean, cassava and sweet potato. Development centers of soybean commodity are found in Toili, Batui, Bualemo, and Bunta sub districts, while production centers of other food crops commodities are found in almost all sub districts of the regency.

For horticulture crops, commodities which are developed include vegetable (onion leaves, cabbage, mustard greens, tomato, string bean, carrot, red onion, cucumber, legumes, red chilly, eggplant, amaranth, squash and kangkung (leafy vegetable)). Production centers of red onion are found in Luwuk, Lamala, Pagimana, and Bualemo sub districts. Production centers of red chilly are found in Toili, Luwuk, Lamala, Pagimana, and Bunta sub districts. Meanwhile, production centers of other vegetable commodities are scattered in almost all sub districts of the regency. For fruit commodities, production centers of orange are found in Toili, Lamala,

Pagimana, and Bunta sub districts. Production centers of durian commodity are found in Kintom, Batui, Pagimana, Balantak, and Bunta sub districts. Development centers of mango commodity are found in Kintom, Toili, Luwuk, Lamala, Pagimana, and Balantak sub districts. Meanwhile other fruit commodities are developed almost in all sub districts of the regency.

Plantation

Banggai Regency has a number of competitive commodities of plantation sectors, they are oil palm, cocoa and coconut. In addition, there are also a number of potential commodities to develop such as vanilla, kapok, pepper, cashew nut, nutmeg, coffee, clove, candle nut, sugar palm, and sago.

■ Oil Palm

Development of oil palm plantation area is carried

Agribusiness Opportunities of Food Crops and Horticulture

Commodity	Investment Opportunity	Location (Sub District)
Food Crops		
Corn	Planting and post harvest processing	Luwuk, Lamala, Batui, Toili
Soybean	Planting and post harvest processing	Toili, Bualemo, Bunta
Horticulture		
Banana	Planting and product processing	East Luwuk, Pagimana, Balantak, Kintom, Batui, Bunta, Nuhon
Durian	Post Harvest processing	Kintom, Pagimana, Bunta, Balantak, Nuhon

Development of Planted Area and Production of Plantation Commodity

Commodity	Total Planted Area (Ha)			Production (ton)		
	2004	2005	2006	2004	2005	2006
Vanilla	3,648	459	590	7,015	32	529
Pepper	885	90	98	190	20	2,884
Cashew Nut	461,698	4,454	5,086	109,167	936	113,108
Cocoa	1,509,151	16,847	10,328	892,137	6,738	4,671
Coffee	109,157	1,075	1,064	39,309	487	44,487
Clove	146,567	1,349	1,357	89,250	254	26,888
Candle Nut	111,488	1,384	1,358	50,863	322	40,205
Coconut	3,003,839	27,656	36,093	3,063,542	27,669	3,622,957
Oil Palm	8,664	8,664	8,664	321,963	121,545	9,912,604
Kapok	7,614	70	70	6,246	11	1,453
Sago	95,639	214	898	25,622	118	6,391



Banggai Regency has a number of competitive commodities of plantation and horticulture sectors.

out by PT. Kurnia Luwuk Sejati, in total area of $\pm$ 19,600. Ha that covers Toili, West Toili and East Luwuk sub districts. Development of oil palm in Banggai Regency is not only carried out in kernel plant (kebun inti) but the company also focused more on plasma plants cultivated by local people. Meanwhile, oil palm processing industries existed in the regency have been capable to produce only CPO. Hence, investment of downstream products to produce oleo chemical and oleo-food are needed

■ Cocoa

Cocoa was started to be developed in Banggai Regency in 1985 in a small scale plantation model. The plantation started to develop rapidly since 1993. Suitable climate, fertile land and topographic condition of the regency are among supporting factors for the increase of total planted area of the commodity, beside the high interest of the people to develop cocoa commodity. Development of cocoa commodity can be carried out through extension and intensification among coconut plant in vast available land. In 2006, total area of cocoa plants reached 10,328 Ha, where the larger part of the

area are found in Bunta, Batui, Toili, and Bualemo sub districts.

■ Coconut

Coconut is dominant commodity as seen from agro climate point of view, Banggai Regency is very suitable for development of coconut commodity. Potential of coconut commodity, besides it can be processed further to become main product copra,



Development of oil palm plantation.



CPO factory of PT Kurnia Luwuk Sejati.



Red onion.



Oil palm plantation area.

it can also be processed to produced finished products and by products such as cooking oil and *bungkil* (residue of copra). By products of copra like coconut shell, fiber and coconut water can be used as raw material of various industries like medicine, food, beverage, ketchup, water processing/refinery, gas refinery, rope, meuble and other industries. Processing of coconut meat to obtain santan (coconut milk) also produces various by products such as coconut powder, Nata de Coco, and other products. In 2006, production of coconut reached 3,622,957 ton. Production centers of coconut are scattered in Pagimana, Bunta, and Balantak sub districts. Meanwhile, total potential area for development of local coconut (kelapa dalam)

reaches 35,000 Ha, and for hybrid coconut reaches 5,000 Ha.

Animal Husbandry

Development of animal husbandry sector in Banggai Regency comprises especially cow commodity which is carried out through IFAD project. This project is one of programs that has been capable to increase and improve cow population and quality. Besides cow, other potential livestock to develop are : horse, goat, pork, broiler and duck. The high interest of the people to develop various livestock commodities has made Banggai as one of the main producers of livestock in Sulawesi.

Agribusiness Opportunities in Plantation Sector

Commodity	Investment Opportunity	Location (Sub District)
Oil Palm	Planting and CPO processing	Toili, East Luwuk
Local Coconut (Kelapa dalam)	Planting, processing of cooking oil, coconut fiber, coconut shell carbon	Batui, Kintom, Luwuk, East Luwuk, Masama, Lamala, Balantak, Bualemo, Pagimana, Bunta, Nuhon
Hybrid Coconut	Planting, processing of cooking oil, coconut fiber, coconut shell carbon	Toili, West Toili, East Luwuk, Masama, Lamala
Clove	Planting and post harvest processing	West Toili, Toili, Batui, Kintom, Luwuk, East Luwuk, Lamala, Balantak, Pagimana, Bunta, Nuhon
Cocoa	Planting and post harvest processing	West Toili, Toili, Batui, Kintom, Luwuk, East Luwuk, Masama, Lamala, Balantak, Bualemo, Pagimana, Bunta, Nuhon
Coffee	Planting and post harvest processing	West Toili, Toili, Batui, Kintom, Luwuk, East Luwuk, Masama, Lamala, Balantak, Bualemo, Pagimana, Bunta, Nuhon
Cashew Nut	Planting and post harvest processing	West Toili, Toili, Batui, Kintom, Luwuk, East Luwuk, Masama, Lamala, Balantak, Bualemo, Pagimana, Bunta, Nuhon
Vanilla	Planting and post harvest processing	Balantak, Pagimana, Luwuk, East Luwuk, Bunta, Kintom, Batui, Toili, Lamala, Masama
Candle Nut	Planting and post harvest processing	Batui, Kintom, Luwuk, East Luwuk, Masama, Lamala, Balantak, Bualemo, Pagimana,

Development of Livestock Population and Livestock Slaughtering

Kinds of Livestock	Population (unit)		Slaughtered (unit)	
	2005	2006	2005	2006
Cow	39,205	39,421	3,450	2,974
Horse	169	168	-	-
Goat	25,356	35,424	7,238	1,584
Pork	27,193	34,178	1,210	1,944
Duck	91,440	92,020	41,454	-
Chicken	300,487	322,671	449,535	271,880



One of potential livestock to develop in Banggai is duck.

SUPPORTING INFRASTRUCTURE AND FACILITIES FOR INVESTMENT

Transportation

For land transportation infrastructure, total span of road in Banggai Regency reaches 2,049.80 Km, consisting of asphalted road in good condition (929.40 Km), gravel road in moderately good condition (714.10 Km) and soil road in moderately good condition (326.30 Km). Land transportation has been served by buses, taxis, trucks and city transportation mini buses, which are generally in good condition. For sea transportation, there are 3 C-type seaports, namely Teluk Betung seaport in Luwuk, Pagimana seaport in Pagimana, and Bunta seaport in Bunta; 2 ferry ports in Luwuk and Pagimana; and 4 people-managed ports, each located in Luwuk, Batui, Toili and Bunta sub districts.

Electricity and Telecommunication

State-owned electricity company of PT. PLN supplies demand for electricity energy in Banggai Regency in installed capacity of 12,630 KWH, supply capacity of 10,424 KWH and 30,862 subscribers. Meanwhile, for telecommunication facility, there have been 4,371 fixed telephone line units, 2 cellular telecommunication facilities operated by Telkomsel and Satelindo, 103 telephone line units provided by Telecommunication Shop (Wartel), and 2 units of internet shops (warnet).



Cow is very potential to develop in Banggai.

Financial Institution and Banking

Financial institutions and banking facilities available in Banggai Regency are concentrated in Luwuk as the capital city of the regency. Those financial institutions and banking services are Bank BRI (1 branch office, and 8 units), Bank BNI (1 branch office and 1 unit), Bank Mandiri (1 branch office), Bank Danamon (1 branch office), Bank BPD of Sulteng (1 branch office), and BPR (1 branch office). ■

INVESTMENT CONTACT :

Office of Regent of Banggai

Jl. A. Yani Nomor 12, Luwuk 94711 – Central Sulawesi
Phone: (62-461) 21053, 21252; Fax : (62-461) 21517

Regional Office for Industry, Trade and Investment Affairs

Jl. Ir. Soekarno No. 1, Luwuk 94711 – Central Sulawesi
Phone : (62-461) 2114

Office for Agriculture Affairs

Jl. Urip Sumoharjo No. 15, Luwuk 94711 – Central Sulawesi
Phone : (62-461) 21032, 21509; Fax. : (62-461) 23586



The Regency of Bener Meriah

GENERAL DESCRIPTION

Bener Meriah Regency belongs to Nanggroe Aceh Darussalam (NAD) Province. The regency was established through Law Number 41 Year 2003 as the extension of Central Aceh Regency. The Regency which occupies 145,909 Ha area is located in the central part of NAD Province, bordering on North Aceh and Bireuen Regency in the north, on Central Aceh Regency in the south and west and on East Aceh Regency in the east. Allocation of land in the regency is dominated by dry land/garden/planting field (tegalan) that reaches 50,384 Ha (34.65%), followed by production forest area of 36,447 Ha (25.07%), protection forest area of 21,604.78 Ha (14.86%), paddy field area of 21,234 Ha (14.60%), yard/building and others of 15,740.02 Ha (10.82%). In 2006, total population of the regency reached 117,863 people scattered in its 7 sub districts.

Bener Meriah Regency is located in Bukit Barisan mountain ranges. Topographic condition of the regency comprises hilly areas and some valleys with declivity ranges between 15-40% (54.14%), and the altitude of 100-2,500 m above sea level. Such condition makes the regency very potential place for development of food crops commodities such as second crops and horticulture commodities. Type of soil in the regency varies, consisting of andosol and latosol with soil texture of between sandy clay and tough clay. Biologically, soil in the regency was formed by sedimentary rock of horizontal layer, volcanic rock and quarter and limestone. Weather temperature that tends to be hot with very small amplitude and frequently change of wind is general condition of climate of Bener Meriah Regency. The rainfalls evenly with average rainfall reaches 1,805 mm/year, average temperature of 20.1° C, and humidity of 78-84%.

INVESTMENT POTENTIAL AND OPPORTUNITIES IN AGRIBUSINESS SECTOR

Bener Meriah Regency has vast and fertile area that is potential for agribusiness development. Agriculture potential has shown to give significant contribution to support economic of the people in the region. The most dominant potential of agriculture sector include plantation of coffee, tobacco, candlenut, and cocoa as well as food crops and horticulture commodities. In addition, there is also potential for development of animal husbandry in large scale as the regency maintains vast shepherding area, especially buffalo and cow commodity.

Food Crops and Horticulture

Bener Meriah Regency has huge potential for development of food crops and horticulture. The regency is widely known as production center for various horticulture commodities such as potato, tomato, and chilly which are marketed up until Medan City (North Sumatera Province. Other competitive



Bener Meriah is widely known as production center for potato.



Bener Meriah Regency has huge potential for development of horticulture.



Cultivation of tomato commodity.

commodities include soybean, corn, cabbage, and carrot. Total area of food crops and horticulture commodity are dominated by paddy crops, followed by fruit crops of orange (3,147 Ha or 150,000 orange trees) and avocado of 10,093 Ha (70,000 trees). Other competitive fruit commodities include durian (10,093 Ha, 120,000 trees) and passion fruit (3,794 Ha, 10,000 trees). Timang Gajah and Pintu Rime Gayo sub districts are potential areas for development of durian.

Animal Husbandry

Bener Meriah Regency is potential area for development of animal husbandry cultivation, especially for large and small livestock. Animal husbandry cultivation that have been developed to fulfill demand for meat, either from local or from outside the region are, among others buffalo, cow, horse, goat and poultry. Animal husbandry cultivation is supported by availability of 31,500 Ha shepherding area found in Bandar sub district (21,500 Ha) and Pintu Rime Gayo sub district (10,000 Ha).

The Dominant large livestock which are prospective to develop in accordance with the potential of land include buffalo, cow and horse. Some of the livestock has been traded interinsular, especially to North Sumatera. However, the current obstacle exists is that cultivation of buffalo and cow is still carried out traditionally in small scale. Other obstacle for the development include unavailability of quality breed that can be developed in modernly. Meanwhile, special for horse cultivation, beside marketed to other regions, the livestock is developed to help farmers. In addition, the horse, which some of them are inseminated with

Total Area and Production of Food Crops and Horticulture

Commodity	Total Area (Ha)	Production (ton)	Marketing Destination
Chilly	200	235.2	Aceh, North Sumatera
Cabbage	150	2,352.0	Aceh
Tomato	2,354	31,142.0	Aceh, North Sumatera
Potato	800	2,670.0	Aceh, export
Corn	5,000	1,541.8	Aceh, North Sumatera
Shallot	150	880.0	Aceh
Carrot	50	540.0	Aceh
Garlic	15	49.5	Aceh, North Sumatera
Red Onion	900	5,380.2	Aceh
Hot Chilly/ Cabe rawit	1,191	8,337.0	Aceh, North Sumatera
Green bean	200	1,296.0	Aceh
Kidney beans	150	359.1	Aceh
Mustard green	310	3,060.0	Aceh

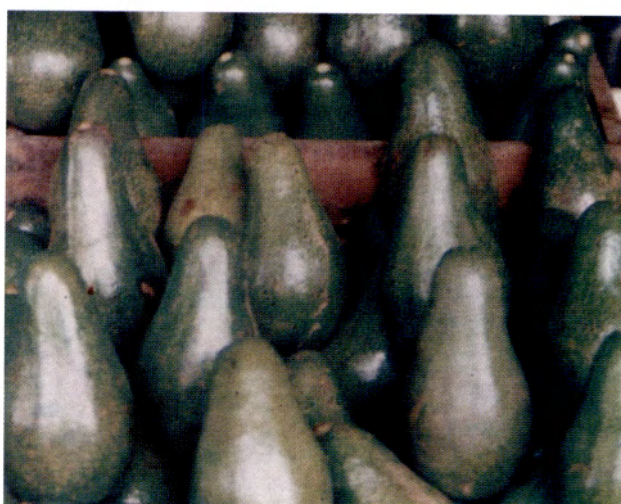
Population and Production of Livestock

Kinds of Livestock	Population (unit)	Production of meat /egg (Kg)
Cow	164	1,325
Buffalo	1,473	14,045
Horse	127	-
Goat	5,681	3,023
Rabbit	281	-
Sheep	30	-
Purebred Chicken	155,093	23,730
Laying Pullet	261	4,296
Broiler	19,095	27,320

Australian horse, are also used as race horse usually held annually.

Fishery

The potential of fishery sub sector most potential to develop is freshwater fishery in rivers and pools. So far, demand for fish consumption of people is supplied by other regions that reach 83 ton/day as local production of fish has not been capable to fulfill demand for animal protein of fish. Therefore, investment potential to develop agribusiness in fishery sub sector is still promising.



Avocado commodity.

Plantation

Plantation potential of Bener Meriah Regency varies, and the most potential commodity to become competitive ones are coffee, tobacco, cocoa and candle nut. Coffee is one of superior and competitive product of the Bener Meriah regency. Almost 90% of coffee products of the regency are exported to some countries like the United States, Japan, European countries

Potential Area for Freshwater Fishery

Sub District	Pool Cultivation (Ha)	Paddy cum fish (Ha)	Total fish farmer (People)	Production (Kg)	Potential Area (Ha)
Bukit	14.90	-	132	5,579.90	54.1
Bandar	9.91	-	131	3,712.25	43.0
Timang Gajah	19.46	2.0	171	7,293.70	42.1
Syiah Utama	2.96	-	24	918.00	113.0
Permata	2.54	-	43	952.40	19.0
Wih Pesam	4.61	-	120	1,732.70	49.0
Pintu Rime Gayo	8.97	-	159	2,988.60	43.8
Total	62.85	2.0	780	73,396.65	364.0



The potential of fishery sub sector in Bener Meriah most potential to develop is freshwater fishery in rivers and pools.

Potential of Coffee Commodity

Sub District	Total Area (Ha)	Number of Farmers (Household)	Farmer Group	Products (ton)	Processing Plant (Unit)
Bandar	5,367.00	3,997	54	171,150	11
Permata	9,147.50	6,103	35	342,650	2
Syiah Utama	4,576.55	1,223	27	214,704	-
Bukit	2,924.96	2,088	37	110,950	9
Wih Pesam	2,595.50	1,834	31	161,350	3
Timang Gajah	8,127.00	7,805	52	72,345	8
Pintu Rime Gayo	6,751.50	6,000	33	78,785	1
Total	39,490.01	29,050	269	1,151,934	34



Potential of pepper commodity.

and others. The largest coffee plantation is found in Permata and Timang Gajah sub districts, followed by Pintu Rime Gayo and Bandar sub districts. Kinds of high quality coffee plant is Arabica Coffee. However, currently people starts to plant various other superior quality of coffee plant. Market share and market opportunities of coffee commodity depends much on market demand from North Sumatera and international

Plantation Potential

Commodity	Total Area (Ha)	Potential Extended Area (Ha)
Oil Palm	54.45	26,447.55
Pepper	156.77	2,095.55
Cocoa	237.13	4,021.62
Candle Nut	163.00	-
Tobacco	108.97	242.53
Sugarcane	221.75	3,310.00
Cassia vera	275.37	962.63
Castor Plant	-	2,250.00
Ginger	310.10	879.36
Sugar Palm	108.00	12.00
Turmeric	305.41	903.22
Vanilla	5.00	-
Rubber	-	600.00
Tea	-	7,330.00
Cardamom	-	4.00

market which are decided by exporter and collector trader. Other potential commodities to develop include cinnamon, patchouli, pepper, ginger, vanilla, nutmeg, clove, areca nut, and oil palm. There are also sugarcane estates managed by 9 units of sugarcane processing industry.



Bener Meriah also potential for development of coffee plantation.

Condition of Supporting Facilities 2007

Infrastructure/Facilities	Total	Condition
BPD (Bank Pembangunan Daerah) 3 units	Active	
BRI (Bank Rakyat Indonesia)	3 units	Active
KUD (Koperasi Unit Desa/ Village Cooperative Unit)	50 units	-
PUSKUD (Pusat Koperasi Unit Desa/ Center of Village Cooperative Unit)	1 units	-
LKM (Lembaga Keuangan Mikro/ Micro Financial Institution)	3 units	-
Airport	1 units	Active
Provincial Road	186.71 Km	Asphalted
Regency Road	236.88 Km	Not asphalted yet



Durian commodity.

INFRASTRUCTURE AND FACILITIES

In general, investment climate in Meriah Bener regency after conflict and tsunami disaster erupted in NAD Province has been running well and restored. Economic of the people which was badly damaged has gradually improved. This condition is indicated by the run of market mechanism and mobility of people to outside the region that have been normal. Supporting facilities such as transportation facilities has started to fun smoothly, supported by representative land transportation facilities of road. For air transportation facilities, there is an airport in Bener Meriah Regency which is capable to accommodate aircraft of CN 235 or SMAC -types. Extension of Landing strips of this airport is currently underway. Other investment facilities available include cold Storage, auction market, and trans road to seaport in North Aceh to Kuala Langsa of East Aceh.

Investment supporting policies of Bener Meriah Regency still refers to prevailing law that stipulates investment, namely Law Number 1 Year 1967 junc to Law Number 11 year 1970 on Foreign Investment and



Cocoa plantation.

Law Number 6 year 1968, junc to Law Number 12 year 1970 on Domestic Investment. Investment policies of Bener Meriah Regency in 2007 are creating conducive climate for small and medium scale industries, developing supporting system for micro, small and medium scale enterprises, and improving investment promotion and cooperation by providing facilities for investment permit application and simplifying regional investment permit. ■

INVESTMENT CONTACT

Government of Bener Meriah Regency
Redelong, Bener Meriah - NAD
Phone : (62-643) 23512
Fax : (62-643) 21418



Ir. H. TAGORE AB

THE REGENT OF BENER MERIAH

Developing Strong Agribusiness

Ir. H. Tagore AB was born in Takengon on 20 April 1954 from a pair of humble parent, Abu Bakar (father) and Syariah (mother). He spent his elementary until senior high school in his hometown. After leaving his senior high school in 1972, he continued his study at Faculty of Agriculture, University of Sumatera Utara where he accomplished his Bachelor of Science Degree majoring in Plantation Production Department. Meanwhile, he then achieved his bachelor degree in Farming Department of the same universities in 1983. The husband of Ny. Meutia Fauziah, SH is well known as a hard worker in carrying out each duties trusted to him. He pursue his career, started as the Head of UPP PJM Seulimeum (1984-1986) until he become number one figure Meriah Bener Regency, with full dedication. A number of executive posts he once held are, among others, the head of UPP ITR Blang Kejeran (1986-1987), Coordinator of OPSUS Gelora Petani BANPRES Blang Kejeran (1986-1987), Section Head of Farming Enterprise of the Office for Plantation Affairs of Branch V, V Central Aceh (1988-1992) and the Head of Branch V of Office for Plantation Affairs of NAD Province in Takengon (1994-1999).

The father of 3 children is also well known as an activist of various professional and social organizations. Ir. H. Tagore AB was once the Head of IMAGA of North Sumatera (1981-1984), Vice chairman of HKTI farmer organization of Central Aceh (1989-1995), Vice Chairman of DPD II KNPI of Central Aceh (1989-1992) and the chairman of DPC Pemuda Panca Marga youth organization of Central Aceh (1993-1994). He then also actively participated in political organization, namely in Golkar party. His organizational capability gave a way to him to hold the post as Vice Chairman of DPD Golkar of Central Aceh (1993-1998), Chairman of DPD Golkar of Central Aceh (1998-2004), and Chairman of DPD Golkar of Bener Merah (2004-at present). His involvement in political arena lead him to hold the post as vice chairman of regional parliament (DPRD) of Central Aceh (1999-2004) and chairman of DPRD of Bener Merah Regency (2004-at present).

After elected as the Regent of Bener Merah Regency for 2005-2010, Ir. H. Tagore AB hand in hand with his government staffs set various policies of regional development. The vision he wishes to realize is "Creating prosperous, safe, peaceful and religious people of Bener Meriah Regency". This vision seems to be simple, but it need hard work and responsibilities to carry out. To realize the vision, one of his focus is developing a strong agribusiness. Although Bener Meriah is known to have huge potential of agribusiness, a number of obstacles are still need serious handling. The eruption of social conflicts and Tsunami disaster that once erupted in NAD Province are challenges that need to be faced together with the people. Utilization of natural resources which have not been maximum, as many of them are still utilized traditionally by local people, needs appropriate strategies. However, the improving investment climate in the regency as well as support from the people, especially his governmental staffs, makes him optimistic that he will be capable to develop Bener Merah Regency to become one of strong agribusiness center in NAD Province. ♦





The Regency of Indragiri Hulu

GENERAL BACKGROUND

*I*ndragiri Hulu Regency is one of the regions of Riau Province. Geographically, it is located on 0°15' North Latitude – 1°05' South Latitude and 10°10' – 102°48' East Longitude. It is bordered by Pelalawan Regency on the north, Muara Tebo (Jambi Province), Kuantan Singingi Regency on the west, and Indragiri Hilir Regency on the east. Administratively, Indragiri Hulu Regency is divided into 14 sub districts that consists of 172 villages and urban villages, with Rengat as the capital. Based on census until June 2006, the population of the regency was 312,910 inhabitants, with average density of 38,17 inhabitants/Km².

Land Condition

Indragiri Hulu Regency with total area of 8,198.26 Km², is a land that has 120,508 hectares of potential agricultural land. Topographically, there are several declivity types in the regency 0-2% (452,484 hectares), 2-15% (161,916 hectares), 15-40% (105,212 hectares) and above 40% (51,412 hectares). Generally, the regency is slightly slope low land with altitude of 0-1,000 meters above sea level. Land with altitude 0-25 meters is 320,503 hectares (25,56%), 25-100 meters is 660,244 hectares (52,66%), and 100-500 meters is 265,000 hectares (21%). In the flat land, the soil type is red yellow podsollic with main component sediment rocks and frozen rocks, especially in southern of Peranap Sub district. On hilly land and mountainous area, the

Remarks from the Regent of Indragiri Hulu

As the Regulation No. 22/1999 regarding Regional Government and Regulation No. 25/1999 regarding The Balance of Financial budget have been into effect, Regional Government of Indragiri Hulu Regency see the need to conduct "self promotion" of regional potential especially natural resources.

Therefore, Regional Government of Indragiri Hulu Regency through Its Office of Food Crop, Horticulture, Animal Husbandry, and Fishery Affairs compile the agribusiness investment and opportunities in conjunction with Indonesia Agriculture Publisher. Through the book entitled "Investment Opportunities in Agribusiness", we would like to inform the public about what Regional Government of Indragiri Hulu Regency is doing, has been doing, and will be doing in the future.

My expectation is that all components of Regional Government of Indragiri Hulu Regency and the entire people can support the government program, so that we could accelerate the economy and development of our regency.

In the end, I would like to express that hopefully this is not the end of the struggle to develop Indragiri Hulu Regency toward the future.

Rengat, April 2007
INDRAGIRI HULU REGENT

Drs. H. R. THAMSIR RACHMAN, MM

soil types are red yellow podsolic, latosol and litosol with main component frozen rocks and metamorf. The soil types can be found in Seberida Sub district. While in catchments area, especially in the downstream, there can be found soil that contains humus, which is peat soil with various thicknesses between 50 and 150 cm.

Therefore, the most dominant soil type in the regency is red yellow podsolic, which is 994,852 hectares, and orgonosol and gley humus, which is 239,152 hectares. While for drainage, there exists 3 types, never flowed, which is 191,950 hectares, or 73%, periodically flowed, which is 149,638 hectares, or 11,93%, and constantly flowed, which is 173,984 hectares, or 14%. Generally, the drainage condition in the regency is good to medium, with soil acidity level between 4,5 and 5,9 or sour and a bit sour. Regarding land utilization, the most dominant usage is for plantation, large scale and small scale, which is 208,201 hectares, food crop, 212,339 hectares, and fish culture, which is 135,34 hectares.

Climate and Rainfall

Based on Koppen classification, the climate type of Indragiri Hulu Regency is AFA (wet tropical), which is average monthly rainfall above 60 mm or annual rainfall above 1,500 mm. The rainy season usually occurs in October until April the following year, with wind blows



Map of Indragiri Hulu Regency.

to west/north west on 4,7 knots of speed. While dry season, occurs in May to September with wind blows from north east to south east on 5,3 knots of speed. The difference of rainy season and dry season do not occur in contrast way. Hurricane or destructive wind seldom occurs in the regency. From rainfall description, the highest rainfall occurs during April, November, and December, while the lowest rainfall occurs during June, July, and September, which is under 150 mm. Based from the observation of Japura Meteorology and Geophysics Station in 1993, 1994, and 1995, the humidity is 86% and

average temperature is between 20,80-33°C.

AGRIBUSINESS INVESTMENT POTENTIALS AND OPPORTUNITIES

Fishery

The area of Indragiri Hulu Regency has the potential for general water fishery of 35,064 hectares, which consists of lake (1,444 hectares), river (9,020 hectares), and swamp (24,600 hectares). Swamp area is usually temporary, however, mostly flowed by waters all year with depth between 0,25-0,4 m and grew with swamp forest and grass that has not been fully utilized. There also exist peat swamp with depth between 0-4,0 m. Indragiri Hulu is crossed by big river, which is Indragiri river that up-streams from Batang Ombilin and Batang



Office for the Regent of Indragiri Hulu.



Indragiri Hulu has the potential for general water fishery.



Fish capture activity.



Shrimp production.



Development of corn commodity.

Sinimar in West Sumatera Province. For culture fishery development, there available 264,9 hectares of pond, which is only 203,90 hectares of it has been utilized.

From the potentials, the primary fishery commodities are patin fish, tilapia, pomfret, gold fish, tambakan fish, green catfish, and kapiék fish. Based on the consumption and production level, the demand for fish in Indragiri Hulu Regency has not been met by the local fisheries. In 2005, the fish consumption reached 6,141.97 tons, while the production was only 4,190.121 tons. This opens an opportunity for fishery business development to meet the demand of local consumption. Beside for consumption purpose, also available ornamental fish development. There are 25 ornamental fish species that can be found in the regency, such as botia, plasbara, and arowana. There also available investment opportunity in turtle culture in Pasir Ringgit, Lirik Sub district, which was once known as the

habitat of turtle.

Food Crop and Horticulture

Indragiri Hulu Regency has great potential for food crop and horticulture development. The potential area for wet land rice cultivation is 14,724 hectares, from which only 5,182 hectares has been utilized. While for dry land, the potential area is 805,102 hectares, from which only 3,550 hectares has been utilized. In 2005, based on national rice demand, which is 132Kg/capita, the amount of rice to meet the demand of Indragiri Hulu Regency people, was 39,165,984 Kg, while the rice production was only 17,558,500 Kg, so there was a deficit about 21,607,484 Kg.

Other commodities that the production still has not met the local demand are corn, peanut, mung bean, and sweet potato. While the production of soybean, cassava, vegetables, and fruits has met the local de-

Fresh Water Fishery Area

Sub district	Resources			Total (Ha)
	Lake (Ha)	River (Ha)	Swamp (Ha)	
Rengat , Kuala Cenaku and West Rengat	758	3,140	12,000	15,908
Seberida, Btg Cinaku and Batang Gansal	630	3,050	2,100	5,880
Pasir Penyu, Lubuk Batu Jaya, Lirik, Sei Lalak and Kelayang, Rakit Kulim	56	1,480	9,400	10,936
Peranap, Batang Pranap	-	1,350	1,100	2,350

Area and Production of Fishery

Description	Amount	
	2005	2006
Culture Area		
- Pond	153.56 Ha	203.90 Ha
- Keramba (fish cage)	318 Units	660 Units
Fishery Production		
- Pond	614.24 tons	1,390.42 tons
- Freshwater	197.52 tons	462.80 tons
- Keramba	159 tons	528 tons
Fish Consumption	19.3 Kg/capita/year	24.78 Kg/capita/year

Area and Production of Food Crop and Horticulture

Commodity	Production (ton)		
	2003	2004	2005
Rice	4,158.78	4,336.18	27,782.46
Corn	2,231.20	2,446.53	1,542.39
Soybean	96.71	140.49	83.08
Peanut	154.17	306.56	250.85
Mung bean	73.01	92.87	51.29
Sweet Potato	661.24	515.04	694.24
Cassava	3,533.61	4,226.60	3,105.81
Vegetable	4,628.64	7,532.15	11,330.6
Fruit	58,694.90	22,301.62	21,044.31

mand, moreover, surplus, therefore the commodities are supplied to another region. The effort to fulfill rice demand has been conducted through counseling, and production facilities aid program in order to open new area and increase cultivation index from once a year to twice a year, but these efforts has not yet paid off. Other than that, also conducted optimalization and intensification of available area with available facilities. In 2006, 985 hectares of wet land rice and 1,500 hectares of dry land rice, by using Organic Poral fertilizer, was produced, which was located in Sialang Dua Dahan Village in West Rengat Sub district.

In order to fulfill the production deficit of several food crop and horticulture commodities, there available an opportunity to develop these commodities with the support of vast and fertile area and suitable agro climate. Other than that, also available opportunity to develop livestock feed manufacturing by using the production of primary commodities. There also available export oriented commodities cultivation, such as durian, mango, orange, pineapple, and rambutan, which can be planted in all sub districts.

Animal Husbandry

During this time, the demand of Indragiri Hulu people for meat has been met from local production. While egg demand still supplied from other regions, in 2005, the demand for meat was 1,097,94 tons, while the production was 1,659,87 tons. Therefore, the investment opportunity in animal husbandry is quite potential. The area available for animal husbandry development is 2,662.5 hectares, spreaded in all sub districts.

Plantation and forestry

Indragiri Hulu Regency has great potential for plantation development, especially large scale scheme, which is popular among investors. The available land for the development is vast, especially for palm oil and



Opening ceremony of paddy harvesting by the regent.

rubber plantation. Other than that, also available unutilized land, which is about 86,911 hectares. The land, about 30,000 hectares of which, is located in Rengat City, where available road and bridges as an access to Indragiri Hilir Regency and Tanjung Balai Karimun. Also available old rubber wood utilization, which is about 2,147 hectares, where rubber reboization program is focused in Peranap Sub district and Kelayang Sub district.

In forestry, Indragiri Hulu Regency has vast forest area, where many wood types are produced, such as meranti, ramin, kulim, kruing, etc. These commodities have been developed commercially by several national and foreign companies. Other than that, also available commodities such as rattan, resin, kemenyan, jelutung gum, and sungkal wood, which are produced by the people. Currently, it has developed Industrial Purpose Plant Forest by investors, such as acacia wood development in Kelayang sub district. ■

INVESTMENT CONTACT

Office for Food Crop, Horticulture, Animal Husbandry,
and Fishery Affairs of Indragiri Hulu Regency
Jl. Indragiri No.01, Pematang Reba, Rengat
Phone : (62-769) 341034, Fax : 341134



Drs. H. R. THAMSIR RACHMAN, MM

THE REGENT OF INDRAGIRI HULU

Drs. H.R. Thamsir Rachman, MM is the best figure in Indragiri Hulu Regency, who was born in Rengat, on 1 January 1950. He is the son of the late Mr. H. Raja Abdurrachman and Mrs. Hj. Johariah. He has a wife named Hj, Mastiati Sriningsih and four children. The education he attended after he graduated from high school is APDN in Pekanbaru, where he graduated in 1975, and IIP Department of

Home Affairs in Jakarta, where he graduated in 1985. In 2000, he obtained Honorary Doctoral Degree in Causal Philosophies and Management from Western University of American Manila. In 2004, he finished his post graduate study at Surapati University majoring Human Resources Management.

Positions he held during his course of career are East Dumai Sub district Head (1979-1980), Bukit Kapur Sub district Head in Bengkalis Regency (1980-1983), Siak Hulu Simpang Tiga sub district Head in Kampar Regency (1985-1989), Siak Hulu Sub district Head in Pangkalan Baru, Kampar Regency (1989-1990), Bangkinang sub district Head in Kampar Regency (1990-1991), Karimun sub district Head in Riau Island Regency (1991-1993) The President of Regional Development Planning Board of Riau Island Regency (1993-1996), and Chief of Village Government Empowerment Affairs of Riau Governor's Office in Pekanbaru (1996-1999). His various experience made him elected as the regent of Indragiri Hulu Regency for 1999-2004 period. Moreover, because of his success in regional government, he was re-elected as the regent for the next period, 2005-2010.

VISION:

"To achieve developed, independent, prosper, cultural, and agrarian Indragiri Hulu Regency in 2020."

MISSION:

1. To develop skilled and quality human resources that are prepared to face challenges ahead based on strength, faith, and devotion to God the Almighty and capable to master science and technology.
2. To preserve cultural values that are based on religious values to filter the influence of other culture in order to maintain the identity and integrity of Indragiri Hulu Regency.
3. To empower economic strength based on people through the improvement of quality and capacity management, capitalization, production, and the improvement of the capability to gain access for raw material, technology, market and other factors.
4. To develop agricultural based industries through market and export oriented industry development.
5. To build and develop infrastructure and facilities that can open isolated areas, regional potentials, productive areas, and increase accessibility to production factors and market opportunity.
6. To improve the performance of regional government so that it can deliver excellent service to the people and implement good corporate governance through regional improvement and legal and regulation formulation. ♦





The Regency of Jember

GENERAL DESCRIPTION

Jember Regency is one of regencies in East Java Province. The regency is bordered by Bondowoso and Probolinggo regency in the north, by Banyuwangi regency in the east, by Lumajang Regency in the west and by Indonesian Ocean in the south. The regency has a strategic location as it is situated between Surabaya and Bali. Therefore, the regency develops rapidly and become a barometer for economic growth in eastern area of East Java. Areas of the regency comprise fertile plain land and valleys in the central and southern part, surrounded by mountain ranges spanning along the northern and eastern borders. Nusabarong Island in the south of the regency is the only island in Jember Regency. Administratively its 3,293.34 Sq km area is divided into 31 sub districts. In 2005 total population of the regency was recorded to reach 2,141,467 people, mostly of productive age, and population growth of 0.21%.

In topographic point of view, the southern area of the regency comprises lowland area which is relatively fertile for development of food crops commod-

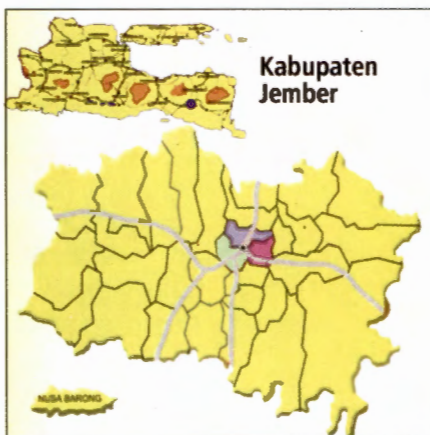
ity. Meanwhile, the northern part of the area comprises hilly and mountainous area which is suitable for development of yearly crops and plantation crops. Based on classification of type of climate, geographical location, and declivity, the area of Jember Regency is divided

into 3 groups of locations which are called as Agriculture Development Area, namely : Type A2 (highland area, wet climate), Type C5 (lowland area, wet climate), and Type E3 (lowland area, dry climate). Based on data of rainfall gathered from each sub district in the regency in 2005, average rainfall in the regency was recorded at 1,897 mm, total rainy days of 107 days per year. Dry months last for 5 months (Mai-September), humid months last for 4 months (January, April, October and November). Meanwhile, wet months

fall for 3 months (February, March and December). Based on the comparison between wet and dry months, Jember Regency can be divided into 4 agro-climate zones.

INVESTMENT POTENTIAL AND OPPORTUNITIES IN AGRIBUSINESS SECTOR

Economic development of Jember Regency is directed into a balance economic structure between



Division of Agro-Climate Zone of Jember Regency According to Oldeman

Agro-Climate Zone	Number Wet Months per year	Sub District
B	7-9 months	Sumberjambe, Kalisat, Sukowono, Tanggul
C	5-6 months	Rambipuji, Wuluhan, Ambulu, Tempurejo, Silo, Jenggawah, Sukorambi, Sumberbaru, Bangsalsari, Panti, Arjasa
D	3-4 months	Jelbuk, Pakusari, Ledokombo, Summersari, Kaliwates
E	< 3 months	Patrang, Kencong, Jombang, Gumukmas, Mayang, Mumbulsari, Ajung, Balung, Umbulsari, Puger, Semboro

Total Area and Agricultural Land Allocation of Jember Regency

Description	Total Area (Sq Km)				
	2001	2002	2003	2004	2005
Technical Paddy Field	74,443	74,604	70,222	70,208	69,931
Half-technical Paddy Field	3,595	3,211	3,525	3,518	3,690
Simple irrigated Paddy Field	7,118	6,999	6,849	6,793	5,577
Rural Irrigated Paddy Field / non PU	397	397	-	-	539
Rain Paddy Field	218	213	199	120	125
Dry land/ garden	35,472	35,472	36,066	35,465	35,451
Yard	36,165	36,165	31,282	31,276	31,277

strong sector of industry and tough agriculture sector. Hence, agricultural-based structural transformation through agribusiness and agro industry gradually and sustainably is considered necessary. Jember Regency has abundant natural resources in form of land and potential agro climate condition to be developed as productive agriculture ventures, and become attractive points for investors to invest.

Seen from its utilization, paddy field area are usually utilized for cultivating of paddy, second crops, horticulture crops, tobacco crops, and sugar cane plantation. Capability of soil is fertile where generally the soil has been processed and cultivated. Dry land areas are usually utilized for farming of second crops and horticulture commodities. Meanwhile, the yard are cultivated for yearly plants and vegetable commodities. Cultivation of both dry land and yard have not been intensive. Therefore, the potential have not been optimum and productive.

In efforts to improve investment in agriculture sector, setting up competitive products of the region

according to criteria that the products has widely open market either in local, regional or international market (export market) need to be made. In addition, the competitive products that have been set must have added value, technology, absorption of employment, and high utilization rate of local raw material. Based on the criteria, investment opportunities in agribusiness sector offered to investor in Jember Regency are as follows:

Potential of Food Crops

Development of food crops sub sector is focused on paddy, corn, soybean, peanut, and cassava commodities. Jember Regency is the biggest paddy producer in East Java and one of the National Rice Barn. Among food crops commodities developed in the regency, and are expected to become competitive commodities for investment, are paddy which generally have medium and short age. Paddy variety of IR 64 remains the primadona, despite the introduction of other paddy varieties of Mamberamo, Maros, Cibogo

Investment Opportunities in Agribusiness Sector

No	Sub Sector	Kinds of Upstream Products	Kinds of Downstream Products
1	Horticulture	<u>Fruit</u> : Orange, durian, dragon fruit, avocado, rambutan (nephelium) <u>Vegetable</u> : Red Chilly, legume	Candied fruit, fruit jam, canned fruit juice
2	Food Crops	Paddy, corn, soybean	Powder, sausage, fresh vegetable Powder, tofu, tempeh, soy milk, animal food, corn tortilla
3	Plantation	Rubber, cocoa, coffee, coconut, sugarcane, tobacco	Crumb rubber, cocoa powder, coffee powder, copra, sugar, cigarette, and others
4	Forestry	Sengon wood, teak wood, mahogany wood	Plywood, furniture, and others
5	Animal Husbandry	Meat cow, fat tail sheep (domba ekor gemuk)	Meat (shredded meat, corned beef, sosis), leather
6	Fishery	Gouramy, catfish, tuna fish	Fresh fish, frozen fish, fish meatball
7	Infrastructure and Facilities	<u>Production Input</u> : Mineral fertilizer, organic fertilizer, pesticide, seedling <u>Agriculture machinery and equipment</u> : Mattock, shovel, plow, harrow, fork, crowbar, sickle, shower, hand tractor, huller for paddy and grains, sheller, and miller <u>Supporting facilities</u> : Banking and non banking financial institution, human resources training and education facilities, research, consulting services, and information technology <u>Agriculture infrastructure</u> : Irrigation, production road, market, agribusiness terminal	



Symbolic of paddy planted by the Governor of East Java Mr. Imam Oetomo, at Panti Sub District, Jember.

and Ciherang. Besides paddy, other alternative food commodities, i.e. corn, is also developed. At present corn variety planted by farmers is still dominated by Arjuna variety, while for hybrid corn, the varieties developed are Pioneer, Bisi and CPI that reaches 60% of the total corn area. Efforts are continually made to improve planting area of those varieties.



Grand opening of paddy harvesting.

So far corn commodity have not been considered as a commodity that is cultivated commercially. Although there are some corn cultivation areas, the consumption target of this commodity only is limited only to fulfill the demand for young corn and dry shelled corn. Therefore, corn becomes a commodity that have bright prospects. Paddy and corn are expected to become priority to develop to realize food self-sufficiency, especially through partnership model of development. Other food crops commodity developed in the regency is soybean. The commodity is generally used as raw material for tofu and tempeh which are now becoming most popular food for the people. In Jember Regency, soybean started to be developed commercially. Hence it will have bright prospects ahead.

One of soybean variety developed in the regency

is Edamame Soybean which is originated from Japan. At present, there are about 18 groups of farmers that develop Edamame soybean which is well known for its relatively short of age (± 60 days). Total planted area of Edamame soybean at present reaches 800 Ha producing 3,000 ton of soybean. This production figure is still far from demand of Japanese market

that reaches 6,000 ton. This condition provide opportunities for development of farming area, supply of seedling and supply of drying machine.

Potential of Food Crops and Horticulture Commodities

Horticulture (both yearly or seasonal crops) that develops and will be developed continually to become potential commodities for investment area large chilly, legume, durian, avocado, rambutan, dragon fruit, and orange. Fruits are important commodities for the regency, some of those fruits have been developed by people of Jember Regency. Productivity of fruit commodities has not been capable to fulfill market demand. Hence investment to develop fruit commodities is quite promising.

Total Area and Production of Food Crops, 2005

Commodity	Total Area (Ha)	Production Capacity (ton)	Potential Center (Sub District)
Paddy	144,453	737,944	Scattered in 13 sub districts
Corn	55,585	289,196	Ambulu, Puger, Wuluhan, Gumukmas, Tempurejo
Soybean	16,623	13,402	Bangsalsari, Ambulu, Gumukmas, Jenggawah, Kencong, Balung, Rambipuji
Edame Soybean	800	3,000	Panti Jenggawah

The Regency of Jember



Orange commodity



Durian commodity



Dragon fruit commodity.

Total Area and Production of Horticulture Crops, 2005

Commodity	Total Area	Production Capacity	Potential Center (Sub District)
Large Chilly	473 Ha	9,573 Quintal	Wuluhan, Ambulu, Kencong, Ajung, Mayang, Ledokombo, Gumukmas, Panti
Legume	956 Ha	17,931 ton	Ambulu, Gumukmas, Jenggawah, Kencong, Rambipuji, Ajung, Umbulsari, Ledokombo
Durian	50,406 trees	47,065 Quintal	Panti, Sumberjambe, Arjasa, Patrang, Sukorambi
Rambutan	519,004 trees	163,211 Quintal	Patrang, Panti, Tanggul, Arjasa, Bangsalsari, Sumberbaru
Avocado	18,779 trees	13,152 Quintal	Silo, Patrang, Ambulu, Sumberbaru, Sumberjambe, Jelbuk, Ledokombo
Siam Orange	2,290,245 trees	1,305,357 Quintal	Umbulsari, Semboro, Bangsalsari, Kencong, Gumukmas, Sumberbaru, Jombang
Dragon Fruit	6 Ha	1 – 2 ton/Ha	Arjasa (Rembangan), Jombang, Gumukmas, Rambipuji, Puger, Summersari, Jelbuk, Ambulu

Plantation Potential

Jember Regency has vast and fertile land available as well as suitable agro climate which are potential for development of plantation commodities. Even, Jember has long been known as the World producer of tobacco commodity. Other potential plantation commodity of Jember includes rubber, cocoa, coffee, coconut and sugarcane. So far most of plantation products like dry rubber, dry cocoa, ose coffee, and sliced/dried tobacco

are still marketed as raw products. SO far, there is only one sugar industry (Semboro Sugar Factory) that absorbs sugarcane products of the people and markets them as finish product (sugar). This condition gives opportunities for development of other plantation industries like processing industry of Virgin Coconut Oil (VCO), processing and trading of coffee produced by the people (wet coffee processing that produces export quality ose coffee), and development of



Tobacco commodity.



Tea plantation.

Total Area and Production of Plantation Sector, 2005

Commodity	Total Area (Ha)	Production (ton)	Kinds of Product
Rubber	9.996,310	10.471,452	Dry Rubber
Cocoa	2.235,741	1.095,362	Dry cocoa
Coffee	14.147,040	6.023,630	Ose / dry coffee
Coconut	12.584,720	11.334,980	Units
Sugarcane	8.243,100	50.652,800	Crystal Sugar
Tobacco	8.314,050	9.999,635	Dry leave

Total Area and Production of Forestry Sector 2005

Commodity	Total Area (Ha)	Production (m ³)	Kinds of Product
Sengon Wood	5.094,300	27.854,947	Log
Teak Wood	14.533,902	12.706,029	Log
Mahogany Wood	10.171,403	9.230,346	Log



Jember has vast forestry area producing products to develop.

Virginia and White Burley tobacco under partnership pattern.

Tobacco product of Jember are, among others, Na Oogst (NO) and Kasturi/ *Tembakau Bawah Naungan* (TBN/ FIN) or Sheltered Tobacco which are developed in total area of 11,958 Ha and 6,414 Ha respectively (2005) with production capacity of 14,269 ton/year and 4,673 ton/year respectively. In 2005 White Burley tobacco has also been tried to be developed in 374 Ha. For tobacco cultivation and development, of the total planted area of 18,327 Ha, 16.575 Ha (90%) of which are managed by people, while the rest of 942 Ha are managed by state owned plantation enterprises of PTPN X and 855 Ha are managed by private companies. Market opportunities for either Na Oogst, Kasturi or White Burley types are still prospective enough to tap as seen from the increasing demand from overseas consumers.

The only state owned enterprises in Jember that manage tobacco is PT. Perkebunan Nusantara X (PTPN X). To anticipate the main overseas market, beside marketed tobacco directly, PTPN X also develops the market through Bobbin unit industry and Kartanegara Worker Cooperative. Tobacco products

marketed directly are aimed at local and export market, among others for Na Oogst and TBN/FIN (Kasturi) tobacco with total export volume in 2005 reached 8,882,879 pack /carton (705,310 Kg) and 14,912 pack /carton (1,134,951 Kg), to various foreign countries like Switzerland, Danish, Dutch, Belgium, Germany, France, and the United States.

In 2005, Bobbin Industry of PTPN X was capable to produce 700 million pack of cigar, absorbing 931 workers (mostly women). Kartanegara Worker Cooperative of PTPN X also produces and markets tobacco products of Na Oogst and TBN/FIN types which are packed in form of cigar and are made manually (hand made). Products of the cigar are varied, among other cigar with sliced tobacco content or Soft Filler (Argopuro, Bali Cs), cigar with single tobacco leaf or long filler (ND, LA), and small cigar (Al Capone, Maco/Macho Filter, Macho Jepang). In 2005 sales of cigar of Kopkar Kartanegara PTPN X reached around 2,772,040 units, where about 2,337,600 units of which are Small Cigars with Macho Jepang brand exported to Japan. While the rest of 383,440 units are marketed for domestic consumption.

Potential of Forestry

Jember also has vast forestry area producing various potential products to develop, among others *sengon* wood, teak wood and mahogany wood. So far, forestry products of Jember are still marketed as raw material (log wood and sawn wood). This condition provides opportunities for development of wood processing industry to produce plywood, furniture, and others.

Potential of Animal Husbandry

Animal husbandry sector in Jember Regency is one of potential sectors, seen from its capability to become complementary productive economic activities of the

The Regency of Jember

main activities of villages. In addition this sector also capable to provide added value, income, employment, and even export opportunities. Livestock agribusiness is very potential to develop as consumption of meat, egg, and milk is predicted to continue growing as the logic consequences of the increasing number of population and better understanding and awareness of the people of the importance of nutrient intake. Meanwhile, livestock commodities which are potential to develop include meat cow and fat tail sheep (*domba ekor gemuk*).

Up until 2005, population of meat cow and fat tail sheep in Jember reached 182,398 units and 63,424 unit respectively. Development of both types of commodities is supported by availability of vast shepherding area (3,298.50 Ha) and grass yard for animal food (53,568.91 Ha). Products of meat cow are marketed to Jakarta, Surabaya and other regions, while products of sheep meat are marketed to Jakarta, Surabaya, Bali and other regions. SO far, processing of livestock products is still carried out through household scale industry, that produce, among others, snack (*kerupuk rambak*) industry, *paru* (lung) snack (*kerupuk paru*) and organic fertilizer. Hence, besides farming of meat cow and fat tail sheep, other investment opportunities offered include development of organic fertilizer industry, leather processing industry, meat processing industry (shredded meat, corned beef, *sisis*), and processing industry of *rambak* snack and *paru* snack.

Potential of Fishery

Fishery business is also potential to develop in Jember Regency, as it is believed that consumption of fish will continue growing. Jember Regency has fishery potential of seawater and freshwater area for development of both fish cultivation and fish capture.. Of various potential available in the regency, cultivation of gouramy fish, catfish, and capture of tuna fish are most prospective to develop by investor. In 2005, production of gouramy fish reached 579.33 ton, catfish of 1,964.89 ton, and tuna fish of 7.89 ton. Development of gouramy and catfish is supported by availability of potential land of 322.01 Ha scattered in all sub districts of the regency. Meanwhile, tuna fish capture in Jember is supported by vast seawater area of Jember Regency in Indonesian Ocean. For gouramy and cat fish, beside providing opportunities for development of fish cultivation and hatchery of gouramy and catfish, opportunities are also offered to process fish egg and meat. Meanwhile, for tuna fish, investment opportunities offered consists of development of fish catching equipments.



Airport facility.

INFRASTRUCTURE AND FACILITIES

To support development of investment in agribusiness sector, the government of Jember Regency takes serious attention on the availability of supporting infrastructure and facilities. Although in general, the condition are representative enough, to create conducive investment climate, the availability of basic infrastructure and facilities like transportation, telecommunication, electricity and clean water, are continually improved, both in term of their quantity and qualities. The smooth access road and bridges connecting production centers are preserved continually to support marketing flow of products. Development and maintenance of irrigation network is carried out to ensure adequate supply of waters to agriculture production centers. Meanwhile, development of telecommunication network are continually fostered to catch up globalization and the present trading trend.

Beside physical infrastructure and facilities, the government of Jember Regency also continually makes its best efforts to create secured and peaceful atmosphere for investors, potential buyers, and domestic as well as foreign tourists. Improvement of security, empowerment of human resources through development of education and health, laws enforcement, and professional investment permit services become focus of attention to create conducive climate for investment. ■

INVESTMENT CONTACT

Economic Section, Regional Secretariat
Jember Regency

Jl. Suparman No. 1, Jember – East Java
Phone . : (62-331) 421033, Fax . : (62-331) 426565



Ir. MZA DJALAL, M.Si.

THE REGENT OF JEMBER

Developing Rural Areas and Improving Urban Areas For The Sake of Common Welfare

As the first regent of Jember who is elected through direct vote, Ir. Mza Djalal, M.Si is fully aware of the heavy mandate of people trusted to him to carry out. However, the regent who was born in Jember on 30 March 1957 is very optimistic that he will be capable to carry out mandate of the people as good as he can. Through a motto of development of “Developing rural areas and improving urban areas for the sake of common welfare”, he is committed to optimize the whole potential of natural resources and human resources for the welfare of the people. Vision he wishes to realize is the existence of creative, clean and respectable services of the government officials to realize welfare, religious and honorable society. To realize the vision, he set mission of development of: 1) To carry out creative and quality government administration, 2) To empower formal and informal education, 3) To develop regional potential optimally, 4) To decrease poverty and unemployment, 5) To strengthen infrastructure and facilities of development. Meanwhile, in the field of investment and trading, strategy and policy he formulated is by improving investment administration system, deregulation and debureaucratization in investment permit granting, and by carrying supervision measures for investment.

Before he was elected as the regent of Jember for 2005-2010 administration period, Ir. Mza Djalal, M.Si is indeed a familiar figure for people of Jember. The father of two children (Diponegoro and Astiti Rahayu) spent his elementary until senior high school in his hometown, Jember. After graduating his Technical Senior High School of STM Negeri I Jember in 1975, he continued his study at Civil Engineering Department of Sepuluh November Technological Institute (ITS) of Surabaya until he got his bachelor degree in 1982. Meanwhile, he got his Magistrate Degree of Administration Science from Post Graduate Program of 17 Agustus University (UNTAG) of Surabaya in 1996.

He also spent most of his career in Jember. After holding his engineering degree, Mza Djalal decided to become a government civil servant in regional government of Jember Regency. Not too long afterwards, it was in 1985, the husband of Ny. Sri Wahyuni, had been trusted to hold the post as the Head of Regional Office of Public Works. Afterwards, various duties and important posts were assigned to him, among others as the Head of Development Section (1988-1994), and the head of Regional Office of Public Works or DPUD (1994-1996). Seeing his capacities and capabilities, he was then promoted to hold the post at the provincial office of East Java, holding the post as the Head of Bureau of Program Formulation (1996-2001) and the Head of Office of Public Works of Bina Marga (2001-2005). However, due to his deep love for his hometown, he was then participated in the race for regent post of Jember, where he paired with Kusen Andalas, and finally he win the race. Through his motto, vision and mission as well as his strategies, he expect participation of the people to hand-in-hand creating conducive climate for investor to invest in the region, especially in agribusiness fields. ♦





The Regency of Kuantan Singingi

GENERAL DESCRIPTION

Kuantan Singingi Regency is one of regencies in Riau Province. Geographically, the regency borders on Kampar and Pelalawan regency in the north, on Jambi Province in the south, on West Sumatera Province in the west and on Indragiri Hulu Regency in the east. Its $\pm 7,668.54$ sq km area is administratively divided into 12 sub districts. Teluk Kuantan is the capital City of Kuantan Singingi Regency. As of December 2005, total population of the regency reaches 267,408 people with average population density of 35 people/sq km.

Topographic condition of Kuantan Singingi Regency is varied. Most of the area has declivity of 0-2%, cover-

ing area of 202,176 Ha (43,3%), declivity of 15-40% covers 172,324 Ha (36.9%), declivity of 2-15% covers 70,040 Ha (15%) and only small part of the area has declivity of > 40% covering 22,358 Ha area (4.79%). In general type of soil in the regency consists of red yellow podzolic, latosol, alluvial, and glei humus, with average pH balance of 4.7-5.8. The larger part of the area consists of dry land that covers 733,929 Ha (97.69%) and the rest of 17,365 Ha (2.31%) comprises paddy field area. Based on climate classification of Koppen, type of climate in Kuantan Singingi Regency is AFA (Wet Tropical) with the lower rate of rainfall occurs in February (127.33 mm) and the highest falls on May (365.67 mm). The heaviest rainy days occurs during October (16 days) and the smallest rainfall occurs during September (7 rainy days).

PETA KABUPATEN KUANTAN SINGINGI

Terbentuk berdasarkan UU No.53 Tahun 1999.

Luas Wilayah 7.656,03 Km², berbatasan dengan :

- Sebelah Utara dengan Kab. Kampar dan Pelalawan
- Sebelah Selatan dengan Propinsi Jambi
- Sebelah Barat dengan Propinsi Sumatera Barat
- Sebelah Timur dengan Kab. Indragiri Hulu

0° 00' LU, 1° 00' LS, 101° 02' - 101° 55' BT.

Lb. Jambi - Pel. Dumai
± 415 Km

Kab. Kampar

Kab. Pelalawan

Situgal

Tl. Kuantan

Benal

Panjen Baserah

Cerenti

Ke Rengat

Peranap

Lb. Jambi - Pel. Ti. Bayur
(Sumbar) ± 366 Km

Lb. Jambi - Ka. Enok
Sp. Pangkalan Sp. IFA ± 342 Km

Ibui

Sel. Besar

Perhentian Sungai

Ke Jambi

LEGENDA

- Jin Propinsi
- Jin Propinsi/Lintas Selatan
- Jin Kab./Lokal
- Sungai Kuantan
- Rencana Jbtk Sel. Kuantan I & II
- Jembatan

Map of Kuantan Singingi Regency.

Availability of Agriculture Area, 2005

Utilization		Total Area (Ha)
Paddy Field	1. Irrigation	590
	2. Half-technical Irrigation	3,298
	3. Simple Irrigation	1,421
	4. Non Public Works (PU) Irrigation	3,563
	5. Rain Catchments	7,743
	6. Pool	500
	7. <i>Polder</i> and others	250
Dry Land	1. Yard	57,028
	2. Dry Land /garden	30,001
	3. Dry land agriculture area / Ladang huma	6,941
	4. Grass yard and shepherding area	1,306
	5. Uncultivated Land	20,623
	6. People Managed Forest / Planted area	7,067
	7. State Forest	310,845
	8. Plantation	226,668
	9. Swamps (unplanted)	69,580
	10. Fishpond	3,028
	11. Pool/ embankment	200
	12. Others	642

INVESTMENT POTENTIAL AND OPPORTUNITIES IN AGRIBUSINESS FIELD

As a new extension regency, Kuantan Singingi plays significant roles in supplying food stock for Riau Province. This is because since a long time, Kuantan Singingi has long been known as a producer of various kinds of agriculture commodities as the region is supported by availability of vast and fertile agriculture land as well as suitable agro climate. The important role of the regency is also supported further with its strategic location as the entrance gate and in cross route to and from southern area of Riau.

Food Crops and Horticulture

Kuantan Singingi Regency maintains vast area for development of food crops and horticulture commodity, either in wet land or in dry land cultivation. Potential commodities to develop through agribusiness model of development include corn, pineapple, lower land vegetable (cucumber, eggplant, legumes, and *kangkung*), as these commodities is most possible to be developed in massive cultivation, maintain good quality and has vast market share. Total area allocated for cultivation of corn commodity reaches 5,000 Ha with production target of 10,000 ton. Total allocated area for pineapple farming reaches 500 Ha with production



Development potential of livestock agribusiness in Kuantan Singingi Regency is quite big.



One of fishery business developed in Kuantan Singingi is pool fish cultivation.

target of 15 ton. Meanwhile, production of lowland vegetable is targeted to reach 100 ton/year.

Animal Husbandry

Development potential of livestock agribusiness in Kuantan Singingi Regency is quite big. This condition is due to the availability of vast shepherding area of 4,486.5 Ha, plantation area, paddy field area, second crops area and horticulture areas which are also equally vast enough that provide alternative source of animal food. Kinds competitive livestock include cow, buffalo, and goat where in 2005 the population reaches 19,056 units, 15,430 units, and 17,499 units respectively. Development potential of livestock is also supported by the increasing demand for meat, both in local market as well as in market of other regions like Pekanbaru and Dumai City. Demand for ruminates in Kuantan Singingi reaches 5,000 units each year in average, consisting of buffalo of 1,500 units, cow of 3,000 units, and goat



of 500 units. At present, there is a companies involving in cow farming business, namely PT. Tri Bakti Sarimas that have applied integrated technology of cow breeding.

Fishery

Kuantan Singingi Regency has public water resources of 23,086 Ha, consisting of lake (56 Ha), river (4,630 Ha), and swamp area (18,400 Ha). In 2005, production of fish capture in public waters reached 524.96 ton cultivated by 1,439 fish farming household (RTP). Utilization of public waters also has been carried out through floating net fish cage of 80 units producing 40.937 ton fishes. Other fishery business developed in the region is pool fish cultivation where, up until today, utilizes area of 171.46 Ha producing 616.476 ton fish. In addition, there is also fish hatchery business (49 units) producing young fish amounted to 7,431,778 young fishes, and fish food industry capable to produce fish food of 6 ton/day.

In general, utilization of fishery potential in Kuantan Singingi have not been optimum. On the other hand, the increasing demand for fish from local market as well as from other regions have not been capable to be fulfilled. Development of fishery cultivation in the regency is also supported by availability of representative infrastructure and facilities such as Tesi Fish Breeding Center (BBI), Mini Hatchery of Teluk Kuantan, and People Managed Hatchery (Kolam Pembenihan Ikan Rakyat or KPIR) available almost in all sub districts. This condition provide huge and prospective opportunities for development of fishery agribusiness in form of:

- **Pool Fish Cultivation**

The potential area reaches 2,000 Ha, of which only as vast as 171.46 Ha have been utilized. Potential



In general, utilization of fishery potential in Kuantan Singingi have not been optimum.

location for pool fish cultivation are located in Kuantan Bay, Gunung Toar, Baserah, Benai, Singingi, Singingi Hilir, and Cerenti. Kinds of fish which are potential to develop include patin, baung, nila, kalui/gouramy, betutu, kelemek, kapiat, and giant tiger prawn (udang galah).

■ **Fish Cage Floating Net (KJA Fish Farming)**

The potential area is capable to accommodate 3,000 units of Fish Cage Floating Net with production capacity reaches 7,500 ton/year. Potential location are found along Kuantan and Singingi rivers, and in a number of lakes and dam. Kinds of fishes suitable to develop include baung, patin, jambal, bawal, kelemek, kapiat and other local fishes.

■ **Ornamental Fish Farming**

Kinds of fishes potential to develop include kayangan/arwana, rajamantili/botia, rasbora, barbus/sibolang, and other tropical ornamental fishes.

■ **Fish Breeding / Hatchery**

Local demand for young fishes reaches 15 million young fishes each year, of which only 50% can be fulfilled.

■ **Fish Food (pellet) Factory**

Local demand for fish food reaches 750 ton per year. There are abundant raw material of fish food industry in the region such as dedak (milled paddy shell), corn and by product of oil palm processing (bungkil).

■ **Fish Processing**

Opportunities are widely open for development of fish fillet industry, cooked fish (ikan salai), fish presto, fish ball, fish nugget, and fish snack.



H. Sukarmis
The Regent of Kuantan Singingi

Plantation

Availability of land for plantation area in Kuantan Singingi reaches 297,586 Ha, where up until 2005, as vast as 277,333.04 Ha have been utilized. Hence there are 9,192.82. Ha areas await to develop. Plantation cultivation can be developed through large plantation scale and people managed plantation model. Competitive commodities to develop include rubber, oil palm, and cocoa.

■ **Rubber**

Up until 2005, total rubber plantation area reached 158,812.40 Ha, producing rubber of 166,551 ton. Most of the plantation area are people-managed plantation (91.56%). At present, production of people-managed plantation only in form of raw material as there is no rubber processing industry in the region, either upstream or downstream industry. This condition provides opportunities for development of rubber processing industry where ideally there should be 6 factories. In addition, old rubber tree area that reaches 28,748.66 Ha (2,874,866 trees) is also potential for development of furniture industry using rubber wood as the raw material

■ **Oil Palm**

Up until 2005, total oil palm plantation area reached 109,883.03 Ha, consisting of people managed plantation (22,044 Ha) with total production of 138,243 ton, and large scale private plantation (83,937.3 Ha) with total production of 828,056 ton. Of the total area and production, ideally there should be 18 units of CPO factory in Kuantan Singingi having production capacity of 30 ton/hour. Up until today there are only 11 units of CPO factories (9 units have been operating and 2 other under construction phase), having production



Production of various fishery commodities in Kuantan Singingi Regency.



Oil palm commodity.



Forest of Rimbo Larangan Air Hitam and Rimbo Samak.



capacity of 30-80 ton/hour. In addition, opportunities are also open for development of downstream industry such as cooking oil industry, olein industry, margarine industry, and other industries.

■ Cocoa

Up until 2005, total plantation area of cocoa commodity reaches 3,222.81 Ha producing cocoa of 11,558.24 ton. Most of the plantation are carried out through people-managed plantation model. Development of cocoa commodity is directed to improve sustainable productivity of cocoa.

■ Coconut

Up until year 2005, total local coconut (kelapa dalam) plantation area and hybrid coconut plantation area reaches around 125,211 ha with total production of coconut reaches 16,940.29 ton. Most of coconut plantation are cultivated through people-managed plantation model. Generally, by products of coconut like coconut shell, coconut fiber and wastage of coconut water have not been utilized and managed optimally. This potential provide opportunities to investors to develop their business in this field.

Forestry

Kuantan Singingi Regency has 330,510 Ha forestry area, consisting of Protection Forest (71,902 Ha), natural conservation forest (103,080 Ha), and limited production forest (155,528 Ha). Of the potential, opportunities offered is in form of available land in Bukit Betabuh Protection Forest area in Kuantan Mudik sub districts, Sentajo Protection Forest area in Kuantan Tengah sub district, and Hutan Rimbo Larangan/Rimbo Simpanan forest for development of agribusiness.

As a tropical forest area, Bukit Betabuh Sentajo protection forest area has specific bio-diversity and beautiful natural environment. Seen from the location



Forest of Rimbo Larangan.

and condition of the area, availability of infrastructure and facilities, and smooth accessibility, both of the forests are very potential to develop agribusiness. Meanwhile, investment opportunities offered include farming and cultivation of medicinal plant, decorative plant, mushrooms, bee honey, and swallow bird nest ; tourism (natural, sport, adventure, hunting); and utilization of forest commodity (water spring, rattan, bamboo, honey, fruit, and others). Meanwhile, based on inventory of condition and diversity of seed plasma contain in the forest, Rimbo Larangan/Rimbo Simpanan are potential for development of research and education, natural tourism, utilization of non-wood forest products (rattan, resin, honey bee, gaharu wood, and fruits), and preservation of forest to support Pacu Jalur Rantau Kuantan culture that have been carried out by generation to generation. ■

INVESTMENT CONTACT

Government of Kuantan Singingi Regency

Komplek Perkantoran Pemda Kabupaten Kuantan Singingi,
Teluk Kuantan - Riau 29562
Phone/Fax : (62-760) 561616



The Regency of Muara Enim

GENERAL INFORMATION

Muara Enim Regency is one of regencies in South Sumatera Province. The regency has a very strategic position as it is crossed by Trans Sumatera Route. Borders of the regency include: Musi Banyuasin Regency in the north, OKU Regency, East OKU and South OKU Regency in the south, OKI Regency, Ogan Ilir Regency, and Palembang City in the east and Musi Rawas Regency, Lahat Regency and Pagar Alam City in the west. Administratively its 9,238,77 sq km area is divided into 22 sub districts covering 303 villages and urban villages. In 2005 total population of the regency reached 638,752 people with average density of 69.14 head/ sq

km and population growth of 2.1% per year (1990-2000). About 34% of total number of work force depend their daily living in food crop agriculture sector, forestry sector, plantation sector, animal husbandry and fishery sectors.



H. Kalamudin, D, SH
The Regent of Muara Enim

Approximately 75.7% of total area of Muara Enim Regency has declivity of less than 12%, while the rest has declivity of medium and very steep declivity. In topographical point of vies, the regency comprises mountain ranges, hills, valley, plain land and small part of swamp. Mountain and hilly areas with steep walls flanking cavities /valleys are located in the southern part as a chain of Bukit Barisan sub mountain ranges. Climate of the area belongs to tropical with average temperature during the day reaches 23-24°C, rainfall intensity



Office of The Regent of Muara Enim.



Paddy harvesting of prime variety of IR-46

of about 50-350 mm each month. Muara Enim has abundant water resources, as the regency is crossed by Enim and Lematang rivers having total catchment area (DAS) reaches 85,000 Ha. In general kinds of soil found in the region are aluvial, regosol, red-yellow podsolik, latosol, andosol, association of gley, association of latosol and litosol, association of yellowish brown podsolik and hydromorf and podsolic and latosol complex.

Economic structure of Muara Enim Regency is characterized by domination of mining and agriculture sectors that give the largest contribution to GRDP. The role of mining sector is dominant enough considering that the region comprises the main coal mining and oil mining area in South Sumatera. During the period of 2002-2005 contribution of the two commodities increased by 2.85%. Meanwhile, the role of agriculture sector contracted from 16.7% in 2002 to become 15.52% in 2005. During 2005, the growth of economy - including oil and gas - reached 4.15%, higher than that of 2004 that reached 3.67%. On the other hand, economic growth without oil and gas during 2004-2005 dropped from 4.39% to become 4.27%. Income per capita upon current price during 2004-2005 increased significantly. Including oil and gas, income per capita increased by around 26.52% from Rp.10,648.13 thousand to become Rp. 13,471.62 thousand. Meanwhile, income per capita without oil and gas increased by around 12.87% from Rp. 6,544.26 thousand to become Rp. 7,386.54 thousand.

INVESTMENT POTENTIAL AND OPPORTUNITIES IN AGRIBUSINESS SECTOR

Muara Enim Regency has economic structure which still rely heavily on agriculture sector. This condition is shown by majority of people in the region who works in



Harvesting of fish cultivation.

agriculture sector. The target of agriculture development, beside focusing on improvement of income of farmers, is also referring to agribusiness system. The objective that in order in the future, downstream subsystem that covers processing and marketing of agriculture products will become very strategic chain of agribusiness sub system, especially to improve income and people's welfare, especially farmers.

Therefore, through what is called as Development Movement, empowerment of people in Serasan Sekundang Land or generally called *Gerbang Serasan*, since 2001 a number of policies have been applied which actually directly related to efforts to improve economy of the people. In its implementation, priority of Gerbang Serasan is especially focused on activities in agriculture activities of food crops, fishery, animal husbandry, plantation, forestry and small scale industry. Under the leadership of Regent H. Kalamudin D., SH. MH and Vice Regent Ir. H. Hanan Zulkarnain, MTP., result of development of agriculture sector in Muara Enim have been felt by people, either in form of availability of enough food, improvement of agriculture production or improvement of income and welfare of the people.

Food Crops and Horticulture

Development of food crops and horticulture in Muara Enim Regency is supported by availability of vast and fertile agriculture area as well as suitable agro climate. Competitive commodities developed in the regency include paddy, corn, cassava, sweet potato, peanut, soybean, vegetable and fruits. Production of paddy in 2005 reached 189.787 tons, or equal to about 101,954 ton rice. Based on consumption of rice that reach 85,274 tons, a surplus of rice of in the regency reaches 16,679 ton. Production of corn reaches 59,621

Development of Harvested Area and Production of Food Crops and Horticulture

Commodity	Total Harvested Area (ha)			Production (ton)		
	2003	2004	2005	2003	2004	2005
Food Crops and Horticulture						
■ Paddy	44,470	46,431	45,723	181,213	188,151	189,787
■ Corn	1,058	2,138	1,723	3,145	6,076	4,928
■ Cassava	1,261	1,426	905	15,211	14,296	11,431
■ Sweet Potato	298	322	225	3,948	4,273	2,914
■ Peanut	329	355	359	466	452	464
■ Mungbean	538	975	995	673	1,198	1,197
■ Soybean	71	127	94	91	146	102
Sayur – sayuran ??						
■ Cabbage	5	5	20	145	145	600
■ Potato	3	-	1	37	-	15
■ Tomato	288	276	226	3,225	248	2,260
■ Onion Leaves	63	68	52	348	51	520
■ Red Peanut	42	46	47	209	17	141
■ <i>Labu Siam</i>	10	10	9	144	32	180
■ String Bean	165	84	96	1,426	101	1,440
■ <i>Kangkung</i>	69	132	133	493	43	1,330
■ Spinach	137	139	128	803	56	128
■ Legumes	494	477	464	14,935	1,526	1,392
■ Eggplant	344	318	314	5,204	718	3,140
■ Chilly	934	513	900	6,439	1,046	2,700
Fruit						
■ Avocado	13	12	7	28.10	15	9
■ Orange	2,067	557	388	10,348.80	8,076	6
■ Lanseh Fruit	143	175	117	287	478	316
■ Durian	199	317	207	396	538	351
■ Mango	185	96	82	210	96	82
■ Pineapple	1,395	343	150	4,338.30	9,261	4
■ Mangosteen	9	12	-	17.70	8	5
■ Banana	48	129	229	140.40	647	1,149
■ <i>Rambutan</i>	359	314	199	2,152.10	942	597
■ Sapodilla	134	97	94	537.60	68	66
■ <i>Nangka</i>	58	82	45	117	173	95
■ Guava	110	90	26	470	45	13
■ Papaya	18	48	11	110	62	14

ton. This production has not been capable to fulfill local demand that reaches 370,000 tons. This condition open opportunities for development of corn farming either through extension as well as through intensification activities. In addition, besides providing opportunities for development of a number of competitive products, the regency also offers opportunities for investors to develop processing industry.

Animal Husbandry

Muara Enim Regency is one of production center of livestock in South Sumatera. A number of competitive livestock developed in the regency include cow, buffalo, horse, pork, chicken and duck. Improvement of livestock population is supported by a number of



One of competitive livestock in Muara Enim is cow.

Development of Livestock Population

Kinds of Livestock	Population (Unit)		
	2003	2004	2005
■ Cow	73,278	73,373	73,469
■ Buffalo	15,626	15,735	15,814
■ Horse	175	182	219
■ Goat	51,667	61,925	62,017
■ Sheep	6,897	7,054	6,939
■ Pork	25,486	2,073,530	1,672,250
■ Broiler	2,119,327	3,956,700	5,042,900
■ Purebred Chicken	666,455	686,168	687,080
■ Duck	73,278	73,373	73,469



Program of man-made insemination.



Development of broiler.

activities such cow fattening program, man-made insemination, development of broiler, through implementation of *Gerbang Serasan*, BPLM, Ministry of Cooperative and small-medium Enterprises (UKM), and other activities carried out by regional office for Animal Husbandry and Fishery Affairs of Muara Enim Regency. In 2005, production of meat reached 9,768.12 ton, which means there was a surplus of 5,227.72 ton from consumption around 4,540 ton, while production of egg reached 5,464.60 ton also had surplus of 762.16 ton compared to consumption rate that reached around 4,702.44 ton.

Plantation

Development of plantation in Muara Enim Regency

is carried out through people-managed plantation and large plantation company. Competitive commodities developed through people-managed plantation include coffee, coconut, oil palm, sugar palm, cocoa, rubber, cinnamon, pepper, and vanilla. So far leading commodities cultivated by both people-managed and large scale plantation estate consist of oil palm, rubber and coffee. Coffee commodity in the region, other than fulfilling demand from the region, it also become specific commodity of Muara Enim Regency. Coffee produced in Semende region has long been known to have specific flavour. In 2005, production of competitive products of people-managed plantation consisted of rubber (155,264 ton), coffee (18,244 ton) and oil palm (13,824 ton).

Development of Area of People-managed Plantation According to Type of Crops Variety

Year	Rubber (ha)		Coffee (ha)		
	GT.I	Others	Arabica	Robusta	Others
2003	160,155	-	-	25,709	1,287
2004	115,593	49,550	256	24,117	1,287
2005	166,172	49,550	256	24,250	-



Coffee commodity.



Coconut plant.



Pineapple production.



Processing of plantation area.



Oil palm area.



The regent is making incisions in rubber tree.

Application of conventional model of farming of people-managed plantation resulting on low productivity of plantation sector, far below expectation. It is expected that with improvement of farming system and application of efficient and effective technology for post harvest will be capable to improve economic added value of the people-managed plantation in order to be equal to large scale plantation. Considering the huge potential of land, opportunities are available for development of new area, especially for oil palm,

rubber, and coffee commodities. Rehabilitation and intensification of plants and opening of new areas through replanting and the use of quality seedling are expected to be capable to improve productivity of plantation sector.

Fishery

Fishery business in Muara Enim Regency comprises only fresh water fishery cultivation. Kinds of business developed include fish capture in public waters and fish



Development of plantation in Muara Enim Regency is carried out through people-managed plantation and large plantation company.

Total Area and Production of Fishery 2005

Fishery Area	Total Area (ha / unit)	Production (ton)
Freshwater Culture Area		
■ Pool	670.70	1,634.20
■ Paddy Field	203.40	325.90
■ Fish Cage (Karamba)	1,281.00	535.60
Public Waters		
■ River	27,955.00	2,017.50
■ Pond	18,336.00	1,177.20
■ Lake	3,682.00	782.70



Corn harvesting.



Oil palm production.



Fish harvesting in paddy field.



Tiger prawn harvesting as implementation of Gerbang Serasan.

culture in pool, fish cage, paddy cum fish and rivers. Up until 2005, fishery business is still small in number and in size. Production of fishery reached only 6,473.10 ton, mostly resulted from capture fishery in public waters (3,977.40 ton), while production of fish from culture fishery was smaller, namely reaching 2,495.70 ton.

From year to year, both production and total area of culture fishery continue developing. However, technology applied in culture fishery is still simple ones. Marketing system of fishery products is also still using traditional market model, as so far there have not been market network which is reliable enough to accomodate fishery products. Besides sold as fresh fish, production of fishery is also processed and preserved to become salted fish, smoked fish, shredded fish, and other fish products, which are all carried out through very simple processing method. In 2005 production of preserved fish of salted fish reached 600.10 ton, and smoked fish of 156,00 ton. Based on the available potential, Muara Enim Regency has vast opportunities for development of fishery agribusiness. Investment opportunities available include expansion of fishery culture area, fish breeding, development of fishery infrastructure and facilities, development of processing technology of fish products, marketing, and others. ■

INVESTMENT CONTACT

Office for Food Crop Affairs
The Regency of Muara Enim
Jl. Jend. A. Yani No. 10, Muara Enim
Phone/Fax : (62-734) 421040



The Regency of Nabire

GENERAL DESCRIPTION

Nabire Regency which belongs to Papua Province is astronomically located between 2°25'00"-4°15'00" South Latitude and 134°35'00"-136°37'00" East Longitude. Occupying total area of 1,631,200 Ha, the regency is bordered by Paniai Regency in the east, by Mimika Regency in the south, by Wondama Regency (West Irian Jaya Province) in the west and by Cendrawasih Bay in the north. Nabire Regency which is located in the back of Papua Island has a strategic position for inter-island and inter regency trading and transportation routes of Papua area, either sea or air transportation. More specifically, Nabire Regency is the entrance gate for mobility of trading and development of Puncak Jaya and Paniai Regency today and in the future.

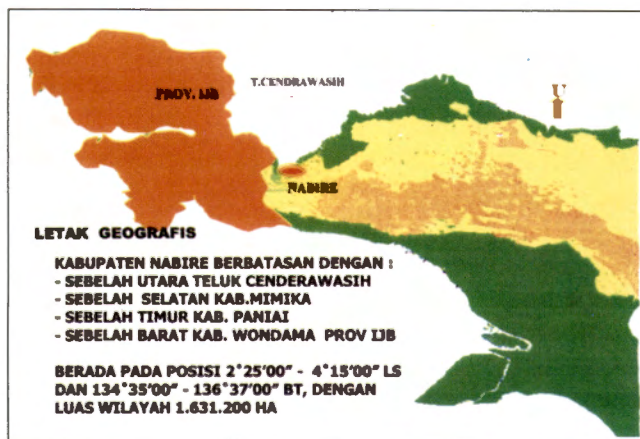
Topographic condition of Nabire Regency varies, from swamps area and lowland around coastal area, highland and wavy area, hilly areas and valleys, up until mountain areas such as Weyland mountain area. There are big rivers such as Siriwo, Poronal, Wapoga, Lagari, Mosairo, Kali Bumi, Wanggar, Wororomi and Irantuar rivers, and many small rivers that become source of irrigation. Types of soils in the regency include red podzolic, grey endiomorf, and grey-yellow podzolic, which are relatively fertile and potential for plantation crops to grow. Climate in the regency belongs to tropical with temperature ranges between 20-30° C, rainfall reaches between 2,000-4,000 mm/year

and average rainy days of 150 days/year.

Administratively, area of Nabire Regency is divided into 17 sub districts (8 of which are located in coastal area and 9 others are located in hinterland areas). The existence of huge natural resources and diversity of cultures in the regency, Nabire has various potential

that can be developed to become asset for development. Relating to priority of regional development and availability of natural resources, agriculture and animal husbandry sector is one of priority to develop. Vision of agriculture and animal husbandry development that will be realized by Nabire by year 2010 is development of strong, productive agriculture and animal husbandry development

that is based on local resources.



Map of Nabire Regency.

INVESTMENT POTENTIAL AND OPPORTUNITIES IN AGRIBUSINESS SECTOR

Nabire Regency is a potential agropolitan development area in Cendrawasih Bay area. Development of agribusiness in this area is supported by availability of vat and fertile land area and suitable agro-climate. Topographic diversity between coastal area, lowland area and mountainous areas enables various agribusiness commodities to grow. The people of the region that mostly farmers living in rural area ensure the availability of human resources in agriculture field.

Development of agribusiness in Nabire Regency is also supported by availability of infrastructure and facilities. Technical irrigation facilities available in



Nabire is a potential agropolitan development area.

some location can be developed further to support agriculture production, especially paddy commodity. The location of Nabire Regency that is very strategic and the existence of representative road provide smooth process or marketing of agribusiness production. To support development of agribusiness enterprises, regional government of Nabire Regency through Regional Office for Agriculture and Animal Husbandry Affairs also has set a number of programs and strategies. Concept of agriculture development is set through agropolitan regional concepts, which is supported by mapping area of agriculture commodities. Meanwhile, for development of agriculture and animal husbandry sub sectors, there have been 8 Unit Pelaksana Teknis Dinas/Daerah (UPTD) or Regional Technical Executing Units, they are:

- Main Seedling Center or *Balai Benih Utama (BBU)* at Topi, Upawa sub district
- Center for supervision and certification of Seed or *Balai Pengawasan dan Sertifikasi Benih (BPSB)*
- Center of Protection of Food Crops and Horticulture Crops or *Balai Proteksi Tanaman Pangan dan Hortikultura (BPTPH)*



Paddy harvesting.

- Center of Livestock Breeding in Wanggar Sub District
- Livestock Health Clinique in Nabire
- Agriculture Nursery Center or *Balai Penyuluhan Pertanian* of Nabire
- Agriculture Nursery Center or *Balai Penyuluhan Pertanian* of Wanggar
- Agriculture Nursery Center or *Balai Penyuluhan Pertanian* of Kamuu

Agriculture Potential

Nabire Regency has potential land of about 810,427 Ha for development of agriculture in broad-sense. Of the total area, about 18,109 Ha of which have been utilized for development of food crops. However, up until at present, such potential have not been wholly utilized. On the other hand, efforts to improve production of food crops and horticulture commodities are continually fostered to increase farmer's income as well as to fulfill demand for food and nutrient for the people. With the increasing production of food crops and horticulture commodities, it is expected that this sub sector will be capable to provide food of people especially in

Realization of Planted Area, Harvested Area and Production of Paddy and Second Crops Commodities

Commodity	Realization 2006			Target 2007		
	Planted Area (Ha)	Harvested Area (Ha)	Production (ton)	Planted Area (Ha)	Harvested Area (Ha)	Production (ton)
Paddy	4,064	1,534	2,614	4,267	1,611	2,745
Soybean	789	453	435	828	476	457
Corn	2,303	846	2,047	2,418	888	2,149
Peanut	1,961	455	517	2,059	478	543
Mungbean	666	393	387	699	413	406
Cassava	2,049	314	1,081	2,151	330	1,135
Sweet Potato	1,981	624	3,285	2,080	655	3,449
Taro	1,099	239	937	1,154	251	984

Realization of Planted Area, Harvested Area and Production of Vegetable

Commodity	Realization 2006			Target 2007		
	Planted Area (Ha)	Harvested Area (Ha)	Production (ton)	Planted Area (Ha)	Harvested Area (Ha)	Production (ton)
Red Onion	149	42	135	156	44	142
Garlic	102	33	58	107	35	61
Shallot/Bawang daun	112	43	115	118	45	121
Cabbage	53	21	87	56	22	91
Mustard Green	371	112	257	390	118	375
Carrot	21	9	52	22	10	55
Kidney Bean	137	43	130	144	45	137
Legume	149	52	329	156	55	345
Big Chilly/Cabe besar	47	26	55	49	27	58
Hot Chilly/Cabe rawit	268	60	103	281	63	108
Tomato	171	52	76	180	55	80
Eggplant	33	9	22	35	10	23
String Bean	209	66	183	219	69	192
Cucumber	149	39	242	156	41	254
Squash	22	6	24	73	6	25
Kangkung	202	57	257	212	60	270
Amaranth	355	65	179	373	68	188
Melon	4	1	4	4	1	4
Water Melon	108	26	119	113	27	125

Realization of Planted Area, Harvested Area, and Production of Fruit

Commodity	Realization 2006			Target 2007		
	Planted Area (Ha)	Harvested Area (Ha)	Production (ton)	Planted Area (Ha)	Harvested Area (Ha)	Production (ton)
Avocado	29	18	67	30	19	70
Star fruit	4	2	9	4	2	9
Lanseh Fruit	6	2	6	6	2	6
Durian	148	42	319	155	44	335
Guava	28	9	27	29	9	28
Rose apple	11	4	15	12	4	16
Siam/keprok Orange	380	157	805	399	165	845
Big Orange	201	153	973	211	161	1,022
Mango	212	49	241	223	51	253
Jackfruit /cempedak	75	32	210	79	74	221
Pineapple	75	69	340	80	72	357
Banana	405	241	2,400	425	253	2,520
Rambutan	226	98	400	237	103	420
Zalacca	48	11	52	50	12	55
Breadfruit	3	1	7	3	1	7
Melino (gtum. gnemon)	11	4	12	12	4	13
Petai	9	2	5	9	2	5

Nabire and generally in other regions.

Compared to those of 2005, total planted area of paddy, second crops and horticulture crops increased significantly. In 2005 total planted area of paddy reached 2,850 Ha and increased to become 4,064 Ha in 2006. Total planted area of second crops increased from 5,208 Ha in 2005 to become 10,848 Ha in 2006, while total planted area of horticulture crops increased from 291 Ha in 2005 to become 4,533 Ha in 2006.

Potential of Jeruk Manis (Sweet Orange)

With strategic geographic position, besides potential for development of various plantation commodities, Nabire is also potential for development of sweet orange. This potential is supported by the existence of market, land and the interest of the people to develop this commodity. Nabire orange at present has been widely known due to its specific taste (a blend of sweet, slightly sour and fresh taste), smooth yellowish green



Nabire is potential for development of sweet orange

skin, its sweet fragrance (but not sharp, rather it is mild and fresh), and its thick and juicy meat. The fresh and specific fragrance of the fruit becomes more apparent when we peel the skin. Up until April 2007, total planted area of sweet orange in Nabire reaches 380 Ha, harvested area of 157 Ha and productivity of 21 ton/Ha. Production center of sweet orange include Nabire, Wanggar, Teluk Kimi, Makimi, Uwapa, and Yaur sub districts. Nabire's sweet orange at present has been penetrated to various market outside the region, from Jayapura, Sorong, Manokwari, up until Manado (North Sulawesi Province).

The increasing number of population and the improving awareness of people on the importance of protein and vitamin intake derived from fruit (especially orange), demand for fruit will increase along. Therefore, extension of area and improvement of productivity of orange become one of opportunities that can be developed by investors. In 2005, the government of Nabire Regency has developed area for orange plant of 215 Ha, with production target of 5.100 ton. However the realization only reached 1,815 ton. Therefore the regional government of the regency continually makes target for intensification and extension of orange commodity in the region. In 2007, the government set a target to open new area of sweet



Activity of sweet orange cultivation.

orange of 30 Ha, so that total area will become 500 Ha. In addition, besides planting, opportunities are also open to develop market and processing of sweet orange commodity.

Animal Husbandry Potential

Development of animal husbandry in Nabire Regency has huge potential as capability of land in the regency to provide animal food is quite vast. If compared to 2005, development of population and slaughtering of livestock in 2006 increased significantly. However, since 2005, population of laying pullet has vanished. This condition was resulted from the stagnant production of food so that there was no farmer cultivates this commodity.

Production of animal husbandry of meat, milk and egg are generally still limited to fulfill consumption of local people. Even some of meat and egg commodity are still supplied from outside Nabire Regency and Papua Province. This condition shows that local production has not been capable to fulfill demand from the people for meat and egg. Production of meat and egg in 2006 increased if compared to their production in 2005. Meanwhile, production of egg of laying pullet is zero as there has not been population of laying pullet in the region. ■

Total Planted Area, Harvested Area and Productivity of Sweet Orange (Up until April 2007)

Sub District	Planted Area (Ha)	Harvested Area (Ha)	Productivity (ton/Ha)
Nabire	94	42.5	34
Wanggar	274	103	82.4
Teluk Kimi	2	1.5	1.2
Makimi	2	2	1.6
Uwapa	7	7	5.6
Yaur	1	1	0.8
Total	380	157	21

Development of Population and Slaughtering of Livestock

Livestock	Population (unit)		Slaughtering/butchery (unit)	
	2005	2006	2005	2006
Meat Cow	3,940	4,092	546	555
Dairy Cow	-	-	-	-
Buffalo	-	-	-	-
Goat	9,353	9,540	2,407	2,455
Sheep	-	-	14	-
Pork	36,817	38,105	17,297	18,552
Horse	-	-	-	-
Purebred Chicken	274,801	280,297	366,046	366,910
Laying Pullet	-	-	254	-
Broiler	18,450	19,373	20,412	15,300
Duck	31,123	32,057	14,374	14,939
Rabbit	-	-	-	-

Development of Production of Meat, Egg and Milk

Livestock	Meat (Kg)		Egg (Kg)		Milk (Kg)	
	2005	2006	2005	2006	2005	2006
Meat Cow	114,660	115,705	-	-	-	-
Dairy Cow	-	-	-	-	-	-
Buffalo	-	-	-	-	-	-
Goat	18,250	18,433	-	-	-	-
Sheep	-	-	-	-	-	-
Pork	672,150	673,593	-	-	-	-
Horse	-	-	-	-	-	-
Purebred Chicken	261,723	262,341	115,208	121,187	-	-
Laying Pullet	-	-	-	-	-	-
Broiler	3,818	11,475	-	-	-	-
Duck	16,866	-	-	-	-	-
Rabbit	-	-	-	-	-	-



Development of animal husbandry in Nabire has huge potential as capability of land in the regency to provide animal food is quite vast.

INVESTMENT CONTACT

Regional Office for Agriculture and Animal Husbandry Affairs of Nabire Regency

Jl. Jend. Sudirman, PO BOX 705, Nabire - Papua

Phone : (62-984) 21377, Fax. : (62-984) 24812



Drs. ANSELMUS PETRUS YOUW

THE REGENT OF NABIRE

Creating Satisfied, Healthy And Smart People of Nabire

Drs. Anselmus Petrus Youw was born in Kipobutu on 22 November 1948. He spent his elementary education at WS Kokonau, Timika until he was graduated in 1960. He then continued his secondary education at PMS Santo Paulus, Abepura and was graduated in 1964 and then continued to senior high school of SMA Gabungan, Jayapura and was graduated in 1968. Afterwards, he enrolled his study at governmental administration academy of APDN Yoka, Jayapura until he was graduated in 1975. Not satisfied with his education, amid his busy days he still spent his spare time to pursue his education at IIP Jakarta until he got his bachelor degree in 1986.

Career of Drs. Anselmus Petrus Youw started in 1969 as a candidate of government servant in Office of Governor of Irian Jaya Province (1969). A year later, the husband of Ny. Blandina Pigai was assigned as KPS staff in Paniai Timur until 1976. Afterward, he was assigned to hold the post as Head of Uwapa/Topo sub district (1976-1978), Head of Tigi Waghete sub district (1978-1981), Section Head (ad in) of Government Affairs of Regional Secretariat of Paniai Regency (1981-1983), the Head of Nabire Kota sub district (1983-1986), Section Head of People Welfare of Regional Secretariat of Paniai Regency (1986-1988), and the Head of Office of Education dan Cultural Affairs of Paniai Regency (1988-1999). His success in carrying out his duties and post trusted to him finally lead him to be elected as the Regent of Nabire for 1999-2004 administration period. The trust was also successfully carried out so that he succeeded to be re-elected to hold the post as Regent of Nabire for 2004-2009 administration period. His dedication in developing the region has been awarded with various medal and award, from Bapak Pembangunan Masyarakat Kenyang, Sehat dan Pintar (Development Leader of Satisfied, Healthy and Smart People) in 1999, up until award given to him for his success in adopting Disaster/ Earthquake Early Warning Program (Penanggulangan Dini Bencana/Gempa Bumi) in 2007.

For Drs. Anselmus Petrus Youw, to develop the regency, and to improve people's welfare, a development concept that directly affects on the life of the people is deemed required. Achievement of developments must be directly felt by most of people of Nabire in general and by the farmers. Therefore, it is only reasonable that during the current government administration, he set a vision of "Realizing a New Nabire in 2010 where the people are satisfied, healthy, and smart and is based on strong believe and piety on the Almighty God, and is supported by appropriate infrastructure". To realize the vision, missions are then set, they are: 1) Improving believe and piety on the Almighty God, 2) Improving quality and productivity of human resources, 3) Improving health level of the people, 4) Empowering people's economy, and 5) Developing infrastructure. Special in agribusiness sector, through the office of Agriculture and Animal Husbandry Affairs of Nabire Regency, he also has set 4 development program of agriculture and animal husbandry sectors, those programs are: 1) Improvement of food security, 2) Development of agribusiness, 3) Improvement of people's/farmer's welfare, and 4) Empowerment of People's economy (PER). ❖





The Regency of North Hulu Sungai

GENERAL BACKGROUND

North Hulu Sungai Regency, after the separated from Balangan Regency, comprises a total area of 892,7 Km², or 2,38% of South Kalimantan Province's territory. Geographically, it is located between 2°-3° South Latitude and 115°-116° East Longitude. The regency is bordered by Central Kalimantan Province and Tabalong Regency on the north, South Hulu Sungai Regency and Central Hulu Sungai Regency on the south, Balangan Regency on the east, and South Barito Regency (Central Kalimantan Province) on the west. Administratively, North Hulu Sungai Regency is divided into 7 sub districts, 214 villages and 5 urban villages, with Amuntai as its capital. In 2005, the total population of the regency was 208,411 people, with 119,448 of productive age people (15-55 years old) and 41,51% of dependency ratio.

Topography

Topographically, the area of North Hulu Sungai Regency comprises of low land, with altitude between 0-25 meters above sea level. The altitude of most of

the low land area is between 0-7 meters above sea level, while the remains, about 300 hectares, is between 7-25 meters above sea level. Overall, the regency has 55,125.5 hectares of swamp area, with 25,954 hectares of which is an area where rice is not planted. The swamp is mostly water resource where water hyacinths grow and only small amount of it utilized for catching and culture fishery. There is only one type of land declivity in the regency, which is 0-2%, therefore regency has slightly slope area and almost waviless.

The most dominant drainage type of the regency is periodically flowed, which is 87.916 hectares, or 98,48% of the total area. Regarding depth effectiveness, there available 34.253 hectares of land with 30-60 meters of effective depth, 850 hectares land with 60-90 cm of effective depth, and 54,167 hectares with above 90 cm of effective depth. While its soil textures, the regency has 3 types of textures, which are smooth, medium, and rough. 56,192 hectares of the regency has smooth soil texture, making it the most dominant texture. The soil types of the regency are alluvial (55,940 hectares), organosol (30,395 hectares), red yellow complex podsolic and latosol (605 hectare), and red yellow podsolic (2,3000 hectares).



North Hulu Sungai Regency has wide potential land for food crop development.

The Regency of North Hulu Sungai



North Hulu Sungai is very potential for development of paddy commodity.

Climate and Land Suitability

Generally, the climate of North Hulu Sungai Regency is tropical with average rainfall is 2,520 mm/year and average rainy day is 125 days/year. Based on land utilization, the regency consists of 4,285 hectares of residential area, 24,208 hectares of rice field area, 5,051 hectares of mixed plantation, and 29,711 hectares of swamp forest, 22,312 hectares of grass swamp, 1,800 hectares of lake, and 1,903 hectares of unspecified use. From the data, it can be seen that most of the area is swamp forest and most other is rice field. This indicated that North Hulu Sungai Regency is agrarian region with most of the inhabitants are farmers.

AGRIBUSINESS INVESTMENT POTENTIALS AND OPPORTUNITIES

During the last 3 years (2003-2005), agricultural sector is the most dominant sector that contributed 30% of regional income. Other sectors that give large contribution area trade sector, hotel and restaurant sector, service sector, and manufacturing sector. This indicated that North Hulu Sungai Regency has great potential in agribusiness development, in terms of food crop and horticulture, animal husbandry, plantation, as well as fishery.

Food Crop and Horticulture

North Hulu Sungai Regency has 39,047 hectares of potential land for food crop development, which is 26,640 hectares of the land has been utilized, therefore still available 12,407 hectares. The types of utilized land are rain fed land and valley. The commodities cultivated area rice, corn, soybean, peanut, mung bean, cassava, and sweet potato. For rice and soybean, there available seeding center. There are several rice seeding centers located at some sub districts. Sungai Pandan Sub district has 5 units with 7,75 hectares of area and 28,05 tons of production. Babirik Sub districts has 54 units with 105 hectares of area and 191,02 tons of production. Banjarm Sub district has 2 units with 1,75 hectares of area and 3.050 tons of production. While for soybean seeding, the center is only available at Banjarm Sub district with 15,5 hectares of area and 7,82 tons of production.

Based on the data, the planted area of rice was 26,190 hectares, or 110,80% of the target. Compared to the previous year, there was an increase about 2,584 hectares. This because the valley that could not be planted by rice in the previous year, in 2005 the land can be planted again. Other than that, it was supported by PAT Program and Production Supporting Posts. While for secondary crops, except peanut, did not meet the

Target and Realization of Food Crop Development in 2005

Commodity	Planted Area (Ha)		Harvested Area (Ha)		Production (ton)	
	Plan	Realization	Plan	Realization	Target	Realization
Rice	23,637	26,190	20,639	25,670	67,986	184,482
Corn	550	423	523	416	771	870
Soybean	642	103	598	103	693	144
Peanut	795	862	723	826	874	1,379
Mung bean	33	13	29	13	33	15
Cassava	80	57	73	52	974	700
Sweet Potato	310	225	290	213	2,445	2,951



Soybean harvesting.



Paddy harvesting.

target, due to land condition. In order to endorse food crop development, there available seeding centers, plant protection, and counseling.

Animal Husbandry

Animal husbandry sector development in North Hulu Sungai Regency is quite satisfying, with main commodities include buffalo and albino duck. Generally, the livestock commodity in the regency until 2005 has significantly rose. The development is supported by the guidance of regional government, the availability of production facilities such as seed, feed, and medicine, and high market demand for meat and egg. Especially for albino duck breeding, the increasing population and

production is due to the condition of the regency that is mostly swamp area and suitable for albino duck habitat. In that swamp area there exists natural feed such as fish, snail, water hyacinth, algae, and sago palm. There is duck seeding centers in Mamar Village with production of 20,00-30,000 heads per week. The commodity is sold in entire South Kalimantan Province and surrounding areas. The duck husbandry activity in the regency is divided into several sections, which are egg hatchery, breeding, consumption egg production, hatch egg production, and product processing (meat and egg).

Beside albino duck, other primary livestock area is swamp buffalo. The increasing population and production is supported by the vast swamp area and the high



Development of animal husbandry sector in North Hulu Sungai Regency is quite satisfying, with main commodities is albino duck.

Livestock Population and Production

Livestock	Population (head)		Meat Production (Kg)		Egg Production (Kg)	
	2004	2005	2004	2005	2004	2005
Cow	1,034	1,059	140,291	164,040		
Buffalo	7,771	7,846	79,827	124,649		
Goat	2,459	2,524	3,611	4,606		
Lamb	348	326	1,040	1,262		
Local Chicken	837,143	860,648	163,716	200,403	669,794	860,648
Purebred Chicken	577,143	677,052	265,793	328,774		
Duck	1,111,300	1,121,716	150,780	182,665	7,874,574	9,018,597



Pumpkin production.



Soybean area.



Peanut potential area.

ability to adapt of the buffalo. Buffalo can be used as an agro-tourism object, because there exist swamp buffalo swimming competition that is popular among tourists. Other than breeding activity, in the regency also grows duck processing business such as jerked duck meat, shredded duck meat, duck crackers that are also popular among tourists as souvenirs.

Plantation

Plantation commodities cultivated in North Hulu Sungai Regency generally are people's plantation commodities such as coconut, sago, rubber, coffee, sugarcane, kapok, areca, etc. The primary plantation commodities, which are mostly found in the regency, are coconut, rubber, and sago. Especially for sago, it is normally found in the swamp area. The planted area of sago is 223 hectares of yielded crop and 648 hectares of not yielded crop, with total production reached 399,85 tons. Regarding coconut, the yielded plant is 820 hectares, with production reached 877,40 tons, and

171,80 hectares of not yielded plant. While for rubber, the total area is 285,50 hectares for yielded plant and 43,40 hectares of not yielded plant, with production reached 313,54 tons.

Fishery

With area that is mostly swamp and vast waters, fishery sector is one of the primary sector in North Hulu Sungai Regency. The regency has 56,452 hectares of general waters, that consist of 54,129 hectares of swamp and 2,323 hectares of river. The fishery production reached 14,931,1 tons/year, the biggest general water fishery production in South Kalimantan Province. The food security program in fishery sector in North Hulu Sungai Regency is conducted through the improvement and empowerment of community nutrition by conducting fish food promotion program, food and nutrition diversification, and home fish culture program. Other than those, also conducted integrated activities consisting business and agribusiness development program



Corn potential area.



Production of fresh water fishery.

Fishery Development Achievement

No	Description	Year		Increase / Decrease (%)
		2004	2005	
1	Gross Regional Domestic Bruto	78,139,621,500	82,691,520,000	5.83
2	Regional Income	9,304,500	15,260,000	64.00
3	Fishery Production(ton)	14,194.30	13,772.92	
	- Catching	13,678.60	13,027.40	(- 4.46)
	- Culture	516.70	745.52	44.28
4	Culture Area			
	- Karamba (unit)	3,238	4,201	29.74
	- Pond (m2)	8,124	17,364	113.70
	- Net (m2)	275	138	(- 50.00)
	- Fish pen (m2)	480	238	(- 49.63)
5	Fish Consumption			
	- Fish Supply for Consumption(ton)			
	- per Capita Consumption (Kg/capita/year)	30.0	33	10.00
6	Income (Rp./year)			
	- Fish Culture	1,263,070	1,713,840	35.69
	- Fishermen	1,459,655	1,464,987	(- 0.37)
7	Worker (people)			
	- Fish Culture	2,252	2,610	15.89
	- Fishermen	51,588	53,355	3.42
8	Group			
	- Fish Culture	51	43	(- 18.60)
	- Supervising Group	8	11	37.50
	- Environmental Lover	0	3	100.00
9	Group Capital Source			
	- Distribution	763,515,000	31,000,000	(- 40.60)
	- Revolving		50,120,000	100.00



One of fishery productions in North Hulu Sungai Regency.

and fishery facilities and organization development.

INFRASTRUCTURE AND FACILITIES

In order to accelerate the economic and social development especially in agricultural sector, Regional Government of North Hulu Sungai Regency has develop

road and bridges infrastructure to the remote areas, especially that connect agricultural production centers. Beside through land, transportation activity is also conducted through river. Regarding road infrastructure, in the regency available 328,041 Km of regency road, with 122,585 Km of asphalt surface road, 76,247 Km of gravel surface road, 129,209 Km of land surface road. In the regency also available 15 Km of narrow path. While provincial road in the regency is 24 Km, through Baribik Sub district, Pandan River, and Banjang River, each has 8 Km of length. The state road in the regency is 28.450 Km, 14 Km in the capital of the regency, which is Central Amuntai Sub district, and 14.450 Km in North Amuntai Sub district. ■

INVESTMENT CONTACT

Government of North Hulu Sungai Regency

Jl. Jend. A. Yani No. 12, Amuntai 71414

Phone/Fax : (62-527) 61878

E-mail : humas-kabhsu@yahoo.co.id



Drs. H. FAKHRUDDIN, M.SI

THE REGENT OF NORTH HULU SUNGAI

Agricultural Development Through *Rawa Makmur 2020 Program*

Drs. H. Fakhruddin, M.Si is a native on who was born in Amuntai, in 1954. He attended his study from elementary school to high school at his hometown until he graduated in 1974. After that, he decided to continue his study at APDN Banjarbaru until he graduated in 1978. On 1 March 1980, he began his career as Civil Servant Candidate with rank II/b. After officially promoted as a civil servant, several early posts he occupied were Head of *Tata Praja* Governmental division, MPP coordinator of Lampihong Sub district, and North Amuntai Sub district Head. Because of his achievements and dedication, in a short time, in 1987, he had the opportunity to study at Administration Science Faculty of Brawijaya University, Malang, where he graduated in 1989. Since then his career continues.

Before elected as Regent of North Hulu Sungai Regency, he was a governmental official in Regional Secretariat Office of North Hulu Sungai Regency. Several post he occupied were Development Affairs Head, Treasury Division Head, Social Division Head, Development Administration Affairs Assistant, and Regional Income Office Head. Although he was occupied with his post as a regent, he still managed to attend higher education, which was Post Graduate Program Administration Science, Brawijaya University, where he graduated in 2003. Beside formal education, the husband of Hj. Nyimas Siti Rooslina and father of Farida Evana, Arif Ronaldy, and Laura Permata also actively involved various education and training that support his career and position.

As the leader of North Hulu Sungai Regency, Drs. H. Fakhruddin, M.Si formulated the development vision, which is "To achieve developed, prosper, and civil community by mastering environmental friendly technology and knowledge based on faith and devotion." In order to implement the vision, he formulated several strategic policies that consist of human resources and natural resources empowerment, legal certainty, security and stability, good governance, infrastructure and facility development, and the preservation of conducive social, cultural, and political climate in the society. In order to support economic and investment development in agricultural sector, due to condition, potential and topography, he conceive an amazing breakthrough by his *RAWA MAKMUR 2020 Program*. This program is focused on the effort to optimize swamp area in North Hulu Sungai Regency for potential commodities development in food crop and horticulture, animal husbandry, plantation, and fishery. The program is expected to improve the agricultural sector contribution as the primary sector of regional economy. ♦





Drs. H.M. WELNY

THE VICE REGENT OF NORTH HULU SUNGAI REGENCY

The Best Leader Figure

It is not exaggerating if the best leader figure status is attached to Drs. H.M. Welny. The man who was born in Amuntai, on 28 December 1958, has the criteria to be called the best leader. In education, though he only has bachelor degree, he has great capacity and knowledge. It is not surprising in many activities, in terms of professional, youth, social and community, he is always regarded as leader. He attended his basic education at Berangas Elementary School until he graduated in 1972. After that, he continued his study as SMPN 3 Junior High School Banjarmasin until 1976 and SMAN 7 High School until he graduated in 1980. He then went to Lampung University to study at Social and Political Science Faculty until he attained a bachelor degree in 1988.

Before he went into politics, Drs. H.M. Welny is one of the professional practioners of cooperative world. His career began when he was chosen to post as President Director of Village Unit Cooperative Center (Puskud) of South Kalimantan Province in 1995. Under his leadership, the Puskud managed to realize several programs and strategic policies for the benefit of the members of Village Unit Cooperative of South Kalimantan Province. In 1999, he was trusted to be Operational Director of Indonesian Coal Cooperative Main Office in Jakarta. Not long after that, he was transferred to be Vice President of Indonesian Oil and Gas Cooperative Main Office in Jakarta. After he finally felt enough working in cooperative world, in 2002, the husband of Hj. Martati decided to work in private sector and became the President Director of PT. Bahana Cintra Mandiri Banjarmasin. His decision to return to Banjarmasin was based on his desire to always be close to his hometown so that he could contribute more to regional development activity.

Although he had been working in cooperative world in such long time, Drs. H.M. Welny is also known for his relation with the birocrates. The father of Enny Suci Hartini, Andri Pria Mardani, and Indra Winarta Putera has high concern for the development of his hometown. In many occasions, he always pays attention to the progress of regional development. His concern finally helped him to be elected as Vice Regent of North Hulu Sungai for 2002-2007 period. He did take too much time to adapt, after he was elected to work beside Regent of North Hulu Sungai Drs. H. Fakhruddin, M.Si, he soon then implemented vision, mission, and strategy that has been formulated for the prosper of the people. His dedication and honesty, made him bestowed with several award and recognitions, including Adhi Karya Nusantara Awards (2004) as the best leader figure for regional development and Lencana Dharma Bakti Pramuka. These awards did not make him proud and complacent, instead, these made him become more motivated to do more for the people and the development of North Hulu Sungai Regency. ♦





The Regency of Pulang Pisau

GENERAL DESCRIPTION

Pulang Pisau Regency is one of regencies in Central Kalimantan Province. It is located at equator area between 0°-10° LS and 110°-120° BT. The area of the regency that occupies 8,997 sq km (or about 5.85% of total area of Central Kalimantan), is divided into 2 zones, namely low tide areas in the south and non low tide zone in the northern part. Borders of the regency include Gunung Mas Regency in the north, Java Sea in the south, Kapuas Regency in the east and Katingan Regency and Palangka Raya City in the west. Administratively, the area of the regency is divided into 8 sub districts covering 83 definitive villages and 1 urban village. The capital city of the regency is Pulang Pisau, which is also the capital city of Kahayan Hilir sub district. As of 2005, total population in the regency reached 115,864 people with average density of 12.88 people/sq km jiwa/Km², and negative average growth of - 1.40% per year during 1998–2005 period.

The northern part of the regency comprises non low tide area (dry land), hilly area in altitude of 50-100 m asl and declivity of 8-15°, is suitable for development of horticulture crops, second crops, plantation/ yearly plants, and animal husbandry. The area also has many lakes and swamps areas, which are potential for development of fishery. *The Southern Part* covers lowland areas in altitude of 0-50 m asl, which is much influenced by low tide waters. This area maintains 134 Km long coastal area and swamps areas. The type of soil is alluvial and peat moss which are suitable for cultivation of food crops, horticulture, plantation, fishpond, and for development of processing industry.

Climate of the regency belongs to tropical and humid with average weather temperature of 21-33° C and maximum temperature of 36° C. Intensity of sunlight is always high and there are huge water resources that

lead to the formation of thick active clouds. The rain falls almost throughout the year where the heaviest rain falls during October-March, ranging between 2,000-3,500 mm per year. The dry season usually falls between June-September.

Utilization of Land

No	Utilization	Total (Ha)
1	Forestry Area	519,429
2	Settlement Area	3,992
3	Waters	11,790
4	Agriculture area (wet land paddy field, upland area, garden, savanna)	178,630
5	Bushes	185,859

Economy

Economic activities in Pulang Regency are still dominated by agriculture sector. Most people earn their living from agriculture (in broader sense) activities (75%), while those involve in trading reaches 15% and the rest (10%) are employees/entrepreneurs. In 2005 Gross Regional Domestic Product (GRDP) upon constant price of the regency reached Rp. 567,988,690,000,



Potential area of paddy commodity.



In general, production of a number of food crops and horticulture in Pulang Pisau have huge potential to supply market demand.



Pulang Pisau is well known as the rice barn of Central Kalimantan Province.

where the largest contributor comes from agriculture sector (51.90%), followed by trading, hotel and restaurant (17.45%), services (11.06%), and other sectors that each contributed less than 10%. Economic growth of the region was recorded to reach 4.48%, higher than economic growth of Central Kalimantan Province, which reached 2.83%. The dominant sector that encourages economic growth in the regency is service sector, followed by agriculture sector, trading, hotel and restaurant and other sectors that grew positively. The only sector that experienced negative growth is industry and processing sector.

INVESTMENT POTENTIAL AND OPPORTUNITIES IN AGRIBUSINESS SECTOR

Competitive products of Pulang Pisau Regency are mostly traded as raw material and have not been processed further to become high-valued and high-quality products that match with market demand. However, in general production of a number of food crops and horticulture, animal husbandry, plantation, and fishery commodities have huge potential to supply market demand. This condition provides opportunities to investors to develop processing industry so that income of farmers can be increased.

Food Crop and horticulture Commodities Potentials and Production

Commodity	Potential of Development Area (Ha)	Total Area (Ha)	Production (ton)	Kinds of Products
Paddy	38,500	24,756	77,151	Rice, rice powder
Corn	11,440	1,073	1,143	Fresh Corn, shelled corn
Soybean	8,300	501	598	Shelled soybean, tempeh, tofu
Cassava	9,300	2,320	18,824	Fresh cassava, snack, dried cassava, and tapioca powder
Banana	9,500	2,874	16,287	Fresh banana, snack and powder
Durian	7,500	353	3,505	Fresh Durian



Cow is very potential to develop in Pulang Pisau.

Food Crops and Horticulture

Based on utilization of land, Pulang Pisau Regency has agriculture area of dry land and wet land area that reaches up to 404 sq km. Competitive commodities developed in the regency include paddy, corn, soybean, cassava and banana. Production of those commodities increases from year to year. Pulang Pisau is also well known as the rice barn of Central Kalimantan Province. Based on the potential of development area that have been utilized, it is most

possible for investor to expand cultivation of food crops and horticulture commodities. Besides, the abundant production of several commodities also provides opportunities for development of processing industries and product marketing.

Animal Husbandry

Production of animal husbandry of Pulang Pisau Regency shows significant increase from year to year. However, utilization of potential is still low. For cow farming for example, of the available potential of 62,000 units, the existing population has only reached 6,104 units. Such low utilization of animal husbandry resources provide investors opportunities to invest in the development of animal husbandry sector.

Plantation and Forestry

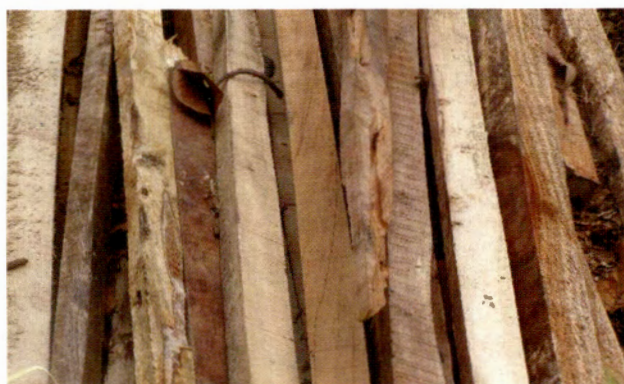
Pulang Pisau Regency maintains huge potential for development of plantation. Kinds of competitive commodities include rubber and coconut. Potential land for development of rubber plantation reaches 90,252 Ha, of which only 28,444 Ha of the area have been utilized producing 10,703 ton of rubber. Rubber commodity is developed widely in Pandih Batu, Kahayan

Development Potential of Animal Husbandry

Kinds of Livestock	Population Development Potential (Unit)	Population (Unit)	Production (Kg)	Kinds of Products
Cow	62,000	6,104	33.940	Fresh meat, life cow
Goat	83,000	4,459	2.560	Fresh meat, life goat
Pork	11,000	4,614	44.803	Fresh meat, life pork
Purebred Chicken	520,000	63,231	13.403	Fresh meat, egg, life chicken
Duck	225,000	2,650	5.918	Fresh meat, egg, life duck



Based on utilization of land, Pulang Pisau Regency has wide agriculture area of dry land and wet land area.



Forestry production.



Milkfish production.

Hilir, Maliku, Kahayan Tengah, and Banama Tingang sub districts. Meanwhile, potential area for development of coconut commodity reaches 141,103 Ha, and only 15,782 Ha have been utilized, producing 18,947.52 ton coconut. Production center for coconut commodity scatters in Kahayan Kuala, Pandih Batu, Kahayan Hilir, Maliku, Kahayan Tengah, and Banama Tingang sub districts. Besides rubber and coconut, there are also development potential of coffee. Coffee commodity developed widely in Kahayan Kuala, Pandih Batu, Kahayan Hilir, Maliku, Kahayan Tengah, and Banama Tingang sub districts, reaching 1,458 Ha and producing 857.24 ton of coffee.

In forestry sub sector, Pulang Pisau regency is in fact has huge potential. Potential land for development of processed wood, plywood and moulding reaches 519,429 Ha. However, up until at present, those potential have not been utilized. This condition provides opportunity for domestic as well as foreign investors to develop forestry sector through planting of forest plant and development of processing industry of forest products, both wood and non wood products.

Fishery

Pulang Pisau Regency has big fishery potential,

either in capture fishery, culture fishery as well as in processing industry of fishery products. The potential of capture fishery is supported by the existence of 153.4 km-long coastal area with potential of 9,144 ton/year, public waters of 572,952 Ha having potential of 6,210 ton/year and sustainable yield of 18,647 ton/year. Kinds of fishers captured include *telang*, *tenggiri*, shark, tiger prawn, crabs, *lais*, *betok*, *baung* and others. Meanwhile, culture fishery in the region is cultivated through fish cage cultivation in Kahayan River catchment area, and fishpond area of 49,000 Ha. Kinds of fishes cultured are, among others: marine fish (*kerapu lumpur*/grouper), river fishes (golden fish, cat fish, gift nila, *bawal*, and local fishes) and brackish water fishes (shrimp, milkfish). Meanwhile, fish processing products of the regency are, among others, dried fish, *wadi*, *bekasem*, fish snack, *silase*, shrimp snack, shredded fish, *ebi*, *petis*, and smoked fish.

INFRASTRUCTURE AND FACILITIES

Most area (80%) of Pulang Pisau Regency can be accessed through land transportation. National road spanning 95,15 Km long connects Pulang Pisau and the capital city of Central Kalimantan Province. Provincial

Development Potential of Marine and Fishery

Kinds of Fishery	Development Potential Area (Ha)	Total Area (Ha)	Production (ton)	Kinds of Products
- Public Water	205,495	382,852	4,633.19	<i>Lais, betok, sepat, baung</i>
- Seawater	28,918	98,304	5,270.00	<i>Telang, tenggiri</i> , shark, tiger prawn, crabs
Culture Fishery				
- Marine Culture	28,918	-	-	Grouper / <i>kerapu lumpur</i>
- Brackish water	48,000	16	1.30	Shrimp, milkfish
- Fresh Water	75,000 units	210 units	63.00	Golden fish, cat fish, <i>patin</i> , gift nila, <i>bawal</i> and local fishes
Fish Processing	According to fish products	Unrecorded	Unrecorded	Dried fish, <i>wadi, bekasem</i> , fish snack, <i>silase</i> , shrimp snack, shredded fish, <i>ebi, petis</i> , and smoked fish



products, there has been an Integrated Agribusiness Sub Terminal of Central Kalimantan in Pulang Pisau Regency. The terminal is expected to be capable to penetrate market opportunities and marketing of agriculture products to neighboring cities (Palangka Raya, Kuala Kapuas and Banjarmasin). In the future, the marketing is expected to be capable to reach a number of regencies in Central Kalimantan Province (South Barito, East Barito, North Barito, Murung Raya and Gunung Mas Regency). This sub terminal also serves as collection point of agriculture products in Central Kalimantan where the products are then distributed to other islands through Pulang Pisau seaport .

Level of Capability/Classification of Farmer Group of Pulang Pisau Regency (until December 2005)

No.	Sub District	Classification of Farmer Group					Total
		Excellent	Advanced	Intermediate	Beginner	Unclassified	
1.	Kahayan Kuala	-	-	-	59	-	59
2.	Pandih Batu	-	-	97	90	-	187
3.	Maliku	-	1	27	144	-	172
4.	Kahayan Hilir	3	-	1	120	4	128
5.	Kahayan Tengah	-	-	-	74	-	74
6.	Banama Tingang	-	-	-	52	-	52
7.	Sebangau Kuala	-	-	-	62	-	62
8.	Jabiren Raya	-	-	-	65	3	68
	Total	3	1	125	666	7	802

Road of 220 Km connects Pulang Pisau and Kapuas Regency as well as South Kalimantan Province (Banjarmasin). Meanwhile, regency road of 645.50 Km connects towns in all sub districts of Pulang Pisau Regency. Land transportation can also be served through a number of rivers and canal (anjir), among others through Kahayan River (600 Km), Sebangau River (200 Km), Kalampan canal of 14.5 Km long that connects Mandomai City and Pulang Pisau, heading to Palangka Raya, Basarang canal of 24 Km-long connecting Kuala Kapuas and Pulang Pisau areas, and Raya Canal of 14.5 Km-long connecting Kuala Kapuas and Bahaur. Meanwhile, sea transportation activities are served by seaport located in Kahayan Kota River of Pulang Pisau. The route is served by pioneer ship and passenger ship. In addition, there are also 8 piers located in each capital city of sub districts.

To support development of agribusiness, Pulang Pisau has irrigation potential of 46,338 Ha, consisting of low tide land and rain catchments land. Meanwhile, to expand access of marketing of agribusiness

Availability of Human Resources

Farmers are the main actor of agribusiness enterprise. About 75% of people in Pulang Pisau works in agriculture sector, and the rest work in other sectors. The quality of farmers in Pulang Pisau is reflected from their level of capability/ classification of farmer group as shown in the following table. ■

INVESTMENT CONTACT

Regional Office for Agriculture and Animal Husbandry Affairs

Jl. Tingang Menteng No. 25
Pulang Pisau 73561 – Central Kalimantan
Phone/Fax : (62-513) 61055

Regional Office for Forestry and Plantation Affairs

Jl. Pemda No. 117, Pulang Pisau 73561
Phone: (62-513) 61054

Regional Office for Marine and Fishery Affairs

Jl. Tingang Menteng, Pulang Pisau – 73561
Phone : (62-513) 61227



H. ACHMAD AMUR, SH, MH.

THE REGENT OF PULANG PISAU

Expanding Market Access For Agribusiness Products

H. Achmad Amur who was born in Bahaur on 22 January 1954 is a native son of Pulang Pisau Regency. He spent his elementary education at SD Bahaur until he was graduated in 1967. He finished his Junior and Senior high school education in Kapuas. After completing his Senior High School in 1973, he then pursued his university education to UNMER Malang until he got his bachelor degree in 1982. In 2006 he also got his magistrate degree from the same university. He started his career at Office of High Attorney (Kejaksaan Tinggi) of South Kalimantan, holding a post as a Sub Section Head of General Affairs. Still at the same office, a number of post trusted to him were : Section Head of Execution, Section Head of Criminal Conduct Against People and Property, Section Head of Political Affairs, and Section Head of Social and Political Affairs. Later in 2000, he was promoted to hold the post as the Head of Attorney General (Kajari) of Martapura. A year later (2001), he was assigned to hold the post as the Attorney General of Kota Mombago of Mombago, North Sulawesi. From this post, once again, he was assigned to hold the same position in Jombang, East Java.

His experience in handling each legal case has helped forming character of H. Achmad Amur, SH, MH. to become a democratic people. No wonder that through Regional Parliament (DPRD) finally he win the trust of people of Pulang Pisau to hold the post as a regent for 2003 -2008 administration period. Vision he wishes to realize is "Creating people's welfare which is based on people-oriented economy and environmentally oriented". The vision will be realized through 7 mission of development, namely: 1) Developing economic of people by stressing on agriculture cultivation (food crops, plantation, animal husbandry, fishery), 2) Improving quality of human resources through good plan toward the people who maintain strong believe in the almighty god and piety and acquired Science and Technology to carry out sustainable development, 3) Developing basic infrastructure, including seaport to accelerate development of people economy and to increase investment flow, 4) Eradicating poverty through efforts to empower people 5) Managing natural resources which are capable to give benefit to improve economy of the people, social welfare and sustainable environment, 6) Encourage well ordered, dynamic and legal awareness living atmosphere, 7) To realize clean government.

Special in agriculture sector, H. Achmad Amur, SH, MH sets a number of strategic policies, among others allocating and developing competitive area, acceleration of development of supporting infrastructure that support agribusiness activities, development of farmer market and agribusiness terminal, development of partnership with all stakeholder (private sector, and banking sector), and development of inter island/export market networking through seaport. Based on the fact that there are many agriculture products that cannot be absorbed by the market, one of his focuses of attention is developing market access of agribusiness products. Infrastructures that have been developed in the regency include Integrated Agribusiness Sub-Terminal of Central Kalimantan in Pulang Pisau. It is expected that this sub-terminal will be capable to expand market access of agribusiness products of Pulang Pisau Regency to the surrounding region, even to other island and to other countries (export). ♦





The Regency of Semarang

GENERAL DESCRIPTION

Semarang Regency is one of 35 regencies/cities in Central Java Province. The regency has a strategic position due to its position which is very close and directly borders on the capital city of Central Java Regency, Semarang. With the strategic position, Semarang Regency becomes one of supporting area of Semarang City and develop rapidly. To make position of the regency more strategic, Semarang Regency is located in the main route of JOGLOSEMAR (Yogyakarta, Solo and Semarang) with busy traffic frequency and high mobility of people. Semarang Regency is bordered by Semarang City and Demak Regency in the north, by Boyolali and Magelang Regency in the south, by Boyolali and Grobogan Regency in the east and by Temanggung and Kendal Regency in the west. Seen from its borders, Semarang Regency is unique as in the middle of the regency, there is Salatiga

City which is administratively separated from Semarang Regency.

Administratively, Semarang Regency with Ungaran as the capital city is divided into 19 sub districts that covers 207 villages, and 28 urban villages. In 2005,

Total population of the regency reached 891,951 people, consisting of 442,265 males and 449,686 females and population growth reached around 0.45%. Topographically, most of areas of the regency comprises hilly/mountainous area with the altitude of between 120-2.000 m and average altitude of 607 m above sea level. The lowest area is found in Candirejo Village, Ungaran Sub District, while the highest area is located in Batur Village of Getasan sub district. As a hilly/mountainous area and is relatively high from the surface



Map of Semarang Regency.

of seawater, the area has relatively cool temperature (ranging between 23-30° C) and high intensity of rainfall, reaching 1,979 mm/year.

Seen from regional economy, although agriculture

GRDP of Semarang Regency, 2005

Sector	GRDP Upon Constant Price Year 2000	
	(Rp. Million)	%
Agriculture	598,179.73	13.34
Mining and Mineral Processing Industry	5,181.75	0.12
Electricity, gas and drinking water	2,108,699.27	47.03
Construction/Building	36,364.10	0.81
Trading, hotel and restaurant	169,911.14	3.79
Transportation and Communication	976,623.22	21.78
Financial institution, leasing and business services	93,210.70	2.08
Services	141,176.17	3.15
Services	354,843.47	7.91
Total GRDP	4,484,189.55	100.00

sector is no longer the largest contributor for GRDP, it still plays significant roles in regional economy of Semarang Regency. Based on GRDP of 2005 upon current price of 2000, agriculture sector contributed 13.34%, to the GRDP, the third largest after processing industry (47.03%) and trading, hotel and restaurant (21.78 %). Other data shows that most of people in the region work in agriculture sector. Furthermore, seen from land utilization, more than 70% of the land in the regency are utilized for agriculture cultivation.

INVESTMENT POTENTIAL AND OPPORTUNITIES IN AGRIBUSINESS

Development of agribusiness in Semarang Regency has huge opportunities to grow fastly. This condition is based on a number of facts as the following:

1. Development policy of regional government of Semarang Regency keenly supports and takes side on the development of agribusiness:
 - a. Agriculture sector become one of competitive potential besides industry and tourism in accordance with the direction of development of Semarang Regency, i.e. INTANPARI (*industri, pertanian, pariwisata* or industry, agriculture and tourism).
 - b. Development of agropolitan area of Candigaron intensively from year to year.
 - c. Development and improvement of a number of supporting infrastructure and facilities for development of agribusiness such as STA (agribusiness terminal) of Jetis and Vegetable Market of Jimbaran, Agropolitan Market of Candigaran.
2. Potential of natural resources which are supported by suitable climate and land supports development of agribusiness.
3. More than 50 % of the existing workers involve in agriculture sector.



Potential area of various vegetable commodities.

4. There are still vast potential such as non wood forestry products, agriculture product and agribusiness development that have not been utilized optimally
5. Distance between agribusiness development area and marketing centers is relatively close.
6. Accessibility of intra region - until its remote rural areas- as well to other region is relatively good.

Food Crops and Horticulture

Semarang Regency has suitable agro climate for development of various agriculture commodities and is supported by widely open market. The regency is production center for rice where each year surplus of rice of the region reaches $\pm 24,000$ ton of rice. Beside food crops, some horticulture also have developed and become regional competitive products, they are, among others kelengkeng (longan), durian, jackfruit, avocado, zalacca, banana, vegetable and decorative plants. Other commodities which are under development phase are zalacca and mangosteen. Production center for vegetable commodities comprises Ambarawa, Bawen, Sumowono, and Getasan sub districts. Production of various vegetable commodities are marketed almost too all cities in Central Java and DIY Province. Production



Fruit production.



Coffee commodity.

Total Harvested Area and Production of Food Crops

Commodity	Total Harvested Area (Ha/year)	Production (ton/year)	Production Center (Sub District)
Paddy	32,662	163,953	Banyubiru, Suruh, Susukan, Ambarawa, Bringin, Pabelan
Corn	16,127	66,271	Tengaran
Soybean	666	780	Bringin, Bancak, Susukan, Kaliwungu
Peanut	2,685	1,574	Pabelan, Suruh, Bringin
Cassava	1,828	39,117	Susukan, Kaliwungu, Suruh
Sweet potato	729	11,477	Sumowono, Jambu, Banyubiru

Harvested Area and Production of Vegetable

Commodity	Harvested Area (Ha/year)	Production (quintal/year)	Production Center (Sub District)
Cabbage	728	160,196	Sumowono, Bandungan, Bawen, Ambarawa, Getasan
Potato	46	8,356	Getasan
Chilly	584	39,998	Getasan, Sumowono, Bandungan, Bawen, Ambarawa
Tomato	239	60,467	Getasan, Sumowono, Bandungan, Bawen
Celery	79	5,281	Bawen, Bandungan
Scallion	596	55,361	Bawen, Bandungan, Sumowono, Getasan
Mustard green	466	57,272	Getasan, Bandungan
Carrot	117	17,021	Getasan, Sumowono

Harvested Area and Production of Decorative Plants

Commodity	Total Harvested Area (M ² /year)	Production (stem/year)	Production Center (Sub District)
Gladiolus	60,000	663,000	Bandungan, Sumowono
Chrysanthemum	80,742	5,894,166	Bandungan, Sumowono
Sedap malam	10,067	181,206	Bandungan, Sumowono
Aster	20,150	1,249,300	Bandungan, Sumowono
Others	120,740	3,018,525	Bandungan, Sumowono

Harvested Area and Production of Medicinal Herb

Commodity	Harvested Area (Ha/year)	Production (ton/year)	Production Center (Sub District)
Ginger	284,40	1,137.60	Getasan, Tengaran
Turmeric	102,15	510.75	Tengaran, Bringin
Cardamom	95,75	11.49	Tuntang, Jambu, Banyubiru
Greater Galangale	14,55	87.30	Tuntang

center decorative plants comprises Ambarawa, Getasan and Ungaran sub districts. Marketing of decorative plants has reached Jakarta, Surabaya, Solo, Yogyakarta and Semarang.

Investment opportunities offered include development of cutting flower (chrysanthemum) and medicinal herbs (biofarmaka). Decorative plants business and cutting flower develop well in Bandungan tourism area and Ambarawa. Development of medicinal herbs is supported by suitable soil and climate as well as the growing market. Production of medicinal herbs are marketed to Semarang City and its surrounding area which has been internationally recognized as the center of Herbal Medicine Industry. Semarang Regency also has



Vegetable production.

Harvested Area and Production of Fruit

Commodity	Harvested Area (tree/year)	Production (quintal/year)	Production Center (Sub District)
Longan/Kelengkeng	19,594	14,539	Bawen, Jambu, Ambarawa
Durian	56,070	57,370	Tuntang, Jambu
Jackfruit	55,675	42,313	Jambu
Avocado	25,361	13,252	Sumowono, Getasan
Banana	517,385	129,346	Sumowono, Tengaran, Getasan
Mangosteen	1,976	2,051	Ungaran
Salak/ zalacca	74,912	7,661	Tengaran, Ambarawa

opportunities for development of agro tourism. Agro tourism location offered include Gedongsongo agro tourism which is located in Gedongsongo Temple area. Vast area is available in this place, and among agro tourism objects that can be developed include flower plants, decorative plants, fishing pool, homestay, and children playing ground, tourism village in Sidomukti and Kopang.

Plantation and Forestry

Semarang Regency has vast potential of plantation area. Commodities developed in the regency include coffee, casiavera, pepper, cubeb (*kemukus*), kapok, tobacco, clove, rosella, sugar palm, local coconut (kelapa dalam), sugar coconut, hybrid coconut, vanilla, cashew nut, and sugarcane. One of investment opportunities offered include development of pepper and *kemukus* commodity. Plantation of pepper and *kemukus* commodity has long been well developed in Semarang Regency. The hilly physical condition with cool climate and dry land is most suitable for planting pepper and



Zalacca commodity.

kemukus. Both of the commodities have high economic value and become a promising export commodities. Other most prospective investment opportunity is silkworm farming. The physical condition of Semarang Regency is very suitable for silkworm habitat. Furthermore, seen from economic view, silkworm commodity is quite promising and it has become export commodity.



Krisan flower.



Production center decorative plants comprises Ambarawa, Getasan and Ungaran sub districts.

Harvested Area and Production of Plantation Commodity

Commodity	Harvested Area (Ha/year)	Production (ton/year)	Production Center (sub district)
Coffee	2,434.19	1,124.93	Jambu, Getasan, Sumowono
Clove	2,418.10	234.50	Jambu, Suruh, Susukan, Tenganan
Honey	2,100.00	100.00	Jambu, Tuntang, Tenganan

Potential of People-Managed Forest

Kinds of Plant	Total Stem/Tree	Total (M ³)	Production Center (Sub District)
Teak Wood	2,376,800	594,200	East Ungaran, Pringapus, Bringin, Bancak, Pabelan, Suruh, Tenganan, Susukan, Tuntang, Kaliwungu
Sengon	1,485,500	495,175	Suruh, Tenganan, Getasan, Tuntang, Ambrawa, Sumowono, Banyubiru, Jambu, West Ungaran
Mahogany	1,138,400	594,200	Spread in all sub districts
Suren	891,300	222,825	Getasan

National Award achieved by Semarang Regency for the Best Performance in Agriculture Sector, delivered by President of RI

Year 2004

1. The 1st National Winner of "Organic Rice" Competition, Represented by "Al-Barokah" Farmer Group of Ketapang Village, Susukan Sub District
2. The 1st National Winner of Individual Decorative Plant Competition, represented by "Nusa Indah"

Year 2005

1. The 1st National Winner of Agribusiness Player of Decorative Plants, Biopharmaceutical, Represented by Woman Farmer Group of "Sri Rejeni" of Tenganan Village, Tenganan Sub District.
2. The 1st National Winner of Agribusiness Player of Decorative Plants, represented by "Ponco Margo Tani" farmer group of Kopeng Village, Getasan Sub District.

Year 2006

1. The 1st Winner for Cutting Flower Group, represented by "Sri Rejeni" farmer group of Jetis Village, Ambarawa Sub District
2. The 1st Winner for Organic Vegetable Group, represented by "Tranggulasi" farmer group of Batur Village, Getasan Sub District.
3. The 1st Winner of Decorative Plant Farmer, represented by Sukirno from Susukan Village, Ungaran Sub District
4. The 1st Winner for Agribusiness Player of Coffee Processing, represented by "Manunggal VI" farmer group of Bedono Village, Jambu Sub District.
5. Service Industry of Agriculture Machinery and Equipment (Kelompok Usaha Pelayanan Jasa Alat Mesin Pertanian or UPJA) of Rowoboni Village, Banyubiru Sub District has successfully selected for national nominator (*juara harapan*). ■



Cabbage commodity.

INVESTMENT CONTACT

Office for Agriculture, Plantation and Forestry
The Regency of Semarang
Jl. Letjen. Suprpto No. 9B, Ungaran
Phone : (62-24) 6921811



The Regency of South Bangka

GENERAL INFORMATION

South Bangka Regency is one of new regency which was established through Law Number 5 Year 2003 as extension of Bangka Regency, Bangka Belitung Islands Province. The Regency with Toboali as the capital city has huge potential to develop for the welfare of the people. With vast area, good fertility of land, abundant marine resources, and has abundant mineral resources, make people in the region works in various sectors, from agriculture, mining, as well as in fishery sector. In addition, vast diversity of socio-culture as well as limited human resources and new condition of being a new regency become challenges and strong support for the people in the region to make its best efforts to achieve advancement so that in a relatively short time changes in many filed will take place, especially in the development of human resources and physical development.

However, if we review further, the changes felt have not been maximum. Therefore, other concrete steps need to be performed in order to foster the development into a better condition. Dispersion of information on the potential and investment opportunities in agribusiness sector is expected to be capable to become good and positive step in order to develop this region through promotion of regional potential in order to attract investors from other region and foreign investors

Geography and Demography

South Bangka Regency which is located in Bangka Island borders on Central Bangka Regency in the north, on Java Sea and Bangka Straits in the south, on Gaspar Straits in the east and on Bangka Straits in the west. Administratively, its 3,07.8 sq km area is divided into 5 sub districts covering 3 urban villages, 45 villages

and 156 sub villages (dusun/lingkungan). Based on classification of villages, of the total number of urban villages/villages, there is 1 self-sufficient (swa sembada) villages, 39 self-developed (swakarya) villages, and 8 self-initiative (swadaya) villages. Meanwhile, based on the development of LPM, there are only 48 LPMs Category II. In 2006 Total Population of South Bangka Regency reaches 164,288 people, consisting of 83,536 males (50.85%) and 80,752 females (49.15%). Lepar Pongok is archipelagic sub districts that have huge potential of fishery and tourism sector. Opportunities for development of this sub districts is still very big. South Bangka Regency has a number of rivers that flow and originated from hilly areas located in the central part of the regency. Those rivers are, among others Bangka Kota, Balar, Bangka Ujung, Kepoh, Gusung, Nyireh, and Mandau rivers.

Topography and Climatology

Soil in South Bangka Regency generally has average pH soil of below 5. Within the soil, there are abundant tin ore and other minerals like quartz sand, kaolin, mountain stone, and others. Seen from topographic point of view, area of South Bangka Regency consists of hilly area (4%), wavy area (51%), valley/plain land until wavy land (20%), and swamps and lowland and *bencah* (25%). Types of soil in the region generally comprise yellowish brown podsolic complex, litosol, association of alluvial hidromotif and glei humus, and young grey regosol. Climate in the region belongs to A-type tropical with rainfall variation ranges between 72.2-410.2 mm/month (2005). The lowest rainfall occurs in February. Based on data obtained from Meteorology Station of Pangkalpinang of 2005, temperature in the region varied between 25.7-27.7°C, while its humidity reached between 78-87%. Intensity of sunlight varied averagely between 19.0-57.3% and air pressure ranged between 1,008.9-1,011.1 mb.

INVESTMENT POTENTIAL AND OPPORTUNITIES IN AGRIBUSINESS SECTOR

In general, South Bangka Regency is suitable area to develop tropical agriculture commodities. This suitable condition of climate and the soil can be seen from commodities produced by farmers in this region. Commodities that can grow and developed well in the region include plantation commodities (pepper, rubber, coffee, coconut, oil palm, clove, cocoa, candle nut, and others); food crops commodities (paddy, tuber, corn, and others), and horticulture commodities (orange, water melon, chilly, cucumber, legumes, and others). The tropical climate also affects on the growth of various wood such as ramin, meranti, kapok, jelutung, pulai, gelam, bitanggor, meranti rawa, cempedak air, mahang, mangrove, and others, as well as non wood forestry products like rattan, gaharu, resin, tree bark, tree roots and medicinal herb.

Food Crops

South Bangka is regency which is programmed to become food barn for Bangka Belitung Province due to the availability of vast area to develop food crops commodity, especially wetland paddy, upland paddy, and corn. Other food crops commodity developed in the regency include peanut, soybean, sweet potato and cassava. In 2006, total planted area of wetland paddy 1,311 Ha with land potential of 16,252 Ha. Meanwhile, for upland paddy, and corn commodity, the planted area

reached 1,019 Ha and 428 Ha respectively, while the potential land available reached 124,150 Ha. However, based on the existing data, production of food crops commodity, especially paddy has been only capable to contribute 10% to the total demand for paddy of people in Bangka Belitung Islands Province. Therefore, hard work is still expected from all component of society to succeed the food self-sufficiency program.

One of investment opportunities that can be tapped is the opening of new areas to extend planted area. This potential is supported by the availability of land and good irrigation network. Total potential land available reaches 141,252 Ha, consisting of irrigated land (16,252 Ha), low tide area (250 Ha), dry land area (124,150 Ha), and rain catchments area of 600 Ha. Investment is needed to improve capability to open new areas that is still at minimum, namely only around 250 Ha per year, and is only limited on irrigated land (35 Ha/year) and dry land (15 Ha/year).

Horticulture

Horticulture commodities are developed largely by people in South Bangka Regency, either fruit commodities, vegetable, ornamental plants, or medicinal crops. There are vast opportunities to develop those commodities as, based on data available, there are many commodities that could not meet demand due to the low production. On the other hand, land potential is still vast enough, and the government fully supports the development of horticulture commodities through its



South Bangka is programmed to become food barn for Bangka Belitung Province.



South Bangka is very potential for development of orange commodity.

policies. The available potential land covers Public Works' irrigated land, village irrigation land, non low tide swamp area, and dry land area. Total available land reaches 75,898.5 Ha which are scattered in all sub districts, namely in Toboali (4,550 Ha), Airgegas (64,985.5 Ha), Payung (3,750 Ha), Simpang Rimba (2,404 Ha), and Lepar Pongok (280 Ha).

Plantation

Based on the ownership, plantation business in South Bangka Regency is classified into two groups, namely People-managed plantation and Large-scale

Plantation. Generally, People-managed Plantation develops pepper, rubber and oil palm commodities, while Large-scale Plantation only develops oil palm commodities. One of companies that have developed oil palm commodity in South Bangka Regency is PT. Swarna Nusa Sentosa. In 2005, the company realized development of oil palm plantation in Malik Village of Lepar Pongok Sub Districts in 2,625 Ha areas out of 9,866 Ha areas that have been planned. To improve production of plantation sector, extension of 150 Ha plantation area was made in 2006 in people-managed area in a number of sub districts, namely



Based on agroclimate, South Bangka is very potential for development of pepper commodity.



In 2006, total planted area of wetland paddy is 1,311 ha with land potential of 16,252 ha.

Development of Area of People-managed Plantation

Commodity	Total Area (Ha)		
	2004	2005	2006
Pepper	13,241	12,772	13,074
Rubber	2,802	3,707	4,907
Oil Palm	442	874	974
Coconut	767	730	728
Cocoa	35	53	65



Pepper commodity.

in Toboali (25 Ha), Airgegas (75 Ha) and Payung (50 Ha). Those areas have suitable topographic and agroclimate condition for development of various plantation commodities.

Animal Husbandry

Development of animal husbandry as one of competitive sectors in South Bangka Regency is given priority in especially in the effort to realize meat self-sufficiency in 2009. By realizing cow as one of competitive commodity of animal husbandry, concrete

Development of Cow Population

Kinds of Livestock	Population (unit)	
	2005	2006
Cow	163	286
Goat	243	264
Buffalo	53	30
Pork	133	175
Free Range Chicken	200,248	94,600
Broiler	34,965	26,335
Duck	3,278	730



Duck livestock.

efforts have been made to reach the target. One of the efforts is improving cow population continually, either through government's aid or the people develop independently. Based on the existing data, the number of livestock population - especially cow - is increasing. This condition has encourage the development of supporting factors, one of which improvement of availability of quality grass as animal food and improvement



Broiler cultivation.

of quality of human resources.

Development of animal husbandry cultivation is supported by potential of shepherding area of 755 Ha and feed lot of 100 Ha. In 2006, shepherding area for livestock was extended to reach by 6.5 Ha. In addition, animal husbandry area also has been allocated in each sub districts. The area is combined with horticulture, plantation, and plantation commodities. In Ria Village of Toboali Sub District, cow and goat will be developed. In Sidoharjo village, Airgegas sub district, cow commodity will also be developed. Cow and pork livestock will also be developed in Sumber Jaya Village of Payung Sub District. Goat will be developed in Simpang Rimba village of Simpang Rimba Sub District, while in Penutuk Village of Lepar Pongok Sub District, an area for goat farming will be developed.

Forestry

South Bangka Regency maintains 175,424 Ha forestry areas, consisting of conservation forest (1,712 Ha), production forest (122,745.5 Ha) and protection forest (50,966,5 Ha). Economically, those forest areas have abundant resources both in form of wood and non-wood. Kinds of wood found in large number in the forest area include *tiang* (pile) wood, firewood, *khiau thung*, ebony, and other woods that mostly utilized for construction material and for *tajar* (pile) of pepper plants by farmers. Meanwhile, non-wood products consist of resin, *kemedangan*, tree bark, and others, which are utilized to make handicraft, herbal medicine, and other finished good. Furthermore, forestry area of South Bangka Regency is also rich of valuable flora and fauna rarely found in other regions. This potential provide huge opportunities for development of agribusiness



Cow is one competitive commodity in South Bangka.



Forest area.

enterprise, starting from fanning, processing until marketing of forestry commodities.

The high intensity of illegal mining and illegal logging are resulted in the degrading of forest area both in quality and quantity. This condition results further on the increasing number of critical area in South Bangka Regency that lead further to the degrading quality of environment. In 2006, total amount of very critical land in the regency reached 109,646.95 Ha. In the protection forest area, the amount of very critical land reached 6,014.18 Ha and critical land area reached 10,917.22 Ha. Meanwhile the amount of very critical land in Production Forest area reached 45,717.87 Ha and critical land of 48,859.98 Ha. ■

INVESTMENT CONTACT

Office for Agriculture and Forestry Affairs
The Regency of South Bangka
Jl. Jend. Sudirman No. 109, Toboali
Phone/Fax : (62-718) 42030



Drs. H. JUSTIAR NOER, ST. MM.

THE REGENT OF SOUTH BANGKA

Reliable Organisator

It is only quite right that finally people of South Bangka Regency give their trust to Drs. H. Justiar Noer, ST. MM., to hold the post as a regent of South Bangka Regency for 2005-2010 administration period. As a relatively new regency, South Bangka needs which is not only a native son of the regency but he must also have perfect knowledge, horizon, and on hand experience. Luckily, the regent who

was born in Toboali on 23 December 1950 meeth these criteria. Even, he is known as visioner leader in developing the region through development vision he wishes to realize, namely "To realize prosperous *Junjung Besaoh* land through democratic, clean and reliable government which is based on Science and Technology (IPTEK) and believe and piety to the Almighty God (IMTAQ) and environmentally-oriented". To realize the vision, he also has set mission of development of South Bangka Regency, they are: 1) Improving utilization of natural resources wisely through adoption and development of science and technology (IPTEK), 2) Creating conducive political and security climate to foster investment, 3) Improving infrastructure and facilities to accelerate development, 4) Improving quality of human resources, 5) Improving quality and quantity of public services through transparent and clean government administration.

Drs. H. Justiar Noer, ST. MM., is not a stranger for people of South Bangka Regency. The husband of Ir. Hj. Ekawati. W, Dipl, SE accomplished his elementary education of Sekolah Rakyat Negeri 1 Toboali in 1963. He continued his education to secondary school of SMP Negeri 1 Toboali where he was graduated in 1966, and then he pursued his education to senior high school of SMA Negeri 1 Pangkalpinang until and graduated in 1970. Afterward, the father of one child continued his education to Bandung Academy of Technology majoring in architecture until he was graduated in 1976. He got his bachelor degree from two universities, namely from FKIT of IKIP Bandung majoring in architecture (1982) and from UNHAZ of Bengkulu majoring in Civil Engineering (1996). Further, he got his Magistrate Degree in management science from Post Graduate Program of IPWI Jakarta. Drs. H. Justiar Noer, ST. MM., is also well known as reliable organisator. He pioneered the establishment of Indonesian Architect Association (IAI) of Bengkulu Province where he holds the post as the chairman of the association (1985-1990). He also pioneered the establishment of Indonesian Consultants Association (INKINDO) of Bengkulu Province (1987). He also actively involve as the vice chairman of Kosgoro youth organization of Bangka Belitung Province and General Secretary of Regional Committee of Indonesian Badminton Association (PBSI) of Bengkulu Province (1998 -2000).

Career of Drs. H. Justiar Noer, ST. MM., started in government circles of Bengkulu Province. Several posts he has held include sub section head of General Affairs of Cipta Karya Department of Regional Public Works (DPU), Section Head of Planning and Program of DPU, and Section Head of Housing of Cipta Karya Department of DPU. After the establishment of Bangka Belitung Islands Province, he decided to return to his hometown in 2001 and worked in the government Bangka Regency. Among post he held include the Sub Section Head of Tourism, Art and Cultural Affairs, the head of Office for Communication, Tourism, Art and Cultural Affairs and the Head of Regional Office for Environmental Impact Control Affairs (Bappedalda). In 2004, he was promoted to hold the post as Head of People Empowerment Board of Bangka Belitung Islands Province. Not until a year of holding the post, he was then appointed as the Regent (Ad Interim) of South Bangka Regency. In 2005, he tried his luck by participating in regent election of South Bangka Regency for 2005-2010 administration period, where he finally win the race. ♦



The Regency of Toba Samosir

GENERAL DESCRIPTION

Moba Samosir regency is located in the central part of North Sumatera Province and in the mountain ranges of Bukit Barisan Mountain. This position has made Toba Samosir as one of safety areas for other regions as the area of the regency serves as the upland area of many rivers flowing to the eastern part of North Sumatera. Geographically, the regency is located between 2°03'-2°40' North Latitude and 98°56'-99°40' East Longitude. Total area of the regency reaches 4,534.45 sqkm consisting of 3,440.85 sq km mainland and 1,102.60 sq km toba lakes waters. The regency borders on Simalungun Regency in the north, on North Tapanuli Regency in the south, on Toba Lake and Samosir Regency in the west and on Labuhan Batu and Asahan regencies in the east.

Toba Samosir Regency was established through Law Number 12 Year 1998 on the establishment of Toba Samosir and Mandailing Natal Regency in North Sumatera Province. Toba Samosir Regency is extended from North Tapanuli which was officially established on 9 March 1999. Administratively, the regency is divided into 4 sub districts that cover 192 villages/urban villages. Population of the area reaches 170,015 people, consisting of 83,747 males and 86,268 females that belong to 37,234 households.

Toba Samosir Regency has various topographic condition and contour of land, namely wavy, hilly and

steep as well as labil structure of land. The larger part of the area is located at the altitude of 300-2.200 m above sea level and declivity of 15-44%. As it is located in equator, Toba Samosir Regency has wet tropical climate having average temperature of between 17-29° C and average humidity of 85.04%. The dry season usually falls between April and July, while the rainy season usually occurs during August until March. In 2006, monthly average rainfall in the regency reached 106.7 mm and 190 rainy days per year.

INVESTMENT POTENTIAL AND OPPORTUNITIES IN AGRIBUSINESS SECTOR

Toba Samosir Regency is very potential for development and improvement of various agribusiness commodities through specific farming of *lokalita*. The potential is supported by aspects of structure and texture soil distribution, topographic condition, clima-tologic aspects as well as availability of land. Based on the existing investment potential and opportunities, agribusiness activities that can be developed include sub sector of food crops and horticulture, fishery, and animal husbandry. To support vision and mission set by the regent of Toba Samosir, where agriculture sector is considered as one of priority of development pillars, the regional office for agriculture, fishery and animal husbandry affairs of Toba Samosir regency has set scale of priority of competitive commodities according to the potential

Agribusiness Competitive Commodity

Sub Sector	Competitive Commodity
Food Crops and Horticulture	Paddy, corn, cassava, eggplant, and sweet potato
Animal Husbandry	Buffalo, cow, pork, chicken and duck
Fishery	- Fish Culture of golden fish and tilapia through floating net in Toba Lake - Golden fish Farming in still water pool - Hatchery



Toba Samosir Regency is very potential for development and improvement of various agribusiness commodities.

existed in the regency.

Availability of dry-land area for food crops and horticulture cultivation is still vast enough as, besides 26,186 Ha dry land that have been cultivated, there are still about 53, 805 Ha potential dry land area which are left for cultivation. For development of fish culture, especially culture fishery in floating net cultivation in Toba Lake is still vast enough, as Toba Lake has potential of about 12,000 units of floating net cage and only 884 units have been cultivated. Total dry land area for animal husbandry is also equally available as, seen from the total shepherding area of 6, 861 Ha, the area can also be allocated as location for processing industry and animal husbandry cultivation.

Production of food crops and horticulture, fishery and animal husbandry of Toba Samosir Regency are marketed (in small part) locally to supply local consumption, while the larger part of the commodities are marketed to other regions in North Sumatera Province. Generally, the market player for those commodity are collector, both from Toba Samosir or from other region. Problems often arise is the low sale price of agriculture

commodities during harvest season. This condition provide opportunities in form of development of processing industry of agriculture products in order to increase sale price of products. On the other hand, processing of agriculture products, especially paddy commodity, is only small part that are milled in the regency to become rice and then sold to large trader to other regions. Meanwhile, processing of other agriculture commodities have not been available, or the processing is still carried out traditionally.

Food Crops and Horticulture

Toba Samosir Regency has potential paddy field area of 18,025 Ha, consisting of half technically irrigated paddy field (4,328 Ha), simple irrigated paddy field (8,684 Ha), Rural irrigation paddy field (4,127 Ha), and rain catchments paddy field (886 Ha). Based on the Planting Index, total paddy field area with Planting index of once a year reaches 14,124 Ha and planting index of twice a year reaches 3,911 Ha. Based on the condition, opportunities are open for improvement of Planting Index so that all potential of paddy field area will have Planting Index of twice a year. Improvement of planting index can be developed through partnership model through procurement/supply of agriculture production facilities for paddy field cultivation and improvement of intensification through development of irrigation, namely from rural/simple irrigation system to become half-technically irrigation system.

Beside paddy field area, Toba Samosir Regency also maintains vast upland/dry land area. Total dry land potential reaches 73,130 Ha, of which as vast as 11,950 Ha have been utilized for development of dry land agriculture, 10,994 Ha for garden, 3,242 Ha for yard, and 6,861 Ha for shepherding area. Meanwhile, dry land areas that have not been utilized reach 40,083 Ha. Investment opportunities in agribusiness sector offered to investors are:



Corn potential area.

Development of Harvested Area and Production of Food Crops and Horticulture

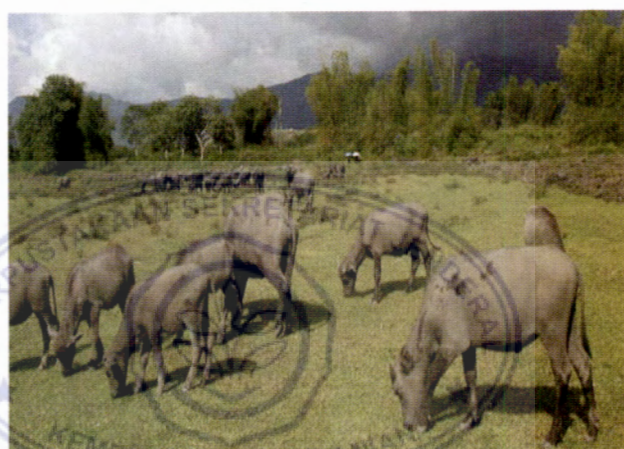
Commodity	Harvested Area (ha)			Production (ton)		
	2004	2005	2006	2004	2005	2006
Wet Land Paddy	20.397	20.575	21.575	103.412	113.542	119.113
Corn	2.786	2.869	2.568	12.592	12.968	12.494
Cassava	2.786	2.869	2.568	12.592	12.968	12.494
Sweet Potato	855	624	315	5.995	5.957	3.027
Peanut	373	624	294	947	1.164	561

Total Harvested Area and Production of Vegetable, 2006

Kinds of Vegetable Crops	Harvested Area (Ha)	Production (ton)
Chilly	302	2.175
Red Onion	147	1.139
Garlic	0	0
Shallot	74	431
Stringbean	60	529
Potato	73	1.242
Cabbage	38	715
Sawi / Mustard Green	50	433
Legume	63	251
Tomato	80	883
Eggplant	75	581
Amarant	62	191
Cucumber	63	1.013

Total Harvested Area and Production of Fruit, 2006

Kinds of Fruit	Harvested Area (Ha)	Production (ton)
Avocado	78	156
Mango	88	114
Nephelium fruit / Rambutan	0	0
Lanseh fruit /Duku	27	56
Siam Orange	32	448
Salak/zalacca	0	0
Durian	55	110
Guava	20	300
Papaya	5	225
Banana	14	140
Pineapple	1	50



Toba Samosir has potential for animal husbandry development.

- Utilization of dry land which have not been utilized (39,953 Ha), to be used for development of food crops and horticulture commodities like corn and vegetable.
- Partnership model for processing of food crops and horticulture commodities
- Partnership model for marketing of agriculture products
- Procurement/supply of agriculture machinery and equipments for post harvest land processing
- Development of organic fertilizer manufacturer

Development of Population and Production of Livestock

Kinds of Livestock	Population (unit)			Production of Meat (ton)			Production of Egg (Kg)		
	2004	2005	2006	2004	2005	2006	2004	2005	2006
Cow	757	665	785	1,44	1,08	2,16	-	-	-
Buffalo	15.707	17.518	16.497	106,59	150,72	88,51	-	-	-
Horse	729	164	745	-	-	-	-	-	-
Goat	2.596	2.615	2.664	-	1,62	3,42	-	-	-
Sheep	108	108	108	-	-	-	-	-	-
Pork	12.469	12.603	13.171	1.304,22	252,10	257,55	-	-	-
Broiler	322.130	361.141	371.252	27,70	29,00	25,98	313.452	351.413	354.020
Duck/Manila duck	37.785	37.043	35.556	0,65	0,67	0,67	40.634	42.334	44.345



Local chicken potential.

Animal Husbandry Sub Sector

Toba Samosir Regency has prospective potential for animal husbandry development, both seen from the availability of land for shepherding area as well as the keen interest of the people to cultivate livestock. Development of livestock agribusiness is also supported by the availability of vast area for grass planting for large ruminant food, availability of 6,861 Ha shepherding area, the absence of large scale livestock farming enterprise, and the abundant raw material for bio-fertilizer processing in form of livestock feces. Investment opportunities in agribusiness field offered are, among others:

- Development/ establishment of large ruminant breeding center (cow, buffalo)
- Development of animal food processing factory
- Development of poultry
- Marketing of livestock products

Fishery Sub Sector

Development potential of fishery sector is focused on public waters (13,068 Ha) and culture fishery area (12,785 Ha). The potential of public water fishery comprises lake (11,200 Ha), rivers (399 Ha), and irrigation dam (1,469 Ha). Meanwhile, potential fish culture area comprises Still Water Pool (KAT) of 2,500 Ha, Lake (KAD)

Development of Fishery Production According Kinds of Fishery Cultivation

Kinds of Fishery	Production (ton)		
	2004	2005	2006
Fish Capture			
- Lake	346,19	364,02	391,38
- River	20,74	21,62	27,78
- Swamp/Lake	25,71	22,10	24,09
Fish Culture			
- Still Water Pool	178,60	199,06	225,43
- Paddy cum fish	355,26	386,91	420,22
- Rapid Water Pool	3,46	3,94	5,90
- Floating Net Cage	97,90	106,50	118,38

Development of Fish Production According to Kinds of Fish

Kind of Fish	Lake	River	Swamp	Fish Culture	Total
Golden Fish	80,54	4,78	3,40	236,64	325,36
Mujahir Fish	188,45	8,75	8,05	225,34	430,59
Tilapia	82,53	4,71	1,74	257,53	346,51
Cat Fish	8,56	2,16	6,17	11,49	28,38
Lampan Fish	9,05	1,95	0,60	2,34	13,89
Jurung Fish	6,17	1,08	0,08	1,29	8,62
Other Fishes	16,13	4,35	4,05	33,60	57,53
Total 2006	391,38	27,78	24,09	767,63	1.210,88
2005	364,02	21,62	22,1	696,41	1.104,15
2004	346,37	20,74	25,71	635,22	1.028,04

of 50 Ha, Floating Net Cage (KJA) of 84 Ha capable to accommodate floating net cage of 12,000 unit (6 x 6 sq m), paddy field area of 10,200 Ha, and fish breeding area of 35 Ha. From potential of public waters available, total areas which have been utilized for capture fishery comprises lake (11,200 Ha), rivers (69 Ha), and irrigation dam of 165 Ha. Meanwhile, for culture fishery, total area that have been utilized are Still Water Pool (KAT) of 200 Ha, Lake (KAD) of 3 Ha, Floating Net Cage (KJA) of 884 units, mina paddy of 915 Ha, and fish breeding area of 25 Ha. Meanwhile, investment opportunities in agribusiness sectors offered by the regency are:

- Development of fish culture in floating net fish cage in Toba Lake
- Development of fish culture of Batak Dish in public waters
- Development of fish food factory
- Partnership to market fish product
- Development of fish breeding/hatchery

INFRASTRUCTURE AND FACILITIES

Infrastructure

In the effort to support development of agriculture, The Government of Toba Samosir focuses its



Development potential of fishery sector is focused on public waters and culture fishery.



Potential area of floating net cage (KJA)

development on the development of various infrastructure and facilities to support production increase of each sub sector of agriculture sector. In food crops and horticulture sub sector, infrastructure and facilities developed include: First, development of technical irrigation network of 124,251 m, half-technically irrigation network of 28,140 m and simple irrigation network of 23,956 m. Second, development of food crops and horticulture seedling center in 6 Ha area. Third, development of 10 units of agriculture education center (4 units of which have possessed building of their own). Fourth, procurement/supply of agriculture machinery and equipment, comprising 10 units of hand tractor, 4 units of mini tractor, 50 units of hand tractor, 10 units paddy miller, and 10 units of corn miller. Fifth, procurement/supply of 5 units of processing machine of organic fertilizer. For fishery sub sector, infrastructure available comprises Fish Breeding Center (in 2 Ha area). Meanwhile, for animal husbandry sub sector, available facilities include 3 units of slaughtering house.

Supporting Policies for Investment

To support investment and trading activities in Toba Samosir Regency, including in agribusiness field, the government has set a number of policies. Those policies are also made to foster regional economic development relating to efforts to improve production of various regional competitive products. In addition, the supporting policies for investment is also made to maximize the role of regional government in the development, namely as regulator, facilitator, and dynamicator. Meanwhile, a number of policies that have been set are, among others:

1. Stimulating involvement of private sector, NGO,

and farmer organization to develop agriculture infrastructure and facilities.

2. Providing agriculture infrastructure and facilities which is prioritized to those that match with the need/interest of public or development of enterprises carried out by larger part of the people.
3. Stimulating the growth of new enterprises/investment that encourage regional economy.
4. Development of Infrastructure and facilities is focused on the demand from agriculture player and those that attract investors.
5. Development of facilities of business networking, irrigation, breeding center, and saprodi becomes priority of the government.
6. Providing agriculture technology which is applicable, low cost, and is capable to be adopted in accordance with the capability and knowledge of the people.

VISION AND MISSION OF DEVELOPMENT OF THE REGIONAL GOVERNMENT

VISION AND MISSION

The direction of policies in agriculture development is based on the vision of development of Toba Samosir Regency, namely: ***“To become a leading, just, and welfare regency in Sumatera by Year 2010 (TOBAMAS)”***.

Meanwhile, mission of development of Toba Samosir are as follows:

1. To improve motivation, services, performance and discipline of government officials of Toba Regency (good governance and clean government).
2. To improve the potential of Toba Regency in an

The Regency of Toba Samosir

efforts to achieve competitiveness in education, agriculture, health, religious, and tourism by cooperation and love each other.

3. To generate ever increasing and fairly distributed income for each people of Toba Samosir Regency.
4. To improve quality of energetic human resources of Toba Samosir Regency in order to be capable to competed in international as well as international arena.
5. To utilize and to develop natural resources existed in Toba Samosir for the sake of people's prosperity.

Based on the above vision and mission, the vision of Regional Office for Agriculture, Fishery and Animal Husbandry Affairs of Toba Samosir Regency is to "To develop Toba Samosir Regency to become food barn in Tapanuli region by 2010".

Meanwhile, the mission of Regional Office for Agriculture, Fishery and Animal Husbandry Affairs of Toba Samosir Regency are as follows:

1. To encourage development of agriculture infrastructure and facilities by state-owned enterprises (BUMN), private sectors, and by farmers.
2. To facilitate cooperation between farmers and professional, independent and sustainable agriculture institutions.
3. To give prime services in administration and management affairs of the development of agriculture, fishery and animal husbandry sectors.
4. To encourage entrepreneurship spirit and perseverance to grow and to develop productive activities by farmers or agriculture government officials.
5. To develop the spirit of cooperation and helping each other in developing and maintaining irrigation network in farmer's level.
6. To encourage development of farmer's institution to become independent social and economic organization in order to be capable to cover the cost of their agriculture enterprises.
7. To develop quality of agriculture human resources that match with local need.

STRATEGIES OF DEVELOPMENT OF AGRICULTURE, FISHERY AND ANIMAL HUSBANDRY SECTORS

The basic strategies adopted in the development of agriculture, fishery and animal husbandry sector are as follows :

1. To facilitate development of agriculture, fishery and animal husbandry business through the



Paddy area.

development of agriculture and facilities which are needed.

2. To accumulate all the potential of resources through coordination, synchronization, socialization and monitoring approaches with related governmental institutions.
3. To improve cooperation with financial institution and wanderer to develop financing of farming enterprise.
4. To optimize utilization of agriculture machinery and equipments of food crops, horticulture, fishery and animal husbandry to support development of farming enterprises.
5. To improve intensity of planting, planting pattern, productivity, quality as well as planting area of food crops and horticulture commodities.
6. To strengthen farmers capitalization through direct aids or direct credit provision for the people.
7. To encourage people's participation to develop farming enterprises which is market mechanism-oriented.
8. To develop environment-friendly local specific technology to achieve production and productivity improvement.
9. To develop marketing control system for fertilizer and pesticide in order that distribution of fake fertilizer and pesticide can be minimized.
10. To develop planning coordination in agriculture development in hierarchic model, from village level until provincial and national level. ■

INVESTMENT CONTACT

Office for Agriculture, Fishery and Animal Husbandry
The Regency of Toba Samosir
Jl. Pertanian No. 1, Hutabulu Mejan Balige
Phone/Fax : (62-632) 21621



The Regency of Way Kanan

GENERAL DESCRIPTION

Way Kanan Regency is one of regencies of Lampung Province which was established in 1999 through Law Number 12 /1999. Its 3,921.63 sq km area (accounts for 16% of total areas of Lampung Province) is bordered by South Sumatera Province in the north, by North Lampung Regency in the south, by Tulang Bawang Regency in the east, and by West Lampung Regency in the west. Administratively, the regency is divided into 14 sub districts that covers 197 villages and 3 urban villages. Its capital city in Blambangan Umpu is one of old kampong in Way Kanan. Based on data of Central Bureau for Statistic (BPS), total population of Way Kanan in 2006 was 361,216 people. The majority of the population settles in rural areas and earn their living through agriculture, animal husbandry and freshwater fishery cultivation.

In general, topographic condition of Way Kanan Regency is divided into 2 groups, namely hilly until mountainous areas and river basin areas. Hilly until mountainous areas of the regency has steep slope in altitude of between 450-500 m above sea level. This region comprises Bukit Barisan and Bukit Pesagi areas. Meanwhile, river basin area comprises catchment area of small and big rivers and lowland which are mostly covered by volcanic ash of dark cloud. This area are mostly in form of lowland, paddy field areas, and plantation areas. In general, type of soil in the region can be divided into 2 parts, namely: 1) Peneplain and aluvial area in the eastern part, and 2) Young volcanic moun-

tain area which are found in Lembah Semangka until aluvial plain in the western part that comprises latosol and andosol type of soil. Climate in the regency belongs to tropical with average temperature of 26-30° C and rainfall intensity of 1,200-3,000 mm/year.



Map of Way Kanan Regency.

AGRIBUSINESS INVESTMENT POTENTIAL AND OPPORTUNITIES

Way Kanan Regency is an agrarian region where majority of the people earn their living through agriculture cultivation. Kinds of activities of the people comprise food crops and horticulture farming; animal husbandry cultivation, and fishery cultivation. The potential of land in the region is vast enough, consisting of paddy field areas and

dry land areas. Way Kanan also has wide river catchments area and most of them have been managed to become technical irrigation area and semi technical irrigation area. Most of rivers in the region flow from the hilly area in the west to the slope area in the east, which are potential for development of dam and irrigation tunnel. Those rivers are: Way Kanan (± 51 Km long and catchments area of 1,198 sq km), Way Giham river (± 80 Km long and catchments area of 506 sq km), Way Umpu river (± 100 Km long and catchments area of 1,179 sq km), Way Besay river (± 113 Km long and catchments area of 870 sq km), and Way Tahmi river (± 60Km long and catchments area of 550 sq km).

To support paddy-farming activities of paddy field area in the rice production centers and to improve production of agriculture commodities to attain food self-

The Regency of Way Kanan

sufficiency, especially in Banjit, Baradatu, Kasui, and Bahuga sub districts, Way Umpu technical irrigation network in Banjit Sub Districts, has been established since 2000. This irrigation network functions to irrigate paddy field area in Way Kanan Regency. Up until 2004, technical irrigation of Way Umpu has maintained secondary irrigation network of 41,700 meters, with total irrigated area of 7,500 Ha, covering 25 villages in three sub districts, namely Banjit, Kasui, and Baradatu.



TAMANURI
The Regent of Way Kanan



H. BUSTAMI ZAINUDIN
The Vice Regent of Way Kanan

of paddy field area utilizing technical irrigation system reaches 6,773 Ha (41.48%), half-technical irrigation system of 941 Ha (5.7%), simple irrigation system of 752 Ha (5.01%), rural irrigation system of 2,821 Ha (17.38%), rain catchments paddy field of 2,315 Ha (14.26%), and *lebak* (pool) paddy area of 2,625 Ha (16.17%).

Competitive commodities that can be developed are wetland paddy, corn, peanut, cassava, vegetable, and fruit. During the last five years, development of planted area of paddy and peanut has shown significant increase, each reaching 5.96 % and 52.96%.

Of the total paddy field area of 15,696 Ha, total area which are potential for 2 planted season/Planting

Food Crops and Horticulture

For development of food crops and horticulture, Way Kanan Regency has vast potential land. Potential



For development of food crops and horticulture, Way Kanan Regency has vast potential land.

Development of Planted Area, Harvested Area and Production of Food Crops ((ton)

Commodity	Total Planted Area (Ha)		Harvested Area (Ha)		Production (ton)	
	2004	2005	2004	2005	2004	2005
Paddy	36,924	35,950	37,605	36,759	135,716	136,873
Corn	11,574	11,081	11,496	8,970	44,078	37,211
Soybean	2,005	1,582	2,034	1,783	2,532	1,828
Peanut	2,585	2,352	2,214	2,810	2,232	3,522
Mungbean	1,474	1,080	1,381	1,420	1,252	1,333
Cassava	19,331	19,511	14,487	16,982	184,804	225,590
Sweet Potato	252	293	277	309	2,712	1,544

Potential of Fruit Crops 2005

Commodity	Production (ton)	Production Center (Sub District)
Orange	975	Pakuon Ratu, Negara Batin, Negeri Agung
Pineapple	270	Negara Batin
Banana	1,160	Pakuon Ratu, Rebang Tangkas, Negeri Agung
Jackfruit	515.45	Pakuon Ratu, Negara Batin



During the last few years, population of livestock in Way Kanan Regency has been growing significantly.

Index (IP 200) reaches 11.927 Ha and planting index (IP) of 100 reaches 3,217 Ha. Hence, potential of the planted area may reach 27,071 Ha/year. Meanwhile, realization of planting of wet land paddy at the end of 2004 reached 26,002 Ha and upland paddy (padi gogo) reached 10,922 Ha. Seen from the existing potential of plan-ted area, there as still potential area left to develop that reach 1,049 Ha through improvement of Planting Index. This condition provides opportunities for investor to involve in extension of paddy field area to improve paddy production, in development of processing industry, and its trading. Beside paddy field potential, most of areas of Way Kanan comprises dry land area which are suitable for development of cassava and second crops commodities. One of investment opportunities offered include development of tapioca processing industry. This opportunity is supported by potential of vast area and insufficient supply of tapioca to match demand from the people.

Animal Husbandry

There are several kinds of livestock which are developed in Way Kanan Regency, among others, cow, goat, duck, pork, sheep, laying pullet, and broiler.

During the last few years, population of livestock has been growing significantly. To fulfill demand for meat from local market, livestock slaughtering is carried out by individual. Development of livestock slaughtering during the last five years increased significantly, along with the increasing demand for meat. In 2005 the live-stock which are slaughtered comprised meat cow (1,722 units), buffalo (776 units), goat (6,424 units), and sheep (86 units). Development of livestock in Way Kanan Regency is supported by availability of green grass for livestock food (HMT), among others, rumput gajah (wide leaf grass), king grass, and setaria. Potential of grass garden area (HMT) owned by farmers reaches 75 Ha which are scattered in all sub districts.

Development of animal husbandry is supported by a number of factors, among others availability of land for livestock farming, availability of land to grow animal food and other source of food animal food (wastage of agro industry), the existence of authorized animal medical official in each sub district, and the availability of road facility. In 2005 production of agriculture wastage which are potential to be used as animal food reached 607,762 ton. If 1 unit of ruminant needs 11 ton feed lot/year, then the wastage will be

Animal Husbandry Potential of Way Kanan Regency

Livestock	Production Center (Sub District)	Population (Unit)	Production of Meat / Egg (Kg/year)	Development Potential
Cow	Negeri Besar, Negara Batin, Pakuan Ratu	8,035	102,012	Fattening and development of parent stock
Buffalo	Bahuga, Blambangan Umpu, Negara Agung	825	6,293	Development of Population / parent stock
Goat	Rebang Tangkas, Kasui, Gunung Labuan	922	45,759	Development of parent stock and fattening
Pork	Banjit	1,398	19,904	Fattening
Free range chicken	Baradatu, Negara Batin	304,955		Production improvement of meat and egg
Broiler	Baradatu, Banjit	128,000	85,858 (eggs)	Improvement of meat production
Laying Pullet	Baradatu, Banjit	6,791	24,389	Improvement of egg production
Duck	Bahuga	5,537	19,385	Improvement of egg production



Fish pond area.



Rubber plantation.

capable to accommodate 55,251 ruminates/year or equal to 55,251 units of mature cows. Besides agriculture wastage, the existence of rubber and oil palm plantation can also become the source of animal food. Production of grass in between rubber or oil palm trees reaches 250,500 ton/year. Hence the amount will be capable to accommodate 22,772 ruminant unit/year or similar to 22,772 units of mature cows. The existence of agro industry that develops in the region, i.e., tapioca factory, sugar factory, rice mill, and processing industry of pineapple may also serve as the producer of food for development of both big and small ruminates as well as poultry. Up until at present, those wastage of industries have not been utilized optimally despite its large amount production. With such supporting power, investment opportunities in animal husbandry sector is widely open for investors.

Fishery

Production of fishery of Way Kanan Regency is supported by two main activities, namely fish farming

and fish capture in public waters. There are 5 big rivers of about 394 Km long and 4,173 sq km wide, which all can be utilized for development of fish cultivation in public waters. Other fishery potential existed in the regency include swamp area of 4,460 Ha, dam/check dam of 1,242 Ha, borrowfit of 417 Ha, and other embankment of 1,230 Ha. Looking at the production and geographic aspects of Way Kanan Regency, fish farming potential has good prospect to develop, as it is difficult to increase production of capture fishery due to the decreasing environmental supporting power.

Production of fish farming during the last five years increased by 16.65% per year, reaching 678.83 ton in 2006. Meanwhile, production of capture fishery in public waters can not be optimized yet. Even from year to year the production has shown insignificant growth, only 0.07% per year. However, production of capture fishery as a whole give significant contribution. In 2006 production of capture fishery reached 395,185 ton or accounted for 36.49% of the total fishery production. Meanwhile, during the last 6 years, pool culture fishery

Potential of Public Water Fishery 2005

Commodity	Production Center (Sub District)	Production (ton)	Potential of Production Improvement (ton)
Gabus	Negeri Besar, Negara Batin	45.67	0.91
Nilam	Negeri Besar, Negara Batin	14.11	0.28
Jelabat	Pakuan Ratu, Negara Batin, Negara Batin	13.33	0.27
Lais	Negeri Besar, Pakuan Ratu, Negara Batin	30.87	0.62
Belida	Negeri Besar, Pakuan Ratu, Negara Batin	13.82	0.28
Baung	Negeri Besar, Pakuan Ratu	21.41	0.43
Tembakang	Negara Besar, Negara Batin	14.70	0.29

Potential of Culture Fishery

Commodity	Production Center (Sub District)	Total Area (Ha)	Production (ton)	Potential Land for Development (Ha)	Potential for Production Improvement (Ha)
Golden Fish	Banjit, Baradatu	35.05	31.93	16.00	14.58
Tilapia	Banjit, Baradatu	169.47	154.39	18.00	16.40
Patin	Banjit, Bahuga	47.49	43.26	32.00	29.15
Catfish	Banjit, Baradatu	22.14	20.17	6.00	5.47

Development of Management of Plantation Area

Commodities	Large Plantation (Ha)		People-managed Plantation (Ha)	
	2004	2005	2004	2005
Rubber	23,784	23,784	26,789	26,795
Coffee	-	-	26,789	25,915
Pepper	-	-	14,262	14,453
Cocoa	350	350	1,483	1,483
Clove	-	-	1,160	1,184
Local Coconut	-	-	2,710	2,710
Hybrid Coconut	-	-	2,695	2,717
Oil Palm	16,574	16,574	-	-

developed by 18.18% per year and has been capable to increase its production as much as 16.65% per year.

Up until today local fish production still cannot fulfill demand for fish consumption in Way Kanan Regency, and other region still supply for the rest. In 2006, consumption of fish reached 2,474.57 ton, while the production only reached 1,083.02 ton. Hence there are still deficit of fish supply of 1,391.55 ton. Based on this condition, fishery sector provides prospective investment opportunities for investors. Other supporting factors that support investment in fishery sector in Way Kanan Regency are, among others, Way Kanan has vast river areas, the existence of Technical Irrigation Network of Way Umpu to supply waters, the existence of Fish Breeding Center (BBI) of Banjit to supply young fishes, and the availability of potential area for fish culture development.

Plantation

Plantation sector is primadona that become source of income for people and the regional government of Way Kanan Regency. Plantation commodities developed in the regency include rubber, coffee, and pepper. Plantation estates which are developed in the region are capable to absorb employment in large number, especially government owned plantation estates and privately owned plantation estates. With such huge plantation potential, Regional Government of Way Kanan Regency offers opportunities to businessmen to jointly create people-based economic in *Ramik Ragom* land.

INFRASTRUCTURE AND FACILITIES

In general, condition of infrastructure and facilities in Way Kanan Regency has been capable to support economic activities of the people and to support development of investment and trading activities in the regency. However, the government continually makes its best efforts to improve capacity and quality of those

infrastructure and facilities in order to become more representative and can dynamically keep up with the acceleration of wheel of development in the regency. For land transportation, as of 2005, total span of road in Way Kanan Regency reached 1,655.05 Km, consisting of state road (81.90 Km), provincial road (267.91 Km) and regency road (1,305.24 Km), and most of them are asphalted. Beside road, Way Kanan Regency also has 5 railway station as parts of Trans Sumatera railway networks.

Demand for telecommunication is served by PT Telkom in Blambangan Umpu and Baradatu with total installed capacity of 330 and 554 telephone line units. Cellular telephone networks also have expand their wing in Ramik Rangon land and take part to open new horizon of information and telecommunication for the people. For electricity network, up until 2005 there have been electricity networks in 14 sub districts that covers 106 villages with 17,407 subscribers. To support trading of various agribusiness commodities, there have been 34 traditional market in 14 sub districts (31 units owned by villagers, 2 unit owned by regional government, and 1 units managed privately). Meanwhile, to support economic development activities, there are also banking facilities available and ready to help the people in handling their business transaction. Those banking facilities comprise 2 units of Bank BRI in Blambangan Umpu and Baradatu Sub Districts, sub branch office of Bank BRI in Bumi Agung and Banjit sub districts and 1 unit of Bank Lampung branch in Baradatu sub district. ■

INVESTMENT CONTACT

Office of Agriculture
The Regency of Way Kanan
Komplek Perkantoran Pemkab. Way Kanan,
Km. 02, Blambangan Umpu
Phone/Fax : (62-723) 461017



The Regency of Western South-East Moluccas

GENERAL DESCRIPTION

Western South East Moluccas Regency is one of regencies in Moluccas Province. The regency has a strategic location, as it is directly borders on Australia and Timor Leste. Its 125,422.4 sq km area comprises seawaters for the larger part (110,834.4 sq km). The regency borders on Pacific Ocean and Australia Continent in the south, on Banda Sea in the north, on Arafura Sea in the east and on Flores Sea and Timor Leste Sea in the west. Administratively the regency is divided into 17 sub-districts, covering 187 villages and urban villages. In 2006 total population of the regency reached 149,850 people, comprising 74,223 males and 75,627 females with population growth reached 1.42% (1990-2000) in average. Most of the people (about 80%) work in agriculture sector.

The strategic position of Western South East Moluccas Regency makes the regency to have promising prospects in the future. The regional government of Western South East Moluccas Regency has made its best efforts to optimize and to develop regional potential of resources that have not been utilized optimally,

among which are some local competitive commodities that are potential enough to be developed further. In agribusiness sector, competitive products developed in the region are, among others:

- Food Crops commodities : Gogo (upland) Paddy, tubers, corn, peanut, mungbean, soybean
- Horticulture Crops : Sweet orange (*Kisar* and *Selwasan* orange), banana, *Golek* mango, red onion, orchid flower, vegetable
- Animal Husbandry : *Moa* buffalo, cow, *kisar* sheep, *kisar* chicken, goat, horse and pork
- Plantation : Coconut, clove, nutmeg, cocoa, coffee, cashew nut

AGRIBUSINESS DEVELOPMENT POTENTIAL

Agriculture sector in Western South East Moluccas is classified into 3 sub-sectors, namely Food crops and horticultures sub-sector, animal husbandry sub sector, and plantation sub-sector. The development of those three sub-sectors is focused on the vision and mission as well as development programs of agriculture sector, namely improvement of food security, development of agribusiness, and empowerment of agriculture people. For the development of agriculture area, the regency is

Total Area and Production of Agribusiness Commodities

No	Commodity	Total Area (Ha)	Production (ton/Ha)	Remarks
1	Gogo Paddy	1,389.0	3,080.0	Planting (November-December), harvesting (March -April)
2	Corn	9,636.0	13,191.0	Planting (November-December), harvesting (March -April)
3	Cassava	869.0	5,880.0	Planting (December-January), harvesting (April-June)
4	Sweet Potato	489.0	2,754.0	Planting (December-January), harvesting (July-August)
5	Taro	1,112.0	8,527.0	Planting (December-January), harvesting (July-August)
6	Soybean	36.5	37.2	Planting (April), harvesting (July)
7	Peanut	1,194.0	2,324.0	Planting (April), harvesting (July)
8	Mungbean	807.0	922.8	Planting (April), harvesting (July)
9	Red Onion	303.0	257.9	Planting (April), harvesting (October)
10	Orange	1,455.0	9,810.9	Harvesting (August)
11	Mango	289.0	525.4	Harvesting (December)
12	Banana	860.0	154,080.0	Harvesting : each week



Potential area for paddy development.



divided into the following cluster of island:

- Island Cluster : comprising Tanimbar Island for development of *gogo* paddy, peanut, mungbean, soybean, corn, red onion, sweet orange, banana, vegetable and tuber commodities.
- Island Cluster II : comprising Babar Islands that is planned to develop corn, breadfruit, local mango, sweet orange, red onion, and pulses commodities.
- Island Cluster III : Comprising Letti Island, Moa Island and Lakor Island which are planned for development of red onion, *laga* peanut, corn and breadfruit commodities
- Island Cluster IV : Comprising Terselatan Island that are suitable for development of *kisar* orange, *gogo* paddy, red onion, and corn commodities.

Development Potential of Corn Commodity

Corn commodity is the second most important

commodity after paddy. This commodity is cultivated by the largest part of people of Western South East Moluccas Regency. The commodity become more important after corn is also used as food, animal food and as raw material for industry. To meet the increasing demand for corn, policies to develop corn commodity need to be supported by application of technology. At present average production of corn in Western South East Moluccas Regency is still low, namely reaching around 1.3 ton/Ha, despite the fact that production potential of corn reaches 7 ton/Ha. Meanwhile, potential land for development of corn reaches 185,687 Ha. Of the potential land, only as vast as 6,545.5 Ha have been utilized, producing around 6,872 ton of corn. Production centers of corn commodity are found in Pulau-pulau Terselatan Sub District, Wetar Sub District, Lemola Sub District, Pulau-pulau Babar Sub District and Babar Timur Sub District.



Peanut potential area.



Corn potential area.

The Regency of Western South-East Moluccas



Mungbean commodity.



Soybean potential area.

Development Potential of Gogo Paddy Commodity

Gogo paddy is one of main local food crop commodities in Western South East Moluccas Regency. The paddy variety cultivated by most people in the region is *padi merah* (red paddy) and IR 64 variety. Planting season for those commodities is once a year. Potential land for development of gogo paddy reaches 3,520 Ha. Of the potential land, only as vast as 765 Ha have been cultivated, producing around 902 ton of gogo paddy. Centers of gogo paddy development are scattered in Selaru, Wermaktian, Wuar Labobar, Kormomolin, and Pulau Wetar sub districts.

Development Potential of Peanut Commodity

There are two varieties of peanut developed by people in Western South East Moluccas Regency, namely *Gajah* and local variety. Potential land for development of peanut commodity reaches 1,659 Ha, of which only 821 Ha has been utilized, producing peanut of 1,396 ton. Production centers of peanut are found in Tanimbar Selatan, Selaru, Tanimbar Utara, and Lemola sub districts.

Development Potential of Soybean Commodity

Soybean is the third most popular food crop commodity after paddy and corn. Superiority of soybean commodity than other second crops commodities lies in its relatively high and stable sale price, tolerant against draught, and its low relatively low production cost. Potential land for development of soybean commodity reaches 650 Ha, and only about 71 Ha producing about 78 tons of soybeans. Production center of soybean commodity is found in Tanimbar Utara Sub District.

Development Potential of Mungbean

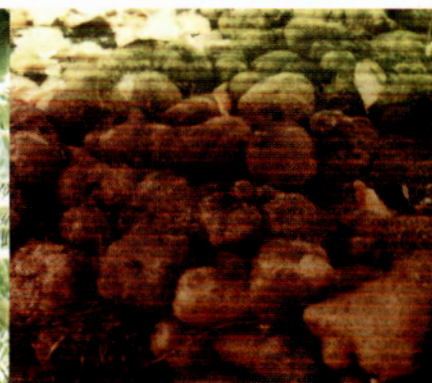
Mungbean varieties developed in Western South East Moluccas Regency are generally green, red, yellow and black local varieties. Potential of land for development of mungbean commodity reaches 782 Ha, of which only as vast as 640 Ha have been utilized, producing 767 ton of mungbean. Production centers for mungbean commodity are scattered in Werthamrian, Yaru, Nirunmas, and Babar Timur sub districts.



Peanut area.



Banana commodity.



Ubi



Potential area of red oneon.



Red oneon production.

Development Potential of Tuber Commodity

Tuber is one of primary food for most of people in Kepulauan Tanimbar. Tuber commodities generally consumed are cassava (*kasbi*), taro (*keladi*), *gembili* (*kombili*), *uwi* (*ubi*), and others. Potential land for development of tubers reaches 4,189 Ha, of which only as vast as 2,118 Ha have been utilized, producing 17,818 ton of tubers. Production centers for tubers are found in Tanimbar Selatan, Werthamrian, Tanimbar Utara, Wuarlabobar, Kormomolin, and Nirunmas sub districts.

Development Potential of Orange Commodity

Orange is one of horticulture that has high economic value. The need of consumption of fresh orange fruit reaches 3.26 Kg/capita /year assuming that consumption of orange 10% of total consumption of fruit (FAO standard). Orange in Western South East Moluccas

Regency is cultivated traditionally in Pulau-pulau Terselatan sub district (Kisar orange), and in Yaru and Wermaktian sub districts (Selwasan orange). Due to its traditional cultivation method, the potential have not been cultivated optimally. Potential land for development of horticulture crops (including orange fruit) reaches 185,687 Ha. Of the potential, total harvested area of orange commodity has only reached 1,386 Ha producing 8,475.5 ton of orange. Production centers of orange commodity include Pulau-pulau Terselatan, Yaru, and Wermaktian sub districts.

Development Potential of Red Onion

Red onion is one of tuber commodities that have high nutrient content and useful for our health. At present, development of production center of tuber vegetables is carried out excessively as, besides having



Orange is one of horticulture in Western South East Moluccas that has high economic value.



The Regency of Western South-East Moluccas

high content of protein, mineral, carbohydrate, and vitamins, tuber vegetable also has high economic value. Farming system of red onion is applied in Western South East Moluccas Regency is still traditional ones. Potential land for development of red onion reaches 7,500 Ha, of which only as vast as 256 Ha of the area have been utilized, producing red onion of 336 ton. Production centers of red onion are scattered in Selaru, Mola, Kormomolin, Pulau-pulau Babar and Wetar sub districts.

Development Potential of Banana

Banana is one of horticulture commodities that have various varieties, which are potential to develop, among others, *ambon* banana, *dewaka* banana, milky banana, *raja* banana, *tanduk* banana, *pas* banana and *nangka* banana. In some areas of Western South East Moluccas Regency, people consume banana as the main dish to replace rice (source of carbohydrate), and cultivation method applied by the people is usually still traditional ones. Potential land for development of banana commodity reaches 782 Ha of which only 494 Ha has been utilized, producing 4,891 ton of banana. Production centers of banana commodity are scattered in Yaru, Yaru, Kormomolin, and Damer sub districts.

INVESTMENT OPPORTUNITIES IN AGRIBUSINESS SECTOR

Based on the potential of land available and vast diversity of commodities that can be developed, investment opportunities in food crops and horticulture sub sectors offered to investors are, among others:

- Farming/ cultivation of food crops and horticulture commodities. The opportunities are supported by the availability of 104,208 Ha of land.
- Development of agribusiness commodities like corn, peanut, mungbean, soybean, tubers, red onion, vegetable, *kisar* and *selwasan* oranges, and banana
- Processing of peanut (bottled peanut, salted peanut, peanut snack, noga), tubers (snack, tapioca powder), orange (juice, syrup), and banana (snack, juice).
- Development of appropriate agriculture technology and supply of other processing facilities and infrastructure.

INFRASTRUCTURE AND FACILITIES

As a relatively new established regency, certainly infrastructure and facilities available in the region is still limited, not excluding facilities in agriculture sec-



Banana plantation area.

tor like seedling system, production system as well as processing and marketing system which are all need to be developed continuously. For land transportation, road and transportation facilities connecting capital city of sub districts and villages within the island still need serious attention from the government. For air transportation, the condition also still need to be improved further. Air transportation activities so far has only been served by an airport located in the capital city of the regency, Saumlaki. The airport is only capable to accommodate Cassa 212 type of aircraft, with flight frequency of once a week serving Larat - Saumlaki route vice versa. To support performance of air transportation, development of international airport in Werthamrian sub district is currently underway. In sea transportation sector, almost all of sub districts in the regency has been capable to be served by pioneer ship (twice a month) or by local motor boat (twice a week).

Supply of electricity in the regency is served by PLN state-owned electricity company through a number of its diesel generated electricity power plant (PLTD). Demand for clean water in each sub districts are supplied by abundant water springs and groundwater. Meanwhile, hotel, post offices, and banking facilities have been available in the capital city of the regency and in a number of capital city of its sub districts. For trading activities, facilities like market and shopping center have been available in all sub districts of the regency. ■

INVESTMENT CONTACT

Regional Office for Agriculture Affairs ,
The Regency of Western South East Moluccas
Jl. Tanjung Batu, Saumlaki
Phone : (62-918) 21476, 22219, Facs. : (62-918) 21200

Empowering The People For The Continuity of Development

As a pair of regent and vice regent in the current regional autonomy, challenges faced by Bitzrael S. Temmar and Drs. Barnabas Orno are not easy ones. In autonomy era, each regional leader is required to be creative in determining strategic policies directed either to the people, businessmen or investors, and the region itself. However, he has a strong belief that they will be capable to successfully face those challenges. With the trust of people in their hand through direct election (the first ever held in Maluku Tenggara Barat), they strongly believe that people and their governmental staffs will fully support them.

In their vision of development, Bitzrael S. Temmar and Drs. Barnabas Orno formulated their idea of "Creating respectable, independent and welfare society of Maluku Tenggara Barat Regency". The vision is based on their hope that all stratum of the people can give positive contribution for the creation of conducive atmosphere of living of people for the continuity of development in the future. To realize the vision, mission to be attained are: 1) To improve quality of services of the government of Western South East Moluccas to its people in friendly, cheap, and fast ways, 2) To design development programs that are capable to improve standard of living and dignity as well as independency of people, 3) To dinamize and to accelerate economic development in order to improve people's welfare.

Based on the above vision and mission, Bitzrael S. Temmar and Drs. Barnabas Orno have set a number of development programs. According to them, principally, planning and formulation of development program that will be carried



out will involve the people (*planning with people*). In this way, they expect to get direct empirical input for the people so that development program offered will be useful and adaptive with people aspiration and needs. Those development program include socio-cultural, legal, political, educational, health and nutrient, infrastructure and public service, economic and environment, finance and regional development budget, and government and regional autonomy programs.

Profile of Regent of Western South East Moluccas

Name : Drs. Bitzrael S. Temmar

Place/Date of Birth : Namtabung, 4 September 1950

Formal Education :

1. Elementary School of Namtabung Village
2. Secondary School of Namtabung Village
3. Economic Senior High School (SMEA) of Saumlaki
4. Bachelor Degree (S1) Majoring in Social and Political Science, Pattimura University, Ambon
5. Post Graduate Degree (S2), Padjajaran University, Bandung

Wife : Ny. Marta Temmar

Children : 1. Betrix Novita Temmar, 2. Falerry Temmar, 3. Garry Temmar, 4. Pieter Temmar

Profile of Vice Regent of Western South East Moluccas

Name : Drs. Barnabas Orno

Place/ Date of Birth : Letoda, Mola Sub District, 2 November 1963

Formal Education :

1. Elementary School of Letoda Village
2. Letti Secondary School at Letti
3. Christian Senior High School of Ambon, Ambon, Mollucas Province
4. Bachelor Degree (S1) majoring in Social and Political Science, Mollucas Christian University, Ambon

Career History :

1. As a government servant in Regional Office for Social Affairs of Maluku Tenggara Barat Regency (1992)
2. Social affairs Section Head of Regional Secretariat of Maluku Tenggara Barat Regency
3. Head of Babar Timur Sub-district in Letwurung
4. General Affair Section Head at Regional Supervisory Body (Bawasda) of Maluku Tenggara Barat Regency

Wife : Ny. Adriana Orno

Children : 1. Efriansa Orno, 2. Gracia Orno, 3. Estri Orno, 4. Steni Orno, 5. Yosua Orno, 6. Yohanis Orno, 7. Yermia Orno



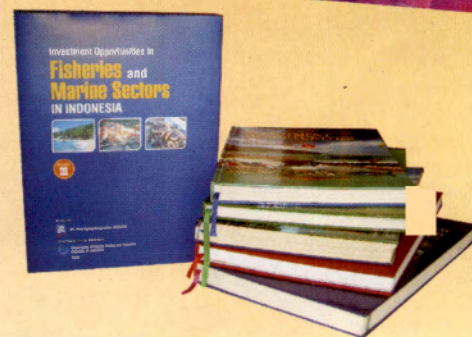
PT. FERACO adalah perusahaan swasta nasional yang bergerak di bidang penerbitan buku-buku informasi bisnis dan pembangunan Indonesia, majalah, serta penyelenggara pameran dan seminar. Dalam pengembangan usahanya, disamping aktif mengembangkan berbagai jenis penerbitan dan pameran secara mandiri, PT. FERACO juga menjalin kerjasama penerbitan buku, majalah, seminar dan pameran serta periklanan dengan institusi pemerintah dan kalangan dunia usaha.

Institusi yang pernah dan sedang menjalin kerjasama penerbitan buku, majalah, pameran dan seminar di antaranya adalah : Kementerian Riset dan Teknologi, Kementerian PPKTI, Departemen Kelautan dan Perikanan, Departemen Perhubungan, Departemen Pertanian, Departemen Pertambangan dan Energi, Sumber daya Mineral, Pemerintah Provinsi Riau, PT. Telekomunikasi Indonesia (TELKOM), Departemen Pekerjaan Umum, Departemen Dalam Negeri, serta perusahaan swasta nasional lainnya.

Hingga saat ini, sejak berdirinya pada 1996, PT. FERACO dengan didukung 25 SDM profesional di bidangnya telah melaksanakan kegiatan penerbitan berbagai jenis buku, majalah, serta beberapa pameran dan seminar yang telah mendapat sambutan luas dari kalangan dunia usaha dan masyarakat.

BUKU-BUKU DAN MAJALAH YANG SUDAH DAN AKAN DITERBITKAN

- Panduan Pendidikan Ke Luar Negeri, 2000
- IPTN Entering 21st Century, 2000
- Telkom Nusantara 21, 2000
- Direktori Produk dan Jasa Layanan Telkom Divisi Regional IV Jawa Tengah, 2000
- Katalog Produk Telkom Divisi Regional II Jakarta, 2001
- Indonesian Maritime Prospective Industry, 2001
- 25th Perjalanan Telkom Mengoperasikan Satelit, 2001
- Eastern Indonesia The Great Challenge for Investment, Juni 2002
- Majalah Timur! : Media Informasi dan Peluang Investasi di Kawasan Timur Indonesia
- Profil 100 Top Kabupaten dan Kota Paling Potensial untuk Berinvestasi di Indonesia, 2003
- Investment Opportunities in Riau - Indonesia, 2002
- Indonesia Agribusiness Prospective Industry, 2002 (Edisi I), Mei 2004 (Edisi II)
- Investment Opportunity in Agribusiness Sectors in Indonesia, September 2005
- Indonesian Mining and Mineral Prospective Industry, Desember 2003
- Indonesia Mining & Mineral - Exploring Potential Resources, Agustus 2005
- Investment Opportunities in Fisheries and Marine Sectors in Indonesia, 2003 (Volume I), Juli 2004 (Volume II), dan Oktober 2005 (Volume III)
- Roadmap to Investment in Eastern Indonesia, Desember 2003 (Volume I), Februari 2005 (Volume II)
- Obyek Wisata Nusantara, Oktober 2005 (Edisi 1), Agustus 2006 (Edisi 2), Juli 2007 (Edisi 3)
- Indonesian Investment and Trading Opportunity by Province, Regency, City, Juli 2004 (Volume I), April 2005 (Volume II), Oktober 2005 (Volume III), Juli 2006 (Volume IV), Mei 2007 (Volume V), November 2007 (Volume VI) bekerjasama dengan Departemen Dalam Negeri RI



PAMERAN DAN SEMINAR YANG SUDAH DAN AKAN DILAKSANAKAN

- Seminar dengan tema: New Vision of Research and Technology Policies in Indonesia
- TELEMATIKA EXPO 2000
- RAKORNAS RISTEK KE – XVIII
- ROUND TABLE DISCUSSION. Seminar dengan tema: Penentuan Skala Prioritas dan Strategi Pengembangan Investasi Kawasan Timur Indonesia
- ROUND TABLE DISCUSSION III. Seminar dengan tema: Intergrasi Implementasi Investasi dan Pembiayaan untuk Percepatan Pembangunan Kawasan Timur Indonesia
- 11th WORKING GROUP MEETING ON CONSTRUCTION AND CONSTRUCTION MATERIALS BIMP-EAGA
- INDUSTRI BAHARI EXPO
- COAL EXPO
- INDONESIA AGRIBUSINESS EXPO
- INVESDA EXPO
- Pekan Agribisnis Nasional (PENAS) XII





APPENDIX



Association in Agriculture Sector

Agribusiness Club

Jl. HOS Cokroaminoto No. 83, Jakarta 10310
Phone : (62-21) 3161745
Fax : (62-21) 3916944
e-mail : agriclub@cbn.net.id
Homepage : www.agribusinessclub.com

Asosiasi Agribisnis Hortikultura Indonesia (ASAGHI)

Indonesian Agribusiness and Horticulture Association
Jl. Nusantara Raya No. 62, Depok 16421
Phone : (62-21) 7751590, 7752511
Fax : (62-21) 7751590

Asosiasi Budidaya Mutiara Indonesia (ASBUMI)

Indonesia Pearl Cultured Association
Tiara Buncit Blok A-5 2nd Floor, Jl. Kemang Utara IX No. 9, Jakarta
Phone : (62-21) 7916537, 9195583
Fax : (62-21) 7916537

Asosiasi Bunga Indonesia (ASBINDO)

Indonesia Flower Association
Komplek Liga Mas Indah Perdatam,
Jl. Duren Tiga Indah Raya Blok I No. 12, Jakarta 12760
Phone : (62-21) 7976442, 7976445
Fax : (62-21) 7976443
e-mail : asobunga@indosat.net.id

Asosiasi Ekspor Kopi Indonesia (AEKI)

Indonesia Coffee Exporter Association
Jl. Sarono (Gondangdia) No. 20, Central Jakarta 10350
Phone : (62-21) 382385, 336306, 3106765
Fax : (62-21) 3104115
e-mail : aeki@indosat.net.id

Asosiasi Eksportir Hortikultura Indonesia (AEHI)

Indonesia Horticulture Exporter Association
Gedung Wijaya Grand Center, Jl. Wijaya II/ Blok 6/29, Jakarta 12160
Phone : (62-21) 7206636, 715564

Asosiasi Eksportir Ikan Hias Indonesia

Association of Ornamental Fish Exporter
Jl. Asem Baris Raya No. 120, Tebet, Jakarta 12830
Phone : (62-21) 8296647, 8727806
Fax : (62-21) 8727804
e-mail : anton@lovinalaras.com
Homepage : www.lovinalaras.com

Asosiasi Eksportir Kulit Indonesia (AEPI)

Association of Indonesian Leather Product Exporters
AKA Building Ground Floor, Jl. Bangka Raya No. 2, Jakarta 12720
Phone : (62-21) 7170507 ext. 255, 7193816 ext. 330
Fax : (62-21) 7192761

Asosiasi Eksportir Pinang Indonesia

Indonesia Areca Nut Exporter Association
Jl. Karya Dame No. 21, Medan
Phone : (62-61) 6615751
Fax : (62-61) 6615751

Asosiasi Gula Indonesia (AGI)

Indonesian Sugar Association
Jl. Fachruddin No. 14, Tanah Abang, Jakarta
Phone : (62-21) 3919390, 31903387
Fax : (62-21) 3919390
e-mail : agi-jkt@cbn.net.id

Asosiasi Importir Buah & Sayuran Segar Indonesia (ASIBSINDO)

Indonesia Fresh Fruit and Vegetable Association
Jl. Mangga Raya Blok F4/25,
Komp. Building Material Mangga Dua, Jakarta
Phone : (62-21) 601392
Fax : (62-21) 6013285

Asosiasi Kakao Indonesia (ASKINDO)

Indonesia Cocoa Association
Jl. Abdul Munir Bedung Brawijaya VII/5,
Kebayoran Baru, South Jakarta
Phone : (62-21) 3863066, 3863067

Asosiasi Koral, Kerang dan Ikan Hias Indonesia (AKKII)

Indonesian Coral, Shell and Ornamental Fish Association
Komplek Ruko Laguna No. 107, Jl. Alternatif Cibubur, Jakarta
Phone : (62-21) 8450113 (hunting)
Fax : (62-21) 8450357
e-mail : akkii@cbn.net.id

Asosiasi Niaga Pupuk Indonesia (ANPI)

Association of Indonesian Fertilizer Trade
Jl. Dr. Sahardjo No. 52, Jakarta 12970
Phone : (62-21) 8311184 (hunting)
Fax : (62-21) 8311185
e-mail : maduma@indo.net.id

Asosiasi Obat Hewan Indonesia (ASOHI)

Indonesia Animal Medicine Association
Jl. Kemuning Dalam I/12, South Jakarta
Phone : (62-21) 7996714, 7996582

Asosiasi Pala Indonesia (API)

Indonesia Nutmeg Association
Jl. Majapahit BIA 3/4 No. 18, Central Jakarta
Phone : (021) 3849747

Asosiasi Pemasaran Bersama Perkebunan (APB)

Joint Marketing Association

Jl. Cut Mutia No.1, Jakarta 10330

Phone : (62-21) 347940, 341051, 337136

Asosiasi Penelitian dan Pengembangan Perkebunan Indonesia (AP3I)

Indonesia Estate Development and Research Association

Jl. Tanjung Karang No.5, Central Jakarta

Phone : (62-21) 325473

Fax : (62-21) 325517

Asosiasi Pengalengan Ikan Indonesia

Indonesian Fish Canning Association

Jl. Cipinang Indah Raya No. 1, Jakarta 13420

Phone : (62-21) 8196910

Fax : (62-21) 8506587

Asosiasi Pengusaha Budidaya Buaya Indonesia

Indonesia Crocodile Cultivation Association

Komplek Harmoni Mas Blok A/12-B,

Jl. Jembatan Dua, Jakarta 14450

Phone : (62-21) 6618049 (hunting)

Fax : (62-21) 6620464

Asosiasi Pengusaha Cold Storage Indonesia (APCI)

Indonesia Cold Storage Business Association

Jl. Antara No. 35, Pasar Baru, Jakarta

Phone : (62-21) 3518058

Fax : (62-21) 3518059

e-mail : apcupusat@cbn.net.id

Asosiasi Pengusaha dan Pecinta Bunga Kering Buatan Indonesia (ASPRINGGA)

Indonesia Dried Flower Lover Association

Jl. Mahoni 30, Central Jakarta

Phone : (62-21) 4247218

Asosiasi Pengusaha dan Petani Flora Indonesia (ASPENI FLORA)

Indonesia Flora Farmer and Business Association

Komp. TVRI, Jl. Kramat IV/F4, Kemanggisian, West Jakarta

Phone : (62-21) 5307808

Asosiasi Pengusaha Hortikultura Indonesia (APHI)

Indonesia Horticulture Business Association

Jl. Iskandarsyah Raya No. 1,

Kebayoran Baru, South Jakarta

Asosiasi Pengusaha Hutan Indonesia (APHI)

Association of Indonesian Forest Concession Holders

Manggala Wanabakti Building Blok IV 9th Floor Wing B,

Jl. Jend. Gatot Subroto, Jakarta 10270

Phone : (62-21) 5737036, 5701154, 5701155

Fax : (62-21) 5732564

e-mail : aphijkt@cbn.net.id

Homepage : www.aphi-pusat.com

Asosiasi Pengusaha Ikan Hias (APIH)

The Indonesian Aquarists Society

Jl. Asem Baris Raya No. 120, Kebon Baru,

Tebet, Jakarta 12830

Phone : (62-21) 8727806, 8296647

Fax : (62-21) 8727804

e-mail : anton@lovinalaras.com

Homepage : www.lovinalaras.com

Asosiasi Pengusaha Ikan Kaleng Indonesia (APIKI)

Indonesia Canned Fish Business Association

PT. Maya Muncar, Jl. Cipinang Indah Raya No.1,

Jakarta 13420

Phone : (62-21) 8196910

Fax : (62-21) 8508587

Asosiasi Pengusaha Ikan Non Tuna Dan Non Udang Indonesia (ASPINTU)

Indonesia Non-Shrimp and Non-Tuna Business Association

PT. Pelagis Samudera Lestari, Jl. Angkasa No.18 G-H,

Kebayoran, Jakarta

Phone : (62-21) 42477545, 4247518

Fax : (62-21) 4248432

Asosiasi Pengusaha Ikan Sidat Indonesia (APISI)

Indonesia Sidat Fish Business Association

PT. Tahapan Jaya, Jl. Kebahagiaan No.77, Krukut, West Jakarta

Phone : (62-21) 6336354

Fax : (62-21) 6336838

Asosiasi Pengusaha Importir Daging Indonesia (ASPIDI)

Indonesia Meat Importer Business Association

Jl. Raya Jagorawi, Stadion Pelita Jaya,

Lebak Bulus, South Jakarta 12440

Phone : (62-21) 7502901

Asosiasi Pengusaha Kayu Gergajian dan Kayu Olahan Indonesia

Indonesian Saw-Millers and Woodworking Association (ISWA)

Manggala Wanabakti Building Blok IV 8th Floor,

Jl. Jend. Gatot Subroto, Jakarta 10270

Phone : (62-21) 5733018, 5703172

Fax : (62-21) 5711327

e-mail : iswa@iwwn.com

Homepage : www.iwwn.com

Asosiasi Pengusaha Pakan Udang Indonesia (APPUI)

Indonesia Shrimp Feed Business Association

PT. Sentral Pantiwi Bratasena, Gedung BRI II 18th Floor,

Room 1801, Jl. Jend. Sudirman No. 44-46, Jakarta

Phone : (62-21) 5745789

Fax : (62-21) 5713327

Asosiasi Pengusaha Perbenihan Udang (APPU)

Indonesia Hatchery Business Association

Jl. Kranggan 103, Surabaya, East Java

Phone : (62-31) 5316979

Fax : (62-31) 572265

Association in Agriculture Sector

Asosiasi Pengusaha Rumput Laut Indonesia (APBIRI)

Indonesia Seaweed Business Association

PT. Galie Arthahari, Desa Suka Danau, Cibitung,

Bekasi, West Java

Phone : (62-21) 8900782

Fax : (62-21) 8900783

Asosiasi Pengusaha Tanaman Hias Indonesia (APTI)

Indonesia Decorated Plant Business Association

Jl. Hang Lekir II/9, Kebayoran Baru, South Jakarta

Phone : (62-21) 770457

Asosiasi Perbenihan Indonesia (ASBININDO)

Indonesia Seeding Association

Jl. M. Kahfi II/ No. 41 Srengseng, Jakarta

Phone : (62-21) 7271618

Fax : (62-21) 7271445

Asosiasi Perdagangan Eksportir Minyak Astiri

Indonesian Essential Oils Trade Association (INDESSOTA)

Jl. Sinar Jaya No. 49, Rawamangun, Jakarta 13230

Phone : (62-21) 4714735

Fax : (62-21) 4714736

e-mail : info@indossota.com

Homepage : www.indessota.com

Asosiasi Perikanan Tuna Indonesia (APTI)

Indonesia Tuna Fishery Association

PT. Sinar Mangkudijaya, Sentral Plaza Building 17th Floor,

Jl. Jend. Sudirman Kav. 48, Jakarta

Phone : (62-21) 5250629, 5207990

Fax : (62-21) 5791433

Asosiasi Perusahaan Perindustrian Pestisida Indonesia (AP3I)

Indonesia Pesticide Industry Company Association

Jl. Perdatam Raya No. 9, South Jakarta

Phone : (62-21) 7994252-7992400

Fax : (62-21) 7994252

Asosiasi Produsen Daging dan Feedlot Indonesia (APFINDO)

Indonesia Feedlot and Meat Producer Association

Departemen Pertanian, Building C 7th Floor,

Jl. Harsono RM, No. 3, Jakarta

Phone : (62-21) 78833001, Fax : (62-21) 78833004

e-mail : apfindo@cbn.net.id

Asosiasi Produsen Pupuk Indonesia (APPI)

Indonesian Fertilizer Producers Association

Pusri Building 6th Floor,

Jl. Taman Anggrek, Kemanggisn Jaya, Jakarta 11480

Phone : (62-21) 5484057, 5481208, 5484079

Fax : (62-21) 5483313

e-mail : appi@pacific.net.id

Homepage : www.appi.or.id

Asosiasi Teh Indonesia (ATI)

Indonesia Tea Association

Jl. Sindangsirna No. 4, Bandung 40153

Phone : (62-22) 2038969 ext. 242

Fax : (62-22) 2031455

e-mail : ptpnviii@pop.rad.net.id

Asosiasi Tuna Indonesia

Indonesia Tuna Association

Jl. Waru No. 26, Rawamangun, Jakarta 13220

Phone : (62-21) 4701284, 4700409

Fax : (62-21) 4892282

e-mail : ayu@vision.net.id

Asosiasi Wisata Agro Indonesia

Indonesian Agritourism Association

Hanurata Building 5th Floor,

Jl. Kebon Sirih No. 67-69, Jakarta 10340

Phone : (62-21) 3917448

Fax : (62-21) 3917448

Dewan Perunggasan Indonesia (DEPERINDO)

Indonesia Poultry Board

Teja Buana Lantai III, Jakarta

Phone : (62-21) 3101303

Gabungan Asosiasi Penyalur Gula & Terigu

Wheat and Sugar Distributor Association

Jl. Batu Tulis Raya No. 21 B, West Jakarta

Gabungan Koperasi Susu Indonesia (GKSI)

Indonesia Milk Cooperative Association

Jl. Prof. Supomo SH No. 178 B, Jakarta 12870

Phone : (62-21) 8290689, 8290851

Fax : (62-21) 8290851

e-mail : gksi@plasa.com

Gabungan Pengusaha Karet Indonesia (GAPKINDO)

Indonesia Rubber Business Association

Jl. Cideng Barat No. 62 A, Jakarta 10150

Phone : (62-21) 346813

Gabungan Pengusaha Kelapa Sawit Indonesia (GAPKI)

Indonesia Oil Palm Business Association

Komplek Tomang Elok, Jl. Murai II No. 40, Medan 20122

Phone : (62-61) 8473331, 8473332

Fax : (62-61) 8468851

e-mail : gapki@indosat.net.id

Gabungan Pengusaha Jamu dan Obat Tradisional Indonesia (GP JAMU)

Association of Herbs and Traditional Pharmaceutical Producers

Plaza DM 18th Floor, Jl. Jend. Sudirman Kav. 25, Jakarta 12950

Phone : (62-21) 5267682

Fax : (62-21) 5267683

e-mail : gpjamu@cbn.net.id

Gabungan Pengusaha Pembibitan Unggas Indonesia (GPPUI)

Indonesia Poultry Breeding Business Association
Jl. Gudang Peluru Blok I/4, South Jakarta
Phone : (62-21) 8290383

Gabungan Pengusaha Perikanan Indonesia (GAPPINDO)

Indonesia Fishery Business Association
Wisma Sakura 2nd Floor,
Jl. Hati Suci No. 4, Taman Kebon Sirih, Jakarta 10250
Phone : (62-21) 3910480, 3910481
Fax : (62-21) 3910481
e-mail : gappindo@indo.net.id

Gabungan Pengusaha Perunggasan Indonesia (GAPPI)

Indonesia Poultry Business Association
Jl. Mangga Dua Raya Blok.C No.2, PO. Box. 488, Jakarta
Phone : (62-21) 6011955
Fax : (62-21) 6012016

Gabungan Perusahaan Karet Indonesia (GAPKINDO)

Indonesian Rubber Association
Jl. Cideng Barat No. 62-A, Jakarta 10150
Phone : (62-21) 3846813, 3501510 (hunting)
Fax : (62-21) 3846811
e-mail : karetind@indosat.net.id

Gabungan Perusahaan Makanan Ternak Indonesia (GPMT)

Indonesia Feed Company Association
Ruko Taman Laguna Cibubur No. 112,
Jl. Alternatif Cibubur, Cileungsi, Pondok Gede, Bekasi 17435
Phone : (62-21) 84590227
Fax : (62-21) 84590227
e-mail : gpmt_pusat@yahoo.com

Gabungan Perusahaan Perkebunan (GPP)

Indonesian Plantation Association
Jl. Panglima Sudirman No. 74/I, Surabaya 60271
Phone : (62-31) 5343223, 5313497
Fax : (62-31) 5314741

Himpunan Asosiasi Pengusaha Flora Fauna Indonesia (HAPFFI)

Federation of Indonesian Flora Fauna Association
Jl. Ikan Hias No. 29, Batu Ampar I,
Kramatjati, Jakarta 13520
Phone : (62-21) 8096566
Fax : (62-21) 8096566

Himpunan Asosiasi Pengusaha Pengembang Industri dan Pertanian Indonesia (HIPETANI)

Federation of Indonesian Industry and Agriculture Development Association
Jl. Kembang V No. 205-B, Jakarta 10420

Phone : (62-21) 3904992

Himpunan Ilmu Gulma Indonesia (HIGI)

Indonesia Weeds Science Association
SEAMEO BIOTROP, Jl. Ir. H. Juanda, PO BOX 17,
Bogor, West Java
Phone : (62-251) 23388

Himpunan Kerukunan Tani Indonesia (HKTI)

Indonesia Farmer Association
Gedung Arsip Departemen Pertanian 1st Floor, Jl. Harsono RM
No. 3, Pasar Minggu – South Jakarta 12550
Phone : (62-21) 7817544

Himpunan Management Perkebunan Indonesia (HIMAPI)

Indonesia Estate Management Association
Puslitbang Karet Sungai Putih Galang, Deli Serdang,
PO BOX 1415, Medan 20014, North Sumatra
Phone : (62-61) 531723

Himpunan Nelayan Seluruh Indonesia (HNSI)

Indonesia Fisherman Association
Jl. Ir. H. Juanda No. 2, Central Jakarta
Phone : (62-21) 363976
Fax : (62-21) 3813976
e-mail : dpnhnsi@cbn.net.id

Himpunan Pengusaha Penangkapan Udang Indonesia (HPPUI)

Indonesia Shrimp Chatching Business Association
Cilandak Commercial Estate Blok III/N-G-E,
Jl. Raya KKO, South Jakarta
Phone : (62-21) 7800545
Fax : (62-21) 7800545

Himpunan Pengusaha Perikanan Indonesia (HPPI)

Indonesia Fishery Business Association
Kartika Plaza Ground Floor, PT. Mina Kartika,
Jl. MH Thmarin No. 10, Jakarta
Phone : (62-21) 321108 Ext. 260

Himpunan Pengusaha Pertambakan Indonesia (HIPERINDO)

Indonesia Fishpond Business Association
Gedung Hanubrata 6th Floor, Kav. 67-69,
Kebun Sirih, Central Jakarta
Phone : (62-21) 335333, 335522
Fax : (62-21) 315911

Himpunan Perlindungan Tumbuh-Tumbuhan Indonesia (HPTI)

Indonesia Plant Protection Association
Direktorat Perlindungan Tanaman Pangan,
Jl. AUP Pasar Minggu, South Jakarta
Phone : (62-21) 782213, 781655

Ikatan Ahli Gula Indonesia (IKAGI)

Indonesia Sugar Scientist Association
Jl. Harsono RM No. 3, Pasar Minggu, South Jakarta
Phone : (62-21) 7815385, 7815386



Association in Agriculture Sector

Ikatan Sarjana Ilmu-Ilmu Peternakan Indonesia (ISPI)

Indonesia Animal Science Association

Jl. Raya Pasar Minggu No. 49, Jakarta 12760

Phone : (62-21) 310358, 7981305

Ikatan Sarjana Perikanan Indonesia (ISPIKANI)

Indonesia Fishery Association

PT. Aquatic Consultan, Jl. Kalibata Raya No. 40, South Jakarta

Phone : (62-21) 8002381-3

Masyarakat Perhutanan Indonesia (MPI)

Indonesian Forestry Society

Manggala Wanabakti Building Blok IV 9th Floor Wing B,

Jl. Jend. Gatot Subroto, Jakarta 10270

Phone : (62-21) 5737082, 5733010

Fax : (62-21) 5705083

e-mail : mpijkt@cbn.net.id

Homepage : www.mpi-id.com

Masyarakat Peternakan Indonesia (MASTERINDO)

Indonesia Livestock Community

Jl. Raya Pasar Minggu 97, South Jakarta

Phone : (62-21) 797551, 7975651

Perhimpunan Agronomi Indonesia (PERAGI)

Indonesia Agronomy Association

Badan Litbang Pertanian, Jl. Ragunan No. 29,

Pasar Minggu, South Jakarta

Phone : (62-21) 782514, 782202

Perhimpunan Anggrek Indonesia (PAI)

Indonesia Orchid Association

Jl. Agus Salim No. 98, Central Jakarta

Phone : (62-21) 335950

Perhimpunan Dokter Hewan Indonesia (PDHAI)

Indonesia Veterinarian Association

Jl. Harsono RM. 3 Gd. C Departemen Pertanian, Jakarta

Phone : (62-21) 7815380 Ext. 4624

Perhimpunan Ekonomi Pertanian Indonesia (PERHEPI)

Indonesia Agriculture Economic Association

Gedung BULOG 4th Floor, Jl. Jend. Gatot Subroto 45, Jakarta

Phone : (62-21) 515047, 510395

Perhimpunan Entomologi Indonesia (PEI)

Indonesia Entomology Association

SEAMO BIOTROP, Jl. Ir. H. Juanda No. 18,

PO BOX 50, Bogor, West Java

Phone : (62-251) 23848

Perhimpunan Fitopatologi Indonesia (PFI)

Indonesia Fitopatologi Association

Fakultas Pertanian UGM Jurusan Hama dan Penyakit Tumbuhan,

Jl. Sekip Unit, Yogyakarta

Phone : (62-274) 63082

Perhimpunan Florakultura Indonesia

Indonesian Floriculturists Association

Jl. Raya Cinangka Km. 10 No. 60, Sawangan, Depok 16517

Phone : (62-21) 7470678 (hunting), 7401913

Fax : (62-21) 7413334

e-mail : g291261@dnnet.net.id

Perhimpunan Hortikultura Indonesia (PERHORTI)

Indonesia Horticulture Association

Jl. Ragunan No. 29, Pasar Minggu, South Jakarta

Phone : (62-21) 7862570

Perhimpunan Meteorologi Pertanian Indonesia (PERHIMPI)

Indonesia Agriculture Meteorology Association

Puslittan dan Agroklimat, Jl. Ir. Juanda No. 98, Bogor, West Java

Phone : (62-251) 323121-327215

Fax : (62-251) 311256

Perhimpunan Penggilingan Padi Indonesia

Indonesia Rice Milling Association

Jl. Pasar Baru Selatan No. 24, Central Jakarta

Phone : (62-21) 344062

Perhimpunan Pengusaha Ikan Hias Indonesia (PIHI)

PT. Lovina Laras, Jl. Asem Baris Raya No. 120, Tebet, South Jakarta

Phone : (62-21) 8296647

Perhimpunan Penyuluh Pertanian Indonesia (PERHIPTANI)

Indonesia Agriculture Extension Association

Pusdiklat Penyuluhan, Badan Pengembangan, SDM dan

Penyuluhan Pertanian, Gedung D Kamar, Jl. Harsono RM No. 3,

Ragunan, Jakarta

Perhimpunan Perunggasan Indonesia (PPUI)

Indonesia Poultry Association

Jl. Prof. Dr. Supomo SH. No. 143, Jakarta 10132

Phone : (62-21) 8291227

Perkumpulan Kinologi Indonesia (PERKIN)

Indonesia Kinologi Association

Jl. Tanah Abang III/19, Jakarta 10160

Phone : (62-21) 364475, 357426

Perkumpulan Pecinta Tanaman (PPT)

Plant-minded Association

Jl. Anggrek Garuda, Blok E No. 20, West Jakarta

Phone : (62-21) 5492338

Persatuan Karyawan Perusahaan Perkebunan Negara (PERKAPEN)

State Estate Enterprise Personnel Association

Jl. Cut Mutiah II, Central Jakarta

Phone : (62-21) 3101497, 3106685

Fax : (62-21) 3106685
Persatuan Pedagang Sapi dan Kerbau Indonesia
Indonesia Buffalo and Livestock Business Association
Jl. Raya Ujung Berung, Komp. Sukup Baru, Kav. 20, PO BOX 41
UJB, Bandung 40611, West Java
Phone : (62-22) 82988. 82372

Persatuan Pedagang Ternak Hewan Nasional Indonesia (PEPEHANI)
Indonesia National Livestock Trader Association
Gedung GPEI, Jl. Kramat Raya 4, Central Jakarta

Phone : (62-21) 3500090
Sektor Pertanian dan Perkebunan (TANBUN)
Estate and Agriculture Sector
Gedung Chandra, Jl. M.H. Thamrin No. 20, Central Jakarta
Phone : (62-21) 336880, 323872

Institutions of Agribusiness Service

Pusat Penelitian dan Pengembangan Tanah dan Agroklimat (PUSLITBANGTANAK)
Jl. Ir. Juanda No. 98, Bogor 16123
Phone : (62-251) 323012
Fax : (62-251) 311256
e-mail : csar@bogor.wasantara.net.id
Homepage : <http://202.159.94.166/CSAR.html>

Balai Penelitian Tanah (BALITTAN)
Jl. Ir. Juanda No. 98, Bogor 16123
Phone : (62-251) 323012
Fax : (62-251) 311256
e-mail : csa@bogor.wasantara.net.id
Homepage : <http://www.soil.climate.org>

Balai Penelitian Agroklimat dan Hidrologi (BALITAGRO)
Jl. Tentara Pelajar No. 1, Cimanggu, Bogor 16111
Phone : (62-251) 312760

Balai Penelitian Pertanian Lahan Rawa (BALITTRA)
Jl. Kebon Karet, Lok Tabat Banjarbaru 70700,
South Kalimantan
Phone : (62-511) 772534
Fax : (62-511) 773034
e-mail : balittra@banjarmasin.wasantara.net.id

**Center For Agriculture Data and Information,
Ministry of Agriculture**
D Bldg Fl. 4th, Jl. Harsono RM No. 3 Ragunan, Jakarta
Telp. (62-21) 7816384, Fax. (62-21) 7816385

Center For Agricultural Finance Services
D Bldg Fl. 8th, Jl. Harsono RM No. 3 Ragunan, Jakarta
Telp. (62-21) 7816085, Fax. (62-21) 7816085

Ministry of Agriculture
SMS Center : 0813-830 34444

Loka Penelitian Pencemaran Lingkungan Pertanian
Jl. Raya Jakenan Jaken Km. 5 PO Box 5, Pati 59182, Central Java

Pusat Perpustakaan dan Penyebaran Teknologi Pertanian (PUSTAKA)
Jl. Ir. H. Juanda 20, Bogor 1622
Phone : (62-251) 321746
Fax : (62-251) 326561
e-mail : pustaka@bogor.net
Homepage : <http://pustaka.bogor.net>

Pusat Penelitian dan Pengembangan Sosial Ekonomi Pertanian (PUSLITBANG SOSEK)
Jl. A. Yani 70, Bogor 16161
Phone : (62-251) 333964, 338717
Fax : (62-251) 314496
e-mail : caser@indosat.net.id

Pusat Penelttian dan Pengembangan Tanaman Pangan (PUSLITBANGTANPAN)
Jl. Merdeka 147, Bogor 16111
Phone : (62-251) 334089, 311432
Fax : (62-251) 312755
e-mail : crifc1@indo.net.id crifc3@indo.net.id

Balai Penelitian Tanaman Padi (BALITPA)
Jl. Raya Sukamandi, Subang 41256
Phone : (62-260) 520157, 521109, 521780
Fax : (62-260) 520158
e-mail : balitpa@vision.net.id

Balai Penelitian Tanaman Jagung dan Serelia Lainnya (BALITJAS)
Jl. Ratulangi No. 274, Maros 90514
Phone : (62-411) 371016, 371529
Fax : (62-411) 371961
e-mail : balitjas@upg.mega.net.id

Institutions of Agribusiness Services

Balai Penelitian Tanaman Kacang-Kacangan dan Umbi-Umbian (BALITKABI)

Jl. Raya Kendalpayak Km. 8 Kotakpos 66, Malang
Phone : (62-341) 801468
Fax : (62-341) 801496
e-mail : blitkabi@mlg.mega.net.id

Balai Penelitian Bioteknologi Tanaman Pangan (BALITBIO)

Jl. Tentara Pelajar 3 A, Bogor 16111
Phone : (62-251) 337975, 339793
Fax : (62-251) 338820
e-mail : borif@indo.net.id

Pusat Penelitian dan Pengembangan Hortikultura (PUSLITBANGHORT)

Jl. Ragunan 19 Pasar Minggu, South Jakarta 12520,
PO Box 122 Jkpsm
Phone : (62-21) 7805768, 7890990
Fax : (62-21) 7805135
e-mail : pushor@rad.net.id dimyatia@indo.net.id

Balai Penelitian Tanaman Sayuran (BALITSA)

Jl. Tangkuban Perahu 517 Lembang, West Java
Phone : (62-22) 286245
Fax : (62-22) 186025
e-mail : riv@bandung.wasantara.net.id dirriv@indo.net.id

Balai Penelitian Tanaman Buah (BALIBU)

Jl. Raya Sumani No. 10 Kotak Pos 5 Solok
Phone : (62-755) 20624
e-mail : rif@padang.wasantara.net.id

Balai Penelitian Tanaman Hias (BALITAS)

Jl. Raya Ciherang Kotak Pos 8 Sindanglaya, Cianjur
Phone : (62-255) 512607
e-mail : segunung@cianjur.wasantara.net.id

Pusat Penelitian dan Pengembangan Peternakan (PUSLITBANGNAK)

Jl. Raya Pajajaran, Bogor 16151
Phone : (62-251) 322185, 328382, 328383, 322138
Fax : (62-251) 328384

Balai Penelitian Ternak (BALITNAK)

Jl. Banjarwaru Kotakpos 212 Bogor 16002
Phone : (62-251) 29754, 29751
Fax : (62-251) 311562, 327150

Balai Penelitian Veteriner (BALIVET)

Jl. RE Martadinata No. 30, Bogor 16114
Phone : (62-251) 321048
Fax : (62-251) 326425

Pusat Penelitian dan Pengembangan Tanaman Perkebunan (PUSLITBANGBUN)

Jl. Tentara Pelajar No. 1, Bogor 16114
Phone : (62-251) 313083, 326194
Fax : (62-251) 326194

Balai Penelitian Tanaman Rempah dan Obat (BALITTRO)

Jl. Tentara Pelajar No. 3, Bogor 16111
Phone : (62-251) 327010, 321879

Balai Penelitian Tembakau dan Serat (BALITTAS)

Jl. Raya Karang Ploso PO Box 199, Malang 65152
Phone : (62-341) 41301, 41447
Fax : (62-341) 43472

Balai Penelitian Tanaman Kelapa dan Palma Lainnya (BALITKA)

Jl. Bethesda II Mapanget PO Box 1004 Manado 95001
Phone : (62-431) 52866, 62796

Balai Besar Pengembangan Alat dan Mesin Pertanian (BBAP)

Situ Gadung Legok, Tromol Pos 2 Serpong 15310, Tangerang
Phone : (62-21) 5376780, 5376787
Fax : (62-21) 5376810
e-mail : camd@cabi.net.id

Balai Penelitian Pascapanen Pertanian (BALITPASCA)

Jl. Ragunan 29 A, Pasar Minggu, South Jakarta
Phone : (62-21) 7805087, 7820024
Fax : (62-21) 7805087, 7820024

Pusat Perlindungan Varietas Pertanian

Gedung A Kampus Deptan
Jl. Harsono RM No. 3, South Jakarta

Balai Pengkajian Teknologi Pertanian (BPTP)

- Nanggroe Aceh Darussalam
Jl. T. Nyak Arief Jeulingke, Banda Aceh
Phone : (62-651) 23470
Fax : (62-651) 23470
- South Sumatera
Jl. Karya Yasa No. 1-B Gedong Johor
Kotakpos 7 MDGJ Medan 20143
Phone : (62-61) 7861781, 7870710
Fax : (62-61) 7861020
e-mail : aiat tgdj@medan.wasantara.net.id
- Riau
Jl. Kaharudin Nasution Km. 10, PO Box 1020 Pekanbaru
Phone : (62-761) 35641, 674205, 674206
Fax : (62-761) 674206
e-mail : aiat pbaru@wasantara.net.id



- **Jambi**
- **West Sumatera**
Kotakpos 34 Padang 25001
Phone : (62-755) 21054
Fax : (62-755) 32128
- **South Sumatera**
Jl. Kol. Barlian Km. 6, Palembang
Phone : (62-711) 410155
- **Bengkulu**
- **Lampung**
Jl. Zainal Arifin Pagar Alam No. 1 A, Bandar Lampung
Phone : (62-721) 781776
Fax : (62-721) 75273
e-mail : lptp natar@lampung.wasantara.net.id
- **DKI Jakarta**
Jl. Raya Ragunan 30 Pasar Minggu, South Jakarta
Phone : (62-21) 78839949
Fax : (62-21) 7815020
e-mail : ardjkt@indo.net.id
- **West Java**
Jl. Kayuambon 80 Lembang
Phone : (62-22) 2786238
Fax : (62-22) 2786238
e-mail : bptplemb@indo.net.id
- **Central Java**
Kompleks Pertanian Tarubudoyo Kotakpos 110 Ungaran
Phone : (62-24) 6924965
Fax : (62-24) 6924966
e-mail : aiatur@semarang.wasantara.net.id
- **DI Yogyakarta**
- **East Java**
Jl. Raya Karangploso Km. 4 Kotakpos 188 Malang 65101
Phone : (62-341) 494042
Fax : (62-341) 471255
- **Bali**
- **West Nusa Tenggara**
- **East Nusa Tenggara**
Jl. HR. Koroh 64 A PO Box 199 Kupang
- **West Kalimantan**
Jl. Budi Utomo 45 Siantan Hulu, Pontianak 78061
Phone : (62-561) 882069, 883883
Fax : (62-561) 883883
- **South Kalimantan**
- **Central Kalimantan**
Jl. G. Obos Km. 5 Kotakpos 122 Palangka Raya
Phone : (62-536) 20662
e-mail : btp@palangkaraya.wasantara.net.id
- **East Kalimantan**
Jl. KH Wachid Hasyim Sempaja PO Box 1237 Samarinda 75119
Phone : (62-541) 37897
Fax : (62-541) 37897
- **South Sulawesi**
Km 17,5 Sudrang Makassar
- **Central Sulawesi**
Jl. Raya Lasoso No. 62 Kotakpos 51 Biromaru Palu
Phone : (62-451) 482546
Fax : (62-451) 482549
- **Southeast Sulawesi**
Jl. Chairil Anwar No. 10 Kotakpos 55 Kendari
Phone : (62-401) 22498, 22545
- **North Sulawesi**
- **Maluku**
Jl. Laksda Leo Wattimena Tromol Pos 28 Poka Amboina
Phone : (62-911) 69454, 69812
Fax : (62-911) 69454
- **Papua**
Jl. Jahim Sentani PO Box 256 Sentani, Jayapura 99352
Phone : (62-967) 91235, 91327
Fax : (62-967) 91327



GROWMORE



RESEARCH FARMS



Manufactured by:

GROWMORE

GARDENA, CALIFORNIA 90248-USA

Distributor:

Nusa Tani

Jl. KS Tubun No. 31, Jakarta

Telp. (021) 536 4704 Fax: (021) 536 50325



Sensasi Teh Indonesia

Selalu Menyegarkan... Selalu Nikmat...

Untuk Informasi :



PT PERKEBUNAN
NUSANTARA VIII

PT. PERKEBUNAN NUSANTARA VIII

Jl. Sindangsirna No. 4 Bandung 40153, Telp. (022) 2038966-69, 2043419, Fax. 2031455, 2033217
email : ptpnviii@rad.net.id, bagpas8@rad.net.id, website : <http://www.pn8.co.id>

PUSAT KOPERASI KARYAWAN (PUKOPKAR) PTPN VIII

Jl. Cikapundung Barat No. 1 Bandung, Telp. (022) 4205339 Facs. 4232681

INSEKTISIDA

APPLAUD[®]
10 WP

Jagonya

Pestisida untuk padi



FUNGISIDA

TOPSIN
500 SC



APPLAUD 10 WP EFEKTIF MENGENDALIKAN
WERENG BATANG & WERENG DAUN YANG
TELAH RESISTEN (KEBAL) TERHADAP
INSEKTISIDA KONVENSIONAL

TOPSIN 500 SC EFEKTIF MENGENDALIKAN
PENYAKIT BLAS (KRESEK) PADA TANAMAN
PADI, PENYAKIT LAIN PADA TANAMAN APEL,
BAWANG MERAH, BAWANG PUTIH, CABE,
TEBAKAU, MELON, SEMANGKA DAN PISANG



PT Petrokimia Kayaku
(Petrokimia Gresik Group)





KEMENTERIAN KEBUDAYAAN DAN PARIWISATA

Edisi
3

Obyek Wisata Nusantara

Panduan Obyek Wisata Provinsi, Kabupaten dan Kota di Indonesia

Segera terbit buku "Obyek Pariwisata Nusantara Edisi 3" pada bulan April 2008 sebagai informasi terlengkap tentang Panduan Obyek Wisata Provinsi, Kabupaten dan Kota di Indonesia.

Memperkenalkan dan mempromosikan pusat obyek-obyek wisata yang ada pada setiap Kabupaten dan Kota maupun Provinsi di Indonesia kepada wisatawan domestik maupun mancanegara sehingga diharapkan akan terjadi pemerataan kunjungan wisata ke daerah-daerah sekaligus menambah Pendapatan Asli Daerah (PAD).

**SEGERA DAFTARKAN
DAERAH/PERUSAHAAN ANDA!**

Sekretariat Penerbitan:



PT. Fery Agung Corindotama (FERACO)
Puri Sentra Niaga B-42, Jl. Raya Kalimalang, Jakarta Timur 13620
Telp. (021) 860 6819 (Hunting) Fax. (021) 8660 5154
Email: feraco@indosat.net.id

