

INDONESIAN AGRICULTURAL DEVELOPMENT PLAN 2005-2009

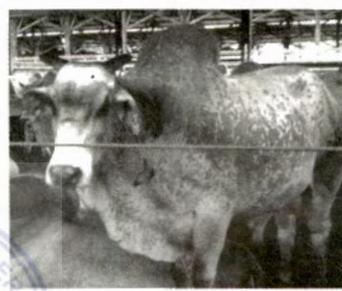


AGRICULTURAL DEPARTMENT

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INDONESIAN AGRICULTURAL DEVELOPMENT PLAN 2005-2009

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**INDONESIAN
AGRICULTURAL DEVELOPMENT
PLAN 2005-2009**

AGRICULTURAL DEPARTMENT

Jl. Harsono RM No. 3 Ragunan

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FOREWORD



After the 1998-1999 economic crisis, the agriculture sector is undergoing accelerated growth. The challenge for the future is how to maintain this momentum. Despite various successes, future agricultural development would still be confronted with various problems, such as farmers' welfare, poverty, unemployment, food security, agricultural infrastructure, low investment in agriculture, and lack of market access.

To operationalize the vision and mission of the nation's development, the Indonesian Agricultural Development Plan for 2005-2009 is formulated. This document describes a framework for agricultural development namely: performance, the problems and challenges; spirit, vision, mission, objectives and targets; strategies and policy direction, as well as agricultural development programs and management. This document considers the present agricultural development performance, weakness and strength, as well as the global challenge and strategic environments in the future.

We hope that all work units at the Ministry of Agriculture and concerned stakeholders in agricultural development would use this document as a reference to implement agricultural development in their respective organizations.

Jakarta, January 2005

Minister of Agriculture,

A handwritten signature in black ink, consisting of stylized initials and a surname, likely 'A. Apriyantono'.

Dr. Ir. Anton Apriyantono



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I. INTRODUCTION

The agricultural sector is a prime mover of national and regional economic development by contributing to GDP's growth and export earning, providing food and raw material for industry, creating job opportunity and increasing income for the people. Furthermore, this sector also features forward and backward multiplier effect through input-output linkages among industries, consumption and investment. Due to agriculture's vital role to the national and rural economy, agriculture revitalization is one of six economic development priorities of the New Cabinet.

The empirical evidences show that during economic crisis the agricultural sector has proven to be more resistance to external shock than other sectors; so that it has been playing a role as a buffer of the national economy, particularly in supplying food, export earning, job opportunity and poverty alleviation. In addition, agriculture has been a leading sector in rural development through the development of agriculture-based enterprises. With its consistent growth and absorption of huge number of employment, the sector has been contributing to sustainable national economic growth.

During the recovery period, the agriculture sector development has shown significant progress. In general, the sector has been able to escape from continuous contraction threat and low spiral growth trap, and even has entered accelerating growth towards sustainable growth.

The above successes among others were due to the implementation of agricultural development policy and program during the period of 2000-2004, which focused on the efforts to overcome the economic crisis and rebuild strong agricultural development foundation.

To maintain sustainability and to maintain the growth momentum, as well as utilize development results, agricultural development program and activities plan is formulated. We hope this document can serve as a reference for concerned

stakeholders in the agricultural development implementation during the period of 2005-2009.

This document is written based on the following: (1) National Medium-term Development Plan for 2004-2009, particularly agriculture revitalization and their related agendas; (2) Vision and directions of Long-term Development Plan for 2005-2025; and (3) assessment of strategic environments, problems, challenges and priorities of agricultural development. This document is intended as a reference for agricultural development stakeholders, particularly bureaucrats within the Ministry of Agriculture. Hopefully this document can also be used as an input in formulating policies and programs to support agricultural development in related agencies.



II. AGRICULTURAL DEVELOPMENT PERFORMANCE FOR THE YEARS 2000-2004

2.1. Agricultural Sector Performances

a. GDP Growth

During the 2000-2003 period, average growth rate of agricultural sector GDP was 1.83 per annum, higher than during crisis (1998-1999) of only 0.88 percent per annum, and 1983-1997 (before crisis) of 1.57 percent per annum. Up to the third quarter of 2004, the growth of agricultural sector GDP was 3.23 percent as compared to third quarter of 2003. Within the agriculture sector, food crops and estate sub sectors grew higher than that of before crisis, while livestock sub sector has not fully recovered yet. After passing low growth phase, agricultural sector is now accelerating and entering towards sustainable growth.

b. Agricultural Production

During the same period, food crops production performed considerably well. Productions of paddy, corn, groundnut, cassava and sweet potato have increased by 0.53, 3.38, 3.22, 2.81 and 2.35 percent per annum, respectively, while soybean has decreased by 18.48 percent per annum. Based on Central Bureau Statistics (CBS) data, in 2004 almost all of food crops production increased, except sweet potato. Paddy production is reached 54.06 million tons or an increase at 3.69 percent, corn 11.16 million tons (2.54 %), soybean 721 thousand tons (7.40 %), and cassava 19,263 million tons (3.99 %), while sweet potato decreased by 5.13 percent. These figures show that food crops have changed from deceleration towards accelerated growth.

Economic crisis in 1998 didn't cause vegetable production contraction. Vegetable production growth had been accelerating. During 2002-2003, vegetable production growth had high growth. In 2003, production growth of

shallot, cabbage, potato, chili and tomato were in the range of 1.0 – 36 percent, while production growth of fruits was in the range of 7.34 – 28.95 percent.

During the 2000-2003 period, estate crops commodities performance were getting better, much better than during the 1993-1997 period, except tea. The most significant growth was sugarcane, which turned around from continues negative growth up to 1999, to positive growth. During this period, production growth of sugarcane was 7.43 percent per annum, far above its demand growth.

Livestock sub sector is also among the sources of agriculture sector growth. In 2003, livestock sub sector has fully recovered from 1998-1999 crisis. Livestock production has surpassed the highest level in the pre crisis period, except horse meat. During the 2000-2003 period, growth rate of broiler and layer were 23.4 and 10.27 percent per annum, respectively, though during crisis those commodities had experienced contraction of 28.23 percent and 8.92 percent per annum respectively.

c. Export and Import

During the 1995-2004 period, balance of payment of food crops, horticulture, estate crops and livestock (excluding fishery and forestry) for fresh and processed products had consistently increased. During the 1995-1997 period, the average export value was US \$ 5.1 billion, while average import value was US \$ 4.6 billion, so that average balance of payment surplus was US \$ 0.5 billion. During the 1998-1999 period, import had drastically declined, so that the average balance of payment surplus was US \$ 1.4 billion. During the 2000-2004 period (after crisis), export increased so that the balance of payment surplus reached US \$ 2.2 billion.

As of June 2004, the export value of agriculture commodities for both fresh and processed product was US \$ 8.6 billion, while import value was US \$ 4.7 billion, so that the balance of payment surplus was US \$ 3.9 billion. This surplus was mostly due to better paddy production in 2004 which reached

54.06 million tons, so that import decreased from 1.4 million tons (US \$ 291 million) to only 0.17 million tons (US \$ 0.4 million). Import value of corn decreased from US \$ 160 million to only US \$ 80 million. However, import value of soybean increased from US \$ 370 million in 2003 to US \$ 383 million in 2004. The primary source of agriculture export remains estate crops sub-sector, particularly palm oil and natural rubber.

d. Farmers Welfare

At the end of 1998, the economic crisis caused an increase of number of the poor to 26 percent or 32 million persons of rural population and 22 percent or 18 million persons of urban population. In 2004, the number of poor drastically decreased to 19.5 percent or 25 million persons of rural population and 12.6 percent or 13 million persons of urban population.

The absolute number of poor farm households had decreased from 26 million persons in 1999 to 20.6 million persons in 2002. Significant increase of agriculture sector growth is expected to reduce the number of farm household members by the end 2004. Based on CBS data, in 1998-1999 income from agriculture (1993 constant price) had decreased, but during 2000-2003 it consistently increased. The average income from agriculture in 2000-2003 was higher than before crisis of 1993-1997.

A variable normally used as farmers' welfare indicator is Term of Trade (TOT) index. TOT is a ratio of price received to price paid by farmers. After sudden drop in 1998-2000, TOT value had significantly increased in 2001, and keep on increasing up to 2003. Value of TOT in 2003 was much higher than the highest point during the New Order era of 1995.

The increasing farmers' welfare is also shown by micro data of field survey results. The average farm household income of wetland paddy farmers in West Java during 2000-2002 drastically increased from RP 2.06 million in 1999 to RP 4.75 million in 2002, while in South Sulawesi farmers' income increased from RP 1.82 million in 1999 to RP 3.95 million in 2002.

e Food Security

During the years 2000-2003, Indonesia never experienced any problem in food shortage. Based on calculation of import ratio to food supply of various food commodities, import dependency using calorie per food item to calorie supply was relatively small. In 2003, food import dependency was in the range of 0 percent for poultry meat, eggs, sweet potato and cassava to 2.2 percent for rice. The import dependency for sugar was 1.69 percent, soybean 1.51 percent and corn 1.25 percent. Thus, in general national food security was not a major problem.

Increasing national food security was followed by food security at the household level. There was a decline from 2002 cal/capita/day in 1996 to 1852 cal/capita/day in 1999, but there was significant increased to 1986 cal/capita/day in 2002. The same phenomenon is also observed for protein supply. Having declined from 54.41 gram/capita/day in 1996 to 48.67 gram/capita/day in 1999, protein supply increased to 54.42 gram/capita/day in 2002.

The above performance is attributed to contribution of various policies, programs and activities implemented by institutions under the Ministry of Agriculture, supported by concerned institutions and stakeholders.

2.2. Implementation of Agricultural Development Management

Development reformation requires good governance and in turn agricultural management adjustments. The adjustments of agricultural development management occurred in the management functions of planning, implementation, monitoring up to evaluation.

Specifically, the adjustment of development planning mechanism shifted from top-down planning to base on top-down policy and bottom-up planning integration. Before decentralization era, agricultural development planning function was characterized by central command and control, as well as mechanistic. With this feature, regional institutions tended to be executors of activities determined by the central level, while each sub-sector was operating in its own way, so that the coordination among sub-sectors was very weak.

After decentralization, since 2000 program and budgeting formulation has been based on the authority determined by National Act (UU) No.: 22/1999 and Government Regulation (PP) No. 25/2000. Agricultural development program and budgeting has been formulated in line with government decentralization guideline to provide more opportunity for the community to participate (community empowerment). In the bottom up planning, agricultural development activities will be formulated starting from the district/municipality, then province and up to central level.

The agricultural development approach is through community participation. The Ministry of Agriculture allocates around 70 to 80 percent of the budget for the regions through deconcentration budget scheme. Most of the deconcentration budget is allocated for community empowerment, through community direct assistance (BLM) scheme. Advocating, guidance and extension activities are carried out by Local Services Office (Dinas) and NGOs. The assistance is provided directly to farmers' groups to provide capital. The budget is a revolving fund that should filter to members of the group.

Since 2001, the monitoring and evaluation system (SIMONEV) has been functioning as an instrument of program implementation control. SIMONEV does not evaluate physical and financial aspects only, but it also covers performance in line with evaluation standards using logical framework (log-frame) performance (input, output, outcome, benefit and impact). SIMONEV is designed to be compatible to formulate the government institution performance report (LAKIP).

To respond to agricultural development needs, since 2000 the Ministry of Agriculture organization structure was modified to focus on agribusiness. In 1997, Echelon-I units under the Ministry of Agriculture numbered 10 units, then down to 8 units during 1998-1999, and up to 12 units during 2000-2004. In 2000-2004, the main task and function of Echelon-I units within the Ministry of Agriculture were divided in accordance with agribusiness system component. The agribusiness system reconfiguration demands stronger functional coordination among Echelon-I units.

III. STRATEGIC ENVIRONMENT

3.1. Changes on Strategic Environment

a International

(I) Liberalization and Unfair International Trade

International trade for the benefit of community welfare has stimulated neighboring countries to establish a regional economic cooperation bodies such as the North American Free Trade Area (NAFTA), European Union (EU), ASEAN Free Trade Area (AFTA) and Asia Pacific Economic Cooperation (APEC). Through economic integration, it is hoped that trade tariff or non-tariff barriers among the members could be reduced or eliminated, so that trade mobility of goods and services, as well as investment among countries within the area become borderless.

The establishment of an economic area is likely to create economic gaps among areas or regions. Economic gaps among regions will occurred because of differences in economic maturity among countries. The strongest economic area is the European Union (EU). EU has reached an integration of currency (Euro currency), that is an important step in the implementation of economic integration. This condition will complicate Indonesian and non-European countries agricultural product exports, since they will get different treatment (tight export-import regulation) from European countries. To face this problem, Indonesia has to develop its agricultural processing capacity and focus on domestic market.

As a consequence of the ratification of the General Agreement on Tariff and Trade/World Trade Organization (GATT/WTO), Indonesia has to follow the rules that have been ratified. During the 1998 economic crisis, following the recommendation of IMF, Indonesia reduced all agriculture commodities import tariff. However, the commitment to abolish economic and trade policies which distorted

marketing were not followed by other countries. In this condition, Indonesian farmers faced unfair competition with other countries' farmers who were protected through tariff and non-tariff as well as indirect and direct subsidy. Due to this situation, the government has to apply protection subsidy while at the same time promote strategic agricultural products such as rice, sugar, corn and soybean. Protection policy is directed to the application of import tariff and import management, production input subsidy, output price regulation and interest subsidy for farming credit scheme. For promotion policy, the government facilitates effort to improve productivity, business efficiency and quality; as well as agricultural product standardization and increasing market access through promotion activities both domestic and overseas.

(2) Production System and Management of Change

In the beginning of the 21st century, radical change in market structure and job opportunity would occur which affecting new market formation, i.e., (1) basic human need would be fulfilled and people preferences would shift to secondary and tertiary needs, so that the future tendency is that the services sector market would grow faster than goods market; (2) people's income would be higher, and in turn, they would prioritize their needs, so that market segmentation would move towards smaller individual groups; and (3) shifting demands among individuals in the similar goods and services market.

In line with the strong competition to obtain market share, businessmen would develop Supply Chain Management (SCM) that integrates all business actors from all segments of the supply chain vertically into joint business (cooperation) based on agreement and standardization of specific process and product for every supply chain. The key of product competitiveness among supply chain is efficiency on each supply chain segment and functional relations among segments in maintaining consistency of every actor in fulfilling agreement and standard use. Consequently, vertical integration among supply chain segments and horizontal integration among actors within one segment, for instance integration among producers, integration

among distributors, and integration among collectors within one same supply chain, are needed.

International agreements on the protection of intellectual property rights (HaKI) ban domestic enterprises to imitate marketed technology and trade mark of foreign enterprises. This will stimulate commercialization of HaKI globally. Domestic enterprises using foreign HaKI and trade mark must pay for royalty based on mutual agreement. One implication is that multi-national enterprises would expand to domestic market, either through direct investment or franchising, or in the form of trade mark leasing. Franchising and trade mark leasing in the field of domestic consumption product, such as fried chicken and hamburger would change and increase consumption pattern that directly compete with domestic products. Furthermore, HaKI is also a vehicle for multi-national enterprises to take control of Indonesian agribusiness sector. On the positive side, franchising and trade mark leasing could increase agricultural product market share and competitiveness, as well as the development of domestic agribusiness.

(3) Strengthening Food Security and Poverty Alleviation (Millennium Development Goals)

In 1996, the World Food Summit (WFS) reached an agreement on food security for all and to eliminate poverty in all countries. The target of WFS is to reduce the number of vulnerable population to half of 1996 before 2015. In 1996, the vulnerable population is estimated around 800 million persons, hence the reduction target is 400 million persons for 20 years, or averaging of 20 million persons per year. In 2002, WFS meet again in Rome and affirmed and renewed global commitment made in 1996 Rome Declaration. Since the target performance of the first five years was not satisfactorily achieved, the WFS 2002 decided to increase vulnerable population reduction to 22 million persons per year starting 2002.

One important commitment of the Rome Declaration in 2002 is to emphasize the importance of agriculture and rural development in eliminating poverty and

hunger. The world is aware that agricultural and rural development plays a key role in strengthening food security because 70 percent of the poor in the world are living in rural areas and engage in agriculture sector. The Central Bureau of Statistics (CBS) data shows that during the economic crisis in 1998, the number of poor people reached almost 50 million persons and about 64.4 percent were living in the rural areas. In 1999, when the economy started to recover, the poor people declined to become 37 million persons and about 66.8 percent were living in the rural areas. Hence, poverty alleviation and hunger elimination can only be done through rural and agriculture development that could increase agriculture productivity, food production and people's purchasing power.

(4) Progress in Technology Invention and Application

In technology invention and application, rapid progress occurred in crops and animal biotechnology based on the progress of biology molecular science and its supporting knowledge. Various organism genome mapping, success of transformation and organism regeneration of genetically modified organism (GMO) have opened opportunity for the germ source based industrial development. The utilization of GMO in relation to food security and food safety is still controversial. The absence of strong and convincing conceptual and empirical knowledge has resulted in hesitation of decision makers to apply GMO. Therefore, most countries apply permissive or precautionary policy in using GMO. This controversy has caused difficulties for developing countries, in facing the pressure from donor countries and organizations and multinational cooperation related to the use of GMO.

In the field of agriculture equipment and machinery, robotic farming machinery has been developed to face competition. In the field of post harvest, advanced technology such as product quality sensing without damaging the product by using image analyzer for high commercial value agricultural product has also been developed. Rapid expansion using satellite in the data collection, including Geographical Information System (GIS), could be used in land use

planning research related to agricultural commodities distribution and production, natural resource management as well as poverty alleviation.

In general, the status of Indonesian technology for several agriculture commodities are relatively behind compared to other ASEAN countries. For paddy and poultry, Indonesian technology is higher compared to other ASEAN and Central Asia countries. However, for estate crops commodities, Indonesian technology is left behind compared to Malaysia, while horticulture is left behind compared to Thailand. For food processed products, Indonesian products are relatively left behind compared to Thailand and Vietnam. The above are influenced by consistent government attention in developing agribusiness channels from up-stream, down-stream, and marketing system for both processed and fresh products.

b. National

(1) Demand for Food and Industrial Raw Materials

There are three aspects that should be taken into consideration, i.e., (1) increasing demand for agricultural products, in term of quantity, quality and diversity; (2) increasing labor force, and (3) increasing demand for land for non-agriculture use (residential, industrial, and economic infrastructure). Increasing demand for agricultural products could be seen as an opportunity and at the same time as a challenge of agricultural development. Increasing demand means more market for agricultural products, which in turn will cause stronger pressure to increase production.

Though abundant employment in the rural areas is conducive for agriculture sector growth, it is also a burden because farm labor income and employment productivity of agricultural sector are getting more difficult to increase. Moreover, abundant employment in agricultural sector will create new problems, i.e. land fragmentation and declining acreage landholding per household which in turn will increase poverty in agricultural sector in the future. Therefore, poor people in the agricultural sector would likely increase. In the next 10 years the rural population

is expected to be 131 million persons, lower than the urban population of 133 million persons. The economic gap between rural-urban areas remains high, so that the number of poor people in the rural areas would remain higher than urban areas. This shows the need for significant shifting of poverty and its handling. This condition provides the understanding that poverty and the handling of associated problems like vulnerability of the poor in the next 5 years remain the main priorities.

(2) Natural Resources Scarcity and Quality Degradation

The main problems facing agricultural development are: (1) land conversion; (2) land rent gap among regions (Java vs. outside Java; urban vs. rural, paddy land vs. dry land); and (3) high rate of urbanization growth. Increasing demand for land as a result of increasing population will cause decrease arable land, as well as increase farming intensity in the upstream river basin. Decreasing arable land occurs particularly for paddy field since 1980s, and tends to increase in line with increasing land conversion to non-agriculture, particularly in Java Island. In the last few years, paddy field outside Java has been decreasing.

With increasing population, the demand for food is also increasing. To meet increasing food demand, various efforts such as intensification and extensification (land expansion) have been done. One negative impact of extensification is forest degradation. Indonesian forest area has declined from 65 percent of total landmass in 1985 to only 47 percent in 2000. However, irrigated land conversion to residential and industry purposes in Java Island keeps on increasing. The impact of forest degradation and land conversion is global climate change, erosion, flood and drought.

Due to combination of decreasing paddy field in down stream area and increasing number of farmers, a stimulated increase of farming intensity in up-stream area has caused river basin quality degradation. In turn, river basin quality degradation has caused decreasing irrigation canal efficiency

exacerbated by inadequate maintenance and rehabilitation due to government budget limitation. Finally, declining irrigation canal efficiency has caused food productivity to level off in paddy fields. The combined impacts of decreasing arable land and irrigation canal efficiency have caused declining national food production capacity.

(3) Development Management: Regional Autonomy and People Participation

In line with the implementation of Regional Autonomy Policy started in 2001, there are various changes related to the role of central and regional government in development management. The dominant government role in the past shifted to becoming the facilitator, stimulator and promoter of agricultural development. Agricultural development under regional autonomy will depend on people's creativity. Moreover, policy formulation process will also change from top-down and centralistic manner toward bottom-up and decentralized approach. Agricultural development planning and implementation will be executed mostly by regional government. Central government will only handle agricultural development aspects which are ineffective and inefficient if executed by regional government and agricultural development aspects related to inter-regional and national interest. With this scenario, food security management will be more complexed. The issue of national food security therefore remains to be the responsibility of central government. Strengthening food security system is a serious challenge in the future.

Decentralization connotes dominant role of the community. Hence, there is need to reform governmental institutions based on good governance principles with three main characteristics, i.e., credibility, accountability, and transparency. Development policy should be formulated transparently through public debate, implemented transparently, and monitored by the public, while government is fully responsible for the success of development

policy. In this respect, development policy will be more oriented on community interest (democratic) and KKN is avoided. Development policy democratization and KKN prevention through good governance will reduce high economic cost and market distortions (monopoly). Hence, the economy will be more efficient while business growth will be based on real competitiveness rather than due to government protection and support.

3.2. The Problems

a. Scarcity and Declining Natural Resources Capacity

Agricultural development is faced by increasing demand for agricultural products, particularly food due to increasing population, while agriculture natural resources capacity, especially land and water are limited and even declining. The arable land area is declining due to slower rate of new agriculture land expansion while agriculture land conversion keeps on increasing. Land conversion problem is increasing, particularly in Java Island. Every year around 40,000 hectares of productive paddy land in Java is converted into non-agriculture purposes. At the moment, this problem is partly solved by increasing planting intensity, particularly in Java Island, while outside Java through land expansion. However, during the last 10 years, harvesting area of paddy is stagnant, below 12.0 million hectares.

Water resources for agriculture activities is also getting more scarce as due to the impact of natural resources capacity degradation, particularly in the river basin areas. Meanwhile, water use competition is also increasing due to increasing use of water for households and industries. High population pressure to land has caused land holding and utilization more fragmented, so that landless farmers and smallholders farmers with smaller average landholding are increasing.

To overcome these problems, priority activities for 2005-2009 are: (1) new paddy (agricultural) land expansion, and (2) coordination with other

related institutions to reduce land conversion growth. For estate crops and horticulture commodities as well as livestock production, land limitation is not the main problem.

b. Weak and Inappropriate Target of Technology Transfer System

The system of technology adoption or transfer is considered weak due to constraint is technology invention and innovation at the farmers' level. Slow technology dissemination is caused by several factors. Before the implementation of regional autonomy policy, technology dissemination was conducted by field extension workers through the process of technology application on demonstration areas. With decentralization, extension activities become the mandate of regional government and the problem of technology dissemination is getting more complex due to inadequate attention of regional government of the agriculture extension function. The extension institution is considered in contributing little to Regional Original Income (PAD). The low priority of extension is reflected by the sharp decline in the number of field extension workers from 36,626 persons before the decentralization to 19,636 persons in 2003. Furthermore, there are weak relations between researchers, extension workers and farmers. Therefore, for 2005-2009, the research priority and dissemination system should be corrected, followed by agriculture extension revitalization, assistantships, and education, as well as training of farmers.

c. Inadequate Access to Business Services, Particularly Capital

Farmers' access to capital, information and land are very important in improving farm performance. Farming, which is mostly done by smallholders and landless farmers is faced by limitation on the access to business services, especially capital. The inability of rural community to access

capital from formal financial institutions is caused by: (1) limitation of existing formal financial institution; (2) procedures and requirements needed by existing formal financial institution are difficult to carry out by the rural community; and (3) farmers are unable to access credit due to the regulation and high interest rate applied to commercial business. The banking system thus far is not supporting the rural economy, particularly agriculture and tends to drain capital from rural areas.

So far, increasing farmers' access to capital has been carried out through projects, such as the Small Farmers Income Generating Project (P4K), Productive Economic Business Institution (LUPE), Community Direct Assistance (BLM), Revolving Fund, and Farming Credit Scheme (KUT) that replaced the Food Security Credit Scheme (KKP). In addition, other institutions facilitate capital access such as Development of Cooperative and Small/Medium Business (UKM), Rural Micro Finance Institution, People Credit Bank (BPR), and Village Unit Indonesia People Bank (BRI unit desa). All of these activities are considerably successful, but they still need to be further developed to cover more target beneficiaries.

The activities to be implemented to overcome capital access problems are: (1) development of agricultural bank cooperation using central government budget (APBN) as guarantee, (2) development of rural micro finance institution, and (3) farmers empowerment through BLM pattern.

d. Long Marketing Chain and Unfair Marketing System

Long marketing chain is due to insufficient rural infrastructure condition, such as: market information availability, transportation facility and farm road facility. The unfair marketing system is related to capital limitation, which makes farmers sell their agriculture produce before the harvest (ijon system) and consequently weakens farmers' bargaining position. Moreover, the inability of farmers to store their produce results in selling their produce right after harvesting. This condition aggravated by more supply of import

produce due to trade liberalization. Government effort to provide price guarantee is constrained by budget limitation, so that only rice and sugar are protected by the government.

Various efforts to increase marketing chain efficiency have been carried out through the development of farm road, partnerships, auction market, and contract farming which have not yet provided optimal results. Protection and promotion policy which have been applied, need to be continuously strengthened through concrete activities, among others: (1) application of tariff, (2) subsidy provision, and export promotion.

e. Poor Quality, Attitude and Skills of Farmers

Poor quality of human resources is a serious constraint in the agricultural development. Farmers' education level and skills are low. During the last 10 years, education progress of agriculture human resources was very slow. In 1992 (CBS, 1993), 50 percent of agriculture employees did not finish Primary School (SD), 39 percent finished SD, and only 8 percent have finished their Junior High School (SLTP). In 2002 (CBS, 2003), 35 percent agriculture employees did not finish SD, 46 percent finished SD and 13 percent finished SLTP.

Farmers' attitude is also poor characterized by their short-term business orientation and narrow-minded business concept. In addition, most farmers are very dependent upon government support. Low skill of farmers is related to low education level and lack of indigenous knowledge development.

So far, the above problems are being resolved by increasing farmers and apparatuses capacity through education, training and extension. To support these activities the Technical Implementing Units (UPT) in the regions such as Stations for Education and Training, Colleges for Agriculture Extension, and Agriculture Development Schools are used as the means to increase agriculture human resource capacity.

Low education of farmers is being resolved by adopting an education equivalent approach link to farming skills training. In addition, various efforts to strengthen farmers' capacity are also carried out, particularly in the development of entrepreneurship, marketing capability and business management.

At present, the existing farmers' institutions are very weak. Farmers groups which were established during the 1980s to achieve rice self-sufficiency have been malfunctioning. Extension intensity and quality after regional autonomy have significantly reduced because extension system does not get adequate attention from local government. So far, the establishment of farmer groups was merely project-oriented. Farmer groups only become active during the project period, and generally inactive after project period. Sometimes, the establishment of farmer groups was not in line with farmer needs. Moreover, the present condition of farmer groups is also uncoordinated because every government institution establishes their respective farmer groups to implement their own project. This results in many overlapping farmer groups.

The revitalization of extension system has to be implemented immediately and field extension workers should function as well. The existing farmers' institutions need to be well managed. At central level, the coordination in the development of farmers' groups should be improved, so that farmers' activities shall not overlap. Farmer groups development should be carried out through community development approach.

f. Weak Farmers Institution and Bargaining Position

Agricultural development performance depends on the extent of the integration of supporting subsystems, i.e. from upstream subsystem (agro-input, agro-chemical, agro automotive industries), on-farm (farming) subsystem, down-stream subsystem (processing and marketing), and supporting subsystem (financial, education and transportation). Interdependency among

the subsystems is necessary, therefore they are considered under management policies of various sectors. The Ministry of Agriculture has authority pertaining to the on-farm aspect only. Hence, various policies related to agricultural products are often in disharmony from up-stream to down-stream subsystems, such as the case on the management of agricultural product importation (chicken legs, illegal meat, and cotton transgenic seeds).

A common understanding and commitment related to the role of the agriculture sector in national development is needed. If it is agreed that agricultural sector would be the main engine of national economy, therefore close coordination among institutions in formulating policies and its implementation are needed. Agriculture development management should be improved in accordance with government regulation and law.

g. Macro Economic Policies not yet Supporting Agriculture

One important factor which determines the sustainability and capacity of farming competitiveness is the existent of conducive macro economic policy. At present, macro economic policies, that is fiscal, monetary, trade, and priority in the national economic development are not yet conducive for farming business competitiveness and sustainability.

The government policies which are not supporting agricultural sectors are: (1) application of agricultural commodity export tariff to stimulate domestic agricultural product processing industry; (2) banking credit provided by government, large proportion is absorbed by conglomerates while the cooperatives, small and medium enterprises and farmers have small proportion; (3) insufficient local government budget (APBD) for agricultural sector development; (4) some regional governments apply high tax on agricultural commodities, so that competitiveness is reduced and an obstacle for agriculture investment is created; (5) infrastructure development is bias to urban rather than rural areas; and (6) trade liberalization has caused flooding of highly subsidized imported agricultural products from developed countries

which makes Indonesian farmers unable to compete. In this respect, policy advocacy related to institution and support from both legislation and stakeholders are needed.

4.2 The Challenges

a. Optimization of Agricultural Resources Uses

Due to the rapid growth of agricultural land conversion from agriculture to other purposes, especially in Java and around the cities, it is necessary to utilize lessfertile and marginal lands. The development of large-scale irrigation areas for food is getting more difficult. There is scarcity of water resource and irrigated land area, idle lands and absentee landlords have also been increasing giving rise to unfair agricultural landownership and land use system. Therefore, there is need to manage resources supported by technology to utilize lessfertile lands and marginal lands on small-scale sizes. Moreover, it is required that a policy to provide justice and fairness in utilizing agricultural land, both in land ownership and land use is needed, to discourage absentee landlords which causes productive lands to be unutilized. Hence, existing agrarian law and government regulation of water resource to manage optimal use of land have to be reviewed.

Various activities that have been carried out so far and need to be intensified further in the future, are: (1) development of swamp, tidal, and marginal land utilization, (2) development of agro-ecology zone; and (3) river basin and marginal land rehabilitation.

b. Food Security Improvement and Provision of Industrial Raw Materials

Food security depends on the capability of the government to guarantee adequate supply of food in terms of quantities, qualities, safety and *halal* to the people, based on optimal utilization and domestic resources variability. An indicator of self sufficiency is the extent of national food availability on food

imports. As an agrarian country, with a large number of population, Indonesia has a huge domestic market potential. This condition is strengthened by opportunities for optimal agricultural productive resources. Indonesia has various comparative advantages in agricultural sector. However, domestic food supply is still unable to meet domestic food demand (rice, corn, soybean, groundnut, and sugar).

In addition, the agricultural sector has opportunities to provide industrial raw materials. Large number of Indonesian population is a potential market for agricultural commodities. On the one hand, the strategic geographical location and large number of population make other countries look at Indonesia as a potential market. On the other hand, Indonesia has an opportunity as a supplier of raw materials for agriculture based industry for both domestic and international market. Various efforts which have been implemented and need to be continued in realizing food self reliance and provision of raw materials for industry are: (1) increasing production and access, (2) improvement of distribution system; and (3) food diversification to reduce dependency on certain food sources.

c. Reducing Unemployment and Alleviating Poverty

The number of unemployed in agricultural sector (excluding forestry and fishery) in 2003 reached 42.23 percent of national employment or around 36 million inhabitants. The number of open employment in Indonesia today is around 40 million peoples. If the agricultural sector could grow at 3 percent per year, this sector can absorb 6 million people per year. This absorption would be greater if the agricultural sector could cover agro-industry and the services sector.

The agricultural sector is a potential sector to reduce unemployment, even though income generated by non-agricultural is three times more than that of agriculture. To strengthen agriculture, it could develop agro-industries in rural areas and expand to new agricultural land, especially in out of Java.

d. Implementation of Sustainable Development

Sustainable agricultural development may be defined as an effort to manage resources and agricultural entrepreneurship through technological implementation and institution building continuously. Sustainable farm enterprises may be defined as farm enterprises which contribute to the welfare of farmers and their families based on commodities' selection; and farm enterprises should have economic values, market availabilities and continuous production.

Agricultural development is also concerned with environmental conservation, so that technological choices and its management are not based on short-term profit. Environment degradation in river basin areas for instance, will become worse if land utilization is focused only to obtain high profit without considering conservation aspects. Environment friendly technologies which have been developed and applied are: Integrated Pest Management (IPM) and Integrated Crop Management (ICM). Sustainable agricultural development needs the application of Good Agricultural Practices (GAP), which is principally emphasized on low external input use. Various efforts that will be carried out in the future are: (1) extension and socialization of GAP, (2) conservation for critical land and river basin area, either using government budget or community participation.

e. Trade Globalization and Investment

Trade globalization creates problems and opportunities in agricultural development. Some implications of dynamic international environment are: (1) improvement of competitiveness of each country of their products or they would be eliminated in the global market; (2) influence on consumption pattern of the domestic society in terms of product diversification, qualities, and food safety. However, some specific products from Indonesia (such as ornamental plant, salacca, manggosteen and processed product) have good potential to enter the international market.

To protect specific products, there should be tariff application and import restriction based on international trade regulations including quarantine aspects. To increase export, various efforts should be carried out, such as: (1) joint promotion to penetrate and expand in the international market; (2) market intelligence development to search for export markets; and (3) trade cooperation among countries. An important factor is to attract foreign investors to invest on agriculture business through incentive policy in the form of: (1) simplicity of business permit, and (2) business security assurance.

f Agro-industry Development down to the Village Level

Rural areas are still the suppliers of industrial materials located in urban areas. This means that the farmers cannot get optional added value from their produce. The potential of development of agro-industry in rural areas is very significant, because agricultural production centers are located in the rural areas that have abundant labor supply and large potential market. Until now, the potential of agro-industry and the willingness to invest in rural areas is limited by infrastructure freelikes, including banks. Support provided by the government thus far is limited to the provision of equipment and machineries which sometimes were not in line with farmers' needs. Agro-industry technology disseminations have been done, however sometimes the target have not been attained.

In the future, the focus of activities to develop rural agro-industrial are: (1) coordination among related institution to synchronize infrastructure development is necessary at central and regional level; (2) invite investors through promotion and facilitation of partnership cooperation; and (3) increase farmers' skills and encourage entrepreneurship.

g. Central and Regional Program Coordination under Regional Autonomy

Agricultural development management based on regional autonomy requires harmonization between the central and regional governments. The

constraint faced, at present, is the weakness of coordination of the central government with provinces and districts, especially at the beginning of regional autonomy implementation. Provinces have power and funds, but do not have the regions to work with; while districts have power, but they have limited budgets. National Act No 32/2004 regarding Regional Government and National Act No 33/2004 regarding Financial Balance between Central and Regional Government demand interrelation and interdependency between central, province and district/municipality programs/activities. These two laws require that programs determined by central, province and district/municipality have to be synchronized and become a common reference in implementation.

At present, the hierarchy of mechanism for agricultural development planning has been developed, where provinces, based on Regional Agricultural Development Consultation, are oriented to prioritize activities setup by districts in their regions. Moreover, central government facilitates regional meetings to synchronize priorities of provinces with national priorities. In the beginning of regional autonomy, this type of mechanism was difficult to be carried out because of the autonomy euphoria. In the future, activities have to be implemented in line with the improvement of agricultural development management.

At central level, coordination within the ministry and with related ministries has to be strengthened. Strengthening coordination within the Ministry of Agriculture, demands the clear breakdown of tasks and functions of each Echelon-I. Strengthening coordination among related ministries, development of network by utilizing coordination inter-sector forums and cabinet meeting should be carried out. Advocating agricultural development interests will be more effective if it is coordinated by Bappenas (National Development Planning Board), Coordinating Ministry of Economic and Coordinating Ministry of People Welfare.

h. Good Governance

Good governance is characterized by transparency, democracy, accountability, people participation, and freedom from corruption, collusion, and nepotism (KKN). The main constraint in implementing good governance is KKN which is an economic problem. Various internal and external controls have been done, but have not been effective. It should be understood that KKN are in the government management system itself, i.e. budgeting system, salary system, recruitment and career system, controlling and supervision system, as well as individual morality. Therefore, the elimination of KKN has to be started with the radical change of the government management system.

Communities demand good governance and strong commitment by the government of *Cabinet Indonesia Bersatu* (United Indonesia Cabinet) to realize the national goals. The Ministry of Agriculture which has mandate in agricultural development is now implementing clean bureaucracy, i.e. free from KKN, trusteeship, transparency and accountability. Prevention effort through strengthening control and supervision and mental development for supervisors are being implemented. Punishment is applied for units proven to have broken the law.



IV. SPIRIT, VISION, MISSION, OBJECTIVES AND TARGETS

4.1. Spirit, Vision, and Mission

Before formulating the vision and mission, spirit or the core ideology which is the core values and soul of development implementation foundation should be defined. Agricultural development must be based on spirit as the foundation otherwise there is no direction and enthusiasm to attain goals and objectives. For the agriculture sector whose development is related to human, animal, plant and environment (human activity system), core ideology (**spirit**) is required so that development activities would consider strategies to conserve the environment and focus on development objectives.

In line with the ongoing reformation and good governance management by clean government, it follows that Ministry of Agriculture is carrying out reforms and good governance. Good governance would produce development results for the interest and welfare of the people. In other words, a caring attitude and orientation in clean government management are necessary. Hence, the spirit of management of agricultural development is **Clean** (responsibility) and **Care** (professionalism).

Clean means the elimination of KKN (Corruption, Collusion and Nepotism), transparency, and accountability. Care means to provide effective and efficient facilitation, services, protection, advocacy, empowerment and public concern (agricultural societies) to individuals and groups concerning their interests and aspirations.

The agenda and priority of the National Medium-term Development Plan for 2004-2009, identifies "Agriculture Revitalization" as one of the economic development priorities. Agriculture revitalization is directed to enhance community welfare and to place strong foundation for economic development. This concept is a political commitment which has to be supported

and further broken down during implementation by all institutions related to agriculture.

In 2005-2025, agricultural development would be directed to achieve the vision of: **“realizing competitive, fair and sustainable industrial agriculture system to guarantee food security and community welfare”**.

By considering national development priority, long-term vision and direction of agriculture development plan, and strategies, the **vision** of agricultural development for 2005-2009 is: **to realize strong agriculture for strengthening food security, improvement of value added and competitiveness of agricultural products, and the improvement of farmer welfare.**

Strong agriculture implies being able to grow in a sustainable manner and characterized as follows: (1) knowledge is the main foundation in decision-making and enhancing, customs and traditions; (2) advance technology is the main instrument in resource utilization; (3) market mechanism is the main media in transaction of goods and services; (4) efficiency and productivity are basic in resource allocation; (5) quality and competitiveness is an orientation, and objective; (6) professionalism is a main consideration; (7) engineering is central in added value, so that every produce meets determined requirements.

In order to attain the above vision of agricultural development, the Ministry of Agriculture **missions** are as follows:

- (1) To realize professionalism in agricultural bureaucracy and moral integrity.
- (2) To stimulate strong and sustainable agricultural development.
- (3) To achieve food security through increased production and diversification of food consumption.
- (4) To enhance the role of agriculture in national economy.
- (5) To improve the access of farmers and other actors on resources and services.
- (6) To advocate farmers interests and protect them in domestic and global trade.

4.2. The Objectives

- (1) To develop professionalism in agriculture bureaucracy, self-reliance of farmers, and the strong agricultural institutions.
- (2) To enhance sustainable agricultural resources utilization.
- (3) To strengthen food security and safety.
- (4) To improve competitiveness and value added of agricultural products.
- (5) To promote agricultural activities that will stimulate rural economic activities.
- (6) To develop farmer-oriented management system for agricultural development.

4.3. The Targets

There are three main targets of agricultural development in the next five years, namely: (1) the improvement of national food security through the improvement of production capacity of agricultural commodities and decreasing the dependency of food import around 5-10 percent of domestic demand; (2) the improvement of value added and competitive advantage of agricultural commodities through the improvement of the qualities of agricultural products, the improvement agricultural product processing diversification, and the increase of export and export surplus of agricultural products; and (3) the improvement of farmer welfare through the increase of labor productivity in agricultural sector and lower poverty incidences.

The above targets are derived from national development targets. Based on the macro target of RPJMN, during the 2005-2009 period, real GDP of agriculture sector (agriculture, forestry and fishery) is targeted to grow by 3.52 percent per annum with targeted labor absorption of 43.8 – 45.7 million persons. From this macro target, the quantitative agricultural development indicators are derived as follows.

a. Gross Domestic Product (GDP)

In the period of 2005-2009, the growth of agricultural (excluding forestry and fishery) GDP is targeted to increase from 2.97 percent in 2005 to 3.58 percent in 2009 or an average increase of 3.29 percent per year. The growth target is more than that of 2004 target, which was around 2 percent. Based on 2000 constant price, agricultural sector GDP is estimated to increase from RP 198.0 trillion in 2005 to RP 226.0 trillion in 2009. Specific GDP target based on sub-sector are as follows:

- (1) The GDP growth of food crops sub-sector varies from 0.43-1.08 percent or about 0.89 percent per year. Based on 2000 constant price, food crops sub-sector GDP is estimated to increase from RP 77.0 trillion in 2005 to RP 79.0 trillion in 2009.
- (2) The GDP growth of horticultural sub-sector is targeted to increase from 2.86 percent in 2005 to 4.57 percent in 2009 or an average increase of 3.38 percent per year. Based on 2000 constant price, horticulture sub-sector GDP would increase from RP 46.0 trillion in 2005 to RP 53.0 trillion in 2009.
- (3) The growth of estate crops GDP is estimated to increase from 6.01 percent in 2005 to 6.49 percent in 2009 or an increase 6.27 percent per year on the average. Based on 2000 constant price, estate crops sub-sector GDP is estimated to increase from RP 48.0 trillion in 2005 to RP 61.0 trillion in 2009.
- (4) The growth of livestock sub-sector is estimated to increase from 4.11 percent in 2005 to 4.58 percent in 2009 or an average increase of 4.37 percent per year. Based on 2000 constant price, livestock sub sector GDP is estimated to increase from RP 28.0 trillion in 2005 to RP 33.0 trillion in 2009.

b. Investment

In the period 2005-2009, with GDP target as mentioned above, the agricultural sector needs an investment of RP 77.07 trillion or RP 14.40 trillion per year. Food crops sub-sector needs an investment of RP 30.05 trillion or RP 5.08 trillion per

year on the average; horticulture RP 9.92 trillion or RP 1.98 trillion per year on the average; estate crops RP 20.52 trillion or RP 4.10 trillion per year on the average; and livestock RP 16.12 trillion or RP 3.22 trillion per year on the average.

c. Employment Creation

In the period 2005-2009, the labor absorption of agricultural sector is projected to increase from 41.3 million in 2005 to 44.5 million persons in 2009. Labor absorption of agricultural sector in 2005 is greater than that of 2004 which reached 39 million persons. Job opportunities created by agricultural sector in 2009 would be 97.47 percent of job opportunities in agricultural sector on the whole (agriculture, forestry, and fishery) or 42.19 percent of job opportunities. The details of labor absorption based on sub-sector are as follows:

- (1) Labor absorption of food crops sub-sector is estimated to decline from 27.2 million in 2005 to 25.9 million persons in 2009. Job opportunity created by the food crops sub-sector in 2009 is estimated to be 58.18 percent of agriculture sector job opportunity target or 56.70 percent of the entire (agriculture, forestry and fishery) sector job opportunity target.
- (2) Labor absorption of horticulture sub-sector is estimated to increase from 3.4 million in 2005 to 4.9 million persons in 2009. Job opportunity created by the horticulture sub sector in 2009 is estimated to be 11.05 percent of agriculture sector job opportunity target or 10.77 percent of the entire (agriculture, forestry and fishery) sector job opportunity target.
- (3) Labor absorption of estate crops sub-sector is estimated to increase from 6.3 million in 2005 to 7.9 million persons in 2009. Job opportunity created by the estate crops sub-sector in 2009 is estimated to be 17.74 percent of agriculture sector job opportunity target or 17.29 percent of the entire (agriculture, forestry and fishery) sector job opportunity target.
- (4) Labor absorption of livestock sub-sector is estimated to increase from 4.3 million in 2005 to 5.8 million persons in 2009. Job opportunity created by the livestock sub sector in 2009 is estimated to be 13.02 percent of

agriculture sector job opportunity target or 12.69 percent of the entire (agriculture, forestry and fishery) sector job opportunity target.

d. Food Securities

In the period of 2005-2009, the growth of food crops production is projected to increase around 0.35 - 6.50 percent per year. The details of food crops production projections based on commodity are as follows:

- (1) Production of paddy is estimated to increase from 55.03 million tons in 2005 to 57.71 million tons in 2009, or increase by 1.21 percent per annum on the average; while corn production is estimated to increase from 11.82 million tons in 2005 to 13.97 million tons in 2009, or increase by 4.23 percent per annum on the average.
- (2) Production of pulses, i.e. soybean is estimated to increase from 777 thousand tons in 2005 to 1.0 million tons in 2009, or an increase by 1.21 percent per annum on the average; while groundnut production is estimated to increase from 832 thousand tons in 2005 to 850 thousand tons in 2009, or an increase by 0.48 percent per annum on the average.
- (3) Production of tuber, i.e. cassava is estimated to increase from 19.57 million tons in 2005 to 19.90 million tons in 2009, or increase by 0.39 percent per annum on the average; while sweet potato production is estimated to increase from 1.88 million tons in 2005 to 1.91 million tons in 2009, or an increase by 0.35 percent per annum on the average.

In the 2005-2009 period, horticulture production is projected to increase around 2.74 - 8.96 percent. Specifically, horticulture production projections based on commodity are as follows:

- (1) Production of vegetables, i.e. potato is estimated to increase from 1.05 million tons in 2005 to 1.21 million tons in 2009, or an increase by

3.68 percent per annum on the average; chili production is estimated to increase from 1.1 million tons in 2005 to 1.24 million tons in 2009, or an increase by 2.94 percent per annum on the average; shallot production estimated to increase from 819 thousand tons in 2005 to 1.1 million tons in 2009, or an increase by 7.65 percent per annum on the average; cabbage production is estimated to increase from 1.4 million tons in 2005 to 1.61 million tons in 2009, or an increase by 3.59 percent per annum on the average; tomato production estimated to increase from 730 thousand tons in 2005 to 873 thousand tons in 2009, or an increase by 4.64 percent per annum on the average; and carrot production is estimated to increase from 373 thousand tons in 2005 to 438 thousand tons in 2009, or an increase by 4.17 percent per annum on the average.

- (2) Production of fruits, i.e. banana is estimated to increase from 4.53 million tons in 2005 to 6.07 million tons in 2009, or an increase by 7.43 percent per annum on the average; mango production is estimated to increase from 1.68 million tons in 2005 to 2.23 million tons in 2009, or an increase by 7.35 percent per annum on the average; orange production is estimated to increase from 1.62 million tons in 2005 to 1.84 million tons in 2009, or increase by 3.37 percent per annum on the average; durian production is estimated to increase from 824 thousand tons in 2005 to 1.15 million tons in 2009, or an increase by 8.41 percent per annum on the average; papaya production is estimated to increase from 665 thousand tons in 2005 to 848 thousand tons in 2009, or an increase by 6.12 percent per annum on the average; pineapple production is estimated to increase from 739 thousand tons in 2005 to 932 thousand tons in 2009, or an increase by 5.83 percent per annum on the average; and avocado production is estimated to increase from 298 thousand tons in 2005 to 390 thousand tons in 2009, or an increase by 6.83 percent per annum on the average.

In the 2005-2009 period, estate crops production is projected to increase around 0.79 - 7.09 percent per year. Specifically, estate crops production projections based on commodity are as follows:

- (1) Production of perennial crops, i.e. palm oil is estimated to increase from 13.15 million tons in 2005 to 16.74 million tons in 2009, or an increase by 6.21 percent per annum on the average; natural rubber production is estimated to increase from 1.95 million tons in 2005 to 2.34 million tons in 2009, or an increase by 4.79 percent per annum on the average; cocoa production is estimated to increase from 637 thousand tons in 2005 to 778 thousand tons in 2009, or an increase by 5.30 percent per annum on the average; coffee production is estimated to increase from 753 thousand tons in 2005 to 892 thousand tons in 2009, or an increase by 4.37 percent per annum on the average; coconut production is estimated to increase from 3.29 million tons in 2005 to 3.39 million tons in 2009, or an increase by 0.79 percent per annum on the average; and pepper production is estimated to increase from 101 thousand tons in 2005 to 130 thousand tons in 2009, or an increase by 6.48 percent per annum on the average.
- (2) Production of seasonal crops, i.e. tobacco is estimated to increase from 234 thousand tons in 2005 to 307 thousand tons in 2009, or an increase by 7.03 percent per annum on the average; while sugarcane production is estimated to increase from 2.16 million tons in 2005 to 2.85 million tons in 2009, or an increase by 7.09 percent per annum on the average.

In the 2005-2009 period, livestock production is projected to increase around 0.08-10.25 percent per year. Specifically, livestock production projections based on commodity are as follows:

- (1) Production of big ruminants meat, i.e. beef meat is estimated to increase from 392 thousand tons in 2005 to 441 thousand tons in 2009, or an increase by 3.01 percent per annum on the average; buffalo meat production is estimated to increase from 46 thousand tons in 2005 to 47 thousand

tons in 2009, or an increase by 0.68 percent per annum on the average; and horse meat production is estimated to increase from 1,598 tons in 2005 to 1.604 tons in 2009, or an increase by 0.08 percent per annum on the average.

- (2) Production of small ruminants meat, i.e. goat meat is estimated to increase from 71 thousand tons in 2005 to 77 thousand tons in 2009, or an increase by 2.0 percent per annum on the average; lamb meat production is estimated to increase from 87 thousand tons in 2005 to 98 thousand tons in 2009, or an increase by 3.02 percent per annum on the average; and pork meat production is estimated to increase from 191 thousand tons in 2005 to 209 thousand tons in 2009, or an increase by 2.40 percent per annum on the average.
- (3) Production of poultry meat is estimated to increase from 1.52 million tons in 2005 to 2.01 million tons in 2009, or an increase by 7.61 percent per annum on the average; while egg production is estimated to increase from 1.14 million tons in 2005 to 1.60 million tons in 2009, or an increase by 8.74 percent per annum on the average.
- (4) Milk production is estimated to increase from 657 thousand tons in 2005 to 971 thousand tons in 2009, or an increase by 10.25 percent per annum on the average.

In the 2005-2009 period, food staples production is estimated to increase between 1.15 – 7.16 percent per year, and the consumption of the food staples (rice, corn, soybean, and sugar) is projected to increase around 1.21-3.57 percent per year. The details of consumption projection based on commodity are as follows:

- (1) Rice consumption is estimated to increase from 36.08 million tons in 2005 to 37.96 million tons in 2009, or an increase by 1.21 percent per annum on the average. This consumption growth rate is the same

as the average growth rate of production. Rice balance is projected to have a deficit during the 2005-2009 period, i.e. from 313 thousand tons in 2005 to 445 thousand tons in 2009. This deficit is small, i.e. around 0.73-1.17 percent, or about 0.89 percent on the average

- (2) Corn consumption is estimated to increase from 12.14 million tons in 2005 to 13.72 million tons in 2009, or increase by 3.01 percent per annum on the average. This consumption growth rate is slower than the production growth rate of 4.23 percent per annum. Corn is projected to have a deficit and tends to decline, i.e. from 320 thousand tons in 2005 to 14 thousand tons in 2007, and projected to have surplus of 116 thousand tons in 2008 and 254 thousand tons in 2009. These deficits and surpluses are considerable not significant, i.e. around 0.11-2.64 percent and 0.87-1.82 percent, respectively
- (3) Soybean consumption is estimated to increase from 2.39 million tons in 2005 to 2.57 million tons in 2009, or increase by 1.74 percent per annum on the average. This consumption growth rate is slower than the production growth rate of 6.50 percent per annum. Soybean is projected to have deficit and tends to decline, i.e. from 1.61 million ton in 2005 to 1.57 million tons in 2009. This deficit is large, in the range of 61.06-67.45 percent of consumption or 64.27 percent on the average.
- (4) Sugar consumption is estimated to increase from 3.30 million tons in 2005 to 3.82 million tons in 2009, or an increase by 3.57 percent per annum on the average. This consumption growth rate is slower than the production growth rate of 7.09 percent per annum. Sugar is estimated to have a deficit and tends to decline, i.e. from 1.13 million tons in 2005 to 0.97 million tons in 2009. This deficit is relatively large, in the range of 25.5-34.4 percent of consumption or 29.79 percent on the average.

In the agricultural development target for 2005-2009, food consumption diversification could consider *Balanced Dietary Pattern (PPH)*, i.e. increasing food consumption diversification and decreasing dependency of one specific staple food. PPH target in 2009 is 96.6 percent, comprising of grain 52.6 percent, oil and fat 10 percent, tuber 5.7 percent, animal source food 11.2 percent, oily seed 3 percent, pulses 4.8 percent, sugar 5 percent, vegetable and fruit 5.7 percent, and other food sources 3 percent. A 100 percent PPH target would be achieved in 2010.

e. Value Added and Competitiveness

In the period 2005-2009, processed product diversification for agricultural commodities is projected to increase 5 percent per year on the average. Export value of agricultural commodities is projected to increase by 11.34 percent per year, higher than that of the growth of import value of 3.91 per year. Therefore, agricultural trade balance is projected to increase from US \$ 3.9 billion in 2005 to US \$ 7.7 billion in 2009 or an increase by 17.11 percent per year. The total foreign currency obtained from agriculture sector is projected to increase from US \$ 7.8 billion in 2005 to US \$ 12.3 billion in 2009. In the period 2005-2009, there would be increasing the production efficiency reflected by decreasing growth of production cost per unit by 5 percent per year.

f. Farmers Welfare

In the period 2005-2009, labor productivity on agricultural sector is projected to increase from RP 4.80 million in 2005 to RP 5.08 million per capita per year or an increase by 1.4 percent per year on the average. The percentage of poor people in rural areas is projected to decrease from 18.90 percent in 2005 to 15.02 percent in 2009.

V. STRATEGY AND POLICY

5.1. Agricultural Revitalization

Strategies and policies on agricultural development in 2005-2009 are formulated based on the National Medium-term Development Plan (RPJMN). One of the priority agenda of RPJMN which is used as a foundation in formulating strategies and policies on agriculture is the realization of an economy capable of creating and providing job opportunities, and strong foundation for sustainable development.

At the macro level, the economic growth (GDP) for the period 2005-2009 is targeted at 6.6 percent per year, while the agricultural sector (including forestry and fishery) is expected to grow at 3.5 percent per year on the average. Based on this target, agricultural sector (excluding fishery and forestry) is targeted to grow at 3.3 percent on the average.

The RPMJN economic development agenda related to agricultural development, are as follows: (1) agricultural revitalization; (2) improvement of investment and non-oil export; (3) macro economic stabilization; (4) poverty alleviation; (5) rural development; and (6) improvement of natural resources and environment management. Agricultural revitalization is directed to increase: (1) the ability to produce rice domestically around 90-95 percent of total demand; (2) food production and consumption diversification; (3) food availability from animal sources; (4) value added and agricultural production competitiveness; and (5) production and export of agricultural commodities.

5.2. General Strategies

The general strategies to attain objectives and targets of agricultural development are:

(1) To Improve Development Management that is Transparent and without KKN

Development reform applied to government institutions means rehabilitation. Development policies are formulated and applied based on transparency principle through people participation, in the form of public debate, socialization, and people participation in monitoring and evaluation. In addition, there is need to manage various implementation system, i.e. fund system, salary system, recruitment system and employee career improvement, monitoring and evaluation, and enhancement of individual attitudes. In the implementation stage, there is need to develop morality and professionalism of institutions to support effective management, transparency and credibility. Development management is expected to improve the utilization of agricultural resources optimally, providing incentives to investments, in line with public interest and without KKN.

(2) To Improve Coordination in Preparing Policies and Agricultural Development Management

As part of the economic development backbone, agricultural development should be implemented in tandem with other sector development based on RPJMN. Agricultural development implementation is carried out by various development actors such as related technical departments, regional governments, farmers, private sector, communities and other stakeholders. Thus, to attain the objectives and targets that have been set up, coordination is necessary, since policies related to agriculture are not fully within the authority of the Ministry of Agriculture.

To improve coordination at the central level, it is need to develop networking by inter-sector coordination and cabinet meeting. Advocating agricultural development interests would be more effective if it is coordinated by Bappenas, Coordinating Ministry for Economics and Coordinating Ministry of People's Welfare. Within the Ministry of Agriculture, the improvement of coordination needs to spell out the main duties and functions of working

units, more clearly and delineating responsibility areas. The improvement of coordination between central and regional governments (province, district/ municipalities) is done by utilizing and developing planning forums and agricultural development program, which is regulated by National Act No: 32/2004 on Regional Development and National Act No: 33/2004 on Budget Balance between Center and Regional Governments.

(3) To Expand and Utilize Production Bases Sustainably

The basic problem related to the utilization of sustained agricultural resources is land conversion which causes the decreasing area of paddy field, the decreasing quality of river basin area (DAS) as a result of increasing intensity of farm activities, and increasing population needing more food that ultimately increases intensification and extensification of agricultural land. One of the extensification impacts is deforestation and excessive land resources exploitation. The richness and diversity of land and biological resources of Indonesia need to be sustained and utilized optimally, to create interdependency which would benefit inter-regional development, and promote domestic and global trade, developing investment to create new growth and income, which would put farmers as the main actors. Therefore, the following are needed: (1) extension and sustained production through consolidation, (2) optimizing land utilization, (3) opening new lands, especially out of Java, and (4) preservation and conservation of land and biological resources.

(4) To Improve Institutional Capacities and Empower Agricultural Human Resources

With the land ownership less than 0.5 hectare on the average, and lack of agricultural infrastructure, weak farmer organization, and low qualities of human resources, farm activities become less attractive economically due to insufficient income. The effort to increase opportunities and income of small farmers can only be done through the improvement of agricultural human resources capacities and farmer self-reliance, and development of agricultural

institutions to improve the access of farmers of productive assets in rural areas.

(5) To Improve the Availability of Agricultural Infrastructure

Agricultural infrastructures such irrigation, roads, electricity, farm roads, ports (especially for new exports in Eastern Part of Indonesia), transportation and telecommunication are very essential for agricultural development. Technology innovation application is always constrained by the lack of infrastructures such as production inputs, information networks and market infrastructures for agricultural products. Therefore, infrastructure development is needed for: (1) providing facilitation infrastructure including market infrastructure needed by agricultural development actors, (2) stimulating investors to invest in agricultural sector, and (3) advocating other institutions to participate in agricultural infrastructure development.

(6) To Improve Innovation and Dissemination of Appropriate Technology

In line with the system and production management shift in the future, and to adequately respond to market demand development concerning grading, prices, and services, there is need for strategic changes in developing technology innovations; and to pay attention to various users, and ecosystem development. On the dissemination side, there is need to identify strategic changes and pay attention to users' characteristics and agricultural innovation dissemination actors. The poor productivities and qualities are the result of low technology innovations applied by farmers. Therefore, there is need to improve research programs to produce technology innovations that are more appropriate to the users. In addition, there is need to reorient the dissemination system and agricultural extension.

(7) To Promote and Protect Agricultural Commodities

Commitment to eliminate trade barriers which distort markets, is not being applied by all nations, so Indonesian farmers are facing unfair competition with farmers from other nations who are benefiting due to tariff, non-tariff and subsidy protection, directly or indirectly. Therefore, the government still

needs to apply price control, and also promote strategic agricultural products. Protection can be done through tariff application policy and import regulation, applying floor price, and providing appropriate subsidy on production infrastructures and interest credit subsidy on capital for agricultural activities. Promotion can be done through productivity improvement, application of efficient activities, and quality improvement, and product standardization through production technology application, post harvest management and processing, and providing appropriate agricultural infrastructures.

5.3. The Policy Directions

There are many policies and strategies directly related to agricultural development, but the authority to execute those aspects belong to various agencies. These policies are macro; monetary; fiscal; industrial development; trade, marketing, and international cooperation; infrastructure development, especially irrigation; institutional development (including financial institution, research and development function, human resources development, and the development of farmers institution); environment and natural resource utilization and rehabilitation; and food security development. A matrix showing these policies and institutions for the agriculture development is presented in Annex I. However, there are strategic policies that need to be stressed and need immediate action such as the following:

- (1) Conducive macroeconomic policies, i.e. low level of inflation, stable exchange rates, and positive real interest rates.
- (2) Agricultural infrastructure development covering development and rehabilitation of irrigation systems, agricultural land expansion especially out of Java, prevention of land conversion especially in Java, development of farm roads, and other infrastructures.
- (3) Financing policies to develop financial institutions primarily serving the agricultural sector, micro financial institution, *syariah* financial scheme, and others.

- (4) Trade policies which promote activities for domestic and export market. In addition, to protect the agricultural sector from world market competitions, are need the following: (a) promote the concept of strategic products (SP) in WTO forum; and (b) Tariff application and non tariff barrier for rice, soybean, corn, sugar, some horticultural products and livestock;
- (5) Industrial development policies to increase value added and farmer's income.
- (6) Conducive investment policy to stimulate more investment in agricultural sector.
- (7) Development budget that is prioritized for the agricultural sector and its supporting sectors.
- (8) Regional government attention to agricultural development covering agricultural infrastructures, strengthening agricultural extension services, institutional development in agriculture, eliminating various impediments (tax, fees) that reduces the agricultural sector competitiveness, and providing sufficient regional budget allocation.

Moreover, there are direct direct policies related to the agricultural sector under the Ministry of Agriculture that are likewise needed such as the following:

- (1) Agricultural development implementation that is clean, transparent, and free from KKN coupled with the application of reward and punishment.
- (2) Coordination improvement in formulating policy and agricultural development management directed to: (a) the improvement of transparency in formulating policy and agricultural development management; (b) the improvement of evaluation, monitoring, and control of agricultural development; and (c) harmonizing agricultural inter-sector and inter-region development programs.

- (3) Expanding production bases directed to: (a) increasing private investment; (b) settlement of property right; (c) land ownership; (d) commodity zoning; and (e) land inheritance system management.
- (4) Increasing capacity and empowering agricultural human resources directed to: (a) formulating extension revitalization policy, assistances, education and agricultural training; (b) increasing peoples' participation; (c) increasing competency and morale of agricultural units; and (d) developing farmer institutions.
- (5) Increasing the availability of agricultural infrastructures directed to: (a) development of infrastructures for agriculture activities; (b) development of financial institutions in rural areas; and (c) development of processing and marketing infrastructures.
- (6) Improving innovation and dissemination of appropriate technology directed to: (a) response to the problems and needs of users; (b) support in utilization of agricultural local-specific resources optimally; (c) develop the competitiveness of products; (d) harmonize and integrate agricultural technology development; and (e) accelerate the process and coverage of dissemination and feed back on agricultural innovation.
- (7) Improving the promotion and protection of agricultural commodities directed to: (a) formulating policies on subsidy, input production, output prices, interest rates and credit for agriculture activities; (b) increasing export and restricting import; (c) import tariff and import regulation; (d) increasing productivity and efficiency of agricultural activities; (e) quality improvement and product standardization through implementing production technology, and post-harvest management; and (f) strengthening marketing system and protecting agricultural activities.

In addition to the above policies, specific policies related to rice, agricultural land expansion and agricultural financing policies are elaborated in **Box 1 to 3.**

Box 1: Rice Policy

Rice is a staple food for most (95 %) Indonesians and plays an important role in national economy through its contribution in employment creation, national income, economic stability, and social and as national security.

Agriculture census data of 2003 shows that out of 25.58 million farm households, 18.12 million farm households (70.84 %) are engaged in paddy farming, excluding farm households which have business in rice related industry, or 34.47 percent of total households (52.56 million households). Paddy farming provides job opportunity and income for more than 21 million households and contributes 25 – 35 percent farm household income, as well as contributes 66 percent of food crop sector GDP.

Indonesia is large number of population (220 millions currently), is highly sensitive to rice food availability. To meet the increasing demand for rice due to increasing population and households' income, the supply of rice from domestic production is given priority in agricultural development.

Rice commodity development faces various problems and challenges, which are: (a) application of technology limited only to farming technology; (b) increasing productive land conversion; (c) declining land and water resources quality and quantity; (d) climate change phenomena and uncontrolled plant disease, (e) declining incentive in farming; and (f) unfair competition with imported product.

Hence, rice development policy is directed to the following: (1) develop modern and strong rice agribusiness zone to be able to provide better life for the farmers; (2) increase farming efficiency through application of competitive technology innovation; (3) efficient, optimal and sustainable use of natural resources; (4) empower farmers and rural community; and (5) develop strong, efficient and productive business institution and partnership.

Various programs to be implemented cover the following: (a) agriculture infrastructure and facility development; (b) acceleration of productivity improvement; (c) expansion of planting area; (d) development of seed and seedling system; (e) development of plant protection system; (f) development of product processing and marketing; and (g) development of institution. At present, rice policy covers: (a) setting of government procurement price of rice; (b) import tariff and import ban during peak harvesting season; (c) seed and fertilizer subsidy; (d) development of technology; and (e) provision of agriculture infrastructure and facility.

Box 2: Agricultural Land Expansion and Utilization

Agricultural land availability in Indonesia is relatively limited. The average land per capita is only 0.09 ha, and the average landholding of 53 percent farm households is less than 0.5 ha per household. PATANAS data in Java shows that the average land holding of 88 percent farm households is less than 0.5 ha. Agriculture census data also shows that smallholders with land occupation of less than 0.5 ha have increased from 10.8 million households in 1993 to 13.7 million households in 2003, or an increase by 2.6 percent per annum.

The above phenomena are attributed to the following: (a) high population growth of 1.3 percent per annum; and (b) high rate of agricultural land conversion to non-agricultural purposes. Agricultural land conversion in Java during the 1999-2002 period was averaging 110 thousand ha per annum.

To increase national agricultural production capacity and average farm size, policies to increase optimal use of land and expand arable land availability are necessary. According to CBS data (2002), out of 188 million ha of Indonesian landmass, 64 percent was used for agricultural land. Potential land to be used for agriculture without disturbing ecological balance is about 32 million ha, scattered in the province of Riau, South Sumatra Bangka Belitung, and in the islands of Kalimantan, Maluku and Papua. In addition, there are 9.7 million ha idle lands that are could be rehabilitated and use for agriculture.

The utilization and expansion of lands should be linked with the effort to stimulate the development of commercial agriculture unit. Hence, policy and program to be implemented covers the following: (a) utilization of idle land; (b) expansion of paddy land outside Java, particularly in Papua, Kalimantan and Sumatra with potential of 16 million ha; and (c) expansion of dry land for estate crops and horticulture in South Sulawesi, Central Sulawesi, Southeast Sulawesi and Papua with potential of 25 million ha.

Box 3: Agricultural Financing Policy

Government investment in agricultural financing is reflected as budget allocation (APBN and APBD) which is directed to stimulate community fund. Therefore, the biggest portion of development financing comes from the agricultural development entrepreneurs and farmers.

To stimulate agribusiness development, various policies related to financing resources availability for program credit, commercial credit, as well as non-banking financing to be accessed by agricultural development entrepreneurs and farmers have been launched. These policies include the following: (a) Bank interest subsidy policy of food security credit scheme, (b) Agribusiness credit scheme policy, (c) Collective Investment Contractual Scheme Policy; (d) Small and Medium Scale enterprises credit scheme policy; and (e) Micro finance institution policy. To increase access to credit of agricultural development entrepreneurs and farmers, the development of Agriculture Bank should be considered.

In addition to the above credit schemes, starting in 2005, the Ministry of Agriculture has developed financing scheme for smallholders through guarantee scheme. Guarantee fund is placed in banks under the name of guarantor institution, to be used as a guarantee for smallholders to access credit. Smallholders eligible to apply for guarantee scheme are food crops, estate crops, livestock and horticulture farmers. The composition depends upon their enterprises.

The program is targeted to guarantee 1,000 smallholders, and about 500 micro finance institutions located in agriculture production center which are expected to finance 10,000 micro scale agriculture. The guarantee fund is expected to be used to guarantee credit up to 8-10 times as much as guarantee fund. This scheme will be supported by agriculture sector potential mapping and assistantship pattern for micro and small scale entrepreneurs in the field of agriculture. In 2005, the program needs 400 counterparts for 1,000 small and micro entrepreneurs with the assumption that each counterpart would serve 2 – 3 entrepreneurs.

VI. AGRICULTURAL DEVELOPMENT PROGRAM

Agricultural development program is defined as any efforts on facilitation, service, and promotion of agribusiness development in order to improve value added and competitiveness, and in turn will enhance the people's welfare, particularly farmers. In line with the vision, mission, objectives, and strategies mentioned above, programs formulated in the period of 2005-2009 are as follows: (1) Enhancement of Food Security, (2) Development of Agribusiness, and (3) Improvement of Farmers' Welfare.

6.1. Enhancement of Food Security

Food security is characterized by providing food supply and ensuring availability at all times at the regions, access households, safety for consumption and affordable prices. The elements of food security are the following: (1) food availability, (2) food distribution and consumption, (3) public acceptance, (4) food diversification, and (5) food safety.

Food security enhancement program is intended to guarantee the continuous availability of healthy and *halal* food. At the household level, food security is associated with the household capacity to access food from market. Therefore, household food security is dependent on household purchasing power. In line with this, increasing household income is a key factor in increasing household food security. Food covers plant, animal and fish to meet the demand for carbohydrate, protein, fat, vitamins and minerals as well as their derivatives which are useful for health.

The targets of this program are as follows: (1) attainment of food availability at national, regional, and household levels that is adequate, safe, and *halal*, (2) improvement of food diversification in terms of production and consumption, (3) improvement of public capacity in solving food

vulnerability. For rice in particular, BAPPENAS has targeted that 90-95 percent of the rice consumed has to be supplied by domestic production. In addition, food consumption of animal products (meat, eggs, and milk) is also expected to be increased.

To achieve the above objectives and targets, food security enhancement program is further broken down into various subprogram, namely: (1) Enhancement of food production and availability, (2) Development of food production diversification and consumption, (3) Application of food quality standard and safety, (4) Reduction of food shortage level, (5) Development and dissemination of agriculture innovation to support food security, and (6) Development of food security development management.

Action plans of the food security program are as follows: (1) implementation of intensive and extensive approaches for staple crops' production, (2) development of local alternative staple food production, (3) development of non rice food consumption, (4) development and rehabilitation of water irrigation, (5) development of agribusiness networking, (6) facilitation on the system of agricultural input provision, (7) development of capital network system, (8) seed development, (9) facilitation on input production subsidy, (10) development of agricultural machinery service, (11) formulation and development of food price policy, (12) management of food trade, (13) protection on agricultural product and quarantine, (14) development and implementation of food quality and safety standard, (15) development of food and nutrition surveillance system, (16) strengthening public food security institution, (17) development of technology to reduce food losses, (18) development of technology to sustain natural resources, (19) development of technology of traditional food processing, (20) development of technology to improve food quality and safety, and (21) synchronizing policy and program of food security improvement.

6.2. Agribusiness Development

To increase farmers' income, the expansion of farmers' economic productive activities based on improvement of efficiency and competitiveness need to be addressed. The possible means are the following: (1) improvement of value added through processing activities and quality improvement, and (2) promotion of integrated farming system, such as crop-livestock system or crop-livestock -fishery integration.

The approach used for improving agribusiness efficiency and competitiveness is agribusiness system which comprises down stream agribusiness, on-farm activities, up stream agribusiness, and supporting service business. The program will cover 31 selected major agricultural commodities of food crops, horticulture, estate crops, and livestock. The commodities could be varied among regions depending on the potential of the regions and are selected based upon contribution and potential in terms of contribution to food security, provision of industrial raw materials, export or import substitution, as well as expansion of employment opportunities, and poverty alleviation.

This program is aimed for facilitating the development of agribusiness activities in order to produce competitive agricultural product for domestic and international market, and increase of agricultural sector contribution in national economy through the increase of export earnings and GDP.

The main targets of this program are the following: (1) development of the whole agribusiness activity including down stream, on-farm, up stream (agro-industry), and supporting service business, (2) increase of agricultural sector GDP, and (3) increase of fresh and processed agricultural product export.

To achieve the above objectives and targets, this program is further broken down into various subprograms, namely: (1) Enhancement of

agricultural production, product quality and business efficiency, (2) Development of rural agro industry, (3) Development of agricultural product marketing, (4) Development of agricultural infrastructure and facilities, (5) Development and dissemination of agricultural innovation to support agribusiness development, (6) Development of agribusiness development management, and (7) Development of commercial agriculture.

Action plans of this program, are as follows: (1) development of agricultural commodities production zones, (2) development of primary commodities production center area, (3) development of entrepreneurship through extension, assistantship, education, and trainings, (4) assessment on the aspects of social economic and commercial agricultural commodities policies, (5) development of primary livestock strain, (6) development of technology on the improvement of agricultural commodities production system, (7) development of technology on agricultural machinery for improving agriculture productivity, efficiency, and usefulness of renewable energy resources, (8) development of local specific agricultural innovation, (9) biotechnology effectiveness for the improvement of crops and livestock, (10) development of post harvest handling technology, (11) development of agro-industry in the production center area, (12) development of commercial commodities, (13) development of market and information institution, (14) development of technical assistance on Good Agricultural Practices (GAP), (15) protection of agricultural production and quarantine system, (16) adjustment of import tariff and export subsidy policies, (17) development of cooperation and international trade, (18) socialization and implementation of quarantine and *Sanitary and Phyto Sanitary* (SPS) regulations, (19) development of quality assurance system, (20) development of agribusiness partnership model, (21) development of contract farming model, (22) development of promotion on agricultural product, (23) development of agricultural infrastructure in rural area, and (24) synchronization of agribusiness development policy and programs.

6.3. Farmers' Welfare Improvement

"Welfare" in this program is specifically defined as economic welfare or household income. The rationale of this program is that in agriculture development, the achievement of farmers' welfare is essential. The main objective of this program is to improve farmers' income through empowerment and increase accessibility towards agricultural resources, development of institution, and protection. The program targets are as follows: (1) improvement of farmers' capacity and bargaining position, (2) active farmers' institution, (3) improvement of farmers' accessibility towards productive resources, and (4) increase of farmers' income.

To achieve the above objectives and targets, this program is further broken down into subprograms, namely: (1) Farmers' empowerment, (2) Development of apparatuses of human resources, (3) Development of institutions, (4) Enhancement of farmers access to productive resources, (5) Protection for farmers and agriculture, (6) Development of household business diversification, (7) Acceleration and assessment of agricultural innovation dissemination, (8) Special effort for poverty alleviation, and (9) Development of farmers welfare enhancement management.

The plan of actions includes the following: (1) implementation of extension, training and assistantship for farmers, (2) improvement of farmers' entrepreneurship through education, (3) development of middle level education program for youth farmers, (4) strengthening agricultural extension institution in rural areas, (5) development of diversified agriculture based household business, (6) advocacy on the farm ownership rights, certificate and prevention of land conversion, (7) formulation of policy on spatial management, land use, and land progressive taxes, (8) implementation of business incentive and investment promotion, (9) development of water use management and land conservation, (10) facilitation on business investment and partnership, (11) protection of agriculture based business, (12)

formulation and advocacy of policy on farmer protection, (13) assessment of local specific technology, (14) development of model of innovation technology based agribusiness institution, (15) improvement of rural infrastructure, (16) improvement of public participation on policy formulation, (17) synchronization of policy and programs on farmers' welfare improvement, and (18) coordination of national policy on poverty alleviation.



VII. AGRICULTURE DEVELOPMENT MANAGEMENT

7.1. Government Authority in Agriculture Development

To implement the Agricultural Development Planning for 2005-2009, each Directorate General of the Ministry of Agriculture needs to develop a Strategic Plan (Renstra) in accordance with its main functions. In turn, from each Renstra, operational annual planning activities (Renja) would be formulated.

Agriculture development planning connotes government mapping based on to regional autonomy. For the years 2000-2004, agricultural development management refers to National Act No. 22 of 1999 and Government Regulation No. 25 of 2000. However, National Act No. 22 of 1999 was judged inappropriate as a process of development, and it was substituted by National Act No. 32 of 2004 on Regional Government, and National Act No. 33 of 2004 on Budget Balance between Central and Regional Governments.

Agriculture development management is the obligation and responsibility of government in the central, provincial, and local levels. The design of agricultural development program should be formulated in line with the authority of central and local government and should be in line with programs of the other sectors supporting agriculture development. The design of the program should be focused on the improvement of public participation.

As pointed out in the autonomy policy, local government (districts and municipalities) is mandated to implement agriculture development. The authority of the provincial level covers inter-district/municipal administration and other aspects that could not be managed or implemented by the districts/municipalities. The central government formulates policy

on national planning and administers macro national development, balance financial fund, state administration system and economic institution, development and empowerment of human resources, efficiency of natural resources and strategic high technology, conservation, and national standard.

7.2. Planning Mechanism

Agriculture planning mechanism refers to National Act No. 25 of 2004 on National Development Planning System, and translated to the decree of State Minister of National Development Planning/Chairman of BAPPENAS No: KEP.214/M.PPN/11/2004 on Guidelines of National Development and the document of National Medium-Term Development Plan of 2004-2009 issued by BAPPENAS.

Under the coordination of the Local Development Planning Board (BAPPEDA), the district/municipal government conducts Agricultural Development Planning Conference to formulate the planning document needed to be proposed to the provincial level. Simultaneously, similar conference has to be conducted by the provincial government as a means of coordination and evaluation of the district/municipal proposals. Provincial BAPPEDA takes the role of coordinating agricultural development by integrating activities, regional development, and development budget source.

Central Government organizes development planning meeting to socialize the national policy and to develop Regional Government and district/city commitment. Central Government facilitates regional agricultural development in line with national policy based on regional planning requirements as follows: (1) planning zone of economic development and utilization of national resources, environmental aspects and capacity improvement; (2) national competitiveness achievement based on regional comparative advantages and commodities, resource potency, and growth centers, market potency, national commodity potency, (3) empowerment of undeveloped region, poverty

alleviation, and equity, and (4) national policy, food security, international trade policy, macro policy, and infrastructure development in national environment.

At the national level, agriculture development planning activity is coordinated by the Secretary General of the Ministry of Agriculture (Bureau of Planning and Finance).

7.3. Implementation

In principle, agriculture development planning is aimed to improve the public welfare. The government facilitates public participation by effectively integrating activities funded by APBN, APBD, private sector and other development fund sources. In practice, major portion of agriculture development is conducted in the region of district/municipal government, and not limited by local administrative boundary (provincial, district/municipal), and associated sectors. Therefore, synchronization of agriculture development activities among all components within the central and local governments is very significant. Local government commitment is needed by its budget allocation and serious management.

7.4. Monitoring, Evaluation, and Supervision

The government develops the standard and procedure of monitoring, evaluation, supervision, and organization of agriculture development function. Monitoring and evaluation has to be performed by government at central, provincial, and district/municipal levels. Monitoring is aimed at overseeing on-going process of implementation and progress of agriculture development. Evaluation is conducted as a means of supervision, assessment, which will be further used to improve effective implementation of the development activities.

VIII. CONCLUDING REMARKS

Agriculture development is needed to achieve food security, improve competitiveness and value added of agricultural production, and increase farmers' income/welfare. Specifically, development activities are implemented to promote public participation through the government's role in facilitating, supporting, and empowering public capacity and creativity.

Based on the agriculture development vision, mission, strategy and policy, agriculture development program in the medium-term of 2005-2009 includes: (1) Enhancement of Food Security, (2) Development of Agribusiness, and (3) Improvement of Farmers' Welfare. The implementation of these programs involves various agencies in the central, provincial, district/municipal and stakeholders. Therefore, it is essential to synchronize and integrate policies and programs across various sectors.



Annex 1: Matrix of Institutions Linkage in the Agricultural Development

No	Policy	Institution																		
		Economic Coordinating Ministry	Social Welfare Coordinating Ministry	Indonesia Central Bank (BI)	Ministry of Agriculture, Forestry, and Marine & Fishery	State Ministry of Environment/ National Agrarian Board	Ministry of Health/ National Standardization Agency	Quarantine Agency	Agency for Technology Assessment/ Agency for Indonesian Science	Ministry of Trade	Ministry of Industry	Ministry of Public Work	Ministry of Legal Affairs & Human Right	Ministry of Transportation	Ministry of Finance	Ministry of Co-operative and Small & Medium Enterprises	National Food Authority Agency	Local Govt /Ministry of Home Affairs	Ministry of Foreign Affairs	NGO
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	Macro																			
	- Scheme credit for agriculture business development with affordable interest rate	✓		✓	✓						✓				✓	✓				✓
	- Budget allocation to develop agriculture business, particularly public infrastructure	✓			✓					✓	✓	✓		✓	✓					
	- Tax holiday for agriculture business	✓		✓	✓					✓	✓				✓			✓		✓
	- Tax abolishment policy for agriculture sector	✓			✓					✓				✓	✓			✓		✓
	- Added value tax abolishment policy for agricultural product	✓			✓					✓					✓					✓
	- Investment policy to stimulate private sector in agricultural business	✓			✓					✓	✓				✓			✓	✓	✓
	- Export credit policy to stimulate agriculture export	✓		✓	✓					✓					✓	✓				✓
	- Progressive fiscal policies for land ownership	✓			✓	✓									✓			✓		✓
2	Industrial Policies																			
	- Acceleration policies for scaling up the national agriculture machinery industry	✓			✓				✓		✓							✓		✓
	- Acceleration policies for the development of fertilizer, pesticide and medicine industry				✓				✓		✓							✓		✓
	- National seed industry development policies				✓				✓		✓							✓		✓
	- Rural agro-industrial development policies				✓	✓			✓		✓							✓		✓

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
3	Trade and Marketing Policies																			
	- Policies for free export tax of agricultural product	✓			✓					✓					✓					✓
	- Protection policies for domestic agricultural product (processed and non-processed) through levy import tax for achievement of fair trade and non-technical	✓			✓					✓					✓					✓
	- Policies for import tax reduction of capital good and other inputs for agricultural sector	✓			✓					✓					✓					
	- Policies for improvement of distribution system on domestic agricultural product				✓					✓				✓	✓				✓	✓
	- Policies for setting up commodity exchange and auction for transparency purposes				✓					✓									✓	✓
	- Policies for simplification of export procedures to encourage national competitiveness capacity				✓					✓				✓	✓				✓	✓
	- Policies for optimization of Indonesian foreign representatives to conduct market intelligence and agricultural product marketing				✓					✓				✓					✓	✓
	- Policies for encouragement of international market				✓					✓									✓	✓
	- Policies for improvement of domestic market structure				✓					✓						✓			✓	✓
4	Infrastructure Development Policies																			
	- Policies for development of rural public infrastructure (irrigation, farm road, water sanitation, electricity)	✓			✓				✓	✓		✓							✓	✓
	- Policies to stimulate private participation in infrastructure investment	✓			✓					✓		✓							✓	✓
	- Policies to stimulate market infrastructure as agribusiness terminal and auction place.				✓					✓		✓				✓			✓	✓



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
5	Institutional Development Policies																			
	- Policies for development of rural financial institution	✓			✓										✓			✓		✓
	- Policies for banking deregulation at the regions	✓			✓										✓			✓		✓
	- Policies for development of local financial institution	✓			✓										✓	✓		✓		✓
	- Policies for development of quality control agency				✓		✓		✓	✓						✓		✓		✓
6	Technology Innovation and Development Policies																			
	- Policies to improve relevance and linkages between agriculture research and development (ARD) with users' needs (farmers, private sectors) to increase productivity, added value, competitiveness and market expansion	✓		✓	✓					✓	✓				✓			✓		✓
	- Policies for sharpening agriculture technology innovation for selected commodity through comprehensive and integrated approaches with a measurable performance indicator	✓			✓				✓	✓	✓									
	- Policies to promote market driven and environment friendly as well as regional, ecosystem and local wisdom base agricultural technology innovation.				✓	✓			✓	✓	✓							✓		
	- Policies to ensure the optimal use of research result agricultural innovation through strengthening inter-institutions collaboration network.	✓			✓	✓			✓	✓	✓				✓	✓		✓		

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
	- Policies to strengthen institution (distribution, delimitation and linkages among R&D) and application of agricultural science and technology				✓				✓	✓	✓								✓	
	- Policies to increase total amount, budget line items and research budget management	✓			✓				✓						✓				✓	
	- Policies to strengthen extension services institution				✓											✓		✓		✓
	- Policies for development of rural processing industry				✓						✓					✓		✓		✓
7	Farmers Economic Organization Development Policy																			
	- Policies for development of rural food security institution				✓					✓				✓		✓	✓	✓		✓
	- Policies for development of farmers economic organization in rural areas			✓	✓										✓	✓	✓	✓		✓
8	Environment and Natural Resource Development Policies																			
	- Policies for consistent law enforcement in utilizing natural resources	✓			✓	✓							✓		✓				✓	✓
	- Policies for prevention of agricultural productive land conversion	✓			✓	✓			✓			✓	✓						✓	✓
	- Policies for application of progressive tax for idle land	✓			✓	✓						✓			✓				✓	✓
	- Review of Agrarian (Land Reform) Law 1960	✓			✓	✓						✓	✓						✓	✓
	- Policies for regional spatial (land use) management	✓			✓	✓						✓	✓						✓	✓
9	Regional Agribusiness Growth Center Development Policies																			
	- Policies for development of competitive commodities growth centers				✓					✓		✓		✓		✓			✓	✓



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
	- Policies for development of integrated agro-industry areas				✓				✓	✓	✓	✓			✓	✓		✓		✓
	- Policies for development of industry and its supporting services				✓				✓	✓	✓	✓		✓				✓		✓
10	Food Security Policies																			
	- Policies to increase food availability				✓					✓						✓	✓	✓		✓
	- Policies for food production diversification				✓					✓	✓	✓				✓	✓			✓
	- Policies for granting loan for food security purposes			✓	✓										✓	✓	✓	✓		✓
	- Trade policy				✓					✓		✓				✓	✓	✓		✓
	- Policies for food consumption diversification	✓			✓		✓			✓						✓	✓	✓		✓
	- Rice price procurement policy	✓			✓					✓						✓	✓	✓		✓
	- Policies for food distribution	✓			✓					✓				✓		✓	✓	✓		✓
	- Policies for community empowerment to overcome food shortage problem		✓				✓													
11	Special Policy																			
	- Rice	✓			✓					✓					✓	✓	✓	✓		✓
	- Sugar	✓			✓					✓					✓	✓	✓	✓		✓
	- Cooking oil	✓			✓					✓					✓	✓	✓	✓		✓
	- Feed	✓			✓					✓					✓	✓	✓	✓		✓
	- Fertilizer	✓			✓					✓					✓	✓	✓	✓		✓
	- Special effort for poverty alleviation	✓	✓												✓			✓		✓
	- Rural people protein sources (chicken meat, eggs, milks, soybean)	✓			✓					✓					✓	✓		✓		✓

Annex-2: Matrix of Implementation Achievement on Agricultural Development Objectives for 2005 – 2009

Objectives	Strategies	Policies	Sub Programs	Action Plans
<p>1. To develop professional state apparatus on agriculture, self-reliance farmers, and strong agricultural institution</p>	<ol style="list-style-type: none"> 1. Upgrading state apparatus capability 2. Improving farmers' self-reliant and capability 3. Strengthening agricultural institutions 4. Revitalizing agricultural extension 	<ol style="list-style-type: none"> 1. Implementation of clean, transparent and free from corruption collusion and nepotism (KKN) of agricultural development management, followed by application of reward & punishment 2. Improvement of moral and competence of state apparatuses on agriculture 3. Education for farmers in agriculture 4. Increasing community participation in agricultural development 5. Strengthening extension institutions 6. Strengthening farmers organizations/institutions (economics, social, , advocacy and resources) 	<ol style="list-style-type: none"> 1. Development of state apparatuses on agriculture 2. Farmers empowerment 3. Institutional development 	<ol style="list-style-type: none"> 1. Education of national & local state apparatuses on agriculture 2. Technical and management training as well as moral development of state apparatuses on agriculture 3. Improvement of farmer entrepreneurship thru educational equivalence 4. Medium level education for youth farmers 5. Strengthening extension institutions 6. Development of extension, training and farmers assistantship 7. Strengthening and facilitating the establishment of farmers institutions 8. Carrying out domestic and international HRD collaboration as well as agricultural partnership



Objectives	Strategies	Policies	Sub Programs	Action Plans
<p>2. To improve sustainable agricultural resources utilization</p>	<ol style="list-style-type: none"> 1. Consolidating agricultural land reform management 2. Optimizing land utilization 3. Agricultural land expansion, particularly outside of Java 4. Natural resources conservation 5. Sustaining and utilizing biological resources 6. Minimizing growth of agricultural land conversion into non-agricultural purposes 	<ol style="list-style-type: none"> 1. Increasing private sector investment 2. Management of land property right and use for farmers 3. Management of agricultural land inheriting system 4. Commodity zoning policy 5. Application of traditional law on land management 6. Application of absolute agricultural land 7. Law enforcement consequently on land use management 8. Land and biological resources management sustainability 	<ol style="list-style-type: none"> 1. Increasing food production and availability 2. Development of food diversification production and consumption 3. Development and dissemination of agricultural innovation to support food security 4. Strengthening agricultural development management 	<ol style="list-style-type: none"> 1. Increasing production and productivity 2. Expansion of paddy land 3. Development of land use and water management 4. Inventory and evaluation of agricultural resources 5. Development of technology to increase paddy land and marginal land productivity 6. Development of technology and rehabilitation of marginal land and river basin areas 7. Development of competitive commodity based on commodity zoning 8. Policy formulation on land use and progressive tax application for land 9. Advocating land property right, land certification & preventing agricultural land conversion 10. Sustaining and utilizing agricultural genetic and resources 11. Harmonizing policies and programs of agricultural resources utilization

Objectives	Strategies	Policies	Sub Programs	Action Plans
<p>3. To strengthen food security, and food safety</p>	<ol style="list-style-type: none"> 1. Increasing food production and availability 2. Improving food distribution system 3. Developing food production and consumption diversification 4. Increasing facilities and infrastructure to support food security 	<ol style="list-style-type: none"> 1. Increasing national food production capacity 2. Securing food stock and availability 3. Securing distribution and accessible of qualified, safe, healthy and <i>halal</i> food 4. Diversification of food production and consumption based on local resources. 5. Policy on production incentive 6. Community empowerment to overcome food shortage 	<ol style="list-style-type: none"> 1. Increasing food production and availability 2. Development of food diversification on production and consumption 3. Standardization of food quality and safety 4. Decreasing food shortage 5. Development and dissemination of agricultural innovation to support food security 6. Strengthening agricultural development management 	<ol style="list-style-type: none"> 1. Intensification and expansion of staple food production 2. Development of local food source alternatives 3. Development of non-rice local food consumption pattern 4. Development and rehabilitation of irrigation networks 5. Development of farms road 6. Facilitating production equipment and machineries provision system 7. Development of capital networks 8. Seed development 9. Facilitating production inputs subsidy 10. Development of agricultural equipment machineries services 11. Formulating food pricing policy 12. Managing food trading mechanism 13. Safeguarding agricultural production and quarantine 14. Formulation and application of food quality and safety standard 15. Development of nutrient and food early warning system



Objectives	Strategies	Policies	Sub Programs	Action Plans
				<ol style="list-style-type: none">1. Strengthening community-based food security institution2. Development of waste reduction yield technology.3. Development of land resources technology4. Development of traditional food processing technology5. Development of food quality improvement and safety technology6. Harmonizing policy and program of food security enhancement

Objectives	Strategies	Policies	Sub Programs	Action Plans
<p>4. To improve competitiveness and value added of agricultural products</p>	<ol style="list-style-type: none"> 1. Expanding innovation and dissemination of appropriate technologies 2. Increasing and empowering agricultural human resources 3. Product development based on market demand 4. Improving efficiency of agricultural production and product supply chain management 5. Increasing business diversification based on regional comparative advantages 	<ol style="list-style-type: none"> 1. Development of agricultural technology, extension, assistantship, education and training 2. Increasing managerial skills capacity of farmers and entrepreneurs 3. Market intelligence development 4. Scaling up agribusiness scopes and sizes 5. Development of competitive commodities industrial cluster 6. Increasing production and productivity 	<ol style="list-style-type: none"> 1. Enhancement of agricultural production, product quality and business efficiency 2. Agro-industrial development in rural areas 3. Market development of agricultural products 4. Development and dissemination of agricultural innovation to increase added value and competitiveness 5. Strengthening agricultural development management 6. Development of commercial agriculture 	<ol style="list-style-type: none"> 1. Formulation of area-based commodity mapping 2. Development of livestock competitive variety/ breeding 3. Development of agricultural commodities production system improvement technology 4. Development of agricultural mechanization technology to increase efficiency and productivity, as well as use of renewable energy sources 5. Biotechnology utilization to improve crops and livestock quality 6. Application of post harvest technology 7. Agro industrial development in production centers areas 8. Development of local specific commercial commodities 9. Technical guidance and Good agriculture practices (GAP) application 10. Development of institution & market information 11. Study on social and economic aspects, as well as commercial agriculture commodities policy



Objectives	Strategies	Policies	Sub Programs	Action Plans
				<ol style="list-style-type: none"> 1. Commercial agriculture production protection & quarantine 2. Adjustment on import tariff and export subsidy policies 3. Development of international trade cooperation. 4. Socialization and application of quarantine and SPS (sanitary & phyto-sanitary) rules 5. Increasing quantity and quality of agricultural product quality and equipment controller & investigator staffs 6. Development of quality assurance system institution 7. Development of business partnership scheme in agricultural sector 8. Development of Contract Farming Scheme 9. Development of Agricultural Promotion

Objectives	Strategies	Policies	Sub Programs	Action Plans
<p>5. To promote agricultural activities that will stimulate rural economic activities</p>	<ol style="list-style-type: none"> 1. Increasing capacity and empowering rural agricultural human resources 2. Increasing the provision of rural agricultural facilities and infrastructure 3. Increasing innovation and dissemination of appropriate technologies 4. Developing a conducive business environment 5. Encouraging diversification of production and processing of agricultural products 6. Expanding and utilizing sustainable production-base 	<ol style="list-style-type: none"> 1. Development of agricultural extension, assistantship, education and training 2. Development of agriculture facilities and infrastructure, financial institutions, as well as product processing and marketing 3. Development of agricultural innovation dissemination of local specific technology 4. Development of mutual business partnership 5. Development and application of agricultural processing technology 6. Development of business incentives and agricultural investment 	<ol style="list-style-type: none"> 1. Enhancement of agricultural production, product quality and business efficiency 2. Agro-industrial development in rural areas 3. Development of agricultural facilities and infrastructure 4. Increasing farmers access on productive resources 5. Development of local specific agricultural technologies 6. Development of institution 	<ol style="list-style-type: none"> 1. Development of competitive commodities production centers 2. Development of seed industry 3. Development of rural market information networks 4. Development of rural agricultural products processing and marketing 5. Development of rural infrastructure 6. Facilitating investment and business partnership 7. Protection of business 8. Extension, assistantship, education and entrepreneurship training 9. Development of agricultural local specific innovation 10. Development of rural agricultural institutions (financial institution, kiosk, services, cooperatives, association)



Objectives	Strategies	Policies	Sub Programs	Action Plans
<p>6. To develop farmers oriented management system for agricultural development</p>	<ol style="list-style-type: none"> 1. Implementing professional, clean, care, transparent and free from corruption, collusion and nepotism agricultural development management 2. Developing participatory and integrative agricultural development planning system 3. Strengthening coordination in formulating agricultural development policy and management 4. Developing coordination networks among various institutions and stakeholders 5. Formulating agricultural legal basis in favor of farmers 6. Developing effective system of evaluation, supervision and control on agricultural development. 	<ol style="list-style-type: none"> 1. Improvement of state apparatus, followed by application of reward and punishment consistently 2. Upgrading planner' capacity at all levels 3. Harmonization of agricultural development among sectors and regions 4. Increasing transparency in formulating agricultural development management and policy 5. Formulating policy to regulate and encourage law enforcement in favor of farmers 6. Development of effective, efficient and accountable working mechanism and system 7. Increasing evaluation, supervision and control of agricultural development management 	<ol style="list-style-type: none"> 1. Institutional development 2. Development of state apparatuses 3. Development of agricultural development management 4. Special efforts on poverty alleviation 	<ol style="list-style-type: none"> 1. Up grading state apparatuses professionalism through firm application of incentives and disincentive system 2. Participatory planning through education, training & assistantship system 3. Harmonization of policies and programs among various institutions at central and regional through participatory approaches. 4. Increasing community participation in policy formulation, planning and controlling 5. Disseminating information and advocacy of agricultural development policies and programs 6. Formulating and advocating farmers protection policies 7. Development of agricultural development management procedures and system 8. Monitoring and evaluation of agricultural development program 9. Increasing role of auditor in increasing agricultural development performance 10. Implementation and expansion of domestic and international cooperation networks 11. Coordinating national policy on poverty alleviation

Annex 3: Commodity Focus

- 1. Food Crops** : Paddy, Corn, Soybean, Groundnut, Cassava

- 2. Horticulture** : Potato, Chilly, Shallot, Mango, Mangosteen, Banana, Durian, Orange, Orchid, *Rimpang*.

- 3. Estate Crops** : Rubber, Coconut, Oil Palm, Coffee, Cacao, Cashew Nut, Pepper, Sugarcane, Fiber, Tobacco

- 4. Livestock** : Cattle, Goat, Sheep, Native Chicken, Duck, Pig.



Table 1: Growth Target of Agriculture Sector GDP for 2005-2009 (%)

Year	Food Crops	Horticulture	Estate Crops	Livestock	Agriculture	Fishery	Forestry	Entire Agriculture
2005	0.91	2.86	6.01	4.11	2.97	5.22	2.49	3.20
2006	1.03	2.93	6.19	4.28	3.17	5.39	2.65	3.40
2007	1.08	3.27	6.36	4.45	3.37	5.56	2.82	3.60
2008	0.99	3.29	6.32	4.42	3.37	5.52	2.79	3.60
2009	0.43	4.57	6.49	4.58	3.58	5.69	2.95	3.80
Average	0.89	3.38	6.27	4.37	3.29	5.48	2.74	3.52

Note: Entire Agriculture Growth target is determined by RPJMN (2004)

Table 2: Growth Target of Agriculture Sector GDP for 2005-2009, at 2000 Constant Price (RP Billion)

Year	Food Crops	Horticulture	Estate Crops	Livestock	Agriculture	Fishery	Forestry	Entire Agriculture
2005	76,500	45,800	47,511	28,149	197,960	31,803	23,830	253,592
2006	77,290	47,142	50,449	29,354	204,236	33,517	24,462	262,214
2007	78,123	48,683	53,656	30,661	211,123	35,380	25,152	271,654
2008	78,900	50,284	57,049	32,015	218,247	37,334	25,852	281,434
2009	79,236	52,581	60,753	33,482	226,053	39,460	26,615	292,128

Table 3: Target of Investment Need targets of Agriculture Sector for 2005-2009, at 2000 Constant Price (RP Billion)

Year	Food Crops	Horticulture	Estate Crops	Livestock	Total
2005	4,983	1,904	3,557	2,923	13,368
2006	5,013	1,954	3,818	3,069	13,854
2007	5,060	1,987	4,104	3,226	14,377
2008	5,124	2,051	4,355	3,364	14,893
2009	5,243	2,020	4,686	3,541	15,490
Average	5,085	1,983	4,104	3,224	14,397
Total	30,508	9,916	20,521	16,122	77,067
Growth Rate (%)	1.31	1.53	7.93	5.28	3.97

Table 4: Agriculture Sector Employment Absorption Target for 2005-2009 (Persons)

Year	Food Crops	Horticulture	Estate Crops	Livestock	Agriculture	National Target*)	% to National Target
2005	27,224,152	3,376,871	6,329,315	4,342,799	41,273,136	44.10	94.23
2006	26,853,544	3,698,352	6,661,774	4,644,976	41,858,646	44.90	94.28
2007	26,521,174	4,059,749	7,038,345	4,993,138	42,612,406	45.50	94.91
2008	26,267,191	4,476,104	7,466,750	5,388,139	43,598,184	45.90	96.03
2009	25,913,000	4,924,066	7,903,428	5,801,321	44,541,816	46.20	97.47
Growth Rate (%)	(1.23)	9.89	5.71	7.51	1.92	1.07	0.86

Note: *) Entire Agriculture Sector Employment Absorption Target in RPJMN (Million Persons).

Table 5: Food Crops Production Target for 2005-2009

Year	Paddy	Corn	Soybean	Groundnut	Cassava	Sweet Potato
Production (ton)						
2004	54,340,000	11,350,000	730,000	830,000	19,510,000	1,880,000
2005	55,030,040	11,815,184	777,425	832,490	19,574,616	1,884,700
2006	55,717,916	12,312,218	827,930	835,404	19,653,298	1,890,354
2007	56,386,531	12,843,292	881,717	838,829	19,745,887	1,896,970
2008	57,051,892	13,385,861	938,998	844,281	19,815,385	1,904,558
2009	57,707,989	13,965,181	1,000,000	850,276	19,898,173	1,913,129
Growth (%)						
2005	1.27	4.10	6.50	0.30	0.33	0.25
2006	1.25	4.21	6.50	0.35	0.40	0.30
2007	1.20	4.31	6.50	0.41	0.47	0.35
2008	1.18	4.22	6.50	0.65	0.35	0.40
2009	1.15	4.33	6.50	0.71	0.42	0.45
Average (%)	1.21	4.23	6.50	0.48	0.39	0.35

Table 6: Vegetables Production Target for 2005-2009

Year	Potato	Chili	Shallot	Cabbage	Tomato	Carrot
Production (ton)						
2004	1,011,000	1,069,000	764,000	1,350,000	696,000	357,000
2005	1,049,154	1,101,391	818,767	1,401,435	729,957	373,172
2006	1,089,041	1,134,432	880,093	1,453,989	765,288	389,704
2007	1,130,550	1,168,125	948,689	1,507,496	801,887	406,500
2008	1,170,166	1,202,468	1,022,399	1,558,750	837,209	422,232
2009	1,210,944	1,235,656	1,104,658	1,610,345	873,356	437,939
Growth Rate (%)						
2005	3.77	3.03	7.17	3.81	4.88	4.53
2006	3.80	3.00	7.49	3.75	4.84	4.43
2007	3.81	2.97	7.79	3.68	4.78	4.31
2008	3.50	2.94	7.77	3.40	4.40	3.87
2009	3.48	2.76	8.05	3.31	4.32	3.72
Average(%)	3.68	2.74	7.65	3.59	4.64	4.17

Table 7: Fruits Production Target for 2005-2009

Year	Banana	Mango	Orange	Durian	Papaya	Pineapple	Avocado
Production (ton)							
2004	4,239,000	1,565,000	1,559,000	765,000	630,000	702,000	280,000
2005	4,529,531	1,675,176	1,617,307	823,523	665,154	739,346	297,752
2006	4,856,928	1,794,784	1,676,338	890,475	704,465	780,602	317,612
2007	5,225,021	1,925,623	1,735,513	967,590	747,648	825,721	339,750
2008	5,621,967	2,069,852	1,789,314	1,054,286	794,750	875,512	363,328
2009	6,066,831	2,231,095	1,840,309	1,145,587	847,760	931,807	389,524
Growth Rate (%)							
2005	6.85	7.04	3.74	7.65	5.58	5.32	6.34
2006	7.23	7.14	3.65	8.13	5.91	5.58	6.67
2007	7.58	7.29	3.53	8.66	6.13	5.78	6.97
2008	7.60	7.49	3.10	8.96	6.30	6.03	6.94
2009	7.91	7.79	2.85	8.66	6.67	6.43	7.21
Average (%)	7.43	7.35	3.37	8.41	6.12	5.83	6.83

Table 8: Estate Crops Production Target for 2005-2009

Year	Oil Palm	Rubber	Cacao	Coffee	Coconut	Sugarcane	Tobacco	Pepper
Production (ton)								
2004	12,384,798	1,851,192	601,272	720,635	3,261,544	2,020,000	218,604	94,834
2005	13,148,940	1,948,009	636,927	752,559	3,292,529	2,164,632	234,169	100,619
2006	13,961,545	2,049,306	672,341	785,672	3,321,503	2,318,970	250,795	107,009
2007	14,827,160	2,154,845	707,302	820,006	3,348,075	2,483,617	268,350	114,056
2008	15,750,892	2,242,978	742,667	855,676	3,371,846	2,659,209	287,081	121,574
2009	16,735,323	2,339,426	778,315	892,470	3,392,415	2,845,354	307,062	129,827
Growth Rate (%)								
2005	6.17	5.23	5.93	4.43	0.95	7.16	7.12	6.10
2006	6.18	5.20	5.56	4.40	0.88	7.13	7.10	6.35
2007	6.20	5.15	5.20	4.37	0.80	7.10	7.00	6.59
2008	6.23	4.09	5.00	4.35	0.71	7.07	6.98	6.59
2009	6.25	4.30	4.80	4.30	0.61	7.00	6.96	6.79
Average (%)	6.21	4.79	5.30	4.37	0.79	7.09	7.03	6.48



Table 9: Livestock Production Target for 2005-2009

Year	Beef	Buffalo	Horse	Pork	Goat	Lamb	Poultry	Egg	Milk
Production (ton)									
2004	380,060	45,520	1,598	185,652	69,628	84,550	1,396,383	1,051,365	596,304
2005	391,880	45,816	1,600	190,665	71,229	87,174	1,524,152	1,141,270	656,829
2006	403,911	46,123	1,601	195,527	72,761	89,905	1,654,467	1,240,793	723,825
2007	416,109	46,436	1,602	200,219	74,216	92,725	1,781,033	1,350,776	798,018
2008	428,467	46,757	1,603	204,724	75,589	95,393	1,901,253	1,468,684	880,213
2009	440,893	47,084	1,604	209,023	76,874	98,098	2,014,378	1,598,269	971,315
Growth Rate (%)									
2005	3.11	0.65	0.10	2.70	2.30	3.10	9.15	8.55	10.15
2006	3.07	0.67	0.09	2.55	2.15	3.13	8.55	8.72	10.20
2007	3.02	0.68	0.08	2.40	2.00	3.14	7.65	8.86	10.25
2008	2.97	0.69	0.07	2.25	1.85	2.88	6.75	8.73	10.30
2009	2.90	0.70	0.06	2.10	1.70	2.84	5.95	8.82	10.35
Average (%)	3.01	0.68	0.08	2.40	2.00	3.02	7.61	8.74	10.25

Table 10: Main Food Balance Target for 2005-2009

Year	Production (000 t)	Growth (%)	Consumption (000 t)	Growth (%)	Balance (000 t)	% to consumption
Rice						
2005	35,770	1.27	36,082	0.98	-313	-0.87
2006	36,217	1.25	36,483	1.11	-266	-0.73
2007	36,651	1.20	36,933	1.23	-282	-0.76
2008	37,084	1.18	37,425	1.33	-341	-0.91
2009	37,510	1.15	37,955	1.42	-445	-1.17
Average (%)		1.21		1.21		-0.89
Corn						
2005	11,815	4.10	12,135	2.60	-320	-2.64
2006	12,312	4.21	12,478	2.83	-166	-1.33
2007	12,843	4.31	12,857	3.04	-14	-0.11
2008	13,386	4.22	13,270	3.21	116	0.87
2009	13,965	4.33	13,716	3.36	250	1.82
Average (%)		4.23		3.01		-0.28
Soyebean						
2005	777	6.50	2,388	1.34	-1,611	-67.45
2006	828	6.50	2,426	1.56	-1,598	-65.87
2007	882	6.50	2,468	1.77	-1,587	-64.28
2008	939	6.50	2,516	1.93	-1,577	-62.68
2009	1,000	6.50	2,568	2.07	-1,568	-61.06
Average (%)		6.50		1.74		-64.27
Sugar						
2005	2,165	7.16	3,299	2.95	-1,134	-34.38
2006	2,319	7.13	3,407	3.30	-1,088	-31.94
2007	2,484	7.10	3,531	3.62	-1,047	-29.66
2008	2,659	7.07	3,668	3.88	-1,008	-27.50
2009	2,845	7.00	3,818	4.11	-973	-25.48
Average (%)		7.09		3.57		-29.79

Table 11: Agriculture Export Target for 2005-2009 (US\$)

Year	Food Crops	Estate Crops	Livestock	Total
2005	61,588,011	7,529,970,129	234,967,344	7,826,525,484
2006	56,147,121	8,434,804,372	268,796,989	8,759,748,483
2007	51,418,561	9,450,749,585	307,497,289	9,809,665,435
2008	47,263,744	10,591,585,442	351,769,501	10,990,618,687
2009	43,577,031	11,872,811,663	402,415,846	12,318,804,540
Average	51,998,894	9,575,984,238	313,089,394	9,941,072,526
Growth Rate (%)	(7.31)	14.42	17.82	14.35
Total	311,993,354	47,879,921,190	1,565,446,970	49,705,362,629

Table 12: Agriculture Import Target for 2005-2009 (US\$)

Year	Food Crops	Estate Crops	Livestock	Total
2005	1,754,019,780	1,189,147,659	998,862,453	3,942,029,891
2006	1,788,687,432	1,186,211,439	1,100,499,875	4,075,398,746
2007	1,832,595,803	1,183,282,468	1,214,337,150	4,230,215,421
2008	1,885,187,736	1,180,360,730	1,341,882,483	4,407,430,949
2009	1,946,024,891	1,177,446,206	1,484,831,428	4,608,302,525
Average	1,841,303,128	1,183,289,700	1,228,082,678	4,252,675,506
Growth Rate (%)	2.74	(0.25)	12.16	4.23
Total	9,206,515,642	5,916,448,502	6,140,413,388	21,263,377,532

Table 13: Target of Agriculture Commodity Trade Balance for 2005-2009 (US\$)

Year	Food Crops	Estate Crops	Livestock	Total
2005	(1,692,431,769)	6,340,822,470	(763,895,108)	3,884,495,593
2006	(1,732,540,311)	7,248,592,934	(831,702,886)	4,684,349,737
2007	(1,781,177,242)	8,267,467,117	(906,839,861)	5,579,450,014
2008	(1,837,923,992)	9,411,224,712	(990,112,981)	6,583,187,738
2009	(1,902,447,860)	10,695,365,456	(1,082,415,581)	7,710,502,015
Average	(1,789,304,235)	8,392,694,538	(914,993,283)	5,688,397,019
Growth Rate (%)	3.10	17.17	10.42	24.62
Total	-8,946,521,174	41,963,472,688	-4,574,966,417	28,441,985,097



Table 14: Target of Agriculture Employment Productivity for 2005-2009 (RP/Person/Year)

Year	Food Crops	Horticulture	Estate Crops	Livestock	Agriculture	% Growth Rate
2005	2,810,005	13,562,853	7,506,500	6,481,765	4,796,340	1.30
2006	2,878,205	12,746,759	7,572,908	6,319,516	4,879,183	1.73
2007	2,945,684	11,991,627	7,623,383	6,140,628	4,954,496	1.54
2008	3,003,747	11,233,877	7,640,406	5,941,754	5,005,874	1.04
2009	3,057,770	10,678,370	7,686,917	5,771,444	5,075,074	1.38
Average	2,939,082	12,042,697	7,606,023	6,131,021	4,942,193	1.40

Table 15: Poor Reduction Target in Rural Areas for 2005-2009 (%)

Year	Percentage of Poor People
2005	18.90
2006	17.92
2007	16.94
2008	15.95
2009	15.02



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