

the community to carry out the planning, implementation and evaluation of development programs together.

Budget

The total budget for this project, which will be implemented in 3 years is US\$ 7.5 billion, which can be broken down as follows:

First year : Approximately US\$ 2.6 billion
Second year : Approximately US\$ 1.4 billion
Third year : Approximately US\$ 3.5 billion

c. Cattle farming using integrated breeding center village pattern and crops-livestock system

Objective: to develop a system toward the production of free diseases livestock

Introduction

Farm development is a part of an important national development. The objective of livestock development is to improve of the excellence human resource quality, increase farmers income and welfare, environmental protection and increase state revenues. An ecologically, economically and sustainably sound farming system is developed for food security and poverty alleviation, especially for the facility limited farmers and community, with the development opportunity given to large-scale farming industry as well. The challenge of livestock development is more because of an economy globalization, which will become a threat if Indonesia continually importing farm products and technologies. At the same time globalization is also an opportunity for the livestock industry if we can produce high quality, clean and healthy livestock products and free from diseases.

Based on Livestock Statistics in 2005, Indonesia's exports grew by 17% per year. The Islamic world also expects Indonesia as a livestock exporter in accordance with the Islamic rules. Dependency on imports will be a threat if the independent productive effort, move the production process to meet the needs, can not be met domestically.

Factor in the country which have obstructed the growth of the livestock sector, among others are:

- The structure of the livestock industry that largely remains in the form of community business which are characterized by low education and income levels of farmers, management practices and technologies that are still conventional, widespread farm location, business size is relatively small, and procurement of main inputs namely HMT Forage Livestock Foods (HMT) are still dependent on season, availability of family labor, as well as a limited tenure for HMT.
- Availability of good quality seeds that are not accessible by farmers because the research on livestock breeding that have been carried out on a large scale have not been socialized. This was due to communication failure of the R & D with the rancher, and also with both Research Agency of the Ministry of Agriculture and Higher Education. In addition, farmers also have no incentive to adopt new technologies that will be accompanied by an increase in costs

- Agro-farms have not been able to move the livestock sector, for example the dairy processing industry that most are still use the input from the origin country, like the hospitality industry that still requires imported meat.
- Heavy imports of illegal farm products
- Catastrophic diseases (anthrax outbreaks)
- High dependency on feed raw material

Goals of the Project

- Establishment of cattle breeding communities that implement good and correct cultivation technology in the Village Breeding Centre (VBC) pattern to keep the local cattle seed.
- Support and join the Program of Beef Self fulfillment 2014 (PSDS 2014)
- Save the seeds of local cattle
- Improve the farmers ability to manage cattle fattening and breeding both in terms of feed managing and reproductive health of cows and health of seeds

Methods

Livestock development is a shared responsibility among government, public and private sectors. All those three managerial components is necessarily synergize each other to build a structured institutional. A good structure body is aimed to optimize the utilization of various owned resources in the development of expected farming systems. Therefore, livestock restructuring should focus on institutional that are able to:

1. Provide adequate and continuous seeds
2. Achieve adequate and ease of feed acquisition and medicines
3. Profitable marketing for actors.

Institutional that each component will synergize very well will generate the development of the livestock industrial area from upstream to downstream industry that are able to make the people prosperous and supports PSDS-2014.

Distribution of institutional tasks in each synergy work is as follows:

- Government organized setting, guidance, control and supervision to the availability of adequate farm products, both quantity and quality, safe, nutritious, varied and uneven.
- Private and the public have the opportunity to take part in realizing the adequacy of farm products; can be by doing production, trade and distribution of livestock products.

On the other hand, Indonesia with a population reaching 223 million people with population growth rate of 1.01 percent per year (Ditjenak, 2006), is a potential market that want to be targeted by world's food producer from several countries including livestock feed products. It needs to search for a model development and the appropriate institutional and economically advantageous in the application of the model (Ilham, 2006) to build a system capable wisely to accommodate various interests and beneficial for the actors in its operation. Thus the institutional development model can improve the welfare of the community and developing the Human Resources (HR) quality through food security program in providing foodstuffs of animal protein that Safe, Healthy, Whole and allowed in accordance with islamic rules/ halal (ASUH).

Welfare of the community can improve the ability of purchasing power and ability to provide and distribute farm products throughout the archipelago throughout the year. Ministry of Agriculture will perform the update data of cattle population held in the 33 provinces, 471 districts/municipalities, 6548 sub-districts, and 78,732 villages. The Work has been carried out in collaboration with the BPS (Central Bureau of Statistics). Although there are still many farms in Indonesia supported by traditional breeding, but they were one of the important role of the sustainability of farm holders Indonesia, therefore it is needed a special attention to the traditional farmers to improve the quality of their livestock by government and farm experts intervention via operational of Village Breeding Center (VBC).

One of the government programs that is a collaboration between the Directorate General of Livestock, Ministry of Agriculture, with the Directorate of Higher Education, Ministry of Education to promote small-holder livestock is a “Livestock Bachelor Degree Enters Villages (SMD)” program. Undergraduate candidates are attempted to raise livestock farms in Indonesia by contributing in promoting livestock, one of which through the program of SMD which has been running since 2008.

Phase of Activity

VBC development stage that meets national standards take three years project with the following stages:

First Year:

- Planning and coordination
- Feasibility Study
- Detailed Engineering Design

Second Year:

- Construction and installation of cages cattle and the calves
- Certification beef for cultivation and the prospective parent (heifers).
- Running test
- Evaluation and improvement

Third Year:

- Full Operation/production of VBC

Expected results

The most often found in people’s farm in Indonesia is the low-income farmers contrary with the expensive price of meat. Therefore, VBC program is expected to be a program that is able to realize the local cattle breeding center based on traditional livestock. This traditional livestock plays an important role to hold the sustainability farms in Indonesia, with good quality cattle as a result of the Cattle Farming Method implementation following the guidelines of Good Breeding Practices (GBP). It is mentioned in the Agriculture Ministerial Regulation No. 54/Permentan/Ot.140/10/2006 about the GBP and must have been achieved at the latest by 2014 according to PSDS 2014.

Budget

The cost can access needed costs by the NTB provincial government in launching the concept of “earth with a million cattle” that is considered to help fulfilling cattle need in Indonesia and support to meet the national self-sufficient program in 2014. Earth with a million cattle is a flagship program of NTB Governor, Muhammad Zainul Majdi, and his Deputy, Badrul Munir. Data from the Office of Animal Husbandry and Health said that cattle population is about 546,114 by 2008 with the percentage of parent cow of about 37.36% from the population. The birth rate reaches 66.7% of the total parents with the calf mortality of about 20% of all born calf. The recent population of calf is 101,239 with the total slaughter of productive female cattle is not more than 20% of all cattle slaughtered. In NTB, the total slaughtered cattle is of about 41,575 and cattle that are sent out of NTB reaches 28,500.

In accordance to the PSDS 2014, the Directorate General of Animal Husbandry in collaboration with the Central Bureau of Statistics will record over centers of cattle breeding in Indonesia to update the data. Cattle that will be recorded is that afforded by households and legal entities, whose purpose is for business, trade, and transportation. Data collection conducted in this year (2012) is not the first time data collection. Previously, the government has had a cattle population data obtained from cattle census in the past years. Updating the cow data only renew the PTS (cattle keepers) database by visiting the owner of livestock.

NTB provincial government which is as one of cow breeding centers as seen in the national map of local cattle seeds source of in Indonesia (Table A-4) has also launched a concept of Earth With a Million Cattle that was approved by the President of Indonesia. However, this concept will be a cooperation work between Australian Government with local government of NTB province.

Table A- 7 Sources of local cattle breeders in Indonesia

No.	Type of Local Cattle	Breeding Location
1.	Bali	Bali, NTB, Kalsel, Sulbar, Sulsel, Sultra, Gorontalo
2.	Cattle of PO	Sumut, Jabar, Jateng, Jatim, Sulut
3.	Cattle of Madura	Madura
4.	Cattle of Aceh	Aceh
5.	Cattle of Coasal area	Sumbar
6.	Cattle of Bali dan PO	Sumsel, Lampung dan Sulteng
7.	Cattle of PO dan SO	NTT

Sources: Directorate of Breeding, Directorate General of Animal Husbandry

Annex 3.2. Project Ideas for Water Resources

a. Project idea for rain harvesting technology via reservoir

Objective:

To extend water availability for agricultural needs at the dry area by implementing rain harvesting system