

# THE CONTRIBUTION OF LOCAL LIVESTOCK IN SUPPORTING THE ADEQUACY OF ANIMAL PROTEIN TO FACE THE GLOBAL COMPETITION IN ASEAN ECONOMIC COMMUNITY (AEC)

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## ABSTRACT

*Livestock as a component of food needs, has an important role in relation as a source of protein in the future. Animal protein has a huge benefit in building the tenacity of food and creates the Human Resources that healthy and intelligent. The important factor to ensure the endurance and self-sufficiency, particularly in the sub - sector of the livestock is the provision of seeds and/or seedlings livestock, animal feed, and facilities that support it. Consider that, the biggest of the role of foods from animal to improve the quality and productivity of Human Resources, so, in improving the consumption is not only responsible farm' stakeholder but various stakeholders. Increasing national income in five years on the prices and increasing the segment of the middle class population also will be a driver of the increasing food need to be met from domestic production in order to ensure the endurance and self-sufficiency in Indonesia. Indonesia as an agricultural country has potential to produce local livestock until it can contribute in supporting the adequate of animal protein to face the global competition of the economic community, ASEAN to consider that, there are sources of local livestock in each region that enough for reliable through the use of local livestock as plasma of original livestock and local Indonesia.*

*Keywords: Local livestock, animal protein, the ASEAN Economic Community*

## I. INTRODUCTION

Facing the global competition in terms of trade in ASEAN, Aceh has a strategic role. It is related to the geographic position of Aceh province, which borders directly with the ASEAN countries, especially the sea trade lines. With the economic integration, ASEAN will become a single market and a base of the single production that where will occur the flow of goods, services, investment and labor freely between of ASEAN countries. If we are ready, it will open the opportunities for Indonesia to improve its market in the ASEAN. Vice versa, if we do not prepare well, Indonesia would like to be a market for commodity ASEAN countries.

Food self-sufficiency is an important aspect of the existence of a nation in global competition getting tighter. For Indonesia, food self-sufficiency is important considering that Indonesia has a population more than 237 million inhabitants with a population growth of 1.49% per year. The larger of number this population as a basis for economic development, but also it needs to be considered food insecure, mainly the food from animal protein sources

such as livestock and fishery products in order to support the adequacy of animal protein for the society of Indonesia and the ASEAN economic community more large.

Indonesia is also expected to reach the top of "demographic bonus" in 2017 until 2020. It means, the composition of the population in productive age 15-64 years to reach the point of maximum, compared with the nonproductive age 0-14 years and 65 years after. Besides that, it is going to trigger the economic growth, the magnitude of productive age population also means the level of consumption of the population, including food consumption. It also increased national income in five years on prices up RP 6.1 million in 2000 to RP 32.4 million in 2013, and the increasing of the middle class segment of the population will also be a trigger of the increasing needs for food to be met from domestic production in order to ensure the resilience and self-sufficiency in Indonesia to face the global competition of the ASEAN economic community (AEC). To complete the food needs, it is not merely to meet the biological needs, but linked to the dignity of our humanity in a social perspective (Hafsah, 2011).

The growth population and increased prosperity will not only create an increasing in demand of food in terms of numbers, but also followed by an increasing of the aspect of quality, safety, health and wholeness and food allowed. In the other hand, we are faced with several obstacles to meet that demand, such as the availability of land and water, as well as the challenge of global climate change. By the publication of the OECD-FAO Agricultural Outlook (2013), stated that, global meat consumption in five years, it is expected to reach 36.3 kg in 2023. The global meat production is projected to increase by 1.6% per year until 2023, but this growth is smaller than the growth in the last ten years which grew by 2.3% per year. It is driven by demand preference of the poultry, meats will has an important role in the world of meat production in the future. The nominal price of meat is also expected to remain high until 2023, it is driven by high feed prices and input costs (energy, labor, water and land). For the milk products, the projected of growth rate on average is estimated at 1.9% per year, it is lower than the growth in the last 10 years by 2.2%. The slow growth caused by shortage of water resource and suitable land in developing countries and the slow introduction of modern milk production system.

In connection with that matter, it needs to be pursued the alternatives in meet demand and face global competition ASEAN economic community from domestic production in order to ensure the resilience and self-sufficiency in Indonesia as one of them through the provision of local livestock as a mainstay in meeting the sufficiency of animal protein (eggs, meat, and milk).

## **II. ANIMAL PROTEIN CONSUMPTION**

Animal protein has a considerable benefit in building food endurance and creates healthy and intelligent Human Resources. UNICEF recognizes that, the nutrition is based on the protein supply has contributed about 50% of economic growth in developed countries. The nutrient content of animal protein, either eggs or meat is higher than the food of the most popular Indonesian society such as *Tempe* (fermented soya bean) and milk. Approximately 12.5% of egg protein, chicken meat reached 18.5%, while vegetable protein such as *Tempe*

and *Tahu* (Tofu) respectively only consist 11% and 7.5% (Daryanto, 2009). Comparing with a few countries in the world, consumption of animal protein in Indonesian is far below.

According to FAO in 2010 the average consumption of Indonesian animal protein in 2005-2007 is about 56 gr/cap/ day, Malaysia (79), Thailand (57), Philippines (59), and Vietnam (72). If it is compared to some European countries, such as, Denmark (111), France (113), and American (114). The low consumption of animal protein in Indonesia, it is caused by the weak purchasing power of Indonesian. In economics, the weakness of Indonesia's purchasing power because the low society income with the uncertain economic conditions caused by international price fluctuations. There are other factors that also considered, such as, the lack of socialization aware of nutrition, so that, it is not wonder that, if the public awareness of animal protein nutrition is low. Therefore, the government should support the increasing consumption of animal protein and parallel with the public nutrition improvement program.

Table 1. The consumption of animal protein in a few countries in the world

Protein consumption (g/capita/day)				
Countries	1990-92	1995-97	2000-02	2005-07
Bangladesh	42	42	47	49
Brazil	68	77	80	84
Brunei Darussalam	78	89	88	87
China	67	81	86	89
Denmark	100	104	107	111
Egypt	82	88	90	91
France	117	115	119	113
Germany	97	94	99	99
India	56	56	55	56
Indonesia	50	56	54	56
Iran (Islamic Republic of)	79	81	83	84
Israel	113	114	122	126
Italy	111	109	115	112
Japan	96	96	95	92
Malaysia	67	77	76	79
New Zealand	98	100	90	94
Pakistan	56	60	59	57
Philippines	52	54	56	59
South Africa	74	73	76	81
Spain	106	108	112	108
Sri Lanka	48	51	54	55
Thailand	53	58	57	57
United Arab Emirates	102	103	102	104
United Kingdom	93	95	101	104
United States of America	109	111	113	114
Viet Nam	49	55	62	72

The low intake of animal protein at the level of households it effects to appear the cases of malnutrition, the effect of brain growth children, the increased risk of illness, the effect of mental development, and decreased the worker productivity. Considered that, the relative size

of the role of foods from animal to improving the quality and productivity of Human Resources, so, the increasing in consumption is not only responsible stakeholder farms but various stakeholders. It is necessary to develop the commitment and cooperation among all of the parties, especially in the form of cooperation between central government, local government, institutions, universities, and businessmen.

### **III. THE STRATEGY OF ANIMAL PROTEIN SUPPLY**

The endurance food is basically not only in the problem how to meet the food needs of society. Moreover, the endurance food is an important element to create the national endurance of a nation. The important factor to ensure the resilience and self-sufficiency, particularly, in the sub-sector of livestock is the provision of seeds and/or seedlings livestock, where the government has a great responsibility as mandated in Article 13 of Law Number 18 Year 2009 on Animal Husbandry and Animal Health. Although the provision of seeds and/or seedlings can be done through the import of livestock from abroad, the government is committed to giving priority in domestic production and the ability of social economy. As the stipulated in the Indonesian Government Rule No. 48 Year 2011, it is about Animal Genetic Resources and Livestock Breeding, procurement of seeds and/or seedlings of domestic livestock is done through a series of activities which includes of: (1) production of seeds and/or seedlings; (2) determination of the source region of the seedlings; and (3) the establishment and release clumps or lines.

The region of seed source is an area of agro-ecosystem that is not restricted by administrative area and it has the potential for the development of seedlings from the certain types or clumps. Determination clumps or lines of genetic resources (SDG) the animals are the government's recognition of SDG that has been in an area the source of seeds that farmer's culture and belongs to the society. While the release of clumps or strain is a state award by the government of a clump or a new strain of breeding work on the domestic or the result of the introduction that can be disseminated.

In order to strengthen the national breeding and the potential development of local livestock, the Government had been set a clump of livestock Indonesia through the Minister of Agriculture. Until now, it has been set at 53 clumps and strains of as the types of Indonesia local livestock. From the 53 clumps and strains of livestock that has been set, a total of two (2) clumps of livestock from the province of Aceh are clumps of Aceh cow. It has set in 2011 and Simeulue buffalo that has set in 2014. A clump of local livestock is a diversity of animal genetic resources and a valuable asset to the Indonesian, thus, becoming our collective duty to maintain, preserve, and develop it. The animal genetic resources have the advantage to adapt to the environment is critical and good reproducibility.

### **IV. CONTRIBUTION OF LOCAL ANIMAL**

The Germplasm of original livestock and local Indonesia is still limited to the management and conservation efforts still need attention. On the other hand, from pollution to some animal genetic resources which are likely to cause genetic erosion and can threaten the existence of such genetic resources. In order to prevent possible pollution and illegal

extraction clumps or lines of superior cattle that have been formed a region, so, the government provides legal protection through legislation aspect. The efforts of preservation and conservation have been done in 3 islands and districts were: (1) In Raya Island of Aceh Jaya to protect the germplasm Aceh cow; (2) in the Sapudi island of Sumenep to protect the germplasm Madura cow; and (3) on the Nusa Penida island of Klungkung to protect the germplasm Bali cow. In order to meet the availability of quality breeding stock, the Government through the Minister of Agriculture in 2013 also has been set the new regions (South Sulawesi) as the source region of Bali cow and Hulu Sungai Utara (South Kalimantan) as a seed source region Alabio.

For everyone who does genetic resources are required to make arrangements with the implementing state control of the genetic resources concerned. Excluding profit sharing from the utilization of genetic resources is concerned. Utilization of animal genetic resources for the empowerment of local communities in their use, so that the local community will join to preserve it. The government is obliged to protect the cultivation and exaltation.

If talking about food, including livestock sub-sector, it is not only merely using the approach of supply aspects and demand. We do not stop at the conclusion that, if we are lacking, then that problem can be immediately covered by imports. That way is a short-term solution, and cannot be allowed to continue. The Imports in the short term would be able to stabilize the supply and price. But if it continues, in the long term will occur the dependency and we will enter into the trap of food (food trap) exporting countries. Additionally, it will threaten the existence of local livestock and we have. Certainly, we do not want, and basically there are no countries in the world that want to their food aspect depends on other countries because it will be related to national security and the existence of a nation. In terms of maintaining national food, actually we can look in the mirror the concept of food endurance in the style of Joseph Alaihi Salam. The concept of food endurance in the style of Joseph Alaihi Salam basically to prioritizes local capabilities in an effort to meet the food needs of a nation

In developing countries, including Indonesia, basically the livestock has a multi-functional role. The role of livestock are: (1) As a source of food and nutrition, where farm products contributed about 30% for protein consumption of the world community; (2) As an investment, savings and social status symbol, when the role of formal financial institutions like banks still do not develop in the countryside; (3) As a buffer (buffer) the risk of crop failure, through its role as one of the branches of business diversification; (4) Contribute as an input source and efforts to conserve the environment through its contribution as a provider of environmental friendly fertilizers; (5) Contribute to economic development, especially in the village sector in moving upstream (backward linkage) and in downstream sectors (forward linkage). All of the roles of the livestock and simultaneously will encourage increased incomes and employment in village areas and reduce urbanization.

Table 2. The Population and production of livestock in Indonesia

No.	Species	Years		Growth 2015 to2014 (%)
		2014	2015	
I.	Populace (000 ekor)			
1.	Sapi Perah	502,52	525,17	4,51
	Sapi Potong	14.726,88	15.494,29	5,21
	Kerbau	1.335,15	1.381,33	3,46
	Kambing	18.639,53	18.879,60	1,29
	Domba	16.091,84	16.509,33	2,59
	Babi	7.694,13	8.043,79	4,54
	Kuda	428,05	436,10	1,88
	Ayam Buras	275.116,12	285.021,08	3,60
	Ayam ras petelur	146.660,42	151.419,00	3,24
	Ayam Ras Pedaging	1.443.349,12	1.497.625,66	3,76
	Itik	45.268,46	46.875,31	3,55
II.	Produksi Daging (000 ton)			
	Sapi	497,670	523,927	5,28
	Kerbau	35,24	31,67	10,12
	Kambing	65,14	65,85	1,09
	Domba	43,61	40,95	-6,10
	Babi	302,29	319,11	5,57
	Kuda	2,31	2,45	5,84
	Ayam Buras	297,65	314,00	5,49
	Ayam ras petelur	97,20	95,65	(1,59)
	Ayam Ras Pedaging	1.544,38	1.627,11	5,36
	Itik	33,18	34,84	5,02
III.	Produksi Telur (000 ton)			
	Ayam Buras	184,64	191,76	3,86
	Ayam ras petelur	1.244,31	1.289,7	3,65
	Itik	273,06	282,60	3,49
IV.	Produksi Susu (000 Ton)	800,8	805,4	0,58

## V. CONCLUSION

Indonesia as an agricultural country has the potential to produce local livestock, so it can contribute in supporting the adequacy of animal protein to face the global competition ASEAN economic community, consider to the local livestock presence of sources of in each region it can be reliable through the use of local livestock, improved the food endurance, and increased prosperity ranchers. The efforts to develop the potential of the local livestock would require the participation all of the stakeholders. The society must be educated to be more loving and consume local products. Universities increasingly demanded its role in generating a local resource-based technology. The government should develop a livestock development program increasingly along with the farmers and focuses on local resources. The employers increasingly demanded wisdom to just not the pursuit of profit, but it also concerns with the surrounding communities and the preservation of local resources.

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