I. INTRODUCTION

1.1. Background

Development of animal husbandry is an integral part of agricultural development and national development in order to improve nutrition, to increase income and welfare of farmers, to provide employment, to conserve foreign exchange and to increase food Security State.

Beef cattle are one rumination cattle that have the greatest contribution as a producer of meat. Up to now, Indonesia has not been able to meet the needs of domestic beef that tend to increase every year. It is estimated that in 2011 the local meat production is only about 316.1 thousand tons, whereas the estimation of this year reached is 424 thousand tons. To meet the needs of meat, the government will import 140 tons of meat, or about 33% of the total beef demand during 2011 (Direktorat Pangan, 2010).

In order to meet the national needs of meat, the Government of the Republic of Indonesia launched a program of self-sufficient of National Beef in 2005-2010, then another program of Accelerating Achievement of Self-sufficient of Beef in 2008-2010. Because by 2010 the program has not been successful, then the Department of Agriculture re-targets an advanced program to the self-sufficient of beef until 2014. To achieve these targets, the Directorate General of Livestock establishes the policies of: (1) developing a center for breeding and fattening, (2) revitalization of the institutional and functional human resources field, and (3) supporting of facilities and infrastructure. Through the policy, it is expected that the supply of domestic beef will be projected to increase from 67 percent in 2010 to 90 percent in 2014.

The vision of the Animal Husbandry of South Kalimantan Province is towards 2014 South Kalimantan will become a local source of cows and beef cattle as well as self-sufficient of meat (Disnak Tala, 2009). This is supported by the potential of South Kalimantan, which has an area of 3,753,052 ha, mainly consists of lots and
land; there are about 166,604 ha for building, 190,039 ha for plantations, 129,254 ha for fields, and 145,805 hectares for pastures and grazing. By the potential, it can be said that beef cattle population in South Kalimantan in 2008 were 210,633 cows and in 2009 there were 218,065 cows with the growth of 5% per year (Disnak KalSel, 2009). Nowadays, South Kalimantan has been able to meet the adequacy of meat for local people and also has been able to supply the needs of meat, especially beef cattle into the Province of Central Kalimantan and East Kalimantan. Even the Province of Central Kalimantan is very dependent on the supply of meat from South Kalimantan.

Achieving the target and the predicate of beef cattle producer will be realized if it is supported by the resources. Gunadi (1998) explains that in developing livestock sector in a region, it needs to measure the potential of the available resources. These resources include the availability of land, feed, labor and the potential of the developed livestock. The potential is determined by the availability of agricultural land, soil fertility, climate, topography, water availability, and the existing agricultural patterns. Susetyo (1980) adds that in improving livestock production rumination there is the triangular relationship exists between lands, livestock, and livestock feed which is an organic unity. If one of them did not exist then the generated production will not be satisfactory and may cause failure in business. Land is the main capital as a place for rumination cattle to live as well as producing forage. Therefore, it is required quality land in producing forage to achieve the optimal improvement of livestock production.

On the other hand it should be recognized that one of the factors inhibiting the development of beef cattle is increasingly narrowing the area of livestock grazing allotment from time to time whether it is field acreage for grazing or forage crop development and availability of forage feed which is greatly influenced by the seasons. The lack of dry season and the abundant of rainy season cause the availability of forage feed are unstable throughout the year. Not to mention the lack of adequate support facilities to support the availability of food, livestock, and
marketing, can also take a negative influence on the development of animal husbandry. Surely, it is necessary to find appropriate solution.

Feed for ruminants has been obtained and derived from pasture which provides forage of pasture grasses and legume as a source of ruminant feed. The last few years there is a tendency in decreasing productivity of grazing land as a provider of food due to the change of land use. Land as grazing land has been converted into agricultural land for rice fields, plantations and settlements. As a result, pasture ecology as a base for cattle, especially for ruminant livestock, become diminishing (Syamsu, 2006).

The Regency of Tanah Laut is known as cattle-producing areas in South Kalimantan Province. Almost 40% of meat in South Kalimantan is supplied from Tanah Laut. Every week at least 250 cows of Tanah Laut head out the regions in South Kalimantan Province as well as to Central Kalimantan. In 2009 the population of beef cattle reached 80,533 cows as compared to the year 2008 as many as 79,191 cows, and this population continues to be increased to 100,000 cows in the next year (Disnak Tala, 2009).

Based on statistical data of the Regency of Tanah Laut in 2007, the total area of pasture land was 13,755 ha and in 2008 the number was reduced to 13,205 ha (BPS, 2007 and 2008). Thus the potential for grazing land as forage provider is also decreased. If each head of cattle is assumed to require about 20 kg of fodder per day, the need for animal feed is estimated to 1610.66 tons per day and need of 19327.92 tons in a year, not including other ruminants.

The development of beef cattle in the Regency of Tanah Laut in the future faced with the problem of limited natural resources as the basis for the provision of fodder. To ensure the availability of green fodder which remains all year round, then it is needed another alternative such as agricultural waste (rice straw and maize straw) which can be used as a source of livestock feed.
1.2. Scope of Study

Animal feed is all that can be eaten by livestock in a form that can be digested in part or entirely and does not interfere with the respective of animal health. Generally, the ingredients of animal feed can be eaten, but not all the components in the feed material can be digested by livestock. The ingredients of feed consist of crops, crop yields, and also originating from livestock or animal. Almost 90% of the main feed of herbivore cattle comes from forage, includes the remains of agricultural produce such as rice straw, maize straw, rice bran, sugarcane tops, and peanut hay.

This study focuses on identifying areas of potential as a source of beef cattle feed based on carrying capacity.

1.3. Objectives

The goal of this research is to identify the potential land for fodder and to determine the level of availability.