I. INTRODUCTION

1.1 Background

Human population in Indonesia is increasing rapidly. This condition is the reason of raising milk demand in the country. Livestock is made to fulfill the people needs of animal product especially milk. According to BPS (Indonesia Statistic Central Committee), the milk production in Indonesia from 2000 - 2004 around 34 - 35 million liter per annum, only 30% of the demand. Dairy cattle farm cannot be developed in any where because a lot of criteria to be considered. Since the population in Indonesia is increasing, the area for developing livestocks especially land for growing pasture for animal feed is getting scare because it should compete with human settlement.

There are a lot of local dairy cattle farms that do not reach maximum production of milk because the farmers do not consider factors that may influence the production of milks such as unsuitable land for dairy cattle and pasture. This is a very important thing since dairy cattle is sensitive livestock especially to the environment. Beside that, the suitable area for pasture also should be considered. Not every kind of grass can grow in any area. That is why determining suitable area for dairy cattle farm development is very important.

The development of dairy cattle farm will be difficult in the future, especially in high density population area. This is because of the competition of land development for livestock and settlement. Both sectors need land and livestock usually is not a highest priority.

Information technology, especially Geographic Information System (GIS) can be used to determine suitable areas for dairy cattle farm development. The technology is applied for selecting area by considering all factors such as rainfall, water supply, temperature, soil type, elevation and other socio economic factors.

The study is located in Bener Meriah district since this area is potential for developing dairy cattle farm, where it is rich of high land, has good temperature and large bare land. However, there are no dairy cattle exists in the area.
1.2. Scope Study

The area of study is restricted to district level. This study is focused to find potential land for dairy cattle milk development in Bener Meriah district, Nanggroe Aceh Darussalam province. It covers suitable area for livestock and its pasture by considering physical factors, excluding conservation area determination livestock. This study also does not count livestock waste and its effect to the environment.

3. Objective

The objective of the study is to determine suitable areas for dairy cattle farm development in Nanggroe Aceh Darussalam (NAD) Province. In General the result of the study may help the decision maker to consider alternatives area to develop dairy cattle farm in NAD province. The specific objective of the project is give recommendation for humanitarian organization or government to assist people locating in the most suitable cattle farm in the study area so it will improve the local economy.