# Development Strategy of Bufallo at Tanah Laut Regency, South Borneo Province, Indonesia

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***Abstract:****This study aimsto determine thefactors strength, weakness,opportunity and threatdevelopment of buffaloes in Tanah LautandDevelopment Strategy buffaloes in Tanah Laut,.Dataanalysis methodsused are SWOT Analysis (Strength, Weakness, Opportunity, Threat)The data used in this study consisted of primary data and secondary data.Results based on factors of strength include (a).Geographical location, (b).Potential natural resources and availability of feed, (c).Availability of seeds, (d).Agro-tourism potential, (e).Marketing facilities and infrastructure, (f).The ability of livestock to utilize low quality feed.Weaknesses include (a).Livestock business management, (b).Knowledge and skills of farmers, (c).Handling disease, (d).Government policies and regulations, (e).Use of artificial insemination technology (AI).Opportunityfactorsinclude (a).Demand for meat, (b).Development of buffalo cattle, (c).Regional competitiveness, (d).Integration of plantations and buffalo livestock and Threatfactors includes (a).Degradation of productive land, (b).Declining buffalo performance, (c).Cutting productive buffalo cattle.based on SWOT Analysisdevelopment of buffaloes in Tanah Laut Regency in a situation very favorable (quadrant 1) which has the power and opportunity that is large enough so that the strategy should be applied in these circumstances policy support aggressive growth.*

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## I.   Introduction

The agricultural sector proved to be the most able sector to survive the monetary crisis that we experienced a few years ago. When all sectors experience contraction of growth to experience negative growth, the agricultural sector is able to prove itself as a buffer for the national economy. However, the agricultural sector is unable to promise equal welfare to the people who work in this sector, therefore one of the most effective ways to alleviate poverty in rural areas is through increasing those working in the agricultural sector[3].

Livestock is one of the agricultural sub-sectors that has an important role in rural economic activities. Population growth, income and awareness of the importance of quality food are the causes of beef imports and beef and other components in the context of fulfilling meat consumption [2].

Buffalo is known to have several advantages compared to cows, buffaloes play an important role in agricultural development in Indonesia , rice fields can be cultivated properly without having to use engine power (*hand tarctor)* which requires fossil fuels whose supplies are increasingly limited. The use of buffalo as processing power for agricultural land is an alternative development of environmentally friendly agriculture, buffalo can function as a producer of meat for efforts to fulfill national meat needs.

Buffalo has a number of major roles nationally, namely as a meat producer that supports government programs in terms of meat self-sufficiency in addition to beef, as working cattle, producing milk and fertilizer[4]. explained that the potential of buffaloes as beef cattle turned out to be quite high, although buffaloes as beef cattle were not as popular as cattle because the flesh was older and harder than beef, the fiber was coarser and the fat was yellow. Fattened cattle, generally have the ability to increase body weight on average per day higher than cattle.

Tanah Laut Regency is one of the districts that has potential for developing swamp buffalo cattle, this is because Tanah Laut district has an area of swamps (untapped) covering an area of 168,789 Ha while swamp land that is utilized is only 792 Ha [1]. The availability of vast swamps is a potential natural resource that is invaluable and must be utilized as optimally as possible. From that potential, supported by the demand and consumption of buffalo meat, Tanah Laut district has the potential as one of the suppliers of buffalo cattle both in the form of buffalo meat and as one of the potential for agro tourism. Aims of this research is to find out:Factors Strength, weakness, opportunity and threat development of buffaloes in Tanah Laut South Borneo ProvinceIndonesia.

## II.  Material And Methods

Strategy development research was carried out in Tanah Laut Regency South Borneo Province. Tanah Laut Regency was chosen because it has the third largest population of buffalo cattle as many as 3,265 headafter the Hulu Sungai Utara Regency is 8,934 headand Kotabaru Regency is 4,450 head[1]in South Borneo Province, Indonesia

**Study Sampling Design:** Simple Random Sampling
**Sample Size:** 46Respondent
**Study Duration:** December2015 to March 2016
**Subject and Selection method:** This study population was drawn by random sampling in Tanah Laut Regency, the sample of this study is 46 respondent consist of farmer or business actors , expert, goverment employe and agriculture instructor.
**Type and Data Sources:** The data used in this study consisted of primary data and secondary data. Primary data were obtained from interviews and direct observation on the field using a questionnaire. Respondents consisted of respondents from experts and business actors in buffalo farming.
**Data Analysis:** toanalyzing the strength, weakness, opportunity and threat development strategy of buffaloes in Tanah Laut Regencyconducted by SWOT analysis

## III. Result

### Identification Factor of Strengths, Weaknesses, Opportunities and Threat

Strength Factors include (a). The geographical location of Tanah Laut district , the area of Tanah Laut Regency reaches 3,631.35 Km[1] or 9.71% of the total area of South Borneo Province Indonesia, (b). Natural resources and the availability of food,mentions that more than 50% of land in the district of Tanah Laut able to support the availability of feed for livestock buffalo namely by land unplanted marshes of 168.789 ha (46.48%) and land area dry at 363,135 ha while grazing or pasture land is 8,768 ha (2.41%)[1]. (c). The availability of livestock seeds locally is considered as one of the strengths in the development of buffaloes, buffaloes have a birth rate of 485 and the mortality rate is 20[1] (d). Agro-tourism potential, Tanah Laut Regency has natural tourism potential in the form of swamp buffalo agro-tourism located in Banua Raya village, Bati-Bati District (e). Marketing facilities and infrastructure, The availability of marketing facilities and infrastructures as well as markets for the production of buffalo livestock in Tanah Laut Regency is considered a strength, market for agricultural products is the main (absolute) factor that must exist so that agricultural development can take place[3] (f). The ability of buffaloes to utilize low quality feed because buffalo is able to use feed better than cattle.

Weaknesses factors include (a). Livestock business management, One of the main weaknesses possessed by smallholder farmers in Indonesia in general is the lack of good and correct management of livestock business management (b). Knowledge and skills of farmers, Livestock business is managed based on habits for generations (c). Handling diseases, maintaining buffaloes in Tanah Laut regency, where the buffalo herds are kept extensively and semi-intensive so that it will be difficult to manage diseases and marriages. (d). Government policies and legislation, there is no government support in developing buffalo livestock to be one of the district's superior products . (e). Use of artificial insemination technology (AI). Underutilization of AI so frequent inbreeding.

Opportunity factors include (a). Demand for meat, buffalo cattle as the second largest meat producer after beef cattle in Tanah Laut Regency. (b). Development of buffalo cattle, The aim is to support government policies in the meat self-sufficiency program, buffalo meat can be used as an alternative solution and substitute meat for imported beef (c). Regional competitiveness, buffalo livestock as a flasma in South Borneo can be used as a tourist attraction so that it can increase regional income (d). Integration of plantations and buffalo, The development of the plantation sector will create integration of plantations and buffalo livestock

Threatfactors includes (a). Degradation of productive land, the conversion of agricultural land into non-agricultural land (b). Buffalo declining performance, it is caused by inbreeding (c). Cutting the productive buffalo cattle , in this case the sustainability of the supply of quality buffalo livestock breeds will be disrupted by sustainability.

Indicators in these factors are obtained by using literature or literature review and interviews or focus group discussions with the perpetrator business (breeder) and expert of buffalo farming.

### Strategy for the Development of Buffalo Cattle
### Analysis of Internal Determinants

Based on the identification of internal factors in Tanah Laut Regency in the form of Strength and Weakness factors that influence the strategy of developing buffalo livestock in Tanah Laut district. By entering the results of identification of strengths and weaknesses as strategic factors, then giving the weight and rating, the results obtained such as table number 1.

**Table No 1:** Internal Factor Evaluation Matrix - IFE

| Internal factors | Weight | Rating | Score |
|---|---|---|---|
| **Strength** | | | |
| Geographical location of Tanah Laut district | 0.12 | 4 | 0.48 |
| Potential natural resources and availability of forage feed | 0.12 | 4 | 0.48 |
| Availability of seeds | 0.10 | 3 | 0.30 |
| Agro tourism in Tanah Laut district | 0.08 | 3 | 0.24 |
| Means and infrastructure for marketing livestock | 0.11 | 4 | 0.44 |
| The ability of buffaloes to use low quality feed | 0.12 | 4 | 0.48 |
| *Total Strength* | | | **2.42** |
| **Weakness** | | | |
| Livestock business management | 0.08 | 3 | 0.24 |
| Knowledge and skills of farmers | 0.06 | 2 | 0.12 |
| Handling diseases of buffalo cattle | 0.06 | 2 | 0.12 |
| Government policy & legislation | 0.08 | 3 | 0.24 |
| Use of AI technology | 0.08 | 3 | 0.24 |
| *Total Weaknesses* | | | **0.96** |
| **TotalAmount** | **1.00** | **35** | **3.38** |

Based on the results of calculations in table 1, it can be seen that the geographical location of Tanah Laut district, natural resource potential and feed availability and the ability of buffalo cattle to utilize low quality feed with a score of 0.48 can be used as a force in developing buffalo cattle in Tanah Laut district .

The results of the evaluation of strengthfactor indicates that the highest rating factor is the geographical location of the district of Tanah Laut, the potential of natural resources and the availability of forage, infrastructure marketing of livestock and the ability buffaloes utilize feed low quality with a rating of 4 (four), it is shows that these factors are "very strong" in the development of buffalo in Tanah Laut Regency, while the availability of seeds and agro tourism in Tanah Laut district has a rating of 3 (three), this indicates that these factors have a "strong" influence in developing buffalo cattle in the district Tanah Laut

The results of evaluation of weakness factors indicate that the highest rating is the management factor of livestock business, government policy and legislation factors and the use of artificial insemination technology (AI) each has a rating of 3 (three), meaning that the factor is said to be "weak", while the factors of knowledge and skills of livestock as well as the disease management factors of buffaloes each have a rating of 2 (two) which means that these factors are said to be "rather weak" in the development of buffalo cattle in Tanah Laut regency.

### Analysis External Determinants

Based on the identification of external factors in Tanah Laut Regency in the form of Opportunity Factors and Threat Factors that influence the strategy of developing buffalo livestock in Tanah Laut regency. By entering the results of identification of opportunities and threats as strategic factors, then giving the weight and rating, the results obtained as in table 2.

**Table 2:** External Factor Evaluation Matrix - EFE

| ExternalFactor | Weight | Rating (rating) | Score |
|---|---|---|---|
| **Opportunity** | | | |
| Demand for meat | 0.19 | 4 | 0.76 |
| Development of buffalo cattle | 0.17 | 3 | 0.51 |
| Regional competitiveness | 0.18 | 3 | 0.54 |
| Integration of plantations and livestock | 0.18 | 3 | 0.54 |
| *Total Opportunities* | | | **2.35** |
| **Threat** | | | |
| Degradation of productive land | 0.07 | 1 | 0.07 |
| Declining buffalo performance | 0.10 | 2 | 0.20 |
| Cutting productive buffalo cattle | 0.12 | 2 | 0.24 |
| *Total Threat* | | | **0.51** |
| **TotalAmount** | **1.00** | **18** | **2.86** |

Based on the results of calculations in table 2, it can be seen that the demand for meat with a score of 0.76 can be an opportunity or opportunity in developing buffalo livestock in Tanah Laut district, but has the

threat of cutting productive buffalo cattle with a score of 0.24 and Buffalo performance decreasing with scores 0.20.

The results of the evaluation of opportunity factors show that the highest rating on meat demand factors with a rating of 4 (four) means "very likely" in the development of buffalo cattle in Tanah Laut regency, while for regional competitiveness and plantation integration and buffalo livestock have a rating 3 (three) which means "chance", while for the threat factor shows that the cutting factor of productive buffalo cattle and decreased buffalo performance is considered a threatening factor in the development of buffalo cattle in Tanah Laut district.

With an assessment of +1.46 for Factor Evaluation Internal and +1.84 for Factor Evaluation Externally, a combination of internal and external factors can be described in the form of a diagram (figure 1).
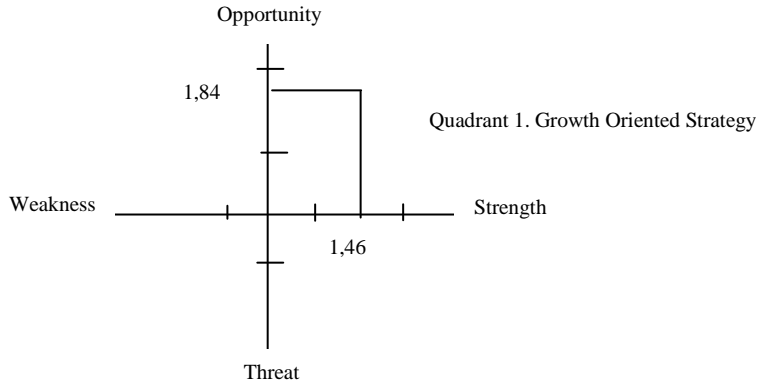


**Figure 1:** SWOT Analysis Diagram

In Figure 1 it is interpreted that the development of buffalo cattle in Tanah Laut district is in a very favorable situation (quadrant 1) which has considerable strength and opportunity so that the strategies that must be applied in this condition support aggressive growth policies[5].

**SWOT Matrix Analysis**

The next step is to develop strategic factors for Tanah Laut Regency by using the SWOT matrix , which can be seen in table 3 .

| Internal Factor / External Factor | Strength (S)<br>S.1. Geographical location<br>S.2. Potential of Natural Resources and Feed<br>S.3. Availability of buffalo seeds<br>S.4. Agrotourism<br>S.5. Buffalo Ability | Weakness (W)<br>W.1. Livestock Business  Management<br>W.2. Human Resources of  Farmers<br>W.3. Handling Disease<br>W.4. Government policy<br>W.5. Use of  Artificial Inseminastion Technology |
|---|---|---|
| **Opportunity (O)**<br>O.1. Meat Demand<br>O.2. Development Buffalo<br>O.3. Competitiveness<br>O.4. Plantation Integration and livestock | **SO STRATEGY**<br>1.  Improve animal feed processing technology<br>2.  Optimizing the potential of agrotourism as one of regional competitiveness | **WO STRATEGY**<br>1.  Increase the knowledge and institutional of farmers in the management of livestock business<br>2.  Provide incentives for production for farmers |
| **Threat (T)**<br>T.1. Land Degradation<br>T.2. Declining buffalo performance<br>T.3. Cutting of livestock Productive | **ST STRATEGY**<br>1.  Protection and clearing of grazing land<br>2.  Implementing marketing and cutting regulations for productive buffalo cattle | **WT SRATEGI**<br>1.  Increasing livestock health and reproduction inspection / service activities<br>2.  Optimization of artificial insemination  technology and intensification of natural breeding |

Based on the SWOT matrix analysis there are several alternative strategies in developing buffalo cattle in Tanah Laut Regency, namely as follows:

**SO Strategy**
Strength – OpportunityStrategy (SO ) is a strategy that uses the power to take advantage of opportunities[5], while the alternative strategies are:
1.  Improve animal feed processing technology
2.  Optimizing the potential of agrotourism as one of regional competitiveness

**WO Strategy**
Weakness – OpportunityStrategy (WO) is a strategy that minimizes weaknesses to take advantage of opportunities[5], while alternative strategies are:
1.  Increasing knowledge and institutions in farmer business management
2.  Provide incentives for production for farmers

**ST Strategy**
Strength –ThreatStrategy (ST) strategy is a strategy that uses power to overcome threat[5], while alternative strategies are:
1.  Protection and clearing of new land grazing livestock
2.  Implementing marketing and cutting regulations for productive buffalo cattle

**WT Strategy**
Weakness-ThreatStrategy (ST) is a strategy that minimizes weaknesses and avoids threat[5], while alternative strategies are:
1.  Increasing livestock health and reproduction inspection / service activities
2.  Optimization of artificial insemination (AI) technology and intensification of natural marriage

## IV. Conclusions

Results based on factors of strength include (a).Geographical location, (b).Potential natural resources and availability of feed, (c).Availability of seeds, (d).Agro-tourism potential, (e).Marketing facilities and infrastructure, (f).The ability of livestock to utilize low quality feed.Weaknesses include (a).Livestock business management, (b).Knowledge and skills of farmers, (c).Handling disease, (d).Government policies and regulations, (e).Use of artificial insemination technology (AI).Opportunityfactorsinclude (a).Demand for meat, (b).Development of buffalo cattle, (c).Regional competitiveness, (d).Integration of plantations and buffalo livestock and Threat factors includes (a).Degradation of productive land, (b).Declining buffalo performance, (c).Cutting productive buffalo cattle.based on SWOT Analysisdevelopment of buffaloes in the district of Tanah Laut themselves in a situation very favorable (quadrant 1) which has the power and opportunity that is large enough so that the strategy should be applied in these circumstances policy support aggressive growth.

## References

[1].    Badan Pusat Statistik, Tanah LautDalam Angka2015
[2].    Komariah, *et. al.* 2014. Produktivitas Kerbau Rawa di Kecamatan Muara Muntai Kabupaten Kutai Kartanegara Kalimantan Timur. Buletin Peternakan Vol. 38 (3):174-181 Oktober 2014. Fakultas Peternakan Universitas UGM.
[3].    Luthfi. 2006. Dinamika Pembangunan Pertanian dan Pedesaan. Pustaka Banua. Banjarbaru Kalimantan Selatan
[4].    Murtidjo, B.A., 1992. Memelihara Kerbau. Kanisius. Yogyakarta
[5].    Rangkuti. Freddy. 2014. Teknik Membedah Kasus Bisnis (Analisis SWOT). PT. Gramedia Pustaka Utama. Jakarta