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Analysis of Potential feed Ingredients to Support the Cattle Feed Industry in West Nusa Tenggara

(*Analisis Potensi Bahan Pakan Guna Mendukung Industri Pakan Sapi di Provinsi Nusa Tenggara Barat*)

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ABSTRAK

Tujuan dari penelitian ini adalah untuk mengetahui potensi pengembangan bahan pakan dan daya dukung lahan untuk mendukung industri pakan ternak, pakan apa yang dapat diterapkan di Provinsi Nusa Tenggara Barat berdasarkan potensi bahan pakan ternak dan untuk mengetahui hubungan antara luas, jenis dan luas sumber pakan, jumlah dan luas lahan penggembalaan, populasi, jumlah pakan, jenis sumber pakan, kapasitas, populasi ternak dan kelembagaan peternakan di Kabupaten Sumbawa dan Lombok Timur. Penentuan lokasi penelitian dilakukan secara *purposive*. Penelitian ini menggunakan pendekatan survei yang dipadukan dengan analisis data sekunder. Hasil kajian menunjukkan bahwa industri bahan pakan ternak sapi di kedua wilayah tersebut cukup potensial untuk dikembangkan. Selain itu, faktor pakan yang tersedia relatif memadai, didukung dengan pengalaman masyarakat dalam beternak, menjadikan usaha ini prospektif untuk dikembangkan. Secara kelembagaan, sebanyak 30 kelompok tani ternak di Kabupaten Sumbawa dan Kabupaten Lombok Timur dengan kepemilikan lahan seluas 218 hektar di kedua kabupaten tersebut berpotensi untuk mendukung pengembangan industri pakan ternak di dua wilayah tersebut.

Keywords: Pakan Ternak, Kelembagaan, Industri Pakan

ABSTRACT

The purpose of this study was to determine the potential development of feed ingredients andthe carrying capacity of land to support the cattle feed industry, what feeds can be applied inWest Nusa Tenggara Province based on the potential of cattle feed ingredients and to determinethe relationship between the area, type and breadth of feed sources, the number and area of grazing fields, population, amount of feed, types of feed sources, capacity, livestock populationand livestock institutions in Sumbawa and East Lombok Regencies. Determination of theresearch location is done purposively. This study uses a survey approach combined withsecondary data analysis. The results of the study show that the cattle feed ingredients industry inthe two regions is quite potential to be developed. In addition, the available feed factor isrelatively adequate, supported by the community's experience in raising livestock, making this business prospective to be developed. Institutionally, as many as 30 livestock farmer groups inSumbawa Regency and East Lombok Regency with land ownership of 218 hectares in bothregencies have the potential to support the development of the cattle feed industry in these twoareas.

Keywords: Livestock Feed, Institutional, Feed Industry

INTRODUCTION

Most of the breeders in East Lombok Regency and SumbawaRegency are cattle commodities. According to Hermanto (2011) the group can play a role as a provider of input for farming or livestock, a provider of capital, a provider of information and a role in collective marketing. In general, the livestockrearing system in West Nusa Tenggara is reflected in the conditions on the islands of Lombok and Sumbawa. On the island of Lombok, for example, livestock rearing is mostly semi-intensive (caged at night) to intensive (caged throughout the day). Then on Sumbawa Island, livestock rearing is extensive (released throughout the day) and semi-intensive (caged at night) in communal cages, especially during the rainy season or during the dry season in pens at certain times.

Communal raising of livestock is carried out in grazing fields, on uncultivated land, even in state forests, community forests, fields or huma and plantation areas. Based on the grazing system, communal livestock rearing has become increasingly pressing,especially on the island of Lombok, so many farmers have switched to intensive or semi-intensive systems. The cattle grazing system on communal land on Sumbawa Island is still being maintained, even though it is faced with various obstacles, especially land conversion, land ownership status, availability of water sources, fertility levels and the decreasing carrying capacity of forage feeds.

Forage feed is one of theimportant factors in determining the level of production and productivity of cattle so that adequate supply of feed will determine the success of a livestock business. The provision of forage by farmers is very dependent on socio-economic conditions, motivation and the purpose of raising livestock itself. Until now, raising cattle is mostly still a side business for farmers where farmers do not allocate special costs for feed, so that forage feed given to livestock is not sufficient which results in production performance not as expected. The provision of forage feed is highly dependent on the availability of sufficient seeds both in quantity and quality. The ability of an area to produce and provide forage based on the available land potential is called the forage carrying capacity. Forage carrying capacity measures the number of individuals of a species (in this case cattle) that can be supported by the environment of a particular area. Carrying capacity describes the maximum number of cattle populations that can be accommodated by an area.

According to data from the Animal Husbandry Service (2021), in 2020 the cattle population in West Nusa Tenggara Province is 1,285,746 heads, with 1,056,796 ha of land as a source of food, 2,026,254 (ST) capacity for beef cattle and the potential for beef cattle development in West Nusa Tenggara Province is 1,046,717 (ST). In this regard, land is an important factor in supporting the availability of forage fodder. Land resources such as rice fields and food crops can produce straw as animal feed. West Nusa Tenggara has long played a role as a center for cattle production and as a source of breeders and beef cattle for other regions in Indonesia. Given the importance of the role of forage feeds in the business of raising cattle and the high potential for developing smallholder livestock businesses, it is necessary to take breakthrough steps such as establishing a cattle feed factory to make it easier for farmers to provide forage feed by optimizing land functions as well as farmers' knowledge of land management procedures so that the provision of forage can be met.

MATERIALS AND METHODS

The location determination in this study was carried out purposively with a survey approach and combined with secondary data analysis. This research was conducted in 2 (two) regencies in West Nusa Tenggara Province, namely Sumbawa and East Lombok Regencies. The variables observed to describe the results of research on potential feed ingredients in order to support the cattle feed industry in West Nusa Tenggara Provinceinclude:

a. The conditions and potential for developing feed ingredients in Sumbawa and East Lombok regencies and the carrying capacity of the land to produce feed ingredients in these regencies.

b. The relationship between the area of East Lombok and Sumbawa Regencies, type and area of feed sources, number and area of grazing fields, number of assets or machinery supporting the animal feed industry, potential of livestock farmer groups, population, amount of feed, types of feed ingredients, capacity, livestock population and livestock institutions in the two regencies.

Data collection in this study was carried out through desk studies,surveys and open interviews with informants using questionnaires and answers given freely. A desk study is conducted to obtain data and information through examination and analysis of data and information using secondary data, in the form of documents, laws and regulations related to this research and other relevant sources. According to Suhubdy *et al.,* (2018), to analyze the potential of feed ingredients used the formula for optimalland potential and analysis of livestock capacity.

Table 1. Land Potential Formula and Livestock Capacity Analysis

Optimal Land Potential Formula		**Formula for Analyzing Livestock Capacity**	
OLP	=a R + b T + c F + d P + e PF + f TUL + g SF	LC	=a RA + b T + c F + d PA + e PFA + f STA + g MA + h TULA
Description	:	Description	:
OLP	: Optimal Land	LC	: Livestock Capacity
R	: Potential Ricefield	RA	: Ricefield Area
T	: Moorland/Tegalan	T	: Moorland/Tegalan Area
F	: Field	F	: Field/Huma Area
P	: Plantation	PA	: Plantation Area
PF	: Private Forest	PFA	: Private Forest Area
TUL	: Temporarily Unused Land	SFA	: State Forest Area
SF	: State Forest	MA	: Meadow Area
a,b,c,d,e,f,g	: Parameters of each variable	TULA	: Temporarily Unused Land Area
		a,b,c,d,e,f,g,h	: Parameters or each variable

RESULTS AND DISCUSSIONS

Conditions and Potential Development of Feed Ingredients

Based on data from the Central Agency of Statistic (2020) it is known that the area of West Nusa Tenggara Province is 20,164.84 km2 (100%) witha population of 5,320,092 people. The area of East Lombok Regency is 1,605.55 km² (7.96% of West Nusa Tenggara Province) and the total population in 2020 will reach 1,325,240 people. The data on land use

area in East Lombok Regency according to data from the Central Agency of Statistics for East Lombok (2019) is presented in Table 2.

Table 2. Land Use Area in East Lombok Regency

No	Land Use Area in East Lombok Regebcy	Area (ha)	%
1	Agricultural Land (Ricefield)	47.598	29,65
2	Non-Ricefield Agricultural Land	75.787	47,20
3	Non-Agricultural Land (Settlements)	37.169	23,15
	Total	**160.554**	**100**

Sumbawa Regency as one of the ten regencies or cities in the West Nusa Tenggara Province is located on the western tip of Sumbawa Island, and has an area of 6,643.98 km2 (32.95% of NTB Province) and the population in 2020 reached 509,753 people (Central Statistics Agency, 2020). Sumbawa Regency is a tropical area which is influenced by the rainy season and dry season. Regarding land use in SumbawaRegency according to data from the Central Agency of Statistics (2016) canbe seen in Table 3.

Tabel 3. Land Use Area in Sumbawa Regency

No	Land Use Area in Sumbawa Regency	Area (ha)	%
1	Agricultural Land (Ricefield)	59.492	8,95
2	Non-Ricefield Agricultural Land	505.681	76,1
3	Non-Agricultural Land (Settlements)	99.225	14,95
	Total	**664.398**	**100**

Based on the data in Table 4, thetotal land area on Sumbawa Island in 2020 is 1,516,037 ha, the animal feed produced is 5,535,908 tons and the capacity for livestock is 1.21 UT/ha. Lombok Island has an area of 402,250 ha, the livestock feed produced is 2,429,972 tons, the livestock capacityfor Lombok Island is 1.79 UT/ha (Animal Husbandry Service, 2021). Thefollowing is the capacity for beef cattle based on land resources on Lombok Island, Sumbawa Island, NTB Province in 2020 can be seen in Table 4.

Table 4. Capacity of Beef Cattle Based on Land Resources in Lombok Island,Sumbawa Island and NTB Province in 2020.

No	Pulau / Propinsi	Luas (ha)	Pakan Ternak (ton)	Daya Tampung (UT/ha)	UT dapat dicukupi	Pemanfaatan 2020*		Yang Belum dimanfaatkan (UT)
						UT	(%)	
I.	**P. Lombok**	**402,250**	**2,429,972**	**1.79**	**809,991**	**504,244**	**62.25**	**305,747**
	- Padang Rumput	32,631	153,365	1.57	51,122			
	- Semak	19,720	93,198	1.57	31,066			
	- Hutan	51,261	516,672	3.36	172,224			
	- Sawah	124,216	1,067,433	2.86	355,811			
	- Tegal	49,062	192,443	1.31	64,148			
	-Perkebunan	52,235	406,861	2.6	135,620			
	- Lainnya	73,125						
II.	**P. Sumbawa**	**1,516,037**	**5,535,908**	**1.21**	**1,845,303**	**719,276**	**38.98**	**1,126,027**
	- Padang Rumput	59,160	226,056	1.27	75,352			
	- Semak	124,271	474,852	1.27	158,284			
	- Hutan	375,761	3,509,601	3.11	1,169,867			
	- Sawah	76,173	645,593	2.82	215,198			
	- Tegal	92,743	449,916	1.62	149,972			
	- Perkebunan	35,519	229,890	2.16	76,630			
	- Lainnya	752,410						

III.	**N T B**	**1,918,287**	**7,967,334**	**1.34**	**2,655,778**	**1,223,520**	**46.07**	**1,432,258**
	- Padang Rumput	91,791	379,421	1.38	126,474			
	- Semak	143,991	568,050	1.31	189,350			
	- Hutan	427,022	4,026,273	3.14	1,342,091			
	- Sawah	200,389	1,713,026	2.85	571,009			
	- Tegal	141,805	642,359	1.49	214,120			
	- Perkebunan	87,754	636,751	2.42	212,250			

*) Terhadap Potensi Tahun 2020

Table 4 shows that the conditions and potential for developing feed ingredients in most of these groups are still feasible and functioning well, conditions are quite good and developedand are still used for forage cultivation. In these 2 (two) regencies, some farmers plant Lamtoro, Turi, Gamal, Elephant Grass, Odot Grass, and bengal grass. Some groups, when the long dry season arrives, have problems meeting their livestock feed.

Table 5. Results of Group Questionnaires in Sumbawa Regency and East Lombok Regency

No	Name of Group	Chief	Total Score /kg	Total Value	Total Result	Status				Agree/ Disagree for the Existence of the Feed Factory	Regency
						VE	E	C	NE		
1.	Sopo Karoa	Kurniawan R.H	100	1380	65,8	-	√	-	-	Strongly Agree	Sumbawa
2.	Maras Panto	I Nengah Susila	100	1340	62,6	-	√	-	-	Strongly Agree	Sumbawa
3.	Tiu Sepit	Akhmad Sahari	100	1240	58,4	-	-	√	-	Strongly Agree	Sumbawa
4.	Kebon Jati	Abdul Munir	100	1270	59,3	-	-	√	-	Agree	Sumbawa
5.	Berkembang	Nasrudin	100	1350	63,0	-	√	-	-	Setuju	Sumbawa
6.	Beriuk Seneng	Saepudin	100	1430	66,2	-	√	-	-	Neutral	Sumbawa
7.	Sabalong Samalewa	Pihirudin	100	1330	64,8	-	√	-	-	Agree	Sumbawa
8.	Banyu Urif	Fanni Fitraturrahman	100	1460	71,5	√	-	-	-	Strongly Agree	Sumbawa
9.	Karya Makmur	Hakmullah	100	1280	60,6	-	√	-	-	Strongly Agree	Sumbawa
10.	Hidayah	Usup	100	1450	70,0	√	-	-	-	Strongly Agree	Sumbawa
11.	Taman Kerti	Jumadi	100	1210	57,6	-	-	√	-	Strongly Agree	Sumbawa
12.	Adal Farm	Hamdan	100	1240	58,7	-	-	√	-	Strongly Agree	Sumbawa
13.	Dsuma Kopong	Samsudin	100	1280	63,0	-	√	-	-	Neutral	Sumbawa
14.	Kemang Kuning	Yatno	100	1380	66,4	-	√	-	-	Strongly Agree	Sumbawa
15.	Ai Beat	Ahmad	100	1300	63,2	-	√	-	-	Agree	Sumbawa
16.	Harapan Bersama	Yahya	100	1120	50,9	-	-	-	√	Strongly Agree	Sumbawa
17.	Samaris	Samadin	100	1420	65,2	-	√	-	-	Neutral	Sumbawa
18.	Panto Gili	Junaidi E	100	1510	72,9	√	-	-	-	Agree	Sumbawa
19.	Lenang Rea	Supardi	100	1340	62,2	-	√	-	-	Agree	Sumbawa
20.	Buin Sepit Olat Jati	Saparudin	100	1570	75,5	√	-	-	-	Strongly Agree	Sumbawa

21.	Assofwa	Zikrillah	100	1510	72,4	√	-	-	-	Strongly Agree	East Lombok
22.	Sejahtera	L. Tahirudin	100	1230	57,0	-	-	√	-	Neutral	East Lombok
23.	Empat – Empat	Mahwin	100	1440	70,4	√	-	-	-	Agree	East Lombok
24.	Lendang Bunga	Ridwan	100	1390	65,8	-	√	-	-	Agree	East Lombok
25.	Suara Alam	Sudirman	100	1500	69,8	-	√	-	-	Agree	East Lombok
26.	Babussalam	Muhlisin	100	1400	67,6	-	√	-	-	Strongly Agree	East Lombok
27.	Maju Bersama	AL Mahsyar	100	1420	69,6	-	√	-	-	Agree	East Lombok
28.	Pacu Karya	Samsudin	100	1350	66,6	-	√	-	-	Agree	East Lombok
29.	Sangkawati	Danil Barwan	100	1400	67,1	-	√	-	-	Strongly Agree	East Lombok
30.	Barokah	Muhamad Ihsan	100	1430	70,1	√	-	-	-	Strongly Agree	East Lombok
	Total	**-**	**3000**	**40.970**	**1.953,8**	**7**	**17**	**5**	**1**		

*Description :
70 and above : Very Eligible
(VE)60-69 : Eligible (E)
51-59 : Considered (C)
0-50 : Not Eligible (NE)

Based on the data in Table 6, theoptimal land potential in the 2 (two) regencies shows that the field has a large potential of 73.5 ha. The results of the analysis related to the capacity of livestock in the 2 (two) regencies can beseen in Table 7.

Table 6. Optimal Land Potential Based on Results of Group Questionnaire in Sumbawa Rregency and East Lombok Regency

No	Name of Group	Chief	R (ha)	T (ha)	F (ha)	P (ha)	PF (ha)	TUL (ha)	SF (ha)	Regency
1.	Sopo Karoa	Kurniawan R.H	-	-	2,5	-	-	-	-	Sumbawa
2.	Maras Panto	I Nengah Susila	-	-	-	3	-	-	-	Sumbawa
3.	Tiu Sepit	Akhmad Sahari	1,5	-	-	-	-	-	-	Sumbawa
4.	Kebon Jati	Abdul Munir	-	-	-	2	-	-	-	Sumbawa
5.	Berkembang	Nasrudin	1	-	1	1	-	-	-	Sumbawa
6.	Beriuk Seneng	Saepudin	-	-	3	1	-	2	-	Sumbawa
7.	Sabalong Samalewa	Pihirudin	-	1	1	11	-	1	-	Sumbawa
8.	Banyu Urif	Fanni Fitraturrahman	-	-	1	-	-	-	-	Sumbawa
9.	Karya Makmur	Hakmullah	-	-	60	-	-	-	-	Sumbawa
10.	Hidayah	Usup	-	15	-	-	-	-	-	Sumbawa
11.	Taman Kerti	Jumadi	-	10	-	-	40	-	-	Sumbawa
12.	Adal Farm	Hamdan	2	1	1	-	-	-	-	Sumbawa
13.	Dsuma Kopong	Samsudin	0,5	-	-	-	-	-	-	Sumbawa
14.	Kemang Kuning	Yatno	0,75	-	-	-	-	-	-	Sumbawa
15.	Ai Beat	Ahmad	0,25	-	-	-	-	-	-	Sumbawa
16.	Harapan Bersama	Yahya	-	1	-	-	-	0,25	-	Sumbawa
17.	Samaris	Samadin	-	0,50	-	-	-	-	-	Sumbawa
18.	Panto Gili	Junaidi E	-	0,25	-	-	-	-	-	Sumbawa
19.	Lenang Rea	Supardi	-	-	-	1	-	-	-	Sumbawa

20.	Buin Sepit Olat Jati	Saparudin	-	-	-	-	-	3	-	Sumbawa
21	Assofwa	Zikrillah	2	-	-	-	-	-	-	East Lombok
22.	Sejahtera	L. Tahirudin	3	-	2	-	-	-	-	East Lombok
23.	Empat – Empat	Mahwin	2	-	-	1	-	-	-	East Lombok
24.	Lendang Bunga	Ridwan	1	-	-	-	25	-	-	East Lombok
25.	Suara Alam	Sudirman	-	-	-	4	-	-	-	East Lombok
26.	Babussalam	Muhlisin	-	-	1	-	-	-	-	East Lombok
27.	Maju Bersama	Al- Mahsyar	-	-	1	-	-	-	-	East Lombok
28.	Pacu Karya	Samsudin	2	-	-	-	-	1	-	East Lombok
29.	Sangkawati	Danil Barwan	-	-	-	2	-	-	-	East Lombok
30.	Barokah	Muhamad Ihsan	-	-	-	-	-	1,5	-	East Lombok
		Total	**16**	**28,75**	**73,5**	**26**	**65**	**8,75**	**0**	East Lombok dan Sumbawa

*Description:
R : Ricefield
T : Tegalan
F : Field
P : Plantation
PF : Private Forest
TUL : Temporarily Used LandSF : State Forest

Table 7. Capacity Analysis Based on Results of Group Questionnaire in SumbawaRegency and East Lombok Regency

No	Name of Group	Chief	RA (ha)	T (ha)	F (ha)	PA (ha)	PFA (ha)	SFA (ha)	MA (ha)	TULA (ha)	Regency
1.	Sopo Karoa	Kurniawan R.H	-	-	2.5	-	-	-	-	-	Sumbawa
2.	Maras Panto	I Nengah Susila	-	-	-	3	-	-	-	-	Sumbawa
3.	Tiu Sepit	Akhmad Sahari	1.5	-	-	-	-	-	-	-	Sumbawa
4.	Kebon Jati	Abdul Munir	-	-	-	2	-	-	-	-	Sumbawa
5.	Berkembang	Nasrudin	1	-	1	1	-	-	-	-	Sumbawa
6.	Beriuk Seneng	Saepudin	-	-	3	1	-	-	-	2	Sumbawa
7.	Sabalong Samalewa	Pihirudin	-	1	1	11	-	-	-	1	Sumbawa
8.	Banyu Urif	Fanni Fitraturrahman	-	-	1	-	-	-	-	-	Sumbawa
9.	Karya Makmur	Hakmullah	-	-	60	-	-	-	-	-	Sumbawa
10.	Hidayah	Usup	-	15	-	-	-	-	-	-	Sumbawa
11.	Taman Kerti	Jumadi	-	10	-	-	40	-	-	-	Sumbawa
12.	Adal Farm	Hamdan	2	1	1	-	-	-	-	-	Sumbawa
13.	Dsuma Kopong	Samsudin	0.5	-	-	-	-	-	-	-	Sumbawa
14.	Kemang Kuning	Yatno	0.75	-	-	-	-	-	-	-	Sumbawa
15.	Ai Beat	Ahmad	0.25	-	-	-	-	-	-	-	Sumbawa
16.	Harapan Bersama	Yahya	-	1	-	-	-	-	-	0.25	Sumbawa
17.	Samaris	Samadin	-	0.50	-	-	-	-	-	-	Sumbawa
18.	Panto Gili	Junaidi E	-	0.25	-	-	-	-	-	-	Sumbawa
19.	Lenang Rea	Supardi	-	-	-	1	-	-	-	-	Sumbawa
20.	Buin Sepit Olat Jati	Saparudin	-	-	-	-	-	-	-	3	Sumbawa
21.	Assofwa	Zikrillah	2	-	-	-	-	-	-	-	East Lombok
22.	Sejahtera	L. Tahirudin	3	-	2	-	-	-	-	-	East Lombok
23.	Empat – Empat	Mahwin	2	-	-	1	-	-	-	-	East Lombok

24.	Lendang Bunga	Ridwan	1	-	-	-	25	-	-	-	East Lombok
25.	Suara Alam	Sudirman	-	-	-	4	-	-	7	-	East Lombok
26.	Babussalam	Muhlisin	-	-	1	-	-	-	-	-	East Lombok
27.	Maju Bersama	Al- Mahsyar	-	-	1	-	-	-	-	-	East Lombok
28.	Pacu Karya	Samsudin	2	-	-	-	-	-	-	1	East Lombok
29.	Sangkawati	Danil Barwan	-	-	-	2	-	-	-	-	East Lombok
30.	Barokah	Muhamad Ihsan	-	-	-	-	-	-	-	1,5	East Lombok
		Total	**16**	**28,75**	**73,5**	**26**	**65**	**0**	**7**	**8,75**	East Lombok and Sumbawa

*Description:
RA : Ricefield
T : Tegalan
F : Field
PA : Plantation Area
PFA : Private Forest Area
SFA : State Forest Area
MA : Meadow Area
TULA : Temporarily Used Land Area

Table 5 shows that of the 30 groups in Sumbawa and East Lombok Regencies, there are 7 (seven) groupsthat are declared very feasible, 17 (seventeen) groups are declared eligible, 5 (five) groups are considered and 1 (one) group is declared eligible. not feasible. The group is declared very feasible because the total assessment results on the questionnaire that have been made, namely the value multiplied by the weight contained in the questionnaire divided by 100 is 70% or more and the group is declared eligibleif the total assessment results from the score on the questionnaire are multiplied by the weight on the questionnaire and then divided 100 is60% to 69%, then the group is considered if the total assessment results from the scores on the questionnaire are multiplied by the weights listed on the questionnaire then divided by 100 is 51% to 59% and the last is if the total assessment results from the scores on the questionnaire multiplied by the weight stated on the questionnaire then divided by 100 is 0%to 50%. The results of the study on the support of the animal feed industry in the Province of NTB, showed that of the 30 livestock groups in Sumbawa and East Lombok Regencies, they strongly agreed with the existence of the animal feed industry or with the existence of ananimal feed factory. A total of 15 livestock farmer groups consisting of 11farmer groups in Sumbawa Regency and 4 groups in East Lombok Regency stated strongly agree with the existence of a feed factory, then 4 groups with a neutral opinion consisted of 3 groups in Sumbawa Regency and 1 group in East Lombok Regency. The conclusion is that the groups that agree with the existence of a feed factory are 11groups in Sumbawa Regency as manyas 6 groups and as many as 5 groups of livestock farmers in East Lombok Regency stating that they agree with theexistence of a feed factory. Most of these groups are advanced groups and beginner groups formed in the last 1 to 4 years. The businesses run by this group are animal husbandry and agriculture. The livestock business run by most of these groups is a livestock business, namely cattle breeding, but there are several groups that run a cattle fattening business.

Cattle fattening business requires the availability of protein source feed sourced from legume plants such as Lamtoro, Calliandra, Gamal. Adequate carbohydrate source feed suchas sorghum and corn to ensure optimal growth of cattle. So, to improve the quality of animal feed, feed processing technology is

applied in forage feed fiber sources such as ammonia and also fermentation. According to Abdullah (2017), the application of ration formulation technology is carried out to improve the quality of concentrated feed ingredients by adding minerals and vitamins to a mixed feed supplement in the form of urea molasses block or better known as UMB is needed to support the mineral needs of cattle.

Based on the results of thestudy, related to the optimal potential of land based on the results of interviews with farmer groups in Sumbawa Regency and East Lombok Regency, there were 218 ha obtained from 16 ha of rice fields, 28.75 ha of tegalan, 73.5 ha of fields, 26 ha of plantations, forestspeople 65 ha, unused land 8.75 ha. Capacity analysis based on the results of group questionnaires in Sumbawa Regency and East Lombok Regency of 225 ha obtained from 16 ha of rice fields, 28.75 ha of tegalan, 73.5 ha of fields, 26 ha of gardens, 65 ha of community forests, 7 ha of meadow, land which is not used 8.75 ha.

Feed to Support the Cattle Industry

The type of feed given to livestock is feed such as grass or fresh legumes. From the results of research that has been carried out, suitable animal feed to support the cattle feed industry in NTB Province is Lamtoro, Gamal, Bengal Grass and Elephant Grass. good nutrition for the development and body weight gain of livestock. Gamal and Lamtoro leaves are very popular with ruminants and have high nutritional value as feed. The nutritional content of Gamal includes crude protein(PK) 26.9 percent, crude fat (LK) 3, 2 percent, ash 8.8 percent, crude fiber (SK) 11.1 percent, dry matter production on average 19.3 tons/ha, seed production 400 to 500 kg/ha with aspacing of 3 m x 3 m (Animal Husbandry Service, 2014).

The nutritional content of lamtoro includes crude protein (CP) more than 26.8 percent, ash 6.5 percent, crude fat (LK) 2.8 percent, crude fiber (SK) 14.6 percent, leaf production reaches 20 tons/ha/ year, seed production is 500 to 700 kg/ha with a spacing of 3 m x 3 m (Animal Husbandry Service, 2014). Neutral detergent fiber (NDF) is around 40 percent, acid detergent fiber (ADF) is around 25 percent, digestibility is more than 65 percent and metabolized energy (ME) is 11 MJ/kg. This green is very suitable for fattening feed because of its high nutritional content. can meet the nutritional needs of fattening. The use of Lamtoro as feed is very environmentally friendly because it can reduce the production of methane gas inthe rumen. Lamtoro has fast growth andcan grow well in areas with annual rainfall of 650 mm to 3,000 mm / year. This plant is tolerant of dry climate or which has 300 mm of rainfall with adrought period of 6 (six) to 7 (seven) months so it is very suitable to be developed in dry climates. Lamtoro plants have been planted in both regencies.

Supporting Assets

Animal feed is very important for all animals used in the food supply chain. Cattle farming is a local resource for the NTB community that grows and develops, is entrenched, and has beenproven to make a major contribution to the welfare of rural communities and increasing Regional Original Income (PAD). Cows have a significant and strategic role in building the economy of rural communities in NTB. In addition, smallholder cattle farms, apart from being a source of household income, also function as a producer of manure to maintain the fertility ofagricultural land.

Land area, number of pastures, number of assets or supporting machinery for the animal feed industry, potential of livestock farmer groups, population, amount of feed, capacity, livestock population and livestock institutions have

a close relationship with the cattle feed industry because theamount of feed must be able to balance and meet capacity of the cattle population. That is, the area of land and pastures affects the amount of available feed that can be produced for animalfeed. Group assets in the form of supporting machines really help farmersin raising cattle so that to achieve this it is necessary to have livestock institutions as facilities or infrastructure for livestock groups to get education about the importance of providing effective, efficient and sustainable forage as well as livestock rearingmanagement.

Guidance and assistance are needed considering the socio-economic and institutional conditions of farmers or breeders in the group are relatively low, on average consisting of elementary school or junior high school graduates. about that. According to data from the Animal Husbandry Service (2022), it is known that in Sumbawa Regency, the area of grazing fields (lar) in 2022 will reach 1,894 ha which can accommodate 12,537 large livestock as shown in table 8.

Table 8. List of Livestock Areas in West Nusa Tenggara

No	Name of Ranch Area	Location			Large (Ha)	Large SID (Ha)	Commodity	Livestock Population	Regent's Decree	Decree. Head master
		village	County	Regency						
1	Limung	Pungkit	Moyo Utara	Sumbawa	1007		Sapi, Kerbau Kuda	1406	No. 650 thn 2009	-
2	Badi	Lopok	Lopok	Sumbawa	384	100	Sapi, Kerbau Kuda	9360	No. 126 thn 2009 tgl. 13 maret 2009	KU. 110/777/satker-06 tgl. 18 Feb 2019
3	Kuang Bira	Motong	Uthan	Sumbawa	113		Sapi, Kuda	898	No. 1766 thn 2010	
4	Melayam	Serange	Lopok	Sumbawa	250		Sapi	461	No. 1016 thn 2011	
5	Olat Monte	Pernek	Moo Hulu	Sumbawa	75		Sapi	218	0	
6	Nange Sejahtera	Lab.Alas	Alas	Sumbawa	40		Sapi	80	0	
7	Turin Tawir	Rhee Loka	Rhee	Sumbawa	25		Sapi	114	0	
	Total Sumbawa Regency				**1894**	**100**	**0**	**12537**	**0**	**0**
8	Doro Ncanga	Doro Ncanga	Pekat	Dompu	1.966	100	Sapi, Kerbau Kuda		No. 38/Disnak /2014 , tgl30 Januari 2014	
9	Oi Tui	Oi Tui	Wera	Bima	100	100	Sapi, Kerbau ,Kuda	35	No. 414.1/032 /03.4/2016 tgl. 21 April 2016	
	Total Sumbawa Island				3960	300	0	12572	0	0
10	Jeringo	Puncak Jeringo	Suela	East Lombok	550		Sapi, Kambing	2839	0	

							, unggas			
11	Banyumulek	Lelede	Kediri	West Lombok	29		Sapi	300	0	
		Total Lombok Island			**579**					
		Total NTB Province			**4539**	**700**	**0**	**40820**	**0**	**0**

Based on the data in Table 8, the production of forage (forage) for pasture in Sumbawa Regency is quite good. Pasture reflects the balance between available forage and thenumber of units of livestock grazed in it per unit time. Storage capacity is closely related to forage productivity ina livestock grazing area. Tana *et al.,* (2015) The higher the forage productivity in a grazing area, the higher the livestock holding capacity as indicated by the number of cattle that can be grazed.

The level of availability of forage in a pasture or an area is one of the most important factors and also influences population dynamics in the successful development of livestock, especially herbivores. Hutasuhut (2017), in calculating the potential of an area, it is necessary to look at the livestock population in the area in relation to the potential forage produced by the region concerned, so the lands that have the potential to produce forage are taken into account, including agricultural land, plantations, pastures and part of forestry.

The production of feed ingredients is largely determined by the area of harvest, age of harvest, soil conditions and rainfall of eachcommodity planted in an area as well as the nutrient content contained in feedingredients.

CONCLUSION

Based on the results of research that has been carried out, the potential for developing feed ingredients in most of the livestock groups in Sumbawa Regency and East Lombok Regency is still feasible and functioning well, the condition is quite good and growing. Institutional support in supporting thepresence of the feed industry in West Nusa Tenggara is by way of regularly hold meetings and group discussions and apply the results of group discussions, have group institutions consisting of breeders, conductguidance or empowerment of livestock farmer groups to see opportunities that can be generated by the feed industry, establish a banking system, people's business cooperatives and credit facilities that make it easier for farmers, establish a clear marketing system, provide counseling to farmers so thattheir knowledge becomes wider. The increase in population and cattle production should be followed by an increase in the welfare of farmers. Improving the quality of beef through intensive maintenance and provision of quality feed should be able to make cattle prices in a high bargaining position. For this reason, farmer institutions should be strengthened to mutually support these improvements.

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