ISBN : 978-623-5644-10-3

PLANNING AREA OF SALT PRODUCTION IN FARMER GROUPS IN KOLAKA VILLAGE, TANJUNG BUNGA DISTRICT, EAST FLORES REGENCY

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ABSTRACT
The study entitled Planning of Salt Production Land Area in Farmer Groups in Kolaka Village, Tanjung Bunga District, East Flores Regency aims to determine and analyze the planning of production land area using sales forecasting and Break Even Point (BEP) methods. This study took the salt pond business in Kolaka Village, Tanjung Bunga District, East Flores Regency. This study only focuses on the area of salt production land. The results of the study indicate that the sales results of the Surya Nusa Bumdes Salt Pond have not been able to make careful and detailed planning of the area of production land regarding existing production factors. So it has not been able to predict the level of production in the coming year, where in 2023 it is predicted that sales will be 473 sacks, in 2024 as many as 494 sacks, in 2025 as many as 515 sacks. The results of the BEP analysis show that if the Bumdes Surya Nusa Salt Pond business produces 454 sacks of salt, it will make a profit of Rp. 22,700,000, - then the company will make a profit and if it experiences a loss, vice versa if the company produces above the BEP point, the company will make a profit. Based on the results of this study, the Bumdes Surya Nusa Salt Pond Business needs to carry out mature production planning using sales forecast analysis so that the company's optimum profit can be achieved.
***Keywords**: (a) Production Area*

1. INTRODUCTION

Salt is one of the agricultural commodities that has the potential to be developed, due to the high demand for salt for industrial and household needs. National salt needs are used for consumption, for the CAP (Chlor Alkali Plant) industry, various food industries, oil drilling, and other needs.Based on data from the Ministry of Maritime Affairs and Fisheries (2012), in terms of quantity, the average national salt requirement in 2014 was 3 million tons and the national salt requirement has continued to increase every year. Both the need for the CAP industry, consumption salt, various food industries, oil drilling, and other salt needs tend to increase.

The national salt requirement from 2011 to 2014 has increased from year to year where the national salt requirement is divided into two, namely consumption salt and industrial salt. Likewise, national salt production continues to increase but still does not meet the salt requirement so that imports from abroad are carried out. The national salt requirement in 2014 reached 3 million tons, consisting of consumption salt of 1.48 million tons and industrial salt of 2.13 million tons. Based on these conditions, national salt production must also be increased in

ISBN : 978-623-5644-10-3

order to meet the national salt requirement. However, in reality, domestic salt production has not been able to meet all national salt requirements. This makes Indonesia have to import salt from several countries,(Department of Industry and Trade of Central Java Province, 2010).

This raises deep concerns because Indonesia has not been able to meet domestic salt demand. Domestic salt needs can only be met through salt imports from abroad. The inability of national salt production to meet national salt needs has resulted in an increase in salt imports. East Nusa Tenggara (NTT) Province has great potential and can be developed into a major salt production site in Indonesia. This hope is not excessive because the NTT region has several advantages in terms of natural physical conditions, namely being an archipelago consisting of 566 islands with 4 (four) large islands, namely Flores, Sumba, Timor, Alor, meaning it has a long coastal area, namely 272 km. The climate and sunlight in this province are also very abundant, even tending to be hot and dry, so they are very supportive of salt production (BPS 2016).

East Flores is an archipelago with an area of 3079.23 km2, bordering Alor Regency in the east, Sikka Regency in the west, the Flores Sea in the north, and the Sawu Sea in the south. The regency located at the eastern tip of Flores Island is known as an Archipelago Regency, consisting of 3 islands, namely Adonara, Solor, and Mainland Flores, and flanked by several other small islands such as Konga Island, Waibalun Island, and Mas Island. The Fisheries and Marine Service of East Flores Regency (2007) noted that the area of the sea of East Flores is approximately 3,818.32 or 67.92% of the total area of East Flores Regency. East Flores has good sea water potential as a raw material for making salt (sodium chloride) and is included in the center of salt production.

The salt industry in East Flores is classified as the Traditional Salt industry. This can be seen from the salt-making process that does not use high-tech tools or technology. The salt-making process in East Flores Regency is carried out by utilizing natural conditions. This shows that the success factor of salt farmers depends on the intensity of sunlight. One of the villages in Tanjung Bunga District which is known as a salt-producing village is Kolaka Village. Kolaka Village is located about 20 km east of Larantuka City. There are several residents in Kolaka Village who work as salt farmers. Residents who have ponds can produce salt, while residents who do not have ponds can help process crystal salt into ready-to-eat salt. In Larantuka City itself, salt production centers have begun to be built considering the large potential in this area. The large market demand for salt makes the salt pond business very promising. However, the problem is the lack of knowledge of salt pond managers about proper and efficient production management. This makes salt production less than optimal and even tends to decline. Like the reality that occurs in salt fields in Kolaka Village, Tanjung Bunga District, East Flores Regency. The problem or issue faced is the lack of necessary equipment, such as suction machines and hoses. Working without modern equipment.

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Production Management

Assauri (2004:11) explains that production is an activity that transforms input into output. While management is an activity or effort carried out to achieve goals by using or coordinating the activities of others (Assauri, 2004:12). According to Fogarsy Herjanto (1997:2) production management is a process that continuously and effectively uses management functions to integrate various resources efficiently in order to achieve goals. In line with M. Fruad et al. (2003:142) who argue that production management is an activity or process that transforms input into output.

According to Anoraga (2004:60) the function of production management is all activities to organize and coordinate production factors efficiently to create and add value and benefits from products (goods and services) produced by the company. While Sumardy (2007:81) the function of production management is the previous planning and organization of people, machines and equipment to produce goods in a certain period.

Production

Production is an activity to find out the addition of benefits or the creation of benefits, forms, time and place for production factors that are useful for consumer fulfillment (Reksohadiprojo, 2000). Assaury (1980), stated that production is all activities in creating and adding utility to goods or services, for this activity production factors are needed in the form of land, capital, labor and skills. In preparing a production plan, companies need to pay attention to several factors that influence the determination of the area of production, including:Raw materials, labor, machinery and capital.

2. RESEARCH METHODS

This type of research is a case study and focuses on research on production area planning carried out by salt pond farmers to determine the right production volume. The method used in analyzing salt production planning in this study is by using the Break Even Point (BEP) method.

1) Sales forecast:
   Estimated sales that can be achieved by the head of salt pond farmers in Kolaka Village, Larantuka District, East Flores Regency in producing salt.
   Indicator: Kg
2) Production planning:
   The maximum production volume that can be recorded by the head of the salt pond farmers in producing salt.
   Indicator: Kg
3) Raw material
   The raw material used in producing salt is sea water.
   Indicator: Liter

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4) Labor
Employees at a salt pond business in Kolaka Village, Larantuka District, East Flores Regency who carry out salt production activities.
Indicator : People

5) Capital
A number of costs prepared by the leaders of salt pond farmers in Kolaka village, Larantuka District, East Flores Regency, to finance the salt production process.
Indicator: Rupiah/Rp

6) Cost
The amount of money needed by the head of the salt pond farmers in Kolaka Village, Larantuka District, East Flores Regency, to produce salt.
Indicator: Rupiah/IDR

7) Machinery and equipment
Machines and production equipment used by salt pond farmers in Kolaka Village, Larantuka District, in producing salt.
Indicator: Unit.

8) Production result
The amount of salt products produced by salt pond farmers in Kolaka Village, Larantuka District, East Flores Regency. S
Indicator: Kg/Ton.

DATA COLLECTION TECHNIQUE

1) Observation
It is a study that conducts direct observation of the research object concerning the amount of production produced by micro farming businesses. In this study, the observation technique used by researchers is by direct observation in the field about the salt production process by salt pond farmers in Kolaka Village, Larantuka District, East Fores Regency.

2) Interview
It is data collection by conducting direct Q&A with the leaders or managers and employees of micro farming businesses.

3) Documentation
This is a document or source related to this research in the form of activities related to salt planning and production by salt pond farmers.

4) Questionnaire
It is a list of questions that must be filled out by respondents as a means of collecting information about the behavior, characteristics, beliefs and attitudes of groups of people or organizations. The questionnaire is distributed to informants (leaders/employees) to be answered to meet research needs.

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3. RESEARCH RESULTS AND DISCUSSION

The data will be used as a basis for compiling sales applications. Thus, production area planning based on sales applications can be analyzed by researchers in terms of compiling a future sales forecast using a simple linear function equation (Assauri 1999:141).

$$Y = a + bx$$

Where:

y: The size of the sales forecast

a: Fixed component of each sale

b: Annual sales growth rate

x: Certain period

for a and b can be found using the formula:

$$a = \frac{\sum y}{n}$$

$$b = \frac{\sum xy}{\sum x2}$$

As for the month From the data above, it is known that during the last 5 years, the Bumdes Surya Nusa pond has produced 2050 sacks of salt and July is determined as the base month for forecasting for the next 3 years.

$$a = \frac{\sum y}{n} = \frac{2050}{5} = 410$$

$$b = \frac{\sum xy}{\sum x2} = \frac{210}{10} = 21$$

The value of "a" is a fixed component of sales each year while "b" is the level of development each year. Based on the values of a and b above, we can plan the amount of sales forecast for 2023 - 2025 in geomembrane salt ponds as follows:

a. In 2023 with the value of x geomembrane salt ponds = 3

Y = a+bx

= 410+ 21(3)

= 410 + 63

= 473 sacks

So in 2023, it is estimated that the geomembrane salt pond will be able to sell 113 sacks.

a. In 2024 with the value of x geomembrane salt ponds = 4

Y= a+bx

= 410+21(4)

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= 410+ 84
= 494 sacks
So in 2024 it is estimated that the geomembrane salt pond will be able to sell 134 sacks
a. In 2025 with the value of x geomembrane salt ponds = 5
Y= a+bx
= 50+ 21(5)
= 410+ 105
= 515 sacks
So in 2025 it is estimated that the geomembrane salt pond will be able to sell 155 sacks.

Work planning analysis

Effective working days for production activities in a year are 65 days.

1) The average production of salt ponds in a year is 10.8 sacks/day.
2) The average productivity of a worker at the Bumdes Surya Nusa salt pond is 10.8:66= 0.68 sacks.
3) The average amount of salt produced by one direct worker in the Surya Nusa Bumdes salt pond in a year is: 0.68 X 65 days = 44 sacks

By knowing the level of direct labor productivity in a year, the number of workers who will be employed to balance the workload in 2023-2025 can be calculated using the formula:

$$\frac{\text{Planned Production Volume}}{\text{Direct Labor Productivity Level}}$$

So it can be seen that the number of direct labor requirements for the Surya Nusa Bumdes Salt Pond for 2023-2025 is:

Calculation of the number of direct labor requirements for the Bumdes Surya Nusa Salt Pond
Year 2023

$$Tambak\ garam = \frac{473}{65} = 7{,}27 = 7$$

So the average number of workers needed by the Surya Nusa Bumdes Salt Pond for 2023 is 7 people.

Year 2024

$$Tambak\ garam = \frac{494}{65} = 7{,}6 = 8$$

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So the average number of workers needed by the Surya Nusa Bumdes Salt Pond for 2024 is 8 people.

Year 2025

$$Tambak\ garam = \frac{515}{65} = 7{,}9 = 8$$

So the average number of workers needed by the Surya Nusa Bumdes Salt Pond for 2025 is 8 people.

Break Even Point Analysis

1. variable costs

1). 5 m hose @ 40,000 = Rp 200.000

This hose functions to channel sea water to the salt ponds of each plot

2). 3 m water level hose @ 5,000 = Rp. 15,000

This water level hose is used to measure the height and slope of the salt pond plot vertically or horizontally.

3). Spirit level rope 1 roll @ 30,000 = Rp. 30,000

This spirit level rope functions to measure the height and low of the salt ponds in each plot

4). Nails 5 cm 1 kg @ 25,000 = Rp. 25,000

These nails function as supports in each salt pond plot.

5). Nails 7 cm 2 kg @ 25,000 = Rp. 50,000

These nails function as supports in each salt pond plot.

6). 2 units of transport carts @ 350,000 = Rp. 700,000

This transport cart functions to transport finished salt.

7). Salt sacks 700 sacks @ 5,000 = Rp 3.500,000

This jar functions to store finished salt.

Amount = Rp.4,520,000

So, the total variable cost incurred is Rp 4,520,000 which is used to produce 700 sacks of salt. The variable cost of salt is Rp 4,520,000: 700 x Rp 1 = Rp 6,457

2. fixed costs

a. Direct Labor = Rp. 12,250,000

b. electricity costs = Rp. 500,000

c. machinery and equipment costs = Rp. 4,000,000

d. building maintenance = Rp. 2,000,000

e. tax = Rp. 500,000

f. materials and others = Rp. 500,000

amount = Rp19,750,000

then the average cost per sack of salt is = Rp. 19,750,000 : 700 x Rp. 1 = Rp. 28,214. The Break Even Point formulation according to Harjanto (2002:73) for calculating the BEP point and the Surya Nusa Bumdes Salt Pond is:

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The Break Even Point (BEP) formula according to Harjanto (2000:73) is:

The BEP formula is used to calculate how many units must be sold to reach the Break Event Point.

$$BEP(x)=\frac{f}{p-v}$$

Where :BEP(x) = Break Even Point (units)
F = Fixed costs
P = Net Selling Price/unit
V = Variable Cost/unit

Break Even Point formula to calculate how much sales money needs to be received to reach BEP

$$BEP\ (Rp) = \frac{F}{1 - {}^{V}/_{P}}$$

Where: BEP (Rp) = Break Even Point (Rupiah)
F = Fixed Costs
P = Net Selling Price/unit
V = Variable Cost/unit

Based on the formula above, the BEP calculation for Bumdes Surya Nusa Salt Pond products in 2022 is as follows:

BEP in salt pond business (unit)

$$BEP(x)=\frac{f}{p-v}$$

$$=\frac{\text{Rp. 19,750,000}}{\text{Rp50,000} - \text{Rp. 6,457}}$$

$$=\frac{\text{Rp. 19,750,000}}{\text{Rp43,543}}$$

=454 sacks of salt

ISBN : 978-623-5644-10-3

BEP in salt pond business (Rupiah)

$$BEP\ (Rp) = \frac{F}{1 - {}^{V}/_{P}}$$

$$= \frac{\text{Rp.19,750,000}}{1 - \frac{\text{Rp4,520,000}}{\text{Rp.35,000,000}}}$$

$$= \frac{\text{Rp.19,750,000}}{1 - \text{Rp } 0{,}13}$$

$$= \frac{\text{Rp.19,750,000}}{0.87}$$

= Rp.22,700,000

Based on the description above, the author can say that planning can be said to be important because the preparation of planning is inseparable from past experiences that have been experienced by the company. This can be used as a basis for projecting future conditions, concerning what, why, where, when, who and how goods are produced in a certain period in the future and involving existing production factors so that the company can achieve profit.

Production planning concerning production factors such as capital, raw materials, labor, machinery, and production equipment must be managed well, planned and directed towards achieving the company's goals. Seeing the importance of production planning for the survival of the company, which applies to the Tambak Garam Bumdes Surya Nusa company, where in the past the company paid less attention to production planning factors so that the optimum profit of the Tambak Garam company must make careful and detailed production planning with regard to the existing production factors so that optimum profit can be achieved.

4) CONCLUSION

1) To achieve optimum needs, the business leader of the Surya Nusa Bumdes Salt Pond must make careful and detailed production plans for the existing production factors.
2) In carrying out the production activities of Bumdes Surya Nusa Salt Pond, it is necessary to pay attention to the level of consumer demand for products in the previous year. So that it can predict the level of salt production in the coming year. Where the Bumdes Surya Nusa Salt Pond business in 2023 is predicted to sell 473 sacks, in 2024 as many as 494 sacks, and in 2025 as many as 515 sacks.
3) The need for the number of workers in the Bumdes Surya Nusa Salt Pond business in 2023-2025 will see an increase in the number of workers every year by 7-8 people. This calculation is obtained from the planned production volume in a certain year divided by the productivity level of the Bumdes Surya Nusa Salt Pond business workforce.
4) From the calculation of costs received from sales and costs incurred to produce salt, a profit of Rp. 10,730,000 was made.

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5) The results of the BEP analysis show that if the Bumdes Surya Nusa Salt Pond business produces 454 sacks of salt, it will make a profit of IDR 22,700,000, then the company will make a profit and if it makes a loss, vice versa if the company produces above the BEP point, the company will make a profit.

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