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MAPPING OF FINANCIAL PRODUCTION AND FEASIBILITY OF PEANUT FARMING

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ABSTRACT

The study was conducted in 10 districts producing peanuts in Southeast Sulawesi, with 320 sample of farmer respondents selected based on the three stage cluster purposive sampling technique. The type of data used are primary and secondary data while the method of data collection is by direct interview based on a questionnaire. While the data analysis method used is descriptive statistics and financial feasibilty of R-C Ratio. The results showed that the development of Peanut production for each district was quite fluctuating, with the location distribution of the highest level of Peanut production in Muna Regency which was 4,400.4 Tons/Year and the lowest was in North Kolaka District with an average of 73.2 Tons/Year. Judging from the level of financial feasibility of Peanut Farming between regencies, it shows that all areas studied have financial feasibility or are profitable to be cultivated. However, the financial feasibility of Peanut farming among regions varied from the relatively low level of feasibility with an R-C Ratio of 1.94 found in Buton District and the highest was in Muna District with an R-C Ratio of 2.94. This description gives the meaning that every expenditure for farming activities of Peanut is Rp. 1 will generate financial benefits of Rp. 2,94.

Keywords: *Financial feasibility, production mapping, peanut farming.*

I. INTRODUCTION

Agriculture is one of the most important sectors in the national economy. Therefore, the sector must be able to be built as a mainstay and as an engine of national economy. One effort that can be done is to optimize the use of domestic resources (land, water, labor, capital, and technology), so can provide a balanced increase in the welfare of farmers and the consumer community (Geo and Muthalib, 2015).

Peanut (*Arachis hypogaea* L.) in Indonesia is one of the second strategic food commodities after soybeans. Peanuts as food can also be used as industrial raw materials, even the leaves can be used for animal feed and fertilizer. The byproduct of making oil in the form of bungkil that can be used as oncom cake with the help of fermented fungi (Suprapto, 1996). Suprapto (1996) states that peanuts contain high nutritional value, including: Fat, Protein, Carbohydrates, Vitamins (A, B, C, D, E and K) and minerals (Ca, Cl, Fe, Mg, P , K and S).

The low ability of domestic production in the supply of Peanuts when compared to demand requires efforts to improve the gap between demand and supply. These efforts can be pursued by means of intensification in production, extensification, and diversification centers that are based on resource potential. The strategy which is based on the superiority of local resources such as land use, labor, capital, and others is one of the efforts to increase farm efficiency in order to reduce imports which in turn can create competitive advantage (Geo and Harafah, 2014). This can be realized if the current and future policies are able to provide support for the growth and development of the Peanut Farming. On land where water availability is limited, namely on dry land and on rain-fed rice fields, farmers usually consider more alternative types of plants to be cultivated with the aim of obtaining higher net income with the technology they have understanded (Gurdev, 2002). However, it should be remembered that the technology applied by farmers to each commodity is not always the technology that provides the highest profit from the commodity concerned, due to various constraints such as the limited information they obtain and the limited reach

of their capital. Because adjacent farmers can grow different crops so the production of a food commodity in an area is rather difficult to predict in a particular season or year.

Province of Southeast Sulawesi is one of the provinces in Indonesia which has the potential for developing Peanuts. This is because the province of Southeast Sulawesi has wide agricultural land and can be utilized for the cultivation of Peanut plants. Based on statistical data and the Department of Agriculture of Southeast Sulawesi Province in 2019 shows that the harvested area, production level and productivity in Southeast Sulawesi over the past 14 years have shown fluctuating developments as shown in Table 1.

Tabel 1. Development of Peanut Harvest Area, Production and Productivity in Southeast Sulawesi in 2005-2018

Yaar	Peanut Crop		
	Harvest Area (Ha)	Production (Ton)	Productivity (Ton/Ha)
2005	8.580	6.995	0.815
2006	8.227	6.757	0.821
2007	8.696	7.627	0.877
2008	7.781	6.938	0.892
2009	5.999	5.089	0.848
2010	6.918	4.942	0.714
2011	5.887	4.540	0.771
2012	7.496	5.199	0.694
2013	6.547	4.942	0.755
2014	6.056	4.652	0.768
2015	4.862	3.471	0.714
2016	3.885	3.023	0.778
2017	3.489	2.617	0.750
2018	3.347	2.541	0.760

Source: Department of Agriculture and Livestock (2019) and Central of Burbau Statistics in Number

The main problem faced by peanut farmers is the level of production that has not maximized. This is caused by farmers who have not implemented a system of agricultural intensification that includes the use of seeds or superior seeds, good water systems, pest control and plant diseases in an integrated manner and the use of fertilizers according to the recommended dosage (Rachman et al. 2008). In addition, to achieve maximum production in a branch of farming, efforts are needed to integrate various production facilities and labor effectively and efficiently so that good production will be achieved if there is an optimal combination and reduce production costs so that farmers' income will increase (Simatupang et al. 2003).

In addition, to meet food needs, the development of a variety of food crops such as peanut to faces the challenge of beable to meet the needs of household consumption and the need for industrial raw materials in the country. In such circumstances, it is necessary to map the production and level of financial feasibility of peanut farming. Due to the extent of the problem, this paper is limited only to describing the production mapping and knowing the level of financial feasibility of peanut farming between regencies in Southeast Sulawesi Province.

II. MATERIALS AND METHODS

The location of this research is in several regencies where the community has spent a long time and consistently cultivated peanut crops in Southeast Sulawesi, namely Muna Regency, Buton Regency, North Buton Regency, Konawe Regency, Konawe Selatan Regency, Bombana Regency, Kolaka Regency, Kolaka Timur Regency, Kolaka Regency North and North Konawe Regency.

Due to the wide area of the study site has limited resources, the sampling technique used was three stage cluster sampling, which divides Provinces to Regencies that are the regions that produce peanut, then choose 10 districts. 10 selected districts subdivided based on Sub-Districts, which were subsequently selected purposively as one of the Peanut-producing districts. In the next stage, each sub-district was selected and then one village was chosen again,

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thus the research location was in 10 villages spread across 10 sub-districts and 10 districts. Furthermore, from each selected village a simple random random selection of peanut farmers respondents was 32 people, so the number of farmers sampled was 320. The primary data collection method was carried out through direct interviews with respondent farmers, while secondary data was collected through publications from related agencies such as the Central of Burbau Statistics and the Department of Agriculture of Southeast Sulawesi, also from research results. The method of data analysis used is descriptive statistics and R-C ratio was used for the analysis of the financial feasibility of annual crops, with formula:

R = Py. Y	Where:	If:
C = FC + VC	R: Revenue	a < 1 : Not feasible
	C: Cost	a > 1 : Feasible
	Py: Output Cost	a = 1 : Impasse
	Y: Output	
	FC: Fixed cost	
	VC: Variabel cost	

III. RESULT AND DISCUSSION

Pemetaan Sebaran Produksi Kacang Tanah Antar Wilayah Kabupaten di Provinsi Sulawesi Tenggara
The results of the mapping of Peanut production spread in 10 regencies in Southeast Sulawesi, accompanied by a description of the production performance ranking of each regency as shown in Figure 1.

Figure 1. Map Distribution of Peanut Production Levels between Regencies in Southeast Sulawesi Province.

Based on the distribution map in the figure about ranking of Peanut production level between regions that the highest level of production achievement is in Muna Regency, following by North Konawe Regency, Konawe Regency, East Kolaka Regency, Kolaka Regency, Konawe Selatan Regency, Buton Regency, Bombana Regency, North Buton Regency, and North Kolaka Regency.

Financial Feasibility of Peanut Farming

Peanut cultivation requires farming costs which can be grouped into fixed costs and variable costs. Fixed costs represent the amount of funds used to buy, pay for fixed assets such as hoes, shovels, sickles, machetes and land and building tax (PBB), while variable costs are the amount of funds used by farmers to purchase production facilities such as seeds, fertilizers, pesticides and labor. The average total cost of cultivating Peanut per hectare between districts varies between Rp. 437,324 per hectare up to Rp. 1,402,676 per hectare, while the average amount of revenue also varies between Rp. 967,844 per hectare up to Rp. 4,095,814 per hectare. To find out the results of the financial feasibility analysis of peanut products between regencies in Southeast Sulawesi Province, it can be systematically shown in Table 3. as follows:

Table 3. Results of Financial Feasibility Analysis Between Peanut Farming in Districts in 2018

No	Districts	Average of Total Cost (Rp/Ha)	Average of Expenses (Rp/Ha)	R-C Ratio	Profit (Rp/Ha)
1	South Konawe	2,291,087	1,015,797	2.25	1,275,290
2	Konawe	2,506,722	1,182,416	2.12	1,324,306
3	Kolaka	967,844	458,324	2.11	509,520
4	Muna	4,095,814	1,402,676	2.94	2,693,138
5	Buton	2,576,805	1,328,250	1.94	1,248,555
6	North Buton	4,095,811	1,400,565	2.92	2,695,246
7	North Konawe	2,426,722	1,182,416	2.05	1,244,306
8	North Kolaka	987,800	437,324	2.25	550,476
9	Bombana	2,251,087	1,005,797	2.23	1,245,290
10	East Kolaka	939,844	450,315	2.08	489,529

Based on the results of the financial feasibility analysis presented in Table 3, it shows that all study locations of peanuts producing have financial feasibility or are profitable to work on as shown by the R-C Ratio value greater than 1, even though the level of financial feasibility quite varied between regions, where the highest financial feasibility of peanut farming is in the Muna Regency with R-C ratio of 2.94. This means that every Rp. 1,- which is expenses to peanut farming cost activities per hectare, it will bring farm financial benefits of Rp. 2.94 per hectare. Following North Buton District with R-C ratio of 2.92, Konawe Selatan Regency and North Kolaka Regency with R-C ratio of 2.25, Bombana District with R-C ratio of 2.23, Konawe Regency with a value of R-C ratio of 2.12, Kolaka Regency with R-C ratio value of 2.11, East Kolaka Regency with R-C ratio value of 2.08, North Konawe Regency with R-C ratio value of 2.05 and the lowest level of financial feasibility is in Regency Buton with R-C ratio of 1.94, which means that every expenditure of Rp. 1,- will generate financial benefits of Rp. 1,94.

The occurance of variations in farming yields between districts as a result of variations in the density or intensification of peanut per hectare, farming experience from farmers, intensity of use of agricultural technology and land resources. The implication of peanuts farming needs to be developed intensively by the community because it turns out to be quite financially profitable, and therefore needs to be supported and encouraged by local and national governments through various policies and programs for developing agricultural food crops, especially Peanuts, so that in turn can strengthen food availability towards self-sufficiency of Peanuts at both the regional and national levels.

IV. CONCLUSION

The results of the mapping of peanut production between regencies in Southeast Sulawesi showed quite varying and fluctuating where the highest average production level is in Muna Regency and the lowest production is in North Kolaka Regency. In addition, the government should conduct socialization intensive and equally in each Regency in cultivating peanut crops. This is important because it is a fairly profitable business and can increase farmers's incomes.

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