Entomology and Applied Science Letters
Volume 4, Issue 4, Page No: 1-3

Available Online at: www.easletters.com

ISSN No: 2349-2864

Comparative Analysis of Farmers' Income Using And Not Using Fertilizer in Clove Plant (Syzigium Aromaticum)

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ABSTRACT

This study aimed to determine the income ratio of farmers who use and do not use fertilizer. The study was conducted from February to April 2017 in Sinjai Barat District, South Sulawesi Province. The population is all clove farmers in Sinjai Barat District, the sample is clove farmers who use fertilizer and do not use fertilizer that is 10% from 388 heads of the family. Data type is quantitative data. Data source is primary data and secondary data. Data analysis used is productivity analysis and income comparison analysis (R / C ratio). The results showed that the productivity of dried clove plants when fertilization reached an average of 1.017 Kg per Ha and if not done the average fertilizer production only 535 kg per ha. Clove farmers' income that uses synthetic fertilizers, organic fertilizers or synthetic fertilizers.

Keywords: income, cost, fertilizer, non-fertilizer.

HOW TO CITE THIS ARTICLE: Amal Said , Syamsinar Syukur, Sitti Nurani Sirajuddin* ,Comparative Analysis of Farmers' Income Using And Not Using Fertilizer in Clove Plant (Syzigium Aromaticum), Entomol Appl Sci Lett, 2017, 4 (4):1-3.

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Received: 07/05/2017
Accepted: 23/09/2017

INTRODUCTION

Agriculture plays an important role of the entire national economy. The number of people living and working in the agricultural sector or from national products derived from agriculture so that the development of the nation is focused on the agricultural sector [1, 2] Development of the agricultural sector is very important because mneyangkut livelihood of more than half the population of Indonesia who depend the family economy in this sector. agriculture derived from plantation products is cloves[3, 4]

Clove plant (Syzigium aromaticum) is a native plantation plantation of Indonesia with high economic value. In April 2017, dry cloves reached Rp 150,000 per kilogram at the farmer level (producer). This plant originated from the islands of Maluku Islands, North Maluku precisely. The clove plant is known as a spice plant and traditional medicine. Cloves are one of the essential oil producers used as raw materials for pharmaceutical industry and food industry. The biggest use of cloves in Indonesia (96%) is as raw material for cigarette industry [5].

Agronomically, clove plants grow well in locations with cool weather, moderate humidity with less rainfall. Clove plants are very fond of darkish brown soils with high soil clutter. Altitude between 700-900 dpl

Adult clove plants aged 15 years and over if properly maintained in the sense of being nourished by applying the recommended technology, can produce 1 kw of wet cloves in one cycle. 1kw wet cloves if dried can produce 30-35 kg of dry cloves (moisture content 14%) opinion from [6]. Problems that are still found in the field is the number of farmers who are still averse to doing fertilization as recommended by the plantation office. Some of them assume that the additional cost (ΔI) issued does not mean significantly because the additional yield obtained (ΔQ) is reabsorbed for the cost of fertilizer alone. Therefore it is necessary to research farmers' income from fertilizer and not use fertilizer in plants clove.

RESEARCH METHODS

This research was conducted in Terasa Village, Sinjai Barat Sub-district, Sinjai District, considering that this village is one of clove production center with altitude and rainfall which is near ideal for cultivation of clove plant. The research implementation is conducted from February to April 2017. The population in this research is the entire head of the family (KK) who work as petanicengkeh who live in Terasa Village, amounting to 647 families. Number of HHs using 338 HH and non-user fertilizer farmers were 309 KK. The sampling was done by simple random sampling of 10% for farmer user group and non-fertilizer farmer [7]. Subsequently selected farmers sample of fertilizer users as much as 34 people and non-users of fertilizers as many as 31 people. Data collected are primary data and secondary data. Primary data is data obtained directly from clove farmer by direct survey and interview at research location. While the secondary data obtained from the existing data on government and private agencies relevant to the problem research. Analysis of data used is the analysis of productivity.

Π1: = TR - TC.
Information :
π = Revenue
TR = Total Revenue (Total acceptance)
TC = Total Cost

RESULT AND DISCUSSION

Good and true clove cultivation begins with correct land preparation, good use of seeds and proper use of production inputs of quantity, quality and application at the right time. So farm management is needed. The use of additional inputs in the cultivation of cloves is intended to optimize the carrying capacity of the land because the optimum land support will optimize production. The use of inputs in the form of the use of urea fertilizer, TSP, KCL, NPK and organic fertilizer for nutrient elements content available on plant growth medium has sufficient content according to the needs of the plant.

It is also necessary for the labor to undertake the maintenance of plants, to control the disruptive crops, to control the pests of pesticides, to control the farming of wild animals and to the destruction and theft of irresponsible persons. So if the farmer expects additional production (ΔQ) then the farmer must also add input production (ΔI).

Results tabulation data presented in the following table.

Table 1. Production cost and Value of clove production without fertilizer and pest control

No.	Description	Amount	Average/ha
1	Number of informant sample	31	-
2	Land area of farmers(ha)	34,3	-
3	Total production costs (IDR)	12.942.414	394.585
4	Total production (ton)	17.447	535
5	Revenue(IDR)	437.075.000	13.375.000
6	Benefit (π/ha)	424.045.692	12.980.415

Source: Primary Data is processed in 2017.

Table 2. Production cost and production value with fertilizer input and pest control with pesticide

No.	Description	Amount	Average/ha
1	Number of informant sample	34	-
2	Land area of farmers(ha)	37,8	-
3	Total production costs (IDR)	43.083.995	1.408.195,-
4	Total production (ton)	38.439	1.017
5	Revenue(IDR)	960.975.000	26.750.000,-
6	Benefit (π/ha)	917.891.005	25.341.805,-

Source: Primary Data is processed in 2017.

From Table 1 and Table 2 show that production cost is higher in clove business by using fertilizer but also high productivity so that the income is also higher so that the income obtained by farmers by using fertilizer is also higher than clove farmers who do not use fertilizer so that the income ratio obtained that
Π1: Π2 = 25.341.805: 12.980.415 = 1, 95: 1
This shows that, clove cultivation business that uses additional input in the form of fertilizer in the production process provides greater benefits than the cultivation of clove plants that do not use additional input production process. Additional inputs (ΔI) increase production costs, but the effect of adding these inputs increases

production volumes of greater value than given input values (ΔR> ΔI).

In this case there is an opportunity that farmers should be able to increase their income. Namely by road, they should keep their cloves well, give fertilization (synthetic fertilizer or organic fertilizers or a combination of both), pest control as recommended by plantation service. Opinion that said the addition of input is a futile action because the increase in revenue due to the addition of input is more or less the same as the increase in acceptance proved wrong. The addition of input in the form of fertilizing plants as recommended proves to bring in greater revenue than the input value given to the plant. This is according to research of fatmah et al (2015) that the application of ZA fertilizer has significant effect on clove production

Therefore, the opportunity to obtain additional income (ΔR) should be utilized properly by farmers. The act of letting the plants do not get enough nutrient supply by relying on the availability of natural nutrients is an unwise decision by the farmers. This is tantamount to letting the opportunity go by without being used to increase their household acceptance, this is in the opinion of [8] that the income of clove farmers is influenced by maintenance and selling price

CONCLUSIONS AND RECOMMENDATIONS.

The productivity of dried clove plants when fertilization is average reaches 1.017 Kg and if not done the average production of fertilization is only 535 Kg per ha. The use of synthetic fertilizers, organic fertilizers or with a combination of organic fertilizer and fertilizer provide additional income greater than the additional value of input given to the cultivated plants.

Farmers should apply fertilizer to their clove plants in accordance with the recommendations of the agricultural service

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