Prosperity
Journal of Society and Empowerment

Prosperity: Journal of Society and Empowerment
Vol 5 No 1 (2025), pp. 19-37
DOI: 10.21580/prosperity.2025.5.1.20568

The Effect of Clove Agricultural Products on Family Welfare Level in Bontobangun Village, Bulukumba Regency

Nur Kumala[1], Jeddah Yanti[2*], Ichsan Invanni Baharuddin[3], Titus Adeyemi Alonge[4]

[12]Universitas Negeri Makassar, Indonesia; [3]Universitas Negeri Padang, Indonesia; [4]University of Technology, Nigeria

*Corresponding author: jeddah.yanti@unm.ac.id

History of Article:

Submitted: Mar 06, 2024
Accepted: Jun 16, 2025
Published: Jun 18, 2025

Citation Style (APA):
Kumala, N., Yanti, J., Baharuddin, I. I., Alonge, T. A. (2025). The Effect of Clove Agricultural Products on Family Welfare Level in Bontobangun Village, Bulukumba Regency. *Prosperity: Journal of Society and Empowerment*, *5*(1), 19-37 https://doi.org/10.21580/prosperity.2025.5.1.20568

Abstract: This quantitative descriptive study aims to determine how much influence clove agricultural products have on the level of family welfare in Bontobangun Village, Rilau Ale District, Bulukumba Regency. The independent variable in this study is the agricultural yield of cloves, while the dependent variable is the level of family welfare. The population in this study was all heads of families in Bontobangun Village, Bulukumba Regency, while the sample of this study was 89 households, a sampling technique using proportional random sampling. This study uses data collection techniques through observation, interviews, distribution of questionnaire sheets and documentation. Furthermore, the data is processed using SPSS version 22 and then presented as a table with an explanation. The results showed that the clove farmers' results significant influenced the family welfare level in Bontobangun Village, Bulukumba Regency. The largest number of clove farmer family members is 46.0 percent who have 3-4 dependents and the lowest number of family members is 10.1 percent who have 7 to 8 dependents. Most clove farming families in Bontobangun Village, Bulukumba Regency, have reached the third-class prosperous family stage. Compulsory needs of family members such as food, clothing, education, and health, family members are dependents.

Keywords: Family Welfare Level, Clove, Quantitative Descriptive, Bontobangun Village

Abstrak: Penelitian ini adalah penelitian deskriptif kuantitatif yang bertujuan untuk mengetahui berapa besar pengaruh hasil pertanian cengkeh terhadap tingkat kesejahteraan keluarga di Desa Bontobangun, Kecamatan Rilau Ale, Kabupaten Bulukumba. Variabel bebas dalam penelitian ini adalah hasil pertanian cengkeh, sedangkan variabel terikatnya adalah tingkat kesejahteraan keluarga. Populasi dalam penelitian ini adalah seluruh kepala keluarga di Desa Bontobangun Kabupaten Bulukumba, sedangkan sampel penelitian ini sebanyak 89 kepala keluarga, teknik pengambilan sampel dengan menggunakan proportional random sampling. Dalam penelitian ini menggunakan teknik pengumpulan data melalui observasi wawancara, penyebaran lembaran kuesioner dan dokumentasi. Selanjutnya data diolah menggunakan

SPSS versi 22, kemudian disajikan dalam bentuk tabel disertai penjelasan. Hasil penelitian menunjukkan bahwa hasil petani cengkeh memiliki pengaruh yang signifikan terhadap tingkat kesejahteraan keluarga di Desa Bontobangun Kabupaten Bulukumba. Sebagian besar keluarga petani cengkeh di Desa Bontobangun Kabupaten Bulukumba sudah mencapai tahapan keluarga sejahtera III Plus yaitu disamping dapat memenuhi kebutuhan pokok anggota keluarga seperti kebutuhan pangan, sandang, pendidikan, dan kesehatan, anggota keluarga juga aktif dalam kegiatan sosial.

Kata Kunci: Tingkat Kesejahteraan Keluarga, Hasil Pertanian, Deskriptif Kuantitatif

Introduction

Indonesia is one of the largest agricultural countries in the world, with more than 50 percent of its population living in the agricultural sector (Andira Tsaniya Al-Labiyah et al., 2023). The agricultural sector is important in national economic growth and social welfare (Aku et al., 2018). The plantation sector is a vital component of the agricultural subsector, playing a significant role in the nation's economy. It attracts substantial high-value investments, helps balance the trade deficit, and generates state revenue through excise taxes and duties. Additionally, it supplies food and industrial raw materials, contributes to foreign exchange earnings from exports, and creates job opportunities (Andrianandrasana et al., 2024).

The characteristics of clove plants can only be harvested once every 1 to 2 years. A large amount of vacant time allows farmers to devote their time to other businesses to earn income and maintain the welfare of their families (Yanti & Bakri, 2023). One of the community's welfare can be seen from the state or socio-economic conditions of the family (Xiang et al., 2025). Family socio-economic conditions are the conditions of each family in society, as seen from the level of education, income, work, and the number of family members who are considered to impact on community welfare and family welfare in the smallest scope (Wiryanata, 2022). One of the largest clove-producing areas in South Sulawesi is Bulukumba Regency, with around 11,732 households, and clove production in 2020 reached 720 tons in an area of 6,945 hectares spread across seven districts, according to the Directorate General of Plantations (Wang et al., 2024). It is supported by the conditions or location of farmers with sufficient rainfall throughout the year (Anjani et al., 2024).

Bontobangun Village, located in Bulukumba Regency, South Sulawesi Province, shows promising potential for the cultivation of clove plants. Approximately 50% of the residents in Bontobangun Village are clove farmers, highlighting a strong inclination among them to place high expectations on clove commodities. These clove products are anticipated to play a significant role in enhancing the overall welfare of the families in the village (Asante et al., 2024). The problem clove farmers face in Bontobangun Village, Rilau Ale District, is that the ups and downs of clove crop production can affect the level of family welfare (Ramla et al., 2022). Income from cloves can be a benchmark

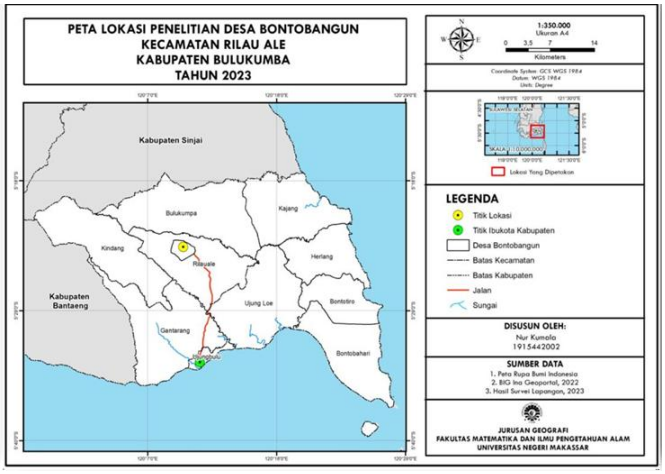
for the level of family welfare, both children and wives of farmers (Vigors et al., 2023). Given the potential for clove production to improve family welfare in Bontobangun Village, the author is interested in research about the effect of clove agricultural products on family welfare level in Bontobangun Village, Rilau Ale District, Bulukumba Regency.

The problems faced by clove farmers in Bontobangun Village, Rilau Ale District, the rise and fall of clove plant production can affect the level of family welfare. Community welfare can be seen from the socio-economic conditions of the family (van Veen et al., 2023). The socio-economic conditions of a family refer to various aspects such as education level, income, employment, and the number of family members. These factors are considered to significantly influence both community welfare and the well-being of families within society's smallest units (Tripathi et al., 2024; Vallance et al., 2023). Income from clove production can be a benchmark for the level of family welfare, both for children and wives of farmers (Swaans et al., 2008; Triono, 2024). Considering that clove production has the potential to improve family welfare in Bontobangun Village, the author is interested in conducting research to reach this study aims to examine the magnitude of the influence of clove production on family welfare level in Bontobangun Village.

Methods

The type of research based on the field under study is a type of quantitative research. Quantitative research is a method to test certain theories (theories) by examining the relationship between variables (Steen et al., 2023, 2024). This study seeks to gather diverse facts and comprehensive information to assess the impact of clove agricultural products on the welfare of families in Bontobangun Village, Rilau Ale District, Bulukumba Regency. Consequently, the population for this research comprises all heads of households in Bontobangun Village, totaling 777 households.

Study Area & Period



Picture 1. Bontobangun Village Map

This research was conducted in Bontobangun Village, located in the Rilau Ale District of Bulukumba Regency, South Sulawesi Province, with a postal code of 92553. The study took place from March to August 2023. Bontobangun Village is situated at an astronomical coordinate range of 5°20" to 5°40" South Latitude and 119°50" to 120°28" East Longitude. Generally, the village features a highland and hilly topography, positioned at an elevation of 325 meters above sea level and distanced from coastal and sea areas, encompassing a total area of 888.8 H^2.

Sampling & Respondents

The sampling technique in this study is proportional random sampling (Rahayu et al., 2024; Rumakey et al., n.d.; Sisay, 2024). The number of samples collected from each stratum is proportional to its size, based on the population in each hamlet: Bontobangun, Buttakeke, and Pabbentengan. This sampling approach incorporates an error rate of 10 percent, which will be detailed further below.

$$n = \frac{N}{1+N.e^2}$$

$$n = \frac{777}{1+777.0,1^2}$$

$$= \frac{777}{8,77}$$

$$= 88.59$$

Description:

n = sample size

N = population size

e = percentage of tolerance for sampling error accuracy that can still be tolerated, e= 0.1(10 percent).

The number of samples was 89 respondents and in each hamlet by determining the proportion according to the number of family cards in each hamlet which is divided into Bontobangun Hamlet with 29 families, Buttakeke Hamlet with 26 families, and Pabbentengan Hamlet with 34 families.

Data Collection (instrument details, validity/reliability)

In this study, data was gathered from various institutions and field survey results. After collecting the data, appropriate data collection techniques were determined to align with the objectives of the study. The techniques employed included observation, questionnaires, intelligence surveys, and documentation methods (Michel et al., 2021; Morrison et al., 2025; Qu et

al., 2023). The data collected will be analyzed according to the design outlined in this study, which will aid in discussing the findings. In conducting this research, several variables will serve as measurement tools with the goal of achieving optimal research outcomes. The variables in this study are as follows:

1. Population
2. Health and nutrition
3. Education
4. Employment
5. Levels and patterns of consumption
6. Housing
7. Poverty
8. Other social conditions

The data collection techniques used in this study are as follows: Observation techniques, questionnaires (questionnaires), intelligence survey techniques, and documentation techniques (Kiptot et al., 2016; Kiptot & Franzel, 2015; Kitole et al., 2024). The data analysis technique used in this study is a descriptive analysis technique that provides an overview of the research results presented in the form of a percentage table. Determined by the following formula:

% = n/N x 100%

Description of the formula: n = Score obtained

N = Ideal score

% = Percentage

Data Analysis

Simple linear regression analysis technique is used to see the effect of clove farming yield variables on family welfare level variables (Méndez-Barrientos et al., 2020; Michaelis et al., 2024; Michel et al., 2021). Also used to build equations and use the equation to make estimates (predictions). The simple regression equation formula used in this study is:

Y = a + b. X

Formula description:

Y = Welfare Level

X = Clove Farming Yield

a and b = Constants

Regression analysis in this study will use the help of SPSS version 22 software. The results of the regression analysis can also be used to test the previously proposed hypothesis. The basis for making decisions is:

If: tcount value < ttable, then Ho is accepted

If: tcount value > ttable, then Ho is rejected

Results and Discussion

Descriptive Statistics of Socio-Economic Conditions of Clove Farmers in Bontobangun Village in 2023

Socio-economic conditions based on education

To find out how socio-economic conditions can be seen based on the level of education. The education level of respondents at the study location can be seen in Table 1 below:

Table 1. Education Level of Clove Farmers

Education	Frequency (KK)	Percentage (%)
No School	8	9,0
SD	36	40,4
SMP	17	19,1
SMA	18	20,2
S1	10	11,2
Sum	**89**	**100**

Source: Research Questionnaire Results 2023

Table 1 illustrates the educational background of the clove farmers. The majority of these farmers have completed elementary school, accounting for 36 individuals, which represents 40.4 percent of the total. Conversely, the lowest educational attainment is represented by eight individuals who never attended school, comprising 9.0 percent of the group.

Socioeconomic Conditions Based on Income

The income of clove farmers in question is how much of their overall income is from clove agricultural products. More details can be seen in Table 2 below:

Table 2. Income Level of Clove Farmers

Income Level (Rp/Year)	Frequency (KK)	Percentage (%)
Rp.10,000,000-Rp.100,000,000	83	93,2
<IDR 10,000,000	6	6,7
Sum	**89**	**100**

Source: Research Questionnaire Results 2023

According to Table 2, clove farmers' annual incomes range from Rp10,000,000 to Rp100,000,000, with 83 households representing 93.2 percent of this income bracket. In contrast,

six respondents, accounting for 6.7 percent, reported incomes below Rp10,000,000 per year. This demonstrates that the income of clove farmers is generally adequate to meet their daily needs, in accordance with the Regional Minimum Wage (UMR).

Socioeconomic conditions by occupation

To see the socio-economic conditions based on employment in Bontobangun Village, please see Table 3 below:

Table 3. Employment Rate of Clove Farmers

Work	Frequency (KK)	Percentage (%)
Clove Farmer	89	100
Other Work	0	0
Sum	**89**	**100**

Source: Research Questionnaire Results 2023

Table 3 shows that clove farmers dominate respondents' work in as 89 households with a percentage of 100 percent.

Socioeconomic Conditions Based on Family Members

Regarding socioeconomic conditions based on family members, we can see the following table:

Table 4. Number of Family Members of Respondents

Number of Family Members	Frequency (KK)	Percentage (%)
1-2	23	25,8
3-4	41	46,0
5-6	16	17,9
7-8	9	10,1
Sum	**89**	**100**

Source: Research Questionnaire Results 2023

Table 4 shows that the highest number of clove farmer family members is 46.0 percent of dependents of 3 to 4 people, and the lowest number of family members is 10.1 percent of dependents of 7 to 8 people.

The Effect of Clove Agricultural Products on Family Welfare in Bontobangun Village, Bulukumba Regency

1. Population

Bontobangun Village is home to a total of 777 families, amounting to a population of 2,881 individuals. The village comprises several hamlets, with Bontobangun Hamlet having 250 households, Buttakeke Hamlet containing 230 households, and Pabbentengan Hamlet consisting of

297 families. The number of respondents surveyed by researchers at the site is detailed in Table 5 below:

Table 5. Number of Respondents in Bontobangun Village

Hamlet	Frequency (KK)	Percentage (%)
Bontobangun	29	32,5
Buttakeke	26	29,2
Pabbentienen	34	38,2
Sum	**89**	**100**

Source: Village Statistics Data

The table above indicates that the majority of respondents from Bontobangun Village reside in Pabbenteng Hamlet, totaling 34 families, which represents 38.2 percent of the sample. In contrast, the fewest respondents come from Buttakeke Hamlet, with only 26 families, accounting for 29.2 percent.

2. Health and Nutrition

The ability of clove farmers to meet the health needs of their families is presented in the following table:

Table 6. Farmers' Ability to Meet Their Health Needs

Place of Treatment	Frequency (KK)	Percentage (%)
Non-Medical	0	0
Puskesmas/Hospital	89	100
Sum	**89**	**100**

Source: Research Questionnaire Results 2023

The data table 6 shows that if a family of clove farmers is sick, then they will seek treatment at the nearest hospital or Puskesmas.

3. Education

The following are the levels of formal education that clove farmers have attended:

Table 7. Education Level of Clove Farmers

Education	Frequency (KK)	Percentage (%)
No School	8	9,0
SD	36	40,4
SMP	17	19,1
SMA	18	20,2
S1	10	11,2

Sum	**89**	**100**

Source: Research Questionnaire Results 2023

Table 7 presents the education levels of the respondents. The majority of clove farmers have completed elementary school, totaling 36 individuals, which accounts for 40.4 percent of the respondents. In contrast, the lowest educational attainment is represented by 8 individuals who have never attended school, making up 9.0 percent of the total.

4. Employment

The amount of labor or labor used by clove farmers is presented in the following table:

Table 8. Labor Used by Clove Farmers

Labor (People)	Frequency (KK)	Percentage (%)
1-2	63	70,7
3-4	16	17,9
5-6	10	11,2
Sum	**89**	**100**

Source: Research Questionnaire Results 2023

Table 8 shows that clove farmers mostly use workers 1 to 2, with a frequency of 63 people, a percentage of 70.7 percent, and the lowest number of workers is 5 to 6 people with a frequency of 10 people with a rate of 11.2 percent.

5. Consumption Levels and Patterns

The ability of clove farmers to meet the needs of consumption levels and patterns is presented in Table 9 below:

Table 9. Consumption Patterns of Clove Farmers

Consumption Patterns	Frequency (KK)	Percentage (%)
Eat two times a day	87	97,7
Not eating two times a day	2	2,2
Sum	**89**	**100**

Source: Research Questionnaire Results 2023

Table 9 shows that clove farmers ate an average of 2 times a day, as many as 87 respondents with a percentage of 97.7 percent.

6. Housing

The condition or quality of the clove farmer's residence whether it is habitable and can provide comfort is presented in the following table:

Table 10. Conditions of Residence of Clove Farmers

State of Residence	Frequency (KK)	Percentage (%)
Have a good roof, floor, and walls	89	100
It does not have a good roof, floor, and walls	0	0
Sum	**89**	**100**

Source: Research Questionnaire Results 2023

The results of Table 10 show that as many as 89 clove farmer households have suitable roofs, floors, and walls with a percentage of 100 percent.

7. Poverty

The ability of clove farmers to meet basic needs such as food, clothing, shelter, education, and health is presented in the following table:

Table 11. Poverty Rate of Clove Farmers

Poverty	Frequency (KK)	Percentage (%)
Able to meet basic needs	87	97,7
Unable to meet basic needs	2	2,2
Sum	89	100

Source: Research Questionnaire Results 2023

Table 11 shows that clove farmers can meet their basic needs with a total of 87 households with a percentage of 97.7 percent.

8. Other Social

The ability of clove farmers to provide social assistance is presented in the following table:

Table 12. Social Activities of Clove Farmers

Social Activities	Frequency (KK)	Percentage (%)
Make donations and be active in community social activities	60	67,4
Not making donations and active community social activities	29	32,5
Sum	**89**	**100**

Source: Research Questionnaire Results 2023

The results of Table 12show that the social activities of clove farmers are dominated by people who actively contribute and are active in community social activities as many as 60 households with a percentage of 67.4 percent.

Characteristics of The Level of Family Well-Being

Table 13 shows the level of well-being of each respondent. The welfare level of clove farmers is dominated by the welfare level of KS III Plus, with as many as 35 people with a percentage of 39.3 percent with the lowest welfare level, namely PPP, as many as two people with a percentage of 2.2 percent. The following table of family welfare levels can be presented below:

Table 13. Family Welfare Levels

Level of Wellbeing	Frequency (KK)	Percentage (%)
Pre-Prosperous Families	2	2.2
KS I	23	25.8
KS II	14	15.7
KS III	15	16.8
KS III+	35	39.3
Sum	**89**	**100**

Source: Research Questionnaire Results 2023

Correlation Analysis of Clove Agricultural Products on Family Welfare in Bontobangun Village, Bulukumba Regency in 2023

Correlation coefficient analysis is a statistical method frequently utilized to examine the relationship between variables. This technique seeks to identify patterns and measure the strength or closeness of relationships between two or more variables, which are represented by correlation coefficients. Below, a table presenting the results of correlation coefficient analysis can be found:

Table 14. Correlation Coefficient Analysis Test Results Correlations

		Level of Wellbeing	Agricultural Products
Level of Wellbeing	Pearson Correlation	1	0.963**
	Sig. (2-tailed)		0.000
	N	89	89
Agricultural Products	Pearson Correlation	0.963**	1
	Sig. (2-tailed)	0.000	
	N	89	89

Correlation is significant at the 0.01 level (2-tailed)

The welfare level correlation coefficient of 0.963 indicates a very strong relationship between the level of welfare and agricultural products. This strong correlation is defined by values ranging from 0.75 to 0.99, which reflect a very robust connection.

Simple linear regression is a statistical method used to examine the strength of the causal relationship between an independent variable (X) and a dependent variable, specifically the welfare level (Y). In this context, X is referred to as the predictor, while Y represents the response or outcome variable. Below, we can present a table summarizing the results of the simple linear regression analysis:

Table 15. Simple Linear Regression Test Results

Model	Unstandardized Coefficients		Standardized Coefficients	T	Say.
	B	Std. Error	Beta		
(Constant)	43.946	7.602		5.781	0.000
X1	1.491	0.288	0.485	5.177	0.000

Dependent Variable: Y1

In Table 15 above, a simple regression equation is established as follows: Y = 43.946 + 1.491X. This regression equation indicates that the constant a is 43.946 and the coefficient b is 1.491, resulting in the model Y = 43.946 + 1.491X. In this context, Y represents the Family Welfare Level, while X denotes the Clove Agricultural Product. The positive relationship between clove agricultural products and family welfare indicates a one-way relationship between variables X and Y. As the value of variable X increases, Y also rises. Therefore, it can be concluded that improved agricultural output of cloves correlates with an enhancement in family welfare (Logstein & Bjørkhaug, 2023; Lukuyu et al., 2012; Mariel et al., 2024).

1. Test Coefficient of Determination (R^2)

The coefficient of determination calculates the magnitude of the independent influence of clove farmer yield (X) on the dependent variable of family welfare (Y). The following table of R test results can be presented below:

Table 16. R Square Test Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.485a	0.236	0.227	6.68010

Predictors: (Constant), X1

Based on Table 16 above, the R Square (R2) value is 0.236. This result means that the yield level of clove farmers affects 23.6 percent of family welfare levels. In comparison, the remaining

76.4 percent is influenced by other variables not studied in the current study (Chi et al., 2024; Indrianti et al., 2022).

2. Calculate t-Test (Partial Test)

The t-test is employed to assess the significant impact of the independent variable on the dependent variable, while assuming the other variables remain constant. The decision-making criteria use a confidence level of 95% (α = 0.05), with the degrees of freedom calculated as df = n - k - 1 = 89 - 2 - 1 = 86, resulting in a t-table value of 1.663. Below is a presentation of the Partial test results:

Table 17. Calculated t-Test Results (Partial Test)

Model	Unstandardized Coefficients		Standardized Coefficients	T	Say.
	B	Std. Error	Beta		
(Constant)	43.946	7.602		5.781	0.000
X1	1.491	0.288	0.485	5.177	0.000

Dependent Variable: Y1

According to Table 17, the t-count value for the farmer yield variable is 5.177, which exceeds the t-table value of 1.663. Additionally, the significant value of 0.00 is less than 0.05. This indicates that there is a significant influence of clove farmers' yield on family welfare. Consequently, we reject the null hypothesis (Ho) and accept the alternative hypothesis (Ha), concluding that the results of clove farming have a positive and significant impact on the level of family welfare (Bello et al., 2024; Boonaert & Maertens, 2023).

Socio-economic Conditions of Clove Farmers in Bontobangun Village, Bulukumba Regency

Clove farmers serve as the primary respondents in efforts to meet their needs, and education is a significant factor influencing their socio-economic conditions. The level of education directly impacts clove production, as it not only enhances farming productivity but also equips farmers with the knowledge to adapt to innovations in the agricultural sector. In Bontobangun Village, the majority of clove farmers have an education level that primarily consists of elementary schooling, with 36 individuals representing 40.4 percent, while eight individuals, or 9.0 percent, have never attended school. This reflects a relatively low education level among these farmers. Despite such limitations, the farmers in Bontobangun Village benefit from socialization and counseling provided by local government authorities on effective and proper clove cultivation practices. Furthermore, they have the opportunity to send their children to pursue higher education beyond elementary school (Asante et al., 2024; Awuah-Frimpong et al., 2024).

According to the analyzed data, the income earned by clove farmers ranges from Rp10,000,000 to Rp100,000,000 annually, encompassing 83 households, which accounts for 93.2 percent of the sample. This indicates that clove farmers can generate sufficient income to meet

their daily needs, provided that crop yields are adequate and market prices remain favorable. The research also revealed that clove farmers dominate the workforce, with all 89 respondents identified as engaged in clove farming, representing a 100 percent response rate. Furthermore, the study found that the highest proportion of clove farmer families—40.0 percent—have 3 to 4 dependents, while the smallest group, at 10.1 percent, has 7 to 8 dependents. Thus, it can be observed that a larger number of family members correlates with an increased burden of dependents carried by the head of the household (Rahayu et al., 2024).

This study is in line with research conducted by Ramla (2022). In Rante Limbong Village, clove farming is the primary occupation for many residents. However, several respondents also hold additional jobs, working as traders or government employees (PNS). A significant portion of the farmers, approximately 33 percent, possess considerable farming experience, ranging between 16 and 21 years. Most farmers cultivate land sizes between 1.0 ha and 2.0 ha, accounting for 80% of the respondents. Meanwhile, 6.7 percent farm on plots smaller than 0.5 ha, and 13.3 percent manage areas larger than 2.0 ha (Ramla et al., 2022).

The Effect of Clove Agricultural Products on Family Welfare in Bontobangun Village, Bulukumba Regency

The findings revealed that 100 percent of clove farming families sought treatment at the hospital or health center when ill. The government's health initiatives are considered successful, particularly with the establishment of a Puskesmas in Bontobangun Village to provide essential medical services. The health of clove farmers in this region significantly impacts clove farming outcomes, as the demanding workload often leads to various health issues among the farmers, highlighting the crucial need for healthcare to maintain their productivity. Additionally, it is noted that the educational background of the clove farmers is primarily at the elementary level (Swaans et al., 2008). This shows that the education level of clove farmers is relatively low. Although the education level of clove farmers in Bontobangun Village is only up to elementary school, they receive socialization or counseling from the local government on cultivating cloves properly and correctly (Triono, 2024). Farmers have the opportunity to provide their children with education beyond the elementary level. Notably, approximately 70.7 percent of clove farmers employ a workforce of one to two individuals. This indicates the necessity for labor in the production of clove agricultural products. During the harvest period, for example, farmers must climb trees to pick clove flowers and dry them, a process that can be time-consuming. Consequently, farmers rely on additional labor, as the harvesting process is both lengthy and potentially hazardous (van Veen et al., 2023).

The results indicate that 97.7 percent of clove farmers consume two meals a day. This suggests that the farmers in Bontobangun Village are relatively prosperous, as they can meet their dietary needs. Individuals with lower incomes typically allocate a significant portion of their earnings to food consumption. Furthermore, all clove farmers have adequate roofing, flooring, and wall structures, with the average house being well-built using quality materials. The condition and

quality of housing are important considerations for ensuring the health and comfort of clove farming families in Bontobangun Village. Notably, 97.7 percent of these farmers can satisfy their basic needs, and 67.4 percent actively contribute to donations and community social activities. From the data presented, it can be concluded that the clothing, food, and shelter needs of clove farmers in Bontobangun Village, Bulukumba Regency, are sufficiently met to support their families. The assessment of family welfare levels reveals that two clove farmers fall into the pre-prosperous category (2.2 percent), 23 farmers are classified in KS I (25.8 percent), 14 farmers in KS II (15.7 percent), 15 farmers in KS III (16.8 percent), and 35 farmers in the KS III + category (39.3 percent).

The welfare or prosperous family stage utilized by BKKBN standards can be categorized to show that most clove farming families have attained the III Plus prosperous family level. This designation indicates that these families can not only meet the basic needs of their members—such as food, clothing, education, and healthcare—but can also address higher demands, including savings, recreation, and access to media such as newspapers, television, and radio.

Based on the findings, researchers concluded that clove agricultural products significantly impact the level of family welfare in Bontobangun Village, Bulukumba Regency. Data management results obtained using SPSS indicate that the T-test hypothesis reveals a t-count value of 5.177 for the family welfare level variable, with a significant value of 0.00. Since the t-count of 5.177 exceeds the t-table value of 1.663, and the significance level of 0.00 is less than 0.05, we accept Ha and reject Ho. This indicates a significant influence of clove agricultural products on family welfare levels in Bontobangun Village, Bulukumba Regency.

This research aligns with the work conducted by Anjani (2024), which utilized data management techniques through SPSS 22. The results from the T-test indicate that the t-count value for the farmer/family welfare variable is 5.748, accompanied by a significant value of 0.00. Since the t-count value exceeds the t-table value (5.748 is greater than 2.036), we accept the alternative hypothesis (Ha) and reject the null hypothesis (Ho). This outcome suggests a significant influence of oil palm farmers' income on the welfare of farmers and their families (Anjani et al., 2024).

Conclusion

Based on the research findings and discussions, the conclusions drawn from this study are as follows: The socio-economic conditions of clove farmers in Bontobangun Village indicate that the average education level among them is predominantly at the elementary school level. The data analysis reveals that annual incomes for most clove farmers range from Rp. 10,000,000 to Rp. 100,000,000. Most farmers in the area support families averaging 3 to 4 members, often with the assistance of 1-2 additional family members.

A significant number of these clove farming families have reached the level of prosperous family III Plus, which means that they are capable of meeting not only their basic necessities—such

as food, clothing, education, and healthcare—but also higher needs including savings, recreation, and access to information through newspapers, television, and radio.

From this descriptive analysis, it can be concluded that clove farming has a considerable impact on the welfare of families in Bontobangun Village, Bulukumba Regency. Given the relatively low level of education among farmers, it is hoped that additional social assistance from various parties could provide regular counseling. This support should focus on helping farmers improve their clove plantation businesses through better planting methods, plant care techniques, and the selection of quality fertilizers.

References

Aku, A., Mshenga, P., Afari-Sefa, V., & Ochieng, J. (2018). Effect of market access provided by farmer organizations on smallholder vegetable farmer's income in Tanzania. *Cogent Food and Agriculture, 4*(1), 1–13. https://doi.org/10.1080/23311932.2018.1560596.

Andira Tsaniya Al-Labiyah, Lusi Nurul Aulia, Najuwa Aurel Annisa, & Lili Puspita Sari. (2023). Peran ZIS Terhadap Peningkatan Kesejahteraan Sosial di Indonesia. I*slamic Economics and Business Review, 2*(2), 168–185. https://doi.org/10.59580/iesbir.v2i2.6003.

Andrianandrasana, H. T., Campera, M., Viraina, F. F., Long, P. R., & Jones, N. (2024). Additional measures needed to ensure clove industry does not contribute to tree cover loss in Madagascar. F*orest Policy and Economics, 169*(September). https://doi.org/10.1016/j.forpol.2024.103333.

Anjani, D., Dilla Anggraeni, F., Praja Rezaldi, A., Tarihoran, an, Peradaban Islam, S., Sultan Maulana Hasanuddin Banten, U., Ekonomi Syariah, H., & Syariah, P. (2024). Tingkat Kebahagiaan dan Kesejahteraan Petani Cengkeh di Kecamatan Mandalawangi Kabupaten Pandeglang. *Jurnal Aksi Sosial, 1*(3), 82–91. https://doi.org/10.62383/aksisosial.v1i3.585.

Asante, B. O., Prah, S., Temoso, O., Boateng, F., & Gyinadu, A. (2024). Impacts of multivalued interventions on maize farmers' welfare: Evidence from SIPMA development project in Ghana. *Heliyon, 10*(22), e40325. https://doi.org/10.1016/j.heliyon.2024.e40325.

Awuah-Frimpong, R., Tham-Agyekum, E. K., Ankuyi, F., Freeman, C., Annor-Frempong, F., & Andivi Bakang, J. E. (2024). Household welfare outcomes of access to and use of agricultural radio broadcast by women cocoa farmers in Tepa district, Ghana. *Social Sciences and Humanities Open, 9*(July 2023), 100796. https://doi.org/10.1016/j.ssaho.2023.100796.

Bello, L. O., Awotide, B. A., & Sakurai, T. (2024). Climate change adaptation and smallholder farmers welfare: Empirical evidence from the Sahelian Region of West Africa. *Land Use Policy, 142*(February), 107181. https://doi.org/10.1016/j.landusepol.2024.107181.

Boonaert, E., & Maertens, M. (2023). Voluntary sustainability standards and farmer welfare: The pathways to success? *Food Policy, 121*(July), 102543. https://doi.org/10.1016/j.foodpol.2023.102543.

Chi, S., Yao, L., Zhao, G., Lu, W., & Zhao, M. (2024). The performance of low carbon agricultural technologies on farmers' welfare: A meta-regression analysis of Asian cases. *Ecological Economics, 224*(September 2023), 108318. https://doi.org/10.1016/j.ecolecon.2024.108318.

Indrianti, M. A., Pau, I. E. P., Ardiansyah, W., & Gobel, Y. A. (2022). Analisis Distribusi Pendapatan Rumah Tangga Petani Cengkeh Di Kecamatan Posigadan. *Jurnal Agriovet, 4*(2), 199–218. https://doi.org/10.51158/agriovet.v4i2.725.

Kiptot, E., & Franzel, S. (2015). Farmer-to-farmer extension: opportunities for enhancing performance of volunteer farmer trainers in Kenya. *Development in Practice, 25*(4), 503–517. https://doi.org/10.1080/09614524.2015.1029438.

Kiptot, E., Karuhanga, M., Franzel, S., & Nzigamasabo, P. B. (2016). Volunteer farmer-trainer motivations in East Africa: practical implications for enhancing farmer-to-farmer extension. *International Journal of Agricultural Sustainability, 14*(3), 339–356. https://doi.org/10.1080/14735903.2015.1137685.

Kitole, F. A., Tibamanya, F. Y., & Sesabo, J. K. (2024). Exploring the nexus between health status, technical efficiency, and welfare of small-scale cereal farmers in Tanzania: A stochastic frontier analysis. *Journal of Agriculture and Food Research, 15*(September 2023), 100996. https://doi.org/10.1016/j.jafr.2024.100996.

Logstein, B., & Bjørkhaug, H. (2023). Good Animal Welfare in Norwegian Farmers' context. Can both industrial and natural conventions be achieved in the social license to farm? *Journal of Rural Studies, 99*(August 2022), 107–120. https://doi.org/10.1016/j.jrurstud.2023.03.002.

Lukuyu, B., Place, F., Franzel, S., & Kiptot, E. (2012). Disseminating Improved Practices: Are Volunteer Farmer Trainers Effective? *Journal of Agricultural Education and Extension, 18*(5), 525–540. https://doi.org/10.1080/1389224X.2012.707066.

Mariel, J., Sanchez, I., Verzelen, N., Massol, F., Carrière, S. M., & Labeyrie, V. (2024). The role of farmers' networks in sourcing planting material and information in a context of agroforestry transition in Madagascar. *Agricultural Systems, 217*(April 2022). https://doi.org/10.1016/j.agsy.2024.103906.

Méndez-Barrientos, L. E., DeVincentis, A., Rudnick, J., Dahlquist-Willard, R., Lowry, B., & Gould, K. (2020). Farmer Participation and Institutional Capture in Common-Pool Resource Governance Reforms. The Case of Groundwater Management in California. *Society and Natural Resources, 33*(12), 1486–1507. https://doi.org/10.1080/08941920.2020.1756548.

Michaelis, S., Gieseke, D., & Knierim, U. (2024). Reliability, practicability and farmers' acceptance of an animal welfare assessment protocol for broiler chickens and turkeys. P*oultry Science, 103*(10). https://doi.org/10.1016/j.psj.2024.103900.

Michel, I., Lobietti, M., Danthu, P., Penot, E., Velonjara, F., Jahiel, M., & Michels, T. (2021). Agroforestry innovation by smallholders facing uncertainty: The case of clove-based cropping systems in Madagascar. *European Journal of Agronomy, 123*(December 2020). https://doi.org/10.1016/j.eja.2020.126218.

Morrison, R., Cassar, X., Duncan, A. J., Rao, E. J. O., & Barnes, A. P. (2025). Information flows within farmer networks and the implications for farmer-to-farmer extension: evidence from the Kenyan dairy sector. *Journal of Agricultural Education and Extension, 8622*, 1–25. https://doi.org/10.1080/1389224X.2025.2461455.

Qu, Y., Li, Y., Zhao, W., & Zhan, L. (2023). Does the rural housing land system reform model meeting the needs of farmers improve the welfare of farmers? *Socio-Economic Planning Sciences, 90*(August), 101757. https://doi.org/10.1016/j.seps.2023.101757.

Rahayu, D. P., Rahayu, S., Faisal, & Yanto, A. (2024). Countering illegal tin mining with a legal formulation of law based on local wisdom in Bangka Belitung, Indonesia. *Cogent Social Sciences, 10*(1). https://doi.org/10.1080/23311886.2024.2311053.

Ramla, S., Syafruddin, R. F., Firmansyah, F., & Arwati, S. (2022). Kontribusi Usahatani Cengkeh Terhadap Pendapatan Rumah Tangga Petani di Desa Rante Limbong Kabupaten Kolaka Utara. *Tarjih : Agribusiness Development Journal, 2*(01), 114–118. https://doi.org/10.47030/tadj.v2i01.362.

Rumakey, G. R., Pattiselanno, A. E., & Puttileihalat, P. M. (2024). Profit Sharing System On Clove Commodity : Farmers And Farm Labor In Waipula Negeri Ureng Hamlet , Leihitu District , Central Maluku Regency. *International Journal of Economics, Business and Innovation Research, 03*(05), 267–276.https://doi.org/10.63922/ijebir.v3i05.1101.

Sisay, K. (2024). Impacts of multiple livelihood diversification strategies on diet quality and welfare of smallholder farmers: Insight from Kaffa zone of Ethiopia. *Cleaner and Responsible Consumption, 12*(July 2023), 100161. https://doi.org/10.1016/j.clrc.2023.100161.

Steen, N. A., Krokstad, S., & Torske, M. O. (2023). A Cross-Sectional Study of Farmer Health and Wellbeing in Norway: The HUNT Study (2017-2019). *Journal of Agromedicine, 28*(4), 809–820. https://doi.org/10.1080/1059924X.2023.2229840.

Steen, N. A., Muri, K., & Torske, M. O. (2024). Exploring longitudinal associations between farmer wellbeing and the welfare of their livestock. The HUNT Study, Norway. *Preventive Veterinary Medicine, 233*(May), 106361. https://doi.org/10.1016/j.prevetmed.2024.106361.

Swaans, K., Broerse, J., Salomon, M., Mudhara, M., Mweli, M., & Bunders, J. (2008). The Farmer Life School: Experience from an innovative approach to HIV education among farmers in South Africa. *Sahara Journal, 5*(2), 52–64. https://doi.org/10.1080/17290376.2008.9724902.

Triono, T. A. (2024). Systematic Literature Review: Membangun Kesejahteraan Sosial Indonesia, Peluang dan Hambatan. *Journal of Society Bridge, 2*, 118–126. https://www.bk3s.org/ojs/jsb/article/view/46.

Tripathi, H. G., Smith, H. E., Sallu, S. M., Machera, S. D., Florence, M., Maburuki, M., Maurice, S., Kunin, W. E., & Sait, S. M. (2024). Farmers' biodiversity knowledge improves natural enemy conservation in agricultural ecosystems. *Crop Protection, 183*(May), 106777. https://doi.org/10.1016/j.cropro.2024.106777.

Vallance, S., Espig, M., Taylor, A., Brosnahan, C., & McFetridge, A. (2023). Farmer wellbeing and animal welfare: Exploring the connections using the case of facial eczema. *Journal of Rural Studies, 104*(May), 103140. https://doi.org/10.1016/j.jrurstud.2023.103140.

van Veen, L. A., van den Oever, A. C. M., Kemp, B., & van den Brand, H. (2023). Perception of laying hen farmers, poultry veterinarians, and poultry experts regarding sensor-based continuous monitoring of laying hen health and welfare. *Poultry Science, 102*(5), 102581. https://doi.org/10.1016/j.psj.2023.102581.

Vigors, B., Wemelsfelder, F., & Lawrence, A. B. (2023). What symbolises a "good farmer" when it comes to farm animal welfare? *Journal of Rural Studies, 98*(February), 159–170. https://doi.org/10.1016/j.jrurstud.2023.01.009.

Wang, L., Ding, X., Hong, M., Xiong, W., & Tan, Y. (2024). Exploring changes and influencing factors of farmers' welfare in different villages under the background of homestead system reform. *Habitat International, 153*(September), 103190. https://doi.org/10.1016/j.habitatint.2024.103190.

Wiryanata, I. W. G. (2022). Analisis Usahatani Cengkeh Di Desa Deno Kecamatan Poco Ranaka Kabupaten Manggarai Timur. *Jurnal dwijenAGRO, 12*(1), 15–20.http://ejournal.undwi.ac.id/index.php/dwijenagro/article/view/1272.

Xiang, P., Wen, C., Lin, Z., & Xia, M. (2025). Effects of organic farming adoption on farmer's subjective well-being: evidence from Xiangxi Prefecture, China. *International Journal of Agricultural Sustainability, 23*(1), 1–21. https://doi.org/10.1080/14735903.2025.2455801.

Yanti, A. I., & Bakri, A. N. (2023). Examining the economic viability of clove farming and its impact on the welfare of farmers in Larompong Sub-District. *Al-Kharaj, 5*(2), 281–287.https://ejournal.iainpalopo.ac.id/index.php/alkharaj/article/download/3755/2358/0.