



Potential Of Albizzia Forest in Food Crops Based Agroforestry

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ABSTRACT

Management of State-owned forests needs to involve the community in utilizing the area. One of them is that the community around the forest area is given authority to obtain permission to manage the forest. Efforts were made to get legalization for the community in accessing and managing forest areas; the government issued a social forestry policy. Management of forest areas using a regime management system requires the participation of communities around the site, so it is necessary to be more active in managing agroforestry-based land. The primary aim of this research is to determine the potential of the Albizzia forest in helping the community provide arable land for agriculture in the development of an agroforestry system. The data collection technique used in this research is field observation, with interview techniques carried out directly. Farmers' responses (77%) of farmers who have introduced this system stated that they were delighted, (19%) answered that they were not happy, and 4% said they were satisfied. Farmers' satisfaction with this management system is seen as a local community product that has proven effective in dealing with economic changes in communities around the Albizzia forest area

INTRODUCTION

Forest land, especially the Sengon forest, has the potential to be developed into an agricultural area with an agroforestry system. Government policy influences the level of community access in utilizing forest areas (Matiku,2013). Communities can use forest products to improve their economy. Access or rights need to be granted so that people can get permission to manage the forest. The government issued a social forestry policy to utilize this area in the agricultural sector so that people can get legalization to access and manage forest areas (Newig,2009). Reducing the impact of deforestation and forest degradation is currently still carried out at relatively high costs, and community activities cause adverse effects, so in plantation forest development activities, the security and welfare of the community are often mentioned regarding the threat of land and food shortages (Sofiyudi et al., 2016). The Sengon forest management process depends on community participation in cultivating land for agroforestry programs so that communities living around forest areas can experience direct and indirect benefits and access to protecting forest resources. Community involvement in managing sengon land is extensive and cannot be ignored because it has negative and positive impacts (Isager, 2001).

LITERATURE REVIEW

Economic and social conditions can destroy the management of sengon forests, which have the potential to be developed. Control of the Sengon forest area using a regime management system requires the participation of communities around the site to encourage them to be more active in managing land based on agroforestry. The community must be equipped with knowledge of land-based monitoring techniques (in the form of training) to carry out their duties according to applicable procedures and help managers achieve organizational goals effectively and efficiently. This research aims to determine the potential of the Sengon forest area in developing agroforestry (Musyoki, *et,al*,2016,).

METHODOLOGY

This research was conducted for three months, from January 29 to March 31, 2022. I am located in Trenggalek Regency. East Java. It is located in the administrative area of the Tugu District government. Located on latitude / Longitude; 7°11"-6°48', 111°24" - 111°50



Figure 1. Riset Area Map

The tools and materials used in this research are writing instruments, questionnaires, cameras, and voice recorders, and the objects targeted in this research are the communities around the forest area that manage agricultural land in the Albizzia forest and forest areas. This research uses data collection techniques used in the process, namely field observations carried out directly by observing objects that are the focus of material in teak forests and recording everything that can be used as material for analysis, interview techniques are carried out directly by interviewing field officers and village communities. A buffer who is permitted to manage land within a forest area, in this case the community. Community responses were taken using a questionnaire and tabulated, where the data was divided into five categories: very dissatisfied, dissatisfied, moderate, satisfied and very satisfied. In the questionnaire assessment, a Likert scale was used, while the measurement of data categories obtained used the Sturges formula.

$$Z = \frac{X-Y}{K}$$

Where Z=Class interval, X= Highest value. Y= Lowest value,
K= Number of classes or categories

Table 1. Perception Categories Based on Maximum Score Achieved

No	Categori Persepsion	Presentase Pencapaian skor	Frekuensi	Responden(%)
1	Very dissatisfied	≥ 20-36	100	100%
2	Not satisfied	>>36-52	100	100%
3	Moderation	>52-68	100	100%
4	satisfied	>68-84	100	100%
5	very satisfied	>84-100	100	100%

RESULTS AND DISCUSSIONS

Characteristics of the Research Location

Land use in Tugue District includes agricultural and non-agricultural areas. Agricultural areas dominate this region, namely 80.01%, consisting of 2,121 ha of rice fields and 12,912.6 ha of non-rice fields. According to (BPS,2021), the agriculture, forestry, and fisheries sectors contributed to the increase in GRDP in Trenggalek Regency in 2018-2020. The types of crops found in the Trenggalek Regency area include rice, secondary crops (corn, cassava, soybeans, green beans, peanuts), and horticulture. Meanwhile, plantation commodities with abundant harvests include cassava, coffee, durian, and cocoa.

Respondent Characteristics

Respondent Identity

Based on the research results, the average age of respondents is 25 years, up to 35 is (30%), while the age group 35 to 45 is 41%, and the average age of respondents is 45 years, up to 55 is 25%, 55 years to 65 years as much as 3% and the remaining 65 years and over as much as 1%. Then, the average respondent's education is elementary school, with the lowest education being elementary school and the highest high school. 25% of farmers are in elementary school, 30% are in junior high school, and 45% are in high school. Also, 75% of respondents own land between 0.1 and 0.5 ha, 12% between 0.5 and 1 ha, and 13% more than 1 ha.

Table 2. Demographic Conditions of the Albizzia Forest Management Community

No	characteristics	Respondent
1	age	25 year -35 year (30%) 35 year -45 year (41%) 45 year -55 year (25%) 55 year -65 year (3%) 65 year up (1%)
2	Education	elementary school (20%) Junior high school(35%) Senior High School (45%)
3	Job	Farmer (69%) servant of the country (18%) Private(13%)

The population demographic research data obtained is presented in Table 1. Based on the table above, the average age of people around forests who manage land based on agroforestry is around 25-65 years, with the majority of education at the high school level. This is because people's desire and willingness to get an education is high enough to be enthusiastic about continuing to a higher level. Almost all land clearing people work as farmers, and 18 are civil servants working as forestry employees. Based on the results of interviews conducted in the field, most of the forest land management communities interviewed understood the existence of teak forests for their lives. This is supported by the community's mindset, which views forests as a place to fulfill the living needs of those whose main occupation is farming (Yuliasutik, 2018). Several forestry employees also understand the existence of teak forests, which are used as additional income to meet living needs by managing agroforestry-based land in forest areas. The knowledge of forest communities about agroforestry varies greatly; some people know the meaning of agroforestry itself and vice versa. This is because the level of education in the district ranges from no school to a bachelor's story, so people's knowledge about agroforestry is also very minimal.

Farmers' Perceptions of the Effectiveness of the Management Regime System for Forest Security and Preservation

The analysis was conducted to determine farmers' perceptions of the system. Farmer satisfaction affects the effectiveness of the regime management system in encouraging farmers' adaptation to food security (Iddi,2010). Perception is the opinion of farmers or what they feel or experience on the efficacy of developing a management regime-based agroforestry system. Income expressed in satisfaction also determines farmers' actions in maintaining the system (Yuliani

et al., 2017). Based on farmers' responses to a series of questions that explored farmer awareness, the following results were obtained: 77 (77%) farmers who had introduced this system said they were delighted, and 4 out of 100 respondents (4%) answered they were not satisfied. Food insecurity and forest sustainability resulted from very satisfied answers, with 77% of farmers practicing the regime management system and 19% of respondents expressing satisfaction, and this positive perception influenced farmers' behavior to maintain the system. These results are by Azjen's (Burton 2004) theory that aspects of human perception determine human behavior – frequency distribution Farmers' perceptions of the effectiveness of 'management regimes' in forest security and sustainability.

The form of farmer satisfaction determines their actions in maintaining the system. Based on farmers' responses to a series of questions that explored farmer awareness, the following results were obtained: 77 (77%) farmers who implemented the system said they were delighted. In comparison, 19 (19%) farmers who implemented the system said they were delighted with it, and 4 out of 100 respondents (4%) were very dissatisfied with it because they did not implement it (Adhikari,2014). The average score of farmers' perceptions of the effectiveness of the 'regime management system' which must be overcome by food insecurity is 4 for 100 respondents, while the average score of 77 farmers who practice the 'regime management' system is five on a Likert scale or very satisfied from 100% of respondents, this positive perception influences farmer behavior to maintain the system. These results are based on Azjen's (Mulwa,2004) theory that aspects of human perception determine human behavior. Figure 2 shows farmers' perceptions of land use

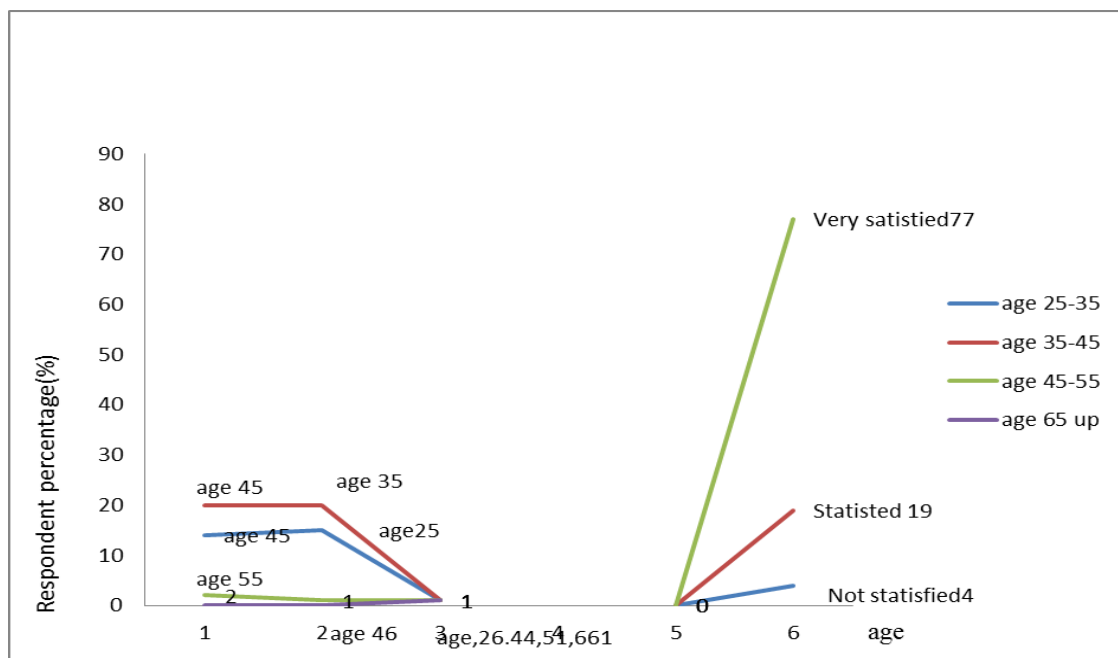


Figure 2. Farmers' Perceptions of Land Use and System Effectiveness 'Management Regime'

From Figure 2 above, it can be seen that the number of respondents who said they were delighted reached 80 people. This is because 100 farmers developed a management regime system (Titus E, 2014). Farmers' satisfaction with this system is not only the reason why farmers maintain this system but also the management system of this regime is seen as a local community product that has been proven effective in dealing with changes in forest and environmental security and has been proven to be able to support local community food stability automatically.

CONCLUSIONS AND RECOMMENDATIONS

The participation of the community is extensive in supporting the land use program under sengon stands; it is proven that 77% feel very satisfied and 19% say they are satisfied, while only 4% say they are dissatisfied; this indicates that the sengon-based land use agroforestry program helps farmers in getting cultivated land for farming. This means that for developments in the coming year, it is necessary to carry out a program to utilize unused forest land in the hope that productive land can be cultivated and the community around the Sengon forest area can be more empowered to meet daily life's economic needs.

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