

Analysis of Social Economic Aspect of Farmers Participants of Raskin Program for Food Solid Patterns with Wanatani System in Dry Land in North Central Timor District

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Abstract— This research aims to: (1) determine the level of acceptance by farmers to Raskin Program with agroforestry systems on dry land, (2) determine the level of application of technology by participating farmers in the Raskin Program with agroforestry systems on dry land, (3) determine the relationship of some social and economic aspects of farmers participating in the Raskin Program with the level of technology implementation, (4) determine the relationship of some of the social and economic aspects of farmers participating in the Raskin Program with the success of the annual crops, (5) know the level of economic welfare of farmers participating in the Raskin program, and (6) understand the constraints faced by farmers in the implementation of Raskin program. The method used in this research is descriptive method with survey techniques. Primary data were collected by interviews based on questionnaires; secondary data obtained from government agencies and institutions associated with the variable of interest and research. Analysis of data using Revenue Analysis, Correlation Spearman and Descriptive Analysis with simple tabulation. The study concluded that: (1) Farmers receive either program, with an average score of 29 (73%), (2) The farmer is good enough to apply the technology system agroforestry, with an average score of 26 (79%), (3) Aspects duration of formal education, working hours and farmers' income have a relationship (significant) at the application level, (4) Aspects of the number of family members productive, working hours and income of farmers have a relationship (significant) with a success rate of growing perennial crops (5) The level of economic welfare of farmers belonging Almost Poor (HM) with a per capita income (IC) Rp. 486,059 (186 %), (6) Income poor rice farmers participating in the program on the work of food patterns for dryland agroforestry systems in North Central Timor district is Rp. 3,194,347 per farmer or Rp. 3,719,547 per hectare and costs Rp. 1,536,019 per farmer or Rp. 1,788,565 per hectare, (7) The outpouring

of working time patterns Raskin program participant farmers intensive dryland agro-food system is HKO 139.92 per farmer or HKO 152.45 per hectare and (8) The technical constraints of cultivation in the form of an attack pest, not the availability of production facilities at the site, and the absence of improved seed and non-technical obstacles such as lack of capital, limited land, distance from markets, natural disasters / wind, low prices and a lack of education.

Keywords— Socio-economic, Raskin program, Agroforestry, Dryland.

I. INTRODUCTION

The issue of poverty is currently still a concern of the government. One of the poverty alleviation efforts carried out by the central government is by providing rice assistance to the poor (raskin rice). The provision of rice assistance for the poor (RASKIN) aims to help the community, especially in order to fulfill the need for food, especially rice.

According to Data Badan Pusat Statistik (2011), Negara Indonesia 95% of the population consumes rice as the main food, with an average rice consumption of 113.7 kg/person/year. This consumption level is far above the world average consumption of only 60 kg/capita/year. Thus Indonesia is the largest rice consuming country in the world. Rice is a very strategic national commodity. National rice instability can cause turmoil in various aspects of life, both social, political and economic (Coordinating Ministry of People's Welfare of the Republic of Indonesia, 2014).

According to Kementerian Koordinator Bidang Kesejahteraan Rakyat (2014), the challenges facing Indonesia in combating poverty and hunger include: 1) The slowing down of poverty, which is an annual average of only 0.37%; 2) Growth that has not been optimal so that it does not have a significant impact on the poor; 3)

Many isolated areas and underdeveloped areas are limited to meeting their basic needs.

Based on these conditions, the Central Government continued to launch the Raskin Program to all provinces in Indonesia. The Raskin program is an implementation of the President's instructions on national rice policies. The President instructed Ministers and Heads of certain non-Ministry Government Agencies, as well as Governors and Mayors/Regents throughout Indonesia to make efforts to increase farmers' income, food security, rural economic development and national economic stability with the implementation of the Raskin Program.

The East Nusa Tenggara (NTT) Provincial Government is one of the areas targeted by the Raskin program, because it is a region that has poor population and a fairly dry land area for agricultural development. People who live in this dry land area, at a certain time, will lack food, especially rice. The most noticeable situation is during the long dry season, which is in the period from March to November. This situation makes the government need to intervene with the help of Raskin rice to help with community food stocks and poverty alleviation.

According to NTT Province Statistical Data for 2014, NTT Province has a dry land area of 3,527,112 ha or 74.49 percent of the land area of 4,734,990 ha. From the area of dry land, the land use by the people of NTT is allocated for tegal/plantation land with an area of 508,745 ha, field/human land with an area of 312,514 ha, pasture/grassland area of 613,131 ha, and plantation area of 379,913 ha (BPSNTT Province, 2014).

Timor Tengah Utara Regency (TTU), which is one of the districts in NTT Province, also has a wide area of dry land which is an area of 187,650 ha or around 62.79 percent of the total area of the regency. (Badan Pusat Statistik Regency TTU, 2014). As a District in NTT Province that received the Raskin Program nationally, the TTU District Government changed the Raskin Program to a Food-Based Solid Raskin Program (PKP) as the flagship program of the TTU District Government and all contained in the Five District Strategic Programs, namely agricultural development programs, development programs education, health development programs, cooperative and SME empowerment programs as well as programs to optimize natural and environmental resources (Pemerintah Kabupaten Timor Tengah Utara, 2011). In the context of community empowerment on dry land in TTU District, the local government implemented the Food Empowerment Raskin Pattern (PKP) program with an agroforestry system with the aim of increasing the welfare of farmers. This program has been implemented

since 2011 until now which is the flagship program of the North Central Timor District Government, for more details can be seen in the table below:

Table 1. Data on the Location of the Number of Sub-Districts and Villages of Implementers of the Raskin Program Labor-intensive Patterns in TTU District 2011 - 2014.

No.	The Implementation of the Raskin Program Solid	Number of Subdistricts	Number of villages
1.	Year 2011	24	175
2.	Year 2012	24	175
3.	Year 2013	24	175
4.	Year 2014	24	194

Source: Dinas Pertanian Tanaman Pangan dan Perkebunan TTU Discrit (2014)

From Table 1, the above shows that the implementation of the raskin pattern program on food works in TTU District in 2011 was carried out in 24 sub-districts and 175 villages. While for 2014, the implementation was in 24 sub-districts and 194 villages/kelurahan. The number of villages that became the location of the program implementation increased in 2014 due to the expansion of villages in TTU District.

The Raskin Program with a Solid Work Pattern (PKP) is a maximum effort to streamline and streamline the management of Raskin by giving more weight through organizing farm families, mutual cooperation work to manage land for agricultural enterprises, assistance, coordination meetings, monitoring and evaluation to strengthen impacts cooperation towards food security as well as food sovereignty of the farm family. The work carried out by farmers participating in the program is carried out with agroforestry systems (Dinas Pertanian Tanaman Pangan dan Perkebunan TTU Discrit, 2014).

The Raskin program of labor-intensive patterns is a program where people or households that previously received rice in exchange for money receive free rice from the local government by doing work in their own gardens. The provision of free rice is expected to enable the community to work on their gardens, so that it will suppress shifting cultivation activities carried out by the community. Thus the community will have a permanent garden and not damage the forest.

The work carried out on his garden must be by applying agroforestry systems. The agroforestry system is expected to suppress the production of gardens by implementing slash and burn which can damage the environment. The agroforestry system is carried out with several jobs ranging from cleaning the garden to planting

longevity plants. According to the results of Tanu's research (2014), the Raskin program of labor-intensive patterns successfully motivated the community and succeeded in controlling the community in implementing agriculture, thereby increasing agricultural production.

The Raskin program of food-intensive patterns with agroforestry systems has various activities ranging from land clearing to planting carried out by farmers. Thus farmers have their own level of acceptance or perception during the program. In implementing the program, socio-economic aspects affect the lives of farmers participating in the program and their families. Economically, farmers have income that will improve the welfare of farmers. The implementation of the Raskin program of food-intensive labor with agroforestry systems has been running for several years with the application of agroforestry system technology on dry land.

Farmers participating in the program plant annual crops and longevity plants or annual crops in their gardens. This longevity plant or annual plant is the hope of farmers in the future or in the future. When longevity plants have reached the age of production, farmers are expected to earn income from these longevity crops. Thus longevity plants or perennials are the main plants in farming, so the success of annual crops is very important. The success of annual crops or longevity plants related to the socio-economic aspects of farmers participating in the program Raskin labor-intensive patterns of agroforestry systems on dry land.

In carrying out program activities, farmers apply agroforestry technology on their farms starting from land clearing activities, making terraces to planting seasonal crops and longevity plants. Besides that, in the implementation of the program with the application of agroforestry technology there were also many obstacles faced both in the form of technical and non-technical constraints.

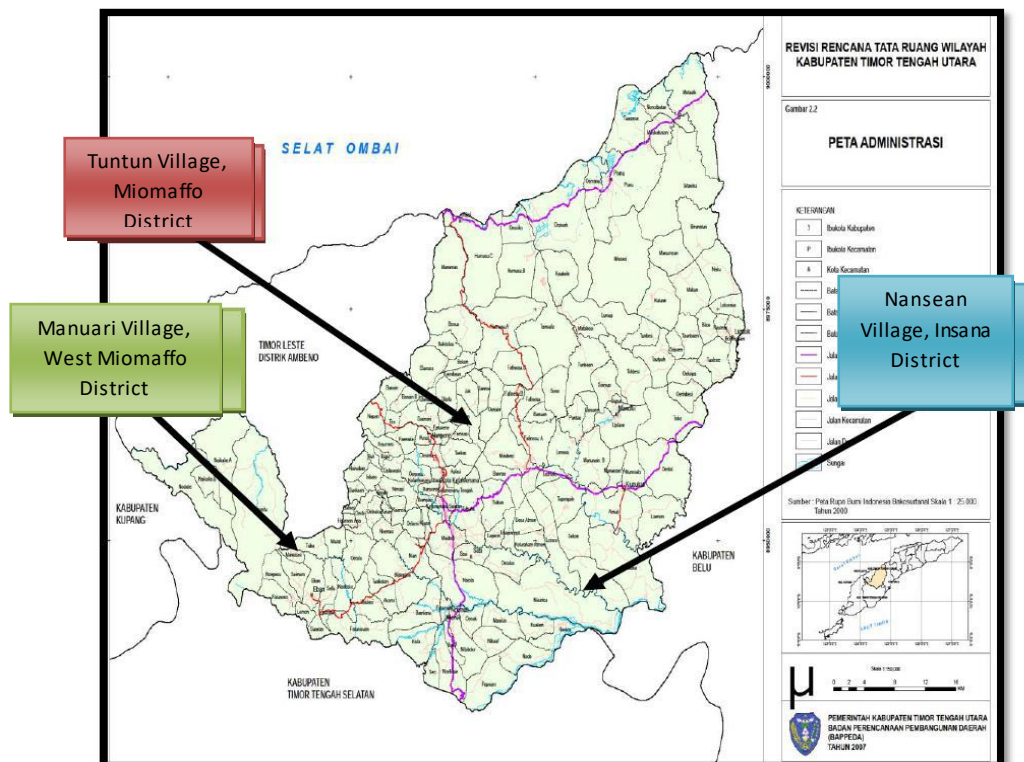
This study aims to: 1). To find out the level of farmers' acceptance of the Raskin Pattern Solid Food Program with agroforestry systems on dry land. 2). To find out the level of application of technology by farmers participating in the Raskin Program of Solid Labor Pattern agroforestry systems on dry land. 3). To find out

the relationship between several socio-economic aspects of farmers participating in the Raskin program, the labor-intensive patterns of agroforestry systems on dry land with the level of application of agroforestry system technology. 4). To find out the relationship between several socio-economic aspects of farmers participating in the Raskin program, the labor-intensive patterns of agroforestry systems on dry land with the success of annual crops. 5). To determine the level of economic welfare of farmers participating in the Raskin program, the labor-intensive patterns of agroforestry systems on dry land. 6). To find out the constraints faced by farmers in the implementation of the Raskin Pattern of Solid Labor Food agroforestry system by program participants.

II. METHOD

This study uses descriptive methods, namely methods that are focused on solving problems that exist at the present time by collecting data and then compiling, explaining, analyzing and drawing conclusions. According to Nasir (1999), descriptive method is a method of examining the status of a group of people, an object, a set of conditions, a system of thought, or a class of events in the present that aims to make descriptions, drawings or paintings systematically, factually and accurately, regarding the facts, characteristics and relationships between the phenomena investigated.

Respondents in this study were farmers who carried out raskin programs on food-intensive patterns with agroforestry systems on dry land. Determination of the location of the study was carried out by "Purposive Sampling" which is spread across 24 sub-districts in TTU Regency which have the widest dry land and have the highest number of program participants so that three sub-districts are chosen, namely West Miomaffo District, East Miomaffo District and Insana District. From each of the three sub-districts each village has the widest dry land and the program participants are quite numerous and good at implementing the program, so Manusasi Village is chosen to represent West Miomaffo District, Tuntun Village representing East Miomaffo District and Susulaku B Village representing Insana District. For more details, see the map of North Central Timor Regency as follows:



Picture 1. Map of North Central Timor Regency as a Research Location (Arrows).

The total number of farmer respondents was determined by Quota Sampling so that there were 150 farmers who were respondents, taking into account the cost and ability of the researcher. Data collection techniques are carried out through survey techniques, namely collecting data by direct interviews with respondents from a number of individuals based on a list of questions that have been prepared in advance (Surakhmad, 1990). While analyzing the data using Revenue Analysis, Spearman Correlation and Descriptive Analysis with simple tabulations.

III. RESULTS AND DISCUSSION

General Description of the Implementation of the Raskin Program in the Solid Work Pattern for Dry Land Agroforestry Systems in North Central Timor Regency

The Raskin Pattern Solid Work Program Food agroforestry systems on dry land are the mainstay program of the elected Regent of North Central Timor Regency for the period 2010-2015 in order to improve the welfare of farmers. According to the report on the Office of Food Crops and Plantations in North Central Timor District (2014), the Raskin Program for Food-Intensive Work in the North Central Timor Regency was carried out in 24 Sub-Districts and 194 villages/kelurahan. The Raskin Pattern Solid Food Work Program was held from

2011 to the present, as the elected Regent Program for the period 2010-2015 where agricultural development is a top priority known as the Five Strategic Programs. The raskin program for food-intensive food agroforestry systems is a special program in North Timor Tengah Regency, East Nusa Tenggara Province. In the TTU District 2011-2015 RPJM (Bappeda TTU, 2011) the five Strategic Programs consist of: 1) Agricultural development; 2) Educational development; 3) Health development; 4) Empowerment of cooperatives and SMEs; 5) Optimizing the management of natural and environmental resources.

The Raskin program of food-intensive patterns is included in the Five Strategic Programs, namely the agricultural development program with the slogan "The Movement of Love of Farmers Towards Farmers Pension" and is expected to answer the problem of poverty through the realization of food security and increased cash income of farm families (Pemerintah Kabupaten Timor Tengah Utara, 2011).

The program began with the formation of a district Coordination team, sub-district coordination team, village/kelurahan coordination team and the establishment of district technical implementers, sub-district technical implementers, village/kelurahan technical implementers, and the determination of facilitating partners, assisting and organizing the implementation of raskin programs for food-intensive patterns.

Based on the results of Tanu's research (2104), the Implementation of the Food-Works Solid Raskin Pattern implemented in two sub-districts, namely Musi District and Kefamenanu City District, turned out this program was implemented with the principle of community empowerment, so that the community became the subject and object of community empowerment through local wisdom owned and actually here lies the real community empowerment. Management of program implementation is based on various binding provisions and well-structured organizational structures involving various elements of the relevant community and NGOs engaged in agriculture. With the synergy of all the related components, all stages of the Food-Intensive Raskin Pattern Program from assistance in the field, distribution of rice to technical evaluation went well. This very systematic implementation management has succeeded in motivating rice recipients of the Raskin Pattern Solid

Food Program, so that it always works optimally. This has opened the eyes of the central government in this matter Menkokesra that it turns out that Raskin rice distribution can be done by means of food-intensive labor patterns and making TTU District (including Musi District and Kefamenanu City District) as a national pilot project for a solid pattern of rice distribution works in 2013.

In the management of the Food-Intensive Raskin Pattern Program, funding is provided by the Government of North Central Timor Regency using funds sourced from the North Central Timor Regency Regional Budget. This fund is to finance the purchase of rice and operational activities in the field. The amount of funds provided by the Timor Tengah Utara Regency Government for the program of magnitude varies each year, for more details can be seen in the table below as follows:

Table 2. The Amount of Funds for the Work-intensive Pattern of the Raskin Program in Timor Tengah Utara Regency in 2011-2014

No.	Budget (Year)	Amount of Fund Allocation (Rp)
1.	2011	5.621.000.000
2.	2012	9.037.336.500
3.	2013	7.500.000.000
4.	2014	7.827.512.000
	Total	29.985.848.500

Sumber: Dinas Pertanian Tanaman Pangan dan Perkebunan TTU District (2014)

From Table 2 above, it can be seen that the total funds spent by the North Central Timor Regency Government for four years to finance the program amounted to Rp. 29,985,848,500. In addition to funds from the district government, for the operational costs of implementing sub-district and village/kelurahan program activities using the budget sourced from sub-districts, sub-districts and ADD/APBdes for villages.

From the funds, the use is for funds to purchase rice by the government, NGO assistance funds, villages / sub-districts, sub-districts and Mantri farmers and monitoring funds by the district technical team. Of all these, the largest portion of this fund is for the purchase of raskin rice from Bulog and NGO assistance funds. This is quite good because NGOs as technical assistants in the field will help PPL with farmers to implement the program.

Level of Farmer Acceptance of Raskin Program Food-Intensive Pattern with Agroforestry System on Dry Land

The level of farmer acceptance is the perception of farmers in this case in the form of farmers' responses to the Raskin program of labor-intensive food patterns,

which can arise in the form of thoughts, feelings, or emotions, attitudes or actions or behavior. According to Saptorini (1989) perception is a complicated mental process and involves various activities to classify the incoming stimulus to produce a response to understand the stimulus. Perception can be formed after going through various activities, namely physical processes (sensing) and psychological (memory, attention, brain information processing). Next Rahmat (1998) says that perception is also determined by functional and structural factors. Some functional factors or factors that are personal between individual needs, experience, age, problems, personality, gender and others are subjective. Structural factors or factors from outside the individual include the family environment, applicable laws, and values in society.

Furthermore, according to Mantra (2011), in many places agroforestry can mean a relatively small change from traditional production methods that are non-optimal or non-substantial so that they can be more easily accepted by local communities than modern and intensive farming techniques that based on one type pattern. Thus in the perception of farmers the implementation of

agroforestry systems will be easily accepted because the model is not much different from what they have done in farming.

In implementing the Raskin Pattern Solid Food Program agroforestry system on dry land in North Central Timor Regency there are 8 (eight) aspects which are perceptions of each farmer, which include: the benefits of the program, the process of rice distribution, the benefits of the coordination team and the technical team, the benefits of the Pendampin NGO, benefits of program socialization, benefits of annual crops, benefits of annual crops, and benefits of land conservation. Of the 8 (eight)

aspects, the average score of the farmer acceptance level reached a score of 29 (73%) from a maximum score of 40 and included in the high qualification. The level of acceptance of farmers has not been able to reach the maximum score because all aspects that have not reached the maximum score. Judging from the level of acceptance score, there are three aspects which have the lowest score of 3 (60%) from a maximum score of 5, namely the benefit aspects of the technical team and coordination team, aspects of the benefits of companion NGOs and aspects of annual crops planted by farmers participating in the program. For more details, see Table 3.

Table 3. Level of Acceptance of Raskin Program for Food-Intensive Patterns of Agroforestry Systems in Dry Land in North Central Timor Regency

No.	Level of Farmer Acceptance/ Perception	Acceptance Score Value										Score achieved	(%)
		1		2		3		4		5			
		Amount (People)	%	Amount (People)	%	Amount (People)	%	Amount (People)	%	Amount (People)	%		
1.	Benefits of the Food-Intensive Raskin Pattern	-	-	2	1	11	7	137	91	-	-	4	80
2.	Rice distribution process	-	-	-	-	18	12	131	87	1	1	4	80
3.	Benefits of the Coordination Team and Technical Team	-	-	2	1	109	73	39	26	-	-	3	60
4.	enefits of Companion NGOs	-	-	1	1	88	59	58	39	3	2	3	60
5.	Benefits of Program Socialization	-	-	1	1	39	26	110	73	2	1	4	80
6.	Benefits of annual crops	-	-	1	1	104	69	42	28	3	2	3	60
7.	Benefits of Annual Plants	-	-	1	1	36	24	111	74	6	4	4	80
8.	Benefits of Land Conservation	-	-	2	1	32	21	115	77	1	1	4	80

Source: Primary Data processed

Based on Table 3 above the benefits aspects of the technical team and the coordination team only 109 respondents (73%) received benefits from the

coordination team and the technical team said they were quite good, while the rest said good and bad. This is because most of the respondents' farmers were not

familiar with the coordination team and technical team. The coordination team and technical team only went down to the village during monitoring while not at all during the program process.

For NGO companion benefits 88 people (59%) said they were good enough and the rest said good and bad. This is due to the fact that many respondent farmers said that NGO advocates only fostered NGO-assisted groups, while groups outside the NGO-assisted group only occasionally during program data collection and Raskin rice distribution. While NGOs in the technical guidelines have a role as technical assistants for all farmers participating in the raskin agroforestry system food-intensive system on dry land. In addition, companion NGOs have a heavy duty because one NGO facilitator must assist one to two sub-districts, with a large number of farmer groups and a number of villages for each sub-district. For the program it can run well so ideally one village is an NGO companion so the mentoring task will run well. Respondent farmers said that the role of NGOs in their own groups was good enough to always accompany their groups at all times. Many NGO assistants provide technical assistance on agroforestry systems, especially changes in farmer behavior regarding pit processing and lane processing. Assistance is carried out through counseling, terrace making practice, preparation of annual seedlings, making

organic fertilizers, improving group administration and making demplot.

While farmer receipts for annual crop benefits, 104 people (69%) said the benefits were quite good while the rest said good and bad. This is because most respondent farmers receive very little from annual crops planted such as maize, rice fields, beans, and cassava. Many farmers say that the results are a little caused by the constraints of unavailability of production facilities such as seeds, medicines and fertilizers on the site and limited capital to buy these production facilities.

For other aspects such as the benefits of the program, the benefits of distributing rice, the benefits of program socialization, the benefits of annual crops and the benefits of land conservation most farmers say good and the rest say quite well. This is because these aspects have been well implemented by the program. For the benefits of socialization the respondent's farmers said it was good, this was because socialization was carried out simultaneously at both the village and sub-district levels. Farmers also said that annual crops and conservation benefits were very good in their farming. Annual crops are plants that in the future will be a source of income for farmers. They also said that conservation can improve soil fertility so that the concept of settled gardens can be done. Meanwhile overall farmer acceptance can be seen in table 4.

Table 4. Criteria for Value of Receipt of Raskin Program for Food-Intensive Patterns of Agroforestry Systems in Dry Land in North Central Timor Regency

No.	Criteria for Farmer Acceptance/ Perception Value	Qualification	Amount (People)	%
1.	34 – 40	Very high	1	1
2.	27 – 33	high	144	96
3.	21 – 26	Medium	5	3
4.	14 – 20	Low	0	0
5.	8 – 13	Very Low	0	0
	Amount		150	100

Source: Primary Data processed

From table 4, it can be seen that most farmers or 144 farmers (96%) are in high qualifications, while the rest are in moderate qualifications and very high qualifications. This shows that the majority of farmers participating in the Raskin program of labor intensive dry land agroforestry systems in Timor Tengah Utara District received the program, so it was hoped they would implement the program.

Thus the acceptance of the raskin program for labor-intensive patterns of dry land agroforestry systems by the respondents who are of high criteria will automatically run the program, especially the

implementation of program aspects. The implementation of program aspects that are running well means that farmers carry out each stage of the program at the level of their farming, from tillage to harvest.

Level of Technology Implementation by Farmers participating in the Raskin Program for Food-Intensive Pattern with Agroforestry System on Dry Land

After the farmer has received a program, the farmers will only implement the program. The application of a program by farmers involves the application of

aspects of the program. These aspects concern the agroforestry system recommended in the program. The recommended agroforestry system is the agrisilviculture model. Model agrisilviculture is the development of food crops / horticulture and tree / wood plants (annual) in an area of dry land. According to Rianse et al. (2010), agrisilviculture is a combination of components or forestry activities (trees, shrubs, palms, bamboo, etc.) with agricultural components (annual crops and plantation crops).

What is meant by the level of application of agroforestry system technology is the application of aspects of agroforestry system activities carried out by farmers participating in the Raskin Program for Food-Intensive Patterns on their farming. According to Mubyarto (1985) argued that basically farmers in farming aim to increase production so that they get high income. Farmers need to try to increase production which is closely related to agricultural intensification efforts. In order to be able to carry out agricultural intensification, technology is needed in this case agroforestry system to increase farmers' income. Although technology is available, but if this technology is not implemented by farmers, productivity increases will not occur and eventually will also relate to the income earned.

Furthermore, according to the Office of Food Crops and Plantations in North Central Timor Regency (2014) the agroforestry system developed is by combining annual crops (food and horticulture) and annual crops / timber / forestry with the application of dryland agroforestry system activities. The application of dry land agroforestry systems to the implementation of the Food-Intensive Raskin Pattern Program prioritizes productive activities in dryland farming areas with agroforestry systems. Priorities in productive activities are intended to obtain wider results and impacts on life and survival. Therefore, the Raskin Pola Karya Pangan Program does not prioritize communal activities. The choice of the type of activity of the Raskin Program Food Works is adjusted to the potential of farmers in dryland agriculture.

In the Raskin program labor-intensive patterns of food, with the application of agroforestry system technology in the form of aspects including land cleaning and tillage (PLPT), terrace making, hole making and fertilization (PTPLP), planting annual crops, legume plants and longevity plants (PTSLP), intercropping and weeding of plants (PTSP), and treatment of longevity plants and terrace repair (PTUPT). For more details, see Table 5.

Table 5. Level of Application of Agroforestry System Technology on Dry Land by Farmers in North Central Timor District

No.	Components of Technology Implementation	Maximum score	Score achieved	(%)
I.	Land and Land Treatment Cleaning	6	5	83
	1. Land clearing for gardens	3	3	100
	2. Soil Processing	3	2	67
II.	Porch Making, Hole Making and Fertilization	6	6	100
	1. Terrace Making	3	3	100
	2. Making holes for longevity plants	3	3	100
III.	Planting of annual crops, legume plants and longevity plants	9	7	78
	1. Planting of annual crops	3	2	67
	2. Planting legumes	3	2	67
	3. Planting longevity plants	3	3	100
IV.	Planting of intercropping and weeding plants	6	4	67
	1. Planting intercrops	3	2	67
	2. Weeding plants	3	2	67
V.	Longevity Plant Care and Terrace Repair	6	4	67
	1. Care for longevity plants	3	2	67
	2. Patio treatment	3	2	67
	Average	33	26	79

Source: Primary Data processed

In Table 5, the component of technology implementation of the respondents' respondents in the Raskin program for labor-intensive agroforestry systems

on dry land in Timor Tengah Utara District has a score of 26 (79%) from a maximum score of 33 with a fairly good rating category The score for the level of implementation

does not reach the maximum score because there are several components of technology that have not reached the maximum score. These components include planting and weeding (PTSP), long-life plant maintenance and terrace repair (PTUPT), and planting annual crops, legumes and longevity plants (PTSPL) and land clearing and tillage (PLPT).

In the technological component of intercropping and weeding (PTSP) only achieved a score of 4 (67%) from a maximum score of 6, this is because there are some farmers who plant intercropping and weeding not as recommended. Planting intercrops is important for diversification with longevity plants. Therefore, the selected type of intercrop is a type of plant that is suitable for living in the shade and of high economic value. Some recommended intercrops include: taro / taro, porang, turmeric, ginger and cayenne pepper. Meanwhile weeding must be done twice, but most farmers only do it once.

In the component of long-term plant maintenance technology and terrace repair (PTUPT), most farmers do not do as recommended, namely having to do treatment by pruning and fertilizing longevity plants. Fertilization is done by giving mulch or manure around longevity plants in the form of plant residues in the garden. For repairs to the terrace, you should also repair the terrace and plant terrace reinforcement plants so that one day you will grow terrace reinforcement plants as living terraces and fodder. The recommended terrace reinforcing plants are gamal,

kaliandra and lamtoro. In addition, farmers also need to repair contour ditches and pruning terrace reinforcement plants.

For the technological component of planting annual crops, legume plants and longevity plants (PTSPL), it does not reach maximum because farmers do not comply with the recommendations. The activity of planting PKP-recommended annual crops is planting annual crops in a permanent garden. The recommended planting of annual crops is maize, and field rice, peanuts, green beans, yams and red beans specifically for elevation areas, namely West Miomaffo District. While for the land clearing and tillage (PLPT) technology component it has not reached its maximum because there are those who have not yet carried out the recommendations. There is still clearing of land for gardens that clears land of less than 0.25 ha and does cleaning by burning (slash and burn). While the aim of the program is to reduce slash and burn so as not to damage the forest. For land processing, there are also those who do imperfect soil treatment, which is to do soil treatment for only a part of the land.

The level of technology application of farmers in the Raskin program participants in the labor intensive pattern of agroforestry systems is mostly included in the Good Enough assessment category and the remainder is in the Good assessment category. For more details can be seen in table 5.

Table 5. Categories of Assessment of the Level of Application of Agroforestry System Technology in Dry Land by Farmers in North Central Timor District

No.	Application Level Assessment Category	Amount (People)	(%)
1.	Well	74	49
2.	Pretty good	76	51
3.	Not good	0	0
4.	Not so good	0	0
Amount		150	100

In Table 5, it can be seen that the distribution of respondents' farmers in the application of dryland agroforestry system technology was the highest, including the category of Good Enough, 76 people (51%) and the least in the Good category as many as 74 people (49%). This is because most of the respondents' farmers have not implemented the technology component according to the recommendations, so the application score does not reach the maximum score.

The application of the raskin agroforestry program to the pattern of food works on dry land with the agrisilviculture model by respondent farmers is a

combination of annual crops, plantation crops and forestry plants. Respondent farmers said that in implementing the agroforestry system they planted terrace reinforcing plants with kaliandra, gamal and lamtoro as well as livestock feed and living terraces. For this reason the respondent farmers said that they hoped that there would be a combination with livestock in the raskin program of labor-intensive patterns of dry land agroforestry systems in the future. According to Berek et al (2010), a combination of food crops (annuals), horticultural plants (plantation crops) and livestock, is an agrofilopoporal model of agroforestry systems.

Relationship between Farmers' Socio-Economic Aspects of Participants in the Raskin Program for Food-Intensive Patterns of Agroforestry Systems on Dry Land with a Level of Technology Implementation

The stage of adoption of technological innovations includes the stages of implementing, trying phase, evaluation phase, interest stage, and conscious stage. With the first stage, farmers have heard, know, and know about a technology, the second stage is that farmers seek further information about a technology, the

third stage is that farmers consider that a technology provides more economic benefits, the fourth stage is that farmers have tried the technology is on a small scale, and the fifth stage of farmers has applied the technology continuously.

The relationship between the level of application and the socio-economic aspects of the farmer which includes age, length of formal education, number of family members, outpouring of work time, and income, are detailed in Table 6 below.

Table 6. Relationship of Farmers' Socio-Economic Aspects with the Level of Application of Agroforestry System Technology to Dry Land in North Central Timor Regency

No	Socio-Economic Aspects	Correlation (rs)	p-value	Decision
1	Age	0,129	0,058	Non Signifikan
2	Duration of formal education	0,187*	0,011	Signifikan
3	Number of productive family members	0,088	0,141	Non Signifikan
4	Outpouring of work time	0,178*	0,015	Signifikan
5	Income	0,217*	0,004	Signifikan

Source: Primary Data processed

Based on Table 6, it can be seen that the value of the correlation coefficient (rs) between ages with the level of application is 0.129 with p-value 0.058 which is greater than $\alpha = 0.05$ (Value t-count 1.583 is smaller than t-table 1,660) then Ho is accepted, so that it can be concluded that there is no significant relationship between age factors with the level of application of technology. This means that the increasing age of a person will not affect someone in learning and implementing an innovation technology, and vice versa, young age respondents will not influence them to apply the technology. This insignificant relationship is caused by the age groups both young and old can apply the technology. It is evident from the age of respondents who varied from young to old with a range of 25-69 years. The value of rs 0.102 shows a relatively low trend figure which means the relationship between the age of the respondent and the level of application (adoption) of technological innovation is very weak.

While from the table above shows the relationship between the length of formal education with the level of application of technological innovation has a significant relationship with the value of rs of 0.187 and p-value of 0.011 which is smaller than $\alpha = 0.05$ (t-count of 2.315 is greater than t-table 1,660) then H1 is accepted, so the higher the formal education of respondents the higher the level of application of technology.

Based on Table 6, it can be seen that the value of the correlation coefficient (rs) between the number of productive family members with the level of application of technological innovation amounted to 0.088 with p-

value 0.141 which is greater than $\alpha = 0.05$ (t-count value 1.074 smaller than t-table 1,660) then Ho is accepted. This means that there is an insignificant relationship between the number of family members and the level of application of technological innovation. This means that the large number of family members of respondents does not necessarily influence the level of application of technology.

From Table 6 it can be seen that the value of the correlation coefficient (rs) between the outpouring of work time and the level of application (adoption) of technological innovation is 0.178 with p-value 0.015 which is smaller than $\alpha = 0.05$ (t-count 2,200 is greater than t-table 1,660) then H1 is accepted, so it can be concluded that there is a significant relationship between the outpouring of work time and the level of application of technology. This shows that the higher the outflow of work time of respondents, the higher the level of application of technology adoption.

From Table 6 it is known that the value of the correlation coefficient (rs) between the income of farmers and the level of adoption of technological innovation is 0.217 with p-value 0.004 which is smaller than $\alpha = 0.05$ (t-count 2,690 is greater than t-table 1,660) then H1 is accepted, which means that the relationship of respondents' income is significant with the level of application of technology, so the higher the income of respondents the higher the level of application of technology. This shows that income affects the high and low levels of application of technology. This relationship shows that in cultivating a plant requires a large amount

of money. This means that with the respondent's high income, the respondent's farmers are more willing to make decisions to implement new innovations.

Relation of Socio-Economic Aspects of Farmers Participants in the Raskin Program Food-Intensive Pattern Agroforestry System on Dry Land with Plant Growth Success

This study also looks at the success of growing annual crops with socio-economic aspects because in cultivating annual crops by farmers related to socio-economic aspects. Farmers in cultivating annual crops need a long time. This long time is related to the age of the plant to be able to produce and produce. In the process of cultivating

crops by farmers, from planting to fruiting, it requires certain socio-economic conditions so they can succeed.

The aim of the raskin program for food-intensive patterns with agroforestry systems in Timor Tengah Utara District is to improve the welfare of the community in this case to improve the socio-economic aspects of the community. With the increase in the socio-economic aspects of society, it will certainly affect the success rate of growing plants. The socio-economic aspects of the farmers studied in this study included age, length of formal education, number of family members, outpouring of work time (CWK), and income. The relationship between the success rate of growing plants and the socio-economic aspects of farmers in detail is presented in table 7.

Table 7. Relationship between Farmers' Socio-Economic Aspects and the Success of Annual Plant Growth in North Central Timor District

No	Socio-Economic Aspects	Correlation (rs)	p-value	Decision
1	Age	0,028	0,365	Non Signifikan
2	Duration of formal education	-0,108	0,094	Non Signifikan
3	Number of productive family members	0,341*	0,306	Signifikan
4	Outpouring of work time	0,280*	0,166	Signifikan
5	Income	0,149*	0,035	Signifikan

Source: Primary Data processed

Based on Table 7 it can be seen that the value of the correlation coefficient (rs) between age and the success rate of growing plants is 0.028 with p-value 0.365 which is greater than $\alpha = 0.05$ (t-count value 0.341 is smaller than t-table 1,660) then H_0 accepted, so it can be concluded that there is no significant relationship between age factors with the success rate of growing plants. This means that the increasing age of a person will not affect the person in determining the success rate of plant growth, and vice versa, the young age of respondents will not affect them to determine the success of growing plants. This is because the nature of annual plant maintenance activities is relatively easy and simple so it does not require a certain age in maintaining plants. Age will affect respondents in ways of thinking and acting, especially in making a decision. The insignificant relationship is caused by the age group both young and old can operate a plant independently. It is evident from the age of respondents who varied from young to old with a range of 25-69 years.

Table 7 above shows the relationship between the length of formal education with the success rate of plant growth has a relationship that is not significant but negative with a value of rs of -0.108 and p-value of 0.094 which is greater than $\alpha = 0.05$ (T-count value is 1.323

smaller from t-table 1,660) then H_0 is accepted, so the higher the formal education of the respondent the higher the success rate of growing plants. Respondents can be said to have been aware of formal education. Formal education that has been taken by respondents can influence thinking in responding to new things that have not been known including innovations in crop cultivation.

Based on Table 7 it can also be seen that the value of the correlation coefficient (rs) between the number of productive family members with the success rate of growing plants is 0.341 with p-value 0.306 which is smaller than $\alpha = 0.05$ (t-count value of 4.429 greater than t-table 1,660) then H_1 is accepted. This means that there is a significant relationship between the number of family members and the success rate of growing plants. This means that the number of respondent family members that influence the success rate of growing plants. The increase in the number of productive family members of the respondent farmers has led to a tendency to increase the number of farm workers in supervising / maintaining annual crops so that the success of growing plants tends to increase.

From Table 7 it can be seen that the value of the correlation coefficient (rs) between the outpouring of work time (CWK) and the success rate of growing plants

is 0.280 with p-value 0.166 which is smaller than $\alpha = 0.05$ (Value tcount 3.547 greater than t-table 1,660) then H1 is accepted, so it can be concluded that there is a significant relationship between the outflow factor of work time and the success rate of growing plants. This shows that the higher the outflow of work time of the respondents, the higher the success rate of growing plants. In addition, there were also many productive family members who devoted their labor and work time to the Raskin program for dry land agroforestry system food systems, especially in the care of longevity plants (13.36 HKO per cultivated land area or 15.56 HKO per hectare) so that time devoted to maintaining more annual crops. Thus increasing the outpouring of working time of farmers has a tendency to increase the success of growing plants.

From Table 7 it is known that the value of the correlation coefficient (rs) between income and the success rate of growing plants is 0.149 with p-value 0.035 which is smaller than $\alpha = 0.05$ (t-count value 1.8327 is greater than t-table 1,660) then H1 is accepted, which means that the relationship between the income of the respondent's farmer is significant with the success rate of plant growth, so the higher the income of the respondent, the higher the success rate of growing the plant. This shows that farmers' income affects the high and low success rates of growing plants.

The relationship between the number of productive family members, the outpouring of work time (CWK) and significant farmer income with the success rate of growing these crops is in accordance with the results of research by Syaihuddin (1996), which states that productive family members (CWK) and farmers' income significantly associated with the success rate of growing plants.

Economic Welfare Level of Farmers Participants in the Raskin Program Food-Intensive Pattern Agroforestry System in Dry Land in North Central Timor Regency

Table 8. Economic Welfare Level of Farmers Participants in the Raskin Program Food-Intensive Pattern Agroforestry System in Dry Land in North Timor Tengah Regency

No.	Criteria for Economic Welfare	Amount(People)	(%)
1.	Not poor	16	11
2.	almost poor	98	65
3.	poor	29	19
4.	Poor Once	7	5
	Jumlah	150	100

From table 8, it can be seen that the majority of respondents who participated in the Raskin program for labor intensive dry land agroforestry systems in the North

The level of economic welfare is the level of income of farmers participating in the Raskin food-intensive pattern of agroforestry systems on dry land in fulfilling basic needs based on the rupiah value of minimum needs based on the prices of nine basic needs that apply to the local market. According to Sajogyo (1996) said that there are several levels of poverty, which are divided based on poverty criteria that compare income with the standard price of rice. The poverty variable is seen by measuring household expenditure in rural areas, namely food expenditure and non-food expenditure. In measuring the level of economic well-being of farmers participating in the Raskin program, the labor intensive patterns of dry land agroforestry systems in Timor Tengah Utara Regency were measured by a poverty approach based on the rupiah value of minimum needs based on the prices of nine basic needs in the local market. The minimum standard of living needs (poverty line) per person per year based on the price of nine basic commodities that apply in the local market in Timor Tengah Utara Regency in 2013 is Rp. 261,995.- (BPS Timor Tengah Utara Regency, 2014).

Criteria for the level of economic prosperity of farmers participating in the Raskin program for food-intensive patterns can be identified by comparing income per capita with a minimum standard value of living needs per person per year. While per capita income is obtained by dividing the total income of the farmer by the number of farmer family members. The average level of economic well-being of farmers in the participants of the Raskin program for labor-intensive agroforestry systems on dry land in Timor Tengah Utara Regency is classified as a criterion of Nearly Poor with Capita Income (IC) of Rp. 486,059 (186%) with a range between Rp. 139,926 (53%) up to Rp. 2,044,500 (780%). For more details about the level of economic welfare of respondent farmers, see Table 8.

Central Timor Regency were almost poor, which were as many as 98 (65%) and 29 people (19). %). While Not

Poor as many as 16 people (11%) and Poor Once as many as 7 people (5%).

From this situation it can be said that the raskin program of labor-intensive dryland agroforestry system food can increase the economic welfare of farmers, where the number of farmers who are above the poverty line (Not Poor and Nearly Poor) is greater than the number of farmers below the poverty line (Poor and Poor once). This is because the longevity of the respondent farmers has started production in 2014 so that there is an increase in income from the annual crop of farmers, especially annual crops planted in 2011. The annual plants that start producing are cashew and orange. The average income obtained from cashew crops is Rp. 138,133.- per arable land area or Rp. 160,845.- per hectare. While the average income obtained from citrus crops is Rp. 296,000.- per arable land area or Rp. 344,667.- per hectare.

While other annual crops that have been planted since the start of the program in 2011 have not produced such products as candlenut and forestry plants such as white teak (gamalina) and mahogany. This is because the age of the production of the plant is more than five years. Respondent farmers said that they were very optimistic in the future the annual crops would provide income for them. According to Mantra (2011), that part of the proceeds obtained with agroforestry/agroforestry systems will be obtained several years or after the waiting period. Therefore farmers or initiators must be able to convince them to get results in the short term if they want to invest in the long term.

Besides that, if we look at the high level of farmer acceptance of the raskin program for labor-intensive patterns of dry land agroforestry systems in Timor Tengah Utara District, the impact on the application of agroforestry technology is quite good. The application of good agroforestry technology causes the success rate of growing plants to be good, where the maintenance of annual crops by farmers will be done well. As a result, the maintenance of good annual crops will make the plants grow and bear fruit so that they can increase farmers' income.

Constraints faced by Farmers in the Implementation of the Raskin Program Solid Work Patterns for Dry Land Agroforestry Systems

The constraints referred to in this study are the constraints faced by farmers in implementing the raskin program of labor-intensive patterns of agroforestry systems on dry land at the level of farming both technical and non-technical. The technical constraints of cultivation are constraints related to crop cultivation by farmers participating in the Raskin work-intensive pattern of agroforestry system food on dry land. While the non-technical constraints or socio-economic constraints are constraints related to economic social conditions experienced by farmers participating in the raskin agroforestry system food-intensive patterns on dry land. The constraints in question can be seen in Table 9.

Table 9. Constraints faced by Farmers in the Implementation of the Raskin Program Food-Intensive Pattern of Agroforestry Systems in Dry Land in North Central Timor Regency

No.	Constraints	Amount (People)	(%)
I	Cultivation Technical Constraints		
	1. Pest Attack Plant diseases	85	57
	2. Lack of availability of production facilities	29	19
II	Non Technical Constraints		
	1. Lack of capital	112	75
	2. Limited land	70	47
	3. Long distance from the market	31	21
	4. Low price	20	13
	5. The occurrence of natural disasters / winds	19	13
	6. Lack of counseling	15	10
	7. Animal attacks occur	12	8

Source: Primary Data processed

In Table 9, it can be seen that the obstacles are technical cultivation constraints and non-technical constraints. The technical constraints of cultivation are plant disease pests, the absence of superior seeds and the availability of production facilities. While non-technical

constraints in the form of distance from the market, limited land, limited capital, cattle attacks, natural disasters/wind, low prices and lack of counseling.

a. Cultivation Technical Constraints

The biggest technical obstacle was the attack of pests, which were experienced by 85 respondents (57%) and the constraints of lack of availability of production facilities in locations such as fertilizers, seeds and medicines experienced by 29 respondents (19%).

Pest attack is an obstacle because many respondents experienced a locust attack on maize, shoot death on cashew plants and attacks of diplodia which attacked citrus plants. For diplodia disease, it has become a common attack on citrus plants, because when an orange tree is fruiting it first breaks directly into the stem, then dries and then dies. Indeed, so far there have been efforts from the Agriculture and Plantation Service of North Central Timor Regency by replacing dead oranges and spraying but have not produced results, especially in the West Miomaffo Subdistrict, namely in Manusasi Village. This also makes the level of application of farmers' technology not yet maximal especially in the TUB plant care component.

The lack of available production facilities and the absence of superior seeds is also an obstacle for farmers because it is caused by the absence of production facilities such as fertilizers and agricultural medicines at the location and the absence of superior seeds of corn and beans for some farmers as recommended. Production facilities such as fertilizers and medicines are often not available on site and are rare when farmers need them. Many farmers have tried alternative natural fertilizers such as compost but the results have not been maximized.

The superior seeds referred to by farmers are superior seeds of corn which are dry-resistant and in accordance with local climate conditions, namely composite corn seeds such as lamuru corn seeds, srikandi seeds and others. While available and distributed by the government are hybrid corn seeds that are greedy and need special technical treatment. Thus farmers have difficulty in increasing production. The same thing happens with legume seeds, most farmers need short-lived, dry-resistant, high-yielding legumes such as Merak or Vilma varieties that are 55 to 60 days old, while those available are seeds imported from Java which not in accordance with local conditions.

b. Non Technical Constraints

Non-technical constraints are constraints that are socio-economic in farmers. The biggest non-technical obstacle experienced by farmers is the lack of capital experienced by 112 farmers (75%), constraints to limited land experienced by 70 farmers (47%), constraints on the distance from the market experienced by 31 farmers (21%). While the constraints of natural disasters/winds were experienced by 19 farmers (13%) and price

constraints were experienced by 20 farmers (13%). Another obstacle is the lack of counseling experienced by 15 farmers (10%).

Lack of capital is an obstacle because of the difficulty of farmers' access to financial institutions, so many farmers find it difficult to increase production, especially in the context of providing production facilities such as fertilizers and medicines. In farming farmers, many use their own limited capital so that farming is done in accordance with existing capital. Respondent farmers said that there were indeed loans from financial institutions such as banks but they had difficulty accessing because they were constrained by strict requirements and administration for example they had to make a business plan. Meanwhile, according to Mantra (2011), said that if an agroforestry/agroforestry system is introduced or implemented, investment is needed initially, such as: plant material, land conservation, and fertilizer. To alleviate farmers, investments needed to facilitate the implementation of agroforestry/agroforestry systems need to be provided through loans with low interest rates. Thus investment as initial capital through credit is needed by farmers in implementing agroforestry systems. Respondent farmers said that they hoped that in the future the program would be accompanied by capital assistance with low interest.

Limited land is an obstacle for some farmers because farmers have gardens around the forest area such as in Tuntun Village and Manusasi Village. This has led to an extension effort that will be made by farmers to meet the objectives of the Raskin program of labor intensive patterns of one-year dry land agroforestry systems of 0.25 ha (25 acres) to open up new plantation land into permanent plantation land. All of this also causes the average land area of the farmers participating in the program to be only 85.88 acres (0.8588ha), even though the program has been running for 4 years from 2011 to 2014, so the area of farmers should be 100 acres (1 ha). While according to Suproyo (1979) said that narrow land tenure is one factor that causes low production and income that will be received by farmers. Farmers who have a large area of arable land will get more income. Thus respondent farmers whose land is limited suggest that for those whose land is limited there is no need to expand the land (extensification) but they intensify the existing land area because they already have permanent gardens and production can be increased so that income can increase.

The distance from the market is an obstacle because a considerable distance from the market makes it difficult for farmers to market their agricultural products. The existing markets are Pasar Baru Kefamenanu in

Kefamenanu City, Eban Market in Miomaffo West District, and Oelolok Market in Insana District. To get a good and suitable price, the farmer must bring the results for sale in Kefamenanu City or to Atambua City, Belu Regency. Finally, many farmers sell a lot of products at locations with low prices such as candlenut, cashew and oranges which are sold wholesale in trees at low prices. Many respondent farmers said that if they could bring their produce directly to Atambua then they could get a pretty good price.

Cattle attacks and natural disasters/winds are an obstacle because many farmer gardens are not fenced or the fence is damaged during the rainy season while livestock raising is carried out by the community traditionally by releasing livestock in the fields. To overcome this, the local village government has carried out public fences such as in the Village of Tuntun and Desa Nansean, but this fence needs close supervision and needs repairs every year. Natural disasters/winds are also an obstacle for every farmer because of the climatic conditions in which during the first rain there were strong winds which caused many crops to be damaged, especially farmers' corn plants. This happens a lot in Nansean Village, Insana District and Manusasi Village, West Miomaffo District.

Low prices are an obstacle because many farmers complain that at the time of harvest the price of agricultural products falls like when harvesting candlenut, cashew and oranges. This is caused by many middlemen who enter the village so that farmers sell at low prices through a wholesale system. Farmers who are members of farmer groups have done joint marketing through farmer groups but this has not gone well because of constraints on the marketing institutions' capital. In addition, many farmers' agricultural products are sold in the form of logs, so the price offered is also low. Respondent farmers said that they needed processing results so that they could increase the price of their products such as cashew fruit which was changed to cashew nuts. Thus it will increase the price of the product because there is an increase in the value added of the product.

The lack of counseling was an obstacle because the program counseling was only done once by the technical team with the help of PPL and NGO assistants. For effective extension activities, at least a month should be held for counseling in farmer groups. According to Mantra (2011), several phases of preparation and implementation of agroforestry/agroforestry systems require good management and must be combined with adequate counseling of surrounding communities and appropriate forms of involvement. This also relates to the level of acceptance in the form of farmers' perceptions of

the benefits of the technical team and the low coordination team. Many respondent farmers said that they were not familiar with the technical team. The technical team should try to overcome technical problems, both technical cultivation at the farm level so that the program can run smoothly. Respondent farmers said that so far the NGO companion had accompanied but the technical information from the technical team was very important especially regarding the distribution of rice and other technical matters related to the program.

IV. CONCLUSION

Based on the scope of work at the scope of this study, the conclusions of this study are: 1) Farmers' acceptance of the labor-intensive raskin pattern program for dry land agroforestry systems in Timor Tengah Utara District includes High acceptance criteria with an average score of 29 (73%) from maximum score of 40; 2) The technology implementation of farmers participating in the Raskin labor-intensive pattern of dry land agroforestry systems in Timor Tengah Utara Regency is included in the Good Enough criteria with an average score of 26 (79%) from a maximum score of 33; 3) Old aspects of formal education, outpouring of work time (CWK) and farmer income have a relationship (significant) with the level of application of technology; 4) Aspects of the number of productive family members, outpouring of work time (CWK) and farmer income have a relationship (significant) with the success rate of growing annual crops; 5) Farmers participating in the Raskin program for labor intensive dry land agroforestry systems in Timor Tengah Utara Regency are in the category of Near Poor with Capita Income (IC) of Rp. 486,059 (186%); 6) The average income of farmers participating in the Raskin program in the pattern of dry land agroforestry systems in Timor Tengah Utara Regency is Rp. 3,194,019.- per arable land area (85.88 acres) or Rp. 3,719,547.- per hectare and costs incurred in the amount of Rp. 1,536,019.- per arable land area or Rp. 1,788,565.- per hectare; 7) Work time outpouring (CWK) of farmers participating in the Raskin work-intensive pattern of dryland agroforestry system food is 130.92 HKO per cultivated land area or 152.45 HKO per hectare; 8) Constraints faced by farmers in the Raskin program of labor intensive patterns of dry land agroforestry systems in Timor Tengah Utara Regency are in the form of cultivation technical constraints, including pest attacks, lack of available production facilities on site, and lack of superior seeds and constraints non technical in the form of lack of capital, limited land, long distance from the market, natural/wind disasters, low prices, and lack of counseling.

REFERENCES

- [1] Berek, A.K., Nurak V., Sumu Y. dan Asa Y. 2010. Emas Hijau Lahan Kering Refleksi Pengalaman Yayasan Mitra Tani Mandiri Mengembangkan Wanatani di Timor dan Flores. Yayasan Mitra Tani Mandiri, Kefamenanu.
- [2] BPS Kabupaten TTU. 2014. Timor Utara Dalam Angka 2014 Kerjasama Bappeda TTU dan Badan Pusat Statistik Kabupaten TTU. Badan Pusat Statistik Kabupaten Timor Tengah Utara, Kefamenanu.
- [3] BPS Propinsi NTT. 2014. Nusa Tenggara Timur Dalam Angka 2014. Badan Pusat Statistik Propinsi Nusa Tenggara Timur, Kupang.
- [4] Dinas Pertanian Tanaman Pangan dan Perkebunan Kabupaten Timor Tengah Utara. 2011. Petunjuk Teknis Pengelolaan Beras Miskin dengan Pola Padat Karya Pangan untuk Mewujudkan Ketahanan Pangan Masyarakat Kabupaten Timor Tengah Utara. Dinas Pertanian Tanaman Pangan dan Perkebunan Kabupaten Timor Tengah Utara, Kefamenanu.
- [5] Dinas Pertanian Tanaman Pangan dan Perkebunan Kabupaten Timor Tengah Utara. 2014. Petunjuk Teknis Pengelolaan Beras Miskin dengan Pola Padat Karya Pangan untuk Mewujudkan Ketahanan Pangan Masyarakat Kabupaten Timor Tengah Utara. Dinas Pertanian Tanaman Pangan dan Perkebunan Kabupaten Timor Tengah Utara, Kefamenanu.
- [6] Dinas Pertanian Tanaman Pangan dan Perkebunan Kabupaten Timor Tengah Utara. 2013. Laporan Tahunan Pelaksanaan Program Raskin Pola Padat Karya Pangan Tahun 2013. Dinas Pertanian Tanaman Pangan dan Perkebunan Kabupaten Timor Tengah Utara, Kefamenanu.
- [7] Kementerian Koordinator Bidang Kesejahteraan Rakyat. 2014. Pedoman Umum Raskin 2014. Kementerian Koordinator Bidang Kesejahteraan Rakyat, Jakarta.
- [8] Mantra, O. 2011. Agroforestry. Jurusan Kehutanan Fakultas Pertanian Universitas Bengkulu, Bengkulu.
- [9] Mubyarto. 1985. Pengantar Ekonomi Pertanian. LP3ES, Jakarta.
- [10] Nasir, M. 1999. Metode Penelitian. Ghalia Indonesia, Jakarta.
- [11] Pemerintah Kabupaten Timor Tengah Utara. 2011. Rencana Pembangunan Jangka Menengah Daerah Tahun 2011-2015. Pemerintah Kabupaten Timor Tengah Utara, Kefamenanu.
- [12] Rahmat, J. 1998. Psikologi Komunikasi. Remaja Karya, Bandung.
- [13] Rianse, U. dan Abdi. 2010. Agroforestri Solusi Sosial dan Ekonomi Pengelolaan Sumberdaya Hutan. Afabeta Bandung, Bandung.
- [14] Sajogyo. 1996. Garis Kemiskinan dan Kebutuhan Minimum Pangan. Aditya Media, Yogyakarta.
- [15] Saptorini. 1989. Persepsi Siswa SMA Se-Kotamadya Semarang Mengenai Narkotika. Laporan Penelitian IKIP, Semarang.
- [16] Surakhmad, W. 1990. Pengantar Penelitian Ilmiah Dasar Metode Teknik. Penerbit Tarsito, Bandung.
- [17] Syaihuddin, 1996. Evaluasi Aspek Sosial Ekonomi Petani Peserta Program Pengembangan Hutan Kemasyarakatan di Kabupaten Sumbawa, Universitas Mataram, Mataram-NTB.
- [18] Tanu, Y. 2014. Pelaksanaan Distribusi Raskin Melalui Pola Padat Karya Pangan Untuk Pemberdayaan Masyarakat di Kecamatan Musi dan Kecamatan Kota Kefamenanu Kabupaten Timor Tengah Utara Propinsi NTT. Program Pasca Sarjana Sekolah Tinggi Pembangunan Masyarakat Desa "APMD" Yogyakarta, Yogyakarta.