The Implementation of Farmer Partnership and the Factors Affecting Potato Farmers' Income in Ijen District, Bondowoso

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ABSTRACT

Potatoes are one of the horticultural commodities that can be the national alternative food needs, but price is a problem faced by potato farmers. Then the researcher tries to find the solution to this problem by using farmer partnership. The purposes of these studies were, (1) analyze whether there were differences in production costs and income costs between partner and non-partner farmers, (2) the factors that affect the income of potato farmers and, (3) how to do mutually beneficial partnerships for potato farmers. The researcher was using the T test formula to analyze the difference between production business and business results, while the factors that affect farmer income, the researcher was using a regression model, the researcher also used a regression model to find out the income factors affecting. In this research, the researcher used a descriptive analysis to analyze farmer partnership by seeing the farmer partnership indicator modal which had more benefit. This research showed us the big difference in average cost between partner and non partner farmers'. The average production cost for partner farmers was 116,783,867 per hectare which is higher than while the average production for non-partner farmers was 58,468,390 per hectare. For the result of "uji T test"analysis the researcher found the difference in income for partner farmers and non-partner farmers. For partner farmers, they got higher income 226,318,633/ha while for non-partner farmers, they got 66,198,277/ha. The factors that affect their income were the large area, the production value, and the partner farmers'. Meanwhile, the pattern of partnership that exists between potato farmers and Indofood's company can be seen from aspects that include rights and obligations, applicable sanctions, payment systems and force majeure. Regarding the sanctions aspect, if it is applied according to the contract applicable , it actually refers directly to the third stage, the legal realm. There is mutual benefit, the rules to create a win-win solution were chosen by both parties. The process of potato farming partnership pattern in Ijen District can be classified as contract farming. which refers to the market contract pattern. This happens because the company determines the type, amount of production and purchases of potato production.

Keyword: potato, income, farmer partnership.

1. INTRODUCTION

Potato is one of the horticultural commodities that can be the national alternative food needs. Potatoes in Indonesia have grown rapidly in the past decade *(solamun tuberosum L)* and make Indonesia the largest potato-producing country in Southeast Asia (Santosa, 2019: 1-3). East Java Province has the largest contribution national potato production by 21.21% and Bondowoso Regency is a tobacco center area in East Java (BPS, 2019).

Bondowoso Regency as one of the strategic areas for potato plant development which in the last five years from 2015-2016 has been increased 5.92% (BPS, 2019). Potato farming in Ijen District has made a very large contribution to economic development in Bondowoso Regency. In fact potato plants in Ijen District have been sent to various regions in Indonesia for food needs (Muktisari, 2020).

There are two varieties of potatoes grown in Bondowoso, those are Atlantic Potatoes and Granola Potatoes. The shape of the Atlantic potato is round, the

color of the potato is pale white. These potato seeds are imported from Australia. Very sensitive to *Phytopthora infestan.* This potato is processed as a food industry in a large scale. The farmers get the Atlantic potato seeds from partner companies which are given to the head of the farmer group. Farmer will sell his potato to a company because it determined by the PT Indofood. While, for the potato granola, the farmer get the seed from local farmer. The shape of granola potatoes is oval, the color of granola potatoes tends to be yellow. This potato is more resistant to late blight and bacterial. Granola potato seeds are available in Indonesia, granola potatoes are often processed for daily food such cakes and soup. (Irawan et al, 2015:4-7).

Potato farming has high production costs. Generally consist of 40% of seeds costs, 40% for pesticides and fertilizers, and 20% for labor needs. This production costs is comment in Indonesia especially in Bondowoso. (Suryani et al, 2017:1-13).

According to (Saptana and Rahman,2015:127-148), the potato commodity market aspect is still facing marketing institutions which are very large and unprofitable. This condition is certainly detrimental potato farmer commodities. One of the solution that can minimizing the existing risks is implementing partnerships.

(Hafsah in Raharjo, 2018:11), farmer partnership realized with the main mission of help and solve the problem of inequality in business opportunities, income inequality, inequality regions, inequality between cities and villages and the quality of the products produced.

The main problem faced by potato farmers in Ijen Bondowoso is price, and the solution is to join a partnership. The potato farming partnership in Ijen is carried out by farmers who are members of the Jalak Hijau farmer group. Based on this background, this study aims to analyse whether there is differences in production costs and income costs between partner and non-partner farmers, the factors that affect the income of potato farmers and how to do mutually beneficial partnerships for potato farmers.

2. MATERIALS AND METHOD

The research was conducted in Ijen District, Bondowoso Regency. The research location was chosen purposively in Ijen district, there are farmers work with PT Indofood there are also not. Data collection was carried out from January to May 2021.

Primary data collection was done through interview techniques using questionnaires and field observations. Respondents were selected using the disproportionate stratified random sampling method, which is a sampling technique used if the population in the field is stratified but less proportional (Sugiyono, 2016). This research has 90 respondents, which divided into two groups, 45 farmers who partnered with PT Indofood and 45 farmers who did not have farmer partnership.

Calculating the total costs incurred to carry out a production can be known by adding up the fixed costs with the variable costs which calculated in units of rupiah/hectare. According to Soekartawi (2016:58) with the following formula:

$$TC = TFC + TVC \tag{1}$$

means :
TC   =   Total Cost
TFC =   Total Fixed Cost
TVC =   Total Variable Cost

The way to calculate is total coast minus total revenue, and we will found the income.

Pattern:
$$I = TR - TC \tag{2}$$

means :
I   = income
TC = Total *cost*
TR = Total *revenue*

To find out the differences production costs and income from farmer partnership and non-partnership potato farming, the researcher using statistical T-test, (Siregar,2017:240).

$$t = \frac{x_1 - x_2}{s\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}} \tag{3}$$

While the population variance was found from this pattern

$$S\sqrt{\frac{(n_1-1)\,(s_1^2)+(n_2-1)(s_2^2)}{(n_1+n_2)-2}} \tag{4}$$

Means:
t   = Value distribution t
$\underline{x}_1$ = The mean value of the first sample
$\underline{x}_2$ = The mean value of the second sample
S   = population variance
n1   = Number of samples of the first population
n2   = Number of samples of the second population
s_1^2 = First sample variance
s_2^2 = Second sample variance

hypothesis:
a. The hypothesis (H0) is accepted if the value of sig (2-tailed) > 0.05 means that there is no difference in production costs and differences in the income of partner and non-partner farmers.
b. Hypothesis (H1) is accepted if the value of sig (2-tailed) <0.05 means that there are differences in production costs and differences in the income of partner and non-partner farmers.

The affecting factors of potato farming income were analysed using multiple linear regression method. Kurniawan & Budi (2016), said that the multiple

regression model is a development of a simple regression model, where the dependent variable Y is a function of several independent variables X1, X2, X3,…, Xn and the residual component u (error terms). The equation model used in this study is;

$$YI = \beta0 + \beta1X1 + \beta2X2 + \beta3X3 + \beta4X4 + \beta5X5 +$$

$$\beta6X6 + \beta7X7 + \beta8X8 + D1 + e \qquad (5)$$

means :

I   = value of potato farming income (Rupiahs/ton)

X1 = land area (ha)

X2 = total production (tons)

X3 = cost of seeds (Rp/kg)

X4 = pesticide cost (Rp/kg)

X5 = fertilizer cost (Rp/kg)

X6 = family area labor wages (Rp/mh)

X7 = Age of farmer (years)

X8 = farmer's education (years)

D1 = participation in partnership, means dummy 0 = not partnered and dummy 1 = partnered

e = error term

The potato farmer partnership pattern will be analysed using descriptive analysis by looking at the indicators mutually beneficial between potato farmers and PT Indofood.

3. RESULTS AND DISCUSSION

3.1 Differences Production Costs and Income Of Partner and Non-partner Potato Farmers

Farmer's production costs include costs paid and calculated costs. The costs paid consist of the cost of seeds, fertilizer, pesticide, transportation costs and sack costs. While the calculated costs consist of labour costs in the family, land rent, depreciation of equipment and maintenance costs. The average production cost incurred by farmers partnership is Rp. 116,783,867 and for non-farmers partnership incurred Rp. 58,468,390. The average production cost per hectare of partner and non-partner farmers in Ijen District can be seen in table 1

Tabel 1. Average Production Cost of Partner and Non Partner Farmers per ha in Ijen District in 2021

Description	Average Production Cost Per Hactar
Partner Farmers	116.783.867
Non Partner Farmers	58.468.390

Source: Primary Data Processes (2021)

Based on table 1, that there is a difference average production cost between partner and non-partner potato farmers. The potato varieties was grown differently, partner potato farmers plant Atlantic varieties and non-partners grow granola potatoes. The difference in the cost of seeds issued by potato farmers and also the difference in the cultivation technique. General, pesticide spraying on Atlantic varieties done once a week while for granola varieties every two weeks, without waiting for pests and diseases to attack. The difference in the average production costs of partner and non-partner potato farmers can be determined by performing the independent sample T test.

Based on analysis samples test table 2, there is a difference in the average production costs of partner and non-partner potato farmers. The results of the analysis turned out to be significant at 0.00 or the value < 0.05. This is because the production costs of partner potato farmers are higher, due to the Atlantic varieties of potato that are not resistant to pests and diseases. This is in line with the research of Andayani et al. (2013) which states that there is a difference in the average production costs of partner potato farmers and non-partner potato farmers.

Tabel 2. Results of Independent Sample t test, Differences Production Costs of Partner and Non Partner Potato Farmers

Anova Model	t count	Df	Sig
Partner production cost (X1)	5.424	64.192	0.000
Non-partner production costs (X2)	5.424		0.000

Source:Primary Data Process (2021)

The average price of potato from partner farmers received by farmers from PT Indofood is Rp. 17,250/Kg. Meanwhile, the price of potatoes for non-partner farmers received from collectors is Rp. 6,000/Kg to Rp. 10,000/Kg.

The average income of partner potato farmers who sell their produce to PT Indofood is IDR 226,318,633 per

season, while the average income of non-partner farmers who sell their products is IDR 66,198,277 per season. The calculation of the net income of partner and non-partner potato farmers in Ijen District can be seen in Table 3.

Table 3. Income of Potato Partners and Non-Partners in Ijen District in 2021 (Rp/ha)

Description	Partner Potato Farmers	Non Partner Potato Farmers
Revenue	343.102.500	124.666.667
Total cost	116.783.867	58.468.390
Income	226.318.633	66.198.277

Source: Primary Data Process (2021)

Based on table 3, it is explained that there is a difference income between partner and non-partner farmers in Ijen district. The price for atlantic potatoes is Rp. 17,250/kg while the price of granola potatoes that are not partnership is Rp. 6000/kg to Rp. 10,000/kg. Differences in the production income of partner and non-partner potato farmers can be identified by performing the independent sample t test can be seen in table 4

Table 4. Results of Independent Sample t-test, Differences Income of Partner and Non-Partner Potato Farmers

Anova Model	t count	Df	Sig
Partner income (X1)	8.945	62.774	0.000
Non-partner income (X2)	8.945		0.000

Source: Primary Data Process (2021)

Based on the results of the independent sample test t-test analysis in table 4 below, it shows that there are differences income of partner and non-partner potato farmers. The results of the analysis turned out significant at 0.00 or the value < 0.05. It was true that there are differences in the income of partner potato farmers and non-partner potato farmers, Aziz et al. (2019). The price of partner potatoes which is higher than the price of non-partner potatoes.

3.2 Factors Affecting Potato Farming Income

The income obtained by farmers from potato farming influenced by various factors, the main factors are the area and the price of potatoes. Several studies have analyzed the factors that influence the income of potato farming, these factors include land area, amount of production, potato prices, seed costs, pesticide costs, fertilizer costs, labor wages, farmer age, farmer education, potato varieties and partnership status. Lestari et al, (2016); Mawardati, (2013); Pratiwi et al, (2018); Mahubessy et al. (2020): and Agatha et al, (2018)).

These eleven factors will be analysed using multiple linear regression with SPSS software. It can be seen it table 5. From the analysis results there are two variables excluded from the model, the potato price variable and potato variety.

3.2.1 Land Area (X1)

The regression coefficient value of land area (X1) is 12556588.5, this shows there is an additional 1 ha of land area, the income of potato farmers will increase by Rp. 12556588.5. The significance value is 0.000 at the 95% confidence level, then the variable area of land (X1) has a significant effect on increasing the income of potato farmers in Ijen district. Pratiwi et al. (2018) said that the variable land area affects the income of potato farmers.

3.2.2 Total Production (X2)

The regression coefficient value for the amount of production (X2) is 9235384.5 , this means if there is an additional 1 kg of production, the income of potato farmers will increase by Rp. 9235384.5 . The significance value of t-count is 0.000 at the 95% confidence level, then the variable amount of production (X2) has a significant effect on increasing the income of potato farmers in Ijen district. This was truly correct that according to Mawardati's research. (2013) that the income of potato farmers is partially influenced by the amount of production produced.

3.2.3 Seed Cost (X3)

The regression coefficient value for seed costs (X3) is -1.245, it means if there is a decrease in the cost of seeds by 1 Rp, the income of potato farmers will decrease by Rp. -1.245. The significance value of t-count is 0.074 > 0.05, so the variable cost of seeds (X3) has no significant effect on increasing the income of potato farmers in Ijen district. According to Pratiwi et al. (2018) the price of seeds had no significant effect, because potato farmers of the granola variety used seeds from the previous cropping season, while the potato farmers of the Atlantic variety did not use the previous harvest. Farmers do not spend a lot of money to buy seeds, so whatever the price of seeds on the market does not affect the income earned from potato farming.

3.2.4 Cost of Pesticides (X4)

The value of the regression coefficient of pesticide costs (X4) is -2,632, it means if there is a decrease in the cost of pesticides by 1 Rp, the income of potato farmers will decrease by Rp. -2,632. The significance value of t-count is 0.614 > 0.05, then the pesticide cost variable (X4) has no significant effect on increasing the income of

potato farmers in Ijen district. According to Agatha et al. (2018) the pesticide cost variable is not significant, it shows that the income level of potato farming is not influenced by this variable. The use of chemical pesticides in the long term can reduce the level of soil fertility which turn reduce the level of production of potato farming and reduce the level of income of potato farming (Izzatussholihah, 2021).

3.2.5 Fertilizer Cost (X5)

The value of the regression coefficient for fertilizer costs (X5) is 13,421, it means if there is an increase in fertilizer costs of 1 Rp, the income of potato farmers will increase by Rp. 13,421. The significance value of t-count is 0.480 > 0.05, then the fertilizer cost variable (X5) which has no significant effect on increasing the income

of potato farmers in Ijen district. According to Pratiwi et al. (2018) the fertilizer cost variable has no significant effect because the type of fertilizer subsidized is used.

3.2.6 Labour Wages (X6)

The value of the regression coefficient of labor wages (X6) is -3.962, this indicates if there is a decrease in labour wages of 1 Rp, the income of potato farmers will decrease by Rp. -3.962. The significance value of t-count is 0.583 > 0.05, then the labour wage variable (X6) has no significant effect on increasing the income of potato farmers in Ijen district. Mawardati's research. (2013) said that lack of labor results in lack of maintenance on plants.

Table 5. Results of Analysis of Factors Influencing Potato Farming Income in Ijen District in 2021

Variabel	Koefisien Regresi	T	Sig	F	Sig
Land Area (X1)	12556588,5	24.290	,000*	160.781	0,000
Total Production (X2)	9235384,5	10.398	,000*		
Seed Cost (X3)	-1,245	-1,809	,074		
Pesticide Cost (X4)	-2,632	-,506	,614		
Fertilizer Cost (X5)	13,421	,709	,480		
Labor Outside The Family (X6)	-3,962	-,551	,583		
Age Of Farmer (X7)	642034,751	1,558	,123		
Farmer Education (X8)	995040,057	1,025	,308		
Partnership Status (D1)	92373011,94	11,360	,000*		
Constant	-155271568	-2,204	,030*		
Adjusted R-Square	,942				

Source: Primery Data Process (2021)

Information:
T : t-count value
F : F-count value
Sig : Significance
** :Significant at the 95% confidence level
* :Significant at the 90% confidence level

3.2.7 Farmer's Age (X7)

The regression coefficient value of farmer's age (X7) is 642034,751, it means if there is an additional age of 1 year, the income of potato farmers will increase by Rp. 642034,751. The significance value of t-count is 0.123 > 0.05, then the variable age of the farmer (X7) has no significant effect on increasing the income of potato farmers in Ijen district. This was support by Mahubessy et al. (2020) that the farmer's age variable does not significantly affect the income of potato farming. In general, a productive age will be able to obtain more potato production/income.

3.2.8 Farmer's Age (X8)

The regression coefficient value of farmer education (X8) is 995040.057, it means if there is an additional 1 year of farmer education, the income of potato farmers will increase by Rp.995040.057. The significance value of t-count is 0.308 > 0.05, then the farmer education variable (X8) has no significant effect on increasing the income of potato farmers in Ijen district. According to Mahubessy et al. (2020) that the education variable does not significantly affect the income of potato farming. Meanwhile the level of education also has a very important role to get a higher income of potato farming.

3.2.9 Partnership Status

The partnership status variable is a dummy variable, where dummy 1 is for partner farmers and dummy 0 is for non-partner farmers. The regression coefficient value of partnership status (D1) is 92373011.94 which has an effect on the income of potato farmers. The income of Non-partner farmer Rp. 66,198,390 or lower Rp. 226,318,633 from partner farmers. The significance value of t-count is 0.000 at the 95% confidence level, then the partnership status variable (D1) has a significant

effect on the amount of potato farming income in Ijen District. The status of partner farmers has higher income than non-partner status, so that the variable of farmer status affects the income level of potato farmers in Ijen District. This statement supported by (Lestari et al, 2016) the variable of farmer partnership status has a significant effect on the income level of farmers who are partnered and not partnered. Partner farmer status has higher income than non partner status.

3.3 Potato Farmer Partnership Pattern in Ijen District

Having partner with PT. Indofood grows atlantic varieties of potatoes which are cultivated as raw materials for industrial needs. The success of the partnership carried out on potato farming in Ijen district cannot be separated from the existence of a partnership implementation process that exists between the company, farmer groups, and potato farmers. The process of implementing partnerships in potato farming of Atlantic varieties in Ijean District is presented in this picture 1.1
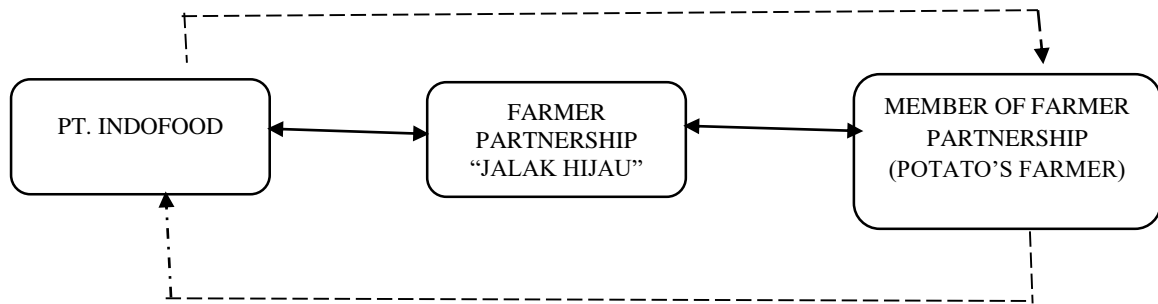

Figure 1.1 Potato farming partnership in Ijen Bondowoso

Keterangan :
- ⟷ : information flow, goods and money
- – – –▸ : technique information flow

Based on Figure 1.1, the partnership process between potato farmers and PT Indofood carried out in Ijen district is divided into two streams. All forms of information that farmer needed through to the head of Jalak Hijau leader. In this case, farmer group as a mediator between potato farmers and PT. Indofood. Having good relationship between farmer groups, farmers and PT. Indofood needs to be maintained and synergized with each other. This synergy can be created by complying with all the rights and obligations that already exist in the partnership agreement. Become part of the relevant parties, to become part of the relevant parties, need to register yourself as a member farmer Jalak Hijau.

Farmer group based on Figure 1.2, explained that the general requirements become a member of the Jalak Hijau Group are very easy. The farmers just needed the copy of their ID card and ID family member. These two requirements are the main requirements for joining the Jalak Hijau Farmer Group, farmers can be partner with PT. Indofood, Land lease letters is the main evidence that potato farmers must show to the head of the farmer group, this is become the evident and obligations verbally when applying as members of a farmer group.
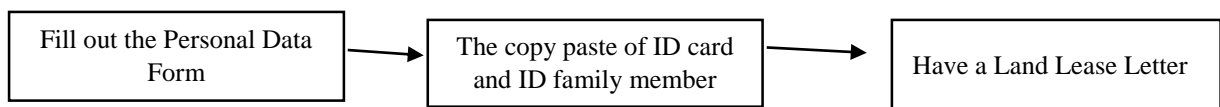

Figure 1.2 Process of Requirements to Become a Member of the Jalak Hijau Farmer Group

Farmers who have become members of farmer groups will continue to be partners for life, but the business process can be carried out according to the farmers' capital. The partnership process in general will be divided into several aspects including rights and obligations, applicable sanctions, payment systems, force majeure (force majeure), if there is a dispute it will be resolved according to the rules that have been applied, and the implementation of the partnership. Here are the explanation;

1. Rights and Obligations
   The rights and obligations in this partnership process are only divided into two parts. See table 6

Table 6. Rights and Obligations in Atlantic Potato Farming Partnership in Ijen.

Aspect	Partner Company	Partner Farmers
Obligation	a. Providing atlantic potato seeds	a) Preparing land and other production breakfast
	b. Conduct audit activities from land preparation to harvesting	b) Fully responsible for the plants and seeds in implement the technical instructions and directions given by the company's field officers
	c. Provide technical guidance, training, and management of potato farming	c) Give permission to field officers for activities carried out
	d Buying potato products with a predetermined agreement	d Selling Atlantic potato crops only to companies (PT. Indofood) with predetermined standards
		a. Paying to partner companies due to the use of seeds that have been provided by partner companies.
Right	a. Determine the buying and selling price of Atlantic potatoes	a. Get good and quality Atlantic potato seeds
	b. Determining the harvest in standard accordance	b. Growing Atlantic potatoes using other means of production (fertilizers, pesticides, and medicines) according to the farmer's reference
	c. Reducing potato seed quota	c. Receive technical guidance, training, and management of potato farming
	d. Terminating the contract with the partner farmer	d. Receive payment from sales of Atlantic potatoes.

Source: Primery Data Process (2021)

2. Payment System

The payment system is carried out when the Atlantic potato harvest has reached the company. The company conducts re-grading to determine how many potatoes are feasible and in accordance with company standards, and returns potatoes that do not pass the grading to farmers. The company will send the money by transfer method to the head of the farmer group with the deduction of the cost of seeds which has been provided by the company.

3. Applicable Sanctions

Partner companies can provide applicable sanctions if the farmers do something that are not in accordance with applicable regulations. If the partner potato farmers do not comply with the obligations stated in the partnership contract, the company will resolve the problem through mediation and a personal approach to partner farmers. Punishment will be given by reducing the seeds provided by the company to the farmers. If farmers still make mistakes again, the supply of seeds to partner farmers will be stopped for a certain period of time. If the farmer still makes repeated mistakes, the company will decide the case in the realm of law.

4. Force Majeur

Force Majeur is a situation that is highly undesirable for both partner companies and farmers. The forced

situation in this case is like crop failure due to natural disasters. If a natural disaster occurs in Atlantic potato farming activities, the partner company will compensate for the losses incurred. Compensation for losses is not fully determined by the policy of the partner company. Other forced circumstances, such as the case of the death of a partner farmer, then the case of the other family listed in the family card must continue from the deceased party.

5. Disputes and Obstacles

Forms of disputes and obstacles in existing partnership activities will be resolved mediation. Mediation is carried out between the company and partner farmers with the head of the farmer group as the mediator. If the conditions of disputes and obstacles that occur still cannot be resolved through mediation, it will decide the case in the realm of law.

6. Partnership implementation

Implementation of the Atlantic potato farming partnership in Ijen district is regulated in a contract signed by the company PT. Indofood with the Jalak Hijau farmer group. Here is the implementation of the Atlantic Potato Farming Partnership in Ijen District.

Table 7. Implementation of Atlantic Potato Farming Partnership in Ijen district

Fase	Activity	Executor	Implementation
Pre farm	Land Preparation	Farmer	Done
	Land Survey	Company	Done
	Determination of Seed Quota	Company	Done
	Seed Distribution	Company	Done
Farming	Planting	Farmer	Done
	Maintenance	Farmer	Done
	Harvest	Farmer	Done
	Technical guidance	Company	Done
Post Farming	Sort out	Farmer	Done
	Weighing	Company	Done
	Delivery	Farmer	Done
	Sort and Weigh in factory	Company	Done
	Bulk Potato Returns	Farmer	Done
	Potato Purchase	Company	Done

Source: Primery Data Process (2021)

In table 7 it is explained that the potato farming partnership activities in Ijen District from pre-farm to post-farming has own function. In the potato farming phase, the company does not participate in determining the fertilizers and drugs selected by the farmers. The company is only obliged to provide good and appropriate technical guidance. Regarding planting, care, and harvesting, it is entirely the responsibility of the farmer.

So far, no sanctions have been carried out on the issue of seeds, because no concrete evidence has been found. if there is something implemented according to the applicable contract, actually refer directly to the third stage, which is followed up in the legal realm. However, due to mutual dependence, the regulations to create win-win solution.

Based on the partnership pattern process that has been studied previously, the partnership pattern in Atlantic potato farming in Ijen District can be classified as contract farming. Agricultural contracts based on the statement of (Kusnadi et al ,2018:155-156) divided into two, production contracts and market contracts. The condition of the partnership pattern in the field has a tendency towards market contracts. This is because partner companies determine the type and amount of production from potato farming activities. Meanwhile, the existing partnership pattern process has its advantages and disadvantages. These are advantages and disadvantages;

Table 8. Advantages and Disadvantages of Potato Farming Partnership Process in Ijen District, Bondowoso Regency

No	Advantages	Disadvantages
1.	PT. Indofood offers profitable cultivation support for farmers, that is support for production facilities in the form of Atlantic variety potato seeds	The rules are made based on the company to fulfill the market manages, so that farmers do not have a strong bargaining value
2.	The marketing sector is more secure, because the production will be purchased or distributed to partner companies	Product standardization is very strict, if the production produced of potato farmers does not meet the standard criteria then large amounts of sorting will be carried out. This is very detrimental to farmers, because the sorting results that do not enter the company will be returned to the farmers with transportation costs charged to the farmers.
3.	There is technical assistance by the company	Technical guidance from Indofood's company only provides material related to the cultivation of Atlantic varieties of potato without any practice in the field.
4.	Stable potato prices do not fluctuate, because prices are determined by partner companies and have been agreed by potato farmers and PT. Indofood	The determination of the quality of Atlantic varieties of potatoes is determined at the time of harvest
5.	Production quality is more controlled	Lack of clarity information from PT. Indofood at harvest time. Farmers cannot do anything without company instruction
6.	Setting potato production targets	

Source: Primary Data Processed (2021)

Table 8 explains the advantages and disadvantages of the potato farming partnership pattern in Ijen District, Bondowoso Regency. The advantages of PT. Indofood offers production facilities in the form of seeds where farmers can borrow potato seeds first then pay letter, guaranteed marketing sector, technical assistance by partner companies, stable potato prices that do not fluctuate, more controllable production quality and setting targets for potato production. Meanwhile, the disadvantages are the rules made by the company, farmers do not have a strong bargaining value, product standards are very strict, only technical guidance there is no feedback from farmers and Lack of clarity informance from PT. Indofood at harvest time. Farmers cannot do anything without company instruction.

There are some farmers who choose not to be partner with PT. Indofood for several reasons:
1. Many farmers complained about the long process of disbursing money from PT. Indofood which took approximately 1.5 months
2. Lack of responsiveness of officers from PT. Indofood's complaints which make farmers are reluctant to partner up
3. Technical matters which are actually detrimental for farmers. For example a delivery driver (courier).

4. CONCLUSION

There is a significant difference in the average production cost between partner and non-partner potato farmers. Because the varieties planted are different. The difference in the cost of the seeds issued and also the difference in the cultivation process. For the average production cost of partner potato farmers is Rp. 116,783,867/ha and the average production cost of non-partner potato farmers is Rp. 58,468,390/ha. Based on the results of the independent samples test t-test analysis, it shows that there are differences in the income of partner and non-partner potato farmers. Because there is a difference in potato prices, for the Atlantic potato price has been determined by PT Indofood Rp. 17,250/kg while the price of granola potatoes that are not partnered is Rp. 6000/kg- Rp. 10,000/kg because it follows the market price. Although partner farmers incur higher production costs, the price of potatoes is also higher than non-partner farmers. The partner farmer's income is Rp. 226,318,633/ha while the income of non-partner potato farmers is Rp. 66,198,277/ha.

Potato farming income is significantly influenced by variables of land area, amount of production, and partnership status. Variable area of land and the amount of production that has a significantly higher level. If the area of land cultivated by farmer increases, the amount of production also increases automatically, the income of farmers will be higher. The variable of partnership status has a significant effect, that farmers choose to partner with PT. Indofood is right choice. Meanwhile, the variable cost of seeds, pesticide costs, fertilizer

In general, the potato farming partnership pattern in Ijen District is a mutually beneficial partnership from both parties. This can be proven from the increasing number of members of the Green Starling farmer group from year to year. Partner companies have more confidence in the potato commodity of Atlantic varieties to be cultivated in Ijen District. The satisfaction of farmers from the existence of this partnership pattern can also be seen from the low level of disputes, obstacles, and force advances that exist forever in the partnership. Potato farmers' satisfaction in participating can also be seen through the income of partner farmers, which are majority higher than non-partner farmers, although at certain moments the price is the opposite.

costs, kindergarten wages, age of farmers and farmer's education did not significantly affect farmers' income.

Meanwhile, the pattern of partnership that exists between potato farmers and Indofood's company can be seen from aspects that include rights and obligations, applicable sanctions, payment systems and force majeure. Regarding the sanctions aspect, if it is applied according to the contract applicable , it actually refers directly to the third stage, legal realm. There is mutual benefit, the rules to create a win-win solution were chosen by both parties. The process of potato farming partnership pattern in Ijen District can be classified as contract farming. which refers to the market contract pattern. This happen because the company determines the type, amount of production and purchases of potato production.

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