

## **Tea Production between Contract and None Contract Farmers in PhuTho Province of Vietnam**

**Le Thi Kim Oanh<sup>1</sup>, Bui Thi Nga<sup>2</sup>, Philippe Lebailly<sup>3</sup>**

<sup>1</sup>PhD candidate, University of Liege, Gembloux Agro bio Tech, Belgium

<sup>2</sup>PhD, Faculty of Accounting and Business Management, Vietnam National University of Agriculture, Vietnam

<sup>3</sup>Prof. PhD, University of Liege, Gembloux Agrobio Tech, Belgium

### **\*Corresponding Authors**

**Name:** Bui Thi Nga

**Email:** [hieu0306@gmail.com](mailto:hieu0306@gmail.com)

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**Abstract:** Tea is one of key crops which substantially contributes to Vietnam's annual exports, creates jobs and raises income for farmers. However, tea production farmers are still facing many difficulties such as low farm management, disease control, etc. Of which, tea consumption is considered to be the most challenge and the main reasons is the low cooperation between farmers and other stakeholders in the tea value chain. This study aims to look more deeply and find out the linkage and benefit of farmers in the model of cooperation between farmers and tea processing company through contract and none contract tea production in the study site. The results shown that the contract farming in tea production in the study sites was still not tightened and did not reflect clearly its real roles. However, it was gradually reflected its roles as the fully contract farmers (worker farmers) received the highest productivity, turnover and value added and the most satisfied, the contract farmers (partly contract) achieved not as high benefit but quite satisfied with their results and contract. None contract farmers although received reasonable results recently but they still did not assure the production, they would like to engage in some kinds of cooperation in the future.

**Keywords:** contract, farmer, tea production

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### **INTRODUCTION**

Tea is one of key crops which substantially contributes to Vietnam's annual exports, creates jobs and raises income for farmers. Besides being one of the solutions to eliminating hunger and reducing poverty, tea plantations also help protect the environment and bring high income for the growers. Consequently, tea has become a high value product of Vietnam [1].

However, tea production farmers are still facing many difficulties such as low farm management, disease control[2], fluctuated market and consumption [3], systems of quality control and marketing [4]. Of which, tea consumption is considered to be the most challenge. One of the main reasons is the low cooperation between farmers and other stake holders in the tea value chain, especially the tea processing companies. While farmers who have contract with companies have more advantages in producing and consuming tea products as they receive more support and assistance from tea processing companies and are ensured to consume their products, farmers without contract are facing more threaten of diseases, quality

control, consuming products and easily to be vulnerable. This study aims to look more deeply and find out the benefit of farmers in the model of cooperation between farmers and tea processing company through contract and none contract tea production in the study site.

### **METHODOLOGY**

This research chose PhuTho province as study sites because this province locates in the Northern and mountainous area that has many difficulties in agricultural production but has traditionally been exporting black tea and is one of the five top tea production provinces and four top tea output in Vietnam. Since 2000, developing tea production has been selected as the key agricultural economic program of PhuTho province. More and more farmers shifted from cereal growing and forests to tea-growing. Tea production has brought income, creating jobs for thousands farmers in the province to escape from poverty and get rich. [1]. In PhuTho, the two largest areas tea production districts, Thanh Son and Doan Hung are chosen to study.

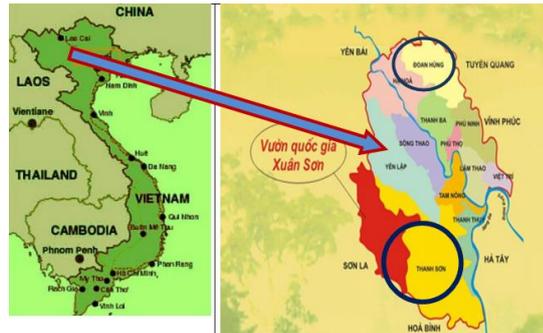


Fig. 1: Study sites

The primary data came from a survey of 110 tea production farms represent for the whole region

based on the semi-structure, standard questionnaires and PRA method. The sample for survey in the table 1

Table 1: Sample of the survey

No	District	Type of farmer			Products sold to company
		Worker farmers (land of company)	Contract farmers (land of Farmer)	Non-Contract farmers	
1	Thanh Son District	20		20	Phu Da - Join Stock Company 2 private companies
2	Doan Hung District	20	30	20	Phu Ben - Foreign company Phu Ben - Foreign company 2 private companies
	<b>Total</b>	<b>40</b>	<b>30</b>	<b>40</b>	6

Five-point LIKERT scale was also used to assess the satisfaction of the farmers with each criteria, ranging from (1) Very dissatisfied, (2) Dissatisfied, (3) Neutral, (4) Satisfied and (5) Very satisfied. Satisfaction index is the weighted average of the number of farmers in each level of satisfaction and the coefficient of each level, where “very dissatisfied” scored 1, and “very satisfied” scored 5.

## RESEARCH RESULTS AND DISCUSSION

### Types of cooperation between farmers and tea processing company

In the study sites, there are three main types of farmer according to the cooperation method:

#### Worker farmers

Farmers do not have tea production land. They receive land from tea processing company and they have to follow strictly all rules of company, especially the quality control rules. For materials, they have to use fertilizer, pesticide that company provides with late payment. For selling fresh tea, they have to sell all fresh tea with the assigning price of company.

#### Contract farmers

There is only one company namely Phu Ben company having contract with farmers in Phu Tho province. In the study sites, there is only one group of Contract farmers through only one Cooperative namely Minh Tien Cooperative in Doan Hung district.

Farmers in this cooperative have contracts with Phu Ben Company. The contract with company will ensure farmers to consume their fresh tea products. The company also provides them some technical assistance of technology for growing tea, good fertilizers and financial support by providing loan with preferential interest.

Farmers in the cooperative can sell fresh tea to other companies when fresh tea price of Phu Ben Company is low. Head of Cooperative used to be fresh tea collectors for many years so he tried ensure to buy fresh tea with reasonable price for farmers. If fresh tea price from Phu Ben Company is low, they can sell fresh tea to other company with higher price to ensure benefit. This implies that, the cooperation between farmers and company is not tight. However, Phu Ben Company still signs contract with them because they can built material zone stably, and they could partly control the quality of input products for their processing process. That helps company to expand exporting into strict market.

#### None Contract farmers

Farmers do not have cooperation with tea processing company and do not sign contract with any other actors along the tea chain, they produce and sell their fresh tea on the spot market through collectors.

#### Area of tea production

Tea production area was different among 3 farmer groups. Worker farmers have the highest area

among 3 farmer groups thanks to support from tea processing company. Their average area was 0.64 hectares (ha) per farm whereas the figures of Contract farmers and none Contract farmers were 0.43 ha and 0.44 ha, respectively.

Company divided land for Worker farmers with minimum area 0.3 ha and maximum of 2 ha which was higher than those of the two other farmer groups. The Worker farmers said that, with this area level, they could live on their major income from tea.

**Table 2: Land area of tea production farmers (ha)**

	<b>Worker farmer (40 farms with land of company)</b>	<b>Contract Farmer : (30 farms signing contract and land of farmers)</b>	<b>None Contract farmer (40 farms without signing contract, land of farmers)</b>
<b>Mean</b>	<b>0.64</b>	<b>0.43</b>	<b>0.44</b>
Max	2	1.4	1.3
Min	0.3	0.09	0.1
STDEV	0.3	0.3	0.27

( $F_{test} = 5.54 (>F_{crit} = 3.08)$ ,  $p = 0.005$ )

Source: Survey result, 2015

### Productivity

Worker farmers received the highest tea productivity and much higher than those of the two other groups. Their productivity of 21.4 tons of fresh tea per ha per year while that number of none Contract farmers and Contract farmers was 17 and 16 tons, respectively.

The explanation for the high the productivity of Worker farmers are: they were provided materials (like fertilizer, pesticide, seed...) by company and were trained in the process of growing fresh tea to have high yield. In addition, their land were larger than those of the two other groups, thus, they could exploit the economy of scale in production.

**Table 3: Productivity of tea production(tons of fresh tea per ha/year)**

<b>Productivity</b>	<b>Worker Farmer</b>	<b>Contract farmers</b>	<b>None Contract farmers</b>
<b>Mean</b>	<b>21.4</b>	<b>16</b>	<b>17</b>
Max	30	25	23
Min	12	10	11
STDEV	4	4	3

( $F_{test} = 23.03 (>F_{crit} = 3.08)$ ,  $p = 4.8E-09$ )

Source: Survey result, 2015

Although a Contract farmer also was supported partly by the company, their productivity was the lowest among three groups, still lower than that of none Contract farmers. The reason for this situation was that, the soil characteristics in the areas of Contract farmers

(in Minh Tien village) were not as good as in other areas.

### Production cost

**Table 4: The tea production cost(Million VND per ha/year)**

<b>Cost of production</b>	<b>Worker Farmer</b>	<b>Contract farmers</b>	<b>None Contract farmers</b>
<b>Mean</b>	<b>35.824</b>	<b>31.361</b>	<b>31.530</b>
Max	63.292	53.273	62.756
Min	16.609	17.910	18.999
STDEV	11.921	8.116	9.595

( $F_{test} = 5.27 (>F_{crit} = 3.08)$ ,  $p = 0.006$ )

Source: Survey result, 2015

Tea production costs of 3 groups were different among three farmer groups. Worker farmers had the highest level with nearly 36 million Vietnamdong (VND) per 1 ha because they invested in growing tea much more than other groups and strictly followed the guidance of the tea processing company. Contract farmers invest the least cost of tea production.

Intermediate cost of Worker farmers was the highest among 3 groups of nearly 31 million VND per ha. The cost of Contract farmers and none Contract farmers was 26.1 million VND, and 26.7 million VND, respectively. In detail, fertilizer cost of Worker farmers was the highest with 19.3 million VND per ha in comparison with 13.6 and 14.1 million VND per ha of none contract and Contract farmers, respectively. The results of deep interview reveals that, in the opinion of

farmers, fertilizer poses positive impact on fresh tea yield. The more fertilizer is used, the more yield of fresh tea is gained.

However, thanks to the strictly control of the company, pesticide cost of Worker farmers was the lowest among 3 groups, approximately 6 million VND per ha whereas those numbers of none contract and Contract farmers groups were about 6.8 million VND per ha. Worker farmers use pesticide more reasonably because they know process of tea production more exactly than other groups. Moreover, company assigns strict rules in using pesticide. If pesticide residual is high, company could not export black tea to their market, especially international market.

### Turnover of tea production

Worker farmers received the highest turnover of tea production at nearly 84 million VND per ha per year. This is because they got the highest productivity and their product's price was high due to the high

quality thanks to the strictly quality control of the company. None Contract farmers received the highest price for their products (because they mostly sell their products in the spot market) but their productivity and their products' quality was lower than those of Worker farmers, thus their turnover was lower than that of Worker farmers.

The Contract farmers gained the lowest turnover at 65 million, just equal to 77% that of the Worker farmers even though their products' price was higher than that of the Worker farmers (but lower than that of none Contract farmers). There were two main reasons for this situation. First, Contract farmers invested least for the tea production and received the least productivity. Second, due to the soil characteristic of the area of Contract farmers was not as good as in other areas, thus their products were considered not as delicious as others and their price seemed to a little lower.

**Table 5: Turnover of tea production (Million VND per ha/year)**

Turnover	Worker Farmer	Contract farmers	None Contract farmers
<b>Mean</b>	<b>83.999</b>	<b>65.059</b>	<b>70.715</b>
Max	120.000	100.000	104.167
Min	47.071	36.100	42.667
STDEV	15.966	17.111	14.496

(*F test* = 16.39 (>*Fcrit* = 3.08), *p* = 6.2E-07)

Source: Survey result, 2015

### Value added

Thanks to the highest productivity and turnover, value added of Worker farmers was the highest of nearly 53 million VND/ha in spite of the

highest production cost. None Contract farmers ranked the second in having high level of value added of 44.2 million VND/ha while Contract farmers have the lowest with only 38.8 million VND/ha.

**Table 6: Value added of tea production (Million VND per ha/year)**

Value added	Worker Farmer	Contract farmers	None Contract farmers
<b>Mean</b>	<b>52.965</b>	<b>38.801</b>	<b>44.278</b>
Max	76.632	65.500	70.205
Min	26.983	12.590	19.750
STDEV	11.505	15.425	13.890

(*F test* = 7.25 (>*Fcrit* = 3.08), *p* = 0.001)

Source: Survey result, 2015

### Satisfaction of farmers about tea production

On overall, Worker farmers and Contract farmers were more satisfied than none Contract farmers in tea production. About material for tea production, Worker farmers and Contract farmers were very satisfied with the high point (4) for fertilizer and

pesticide, convenient because they said that they were very satisfied with the support of the tea processing company and those support were very useful for them in production process. None Contract farmers felt neutral and only some felt satisfy with the material.

**Table 7: Satisfaction of farmers about tea production**

Items	Worker farmers	Contract farmers	None Contract farmers
<b>1. Materials</b>			
Fertilizer quality	4	4	3.6
Pesticide quality	4	3.3	3
Price	3.2	3.2	3.3
Convenient	4	4.3	3.9
Late payment for material	3.9	3.7	3.6
<b>2. Useful technical training</b>	3.4	3.7	3.1
<b>3. Payment of buyers</b>	3.1	4	4.1
<b>4. Stable output level</b>	4.1	3.8	3.7
<b>5. Reasonable selling price</b>	2.4	3.3	3.6

Source: Survey result, 2015

On technical training, Contract farmers satisfy the most but the points was not high, just 3.7 point. Worker farmers and none Contract farmers felt neutral about this service. About time of buyers' payment: Contract farmers and none Contract farmers seemed more satisfy with point 4. Buyers usually pay immediately for these groups. For Worker farmers, they only evaluate about this factor with point 3, equaling to normal level as they were paid after selling about ten days, later than those of the two other groups.

About consumption level, Worker farmers almost were sure to consume all of their products by the company, thus they satisfied the most. Two other groups satisfy moderately with stable output factor. Point of Worker farmers appeared to be by far the highest with 4.1, followed by Contract farmers and none Contract farmers of 3.8 and 3.7 respectively.

All farmers evaluated reasonable selling price factor with low point. Worker farmers was the group which had the lowest level, just 2.4 point because the price was almost set by tea processing company and they did not any power in discussing to increase its. None Contract farmers has the highest level but with only 3.6 point. All farmers would like to sell their tea with higher price in the future.

## CONCLUSION

Worker farmers had strong cooperation with tea processing company, received the most support from company and had good condition to produce tea as their land area were larger. The survey results shown that they were the most successful farmers with the highest productivity, highest turnover and highest value added even though they spent the most. They satisfied mostly with material of production and stable output consumption. However, they dissatisfy about price of fresh tea as the price almost was imposed by the company.

Contract farmer's had quite close cooperation with the tea processing company and received some supports from company. However, their linkage was not good. Contract farmers still sold their products to other tea processing companies even though they signed contract with Phu Ben Company. Therefore, they often received higher price than that of worker farmers but normally lower than that of none contract farmers. They spent the least, gained the least productivity, turnover and value added. However, they were satisfied in signing the contract with the tea processing company as the company ensures to consume their products, support them in material and technical training. This is the factor that tea processing company should use to encourage contract farmers staying closely with them.

None contract farmers received the highest fresh tea price, but the market were not stable compared to other groups. In case of market fluctuation, especially in case of surplus, they would be the most vulnerable one. Although everything now is still good with them in productivity, turnover, value added but they felt neutral, not satisfy with the recent situation. In deep interviewed shown that, they also would like to have a good relationship and cooperation with tea processing company.

On overall, the contract farming in tea production in the study sites was still not tighten and did not reflect clearly its real roles. However, the survey results shown that the contract farming was gradually reflected its roles as the fully contract farmers (worker farmers) received the highest benefit and the most satisfied, the contract farmers (partly contract) achieved not as high benefit but quite satisfied with their results and contract. None contract farmers although received reasonable results recently but they still did not assure the production, they would like to engage in some kinds of cooperation. In the future, when market of Vietnam opens more, we hope that the contract farming in

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general and contract farming in tea production will improve their roles.

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