



## **A VIETNAMESE AGRICULTURAL COOPERATIVE'S INVOLVEMENT IN THE FOOD SAFETY VALUE CHAIN: PERSTECTIVE AND POLICY**

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### **ABSTRACT**

*Over the past 20 years, Vietnam has changed the Law of Cooperatives 3 times with the aim of finding the most appropriate organizational model of production to support for household agriculture development. After the 2012 Cooperative Law came out into society, old cooperatives had to convert to a new type of cooperative, closer to the cooperative model proposed by ICA in mid-2016. With administrative constraints, only about 70% of the cooperatives of over 11,000 cooperatives have converted and about 30% have successfully converted in organizational form and mode of operation. In addition, the problem of food safety control is a challenge for agriculture with more than 80% of small scale farmers. The government is promoting a value chain linkage model aimed at ensuring safe food supply to consumers by using VietGAP certification. Currently there are about 557 supply chains have been voluntarily certified around the country. Agricultural cooperatives play an important role in these safe food supply chains with contribution of 27% in the total of certified chains. In particular, agricultural cooperatives play the role of organizing production for small scale farmers, common quality certification, common market access and linking with businesses in the value chain. However, the new type of cooperative has many difficulties in management capacity, access to capital and land so the scale of operation is small and the sustainability is low. In the future, the state needs realize policy to create a fair business environment for cooperatives, promote capacity strengthening and also changing the credit assess condition for agricultural cooperatives.*

Key words: Agricultural cooperative, value chain, food safety, Vietnam

### **INTRODUCTION**

In Vietnam, after the period of collectivization, the old cooperative model has ended under Doi Moi policy in 1988. In 1996, for the first time, Vietnam had a Cooperative Law, the agricultural cooperative of Vietnam was changed in terms of organization form and mode of operation in accordance with the law. Up to now, the agricultural cooperative in Vietnam had twice of adjustment in organization form and mode of operation under the Cooperative Laws 2003 and the Cooperative Laws 2012. The cooperative law has created a legal basis for the cooperative to make a strong and profound change in the organizational model, management and operational mechanism in practice, creat good conditions for cooperatives to assert themselves in a multi-sector economy. The new cooperative model is based on the principles that the International Cooperative Alliance (ICA) has confirmed for cooperatives in the twentieth century, as reflected in the Cooperative Law 2012: voluntary joining and leaving cooperative; democratic and equality management; self-responsibility and mutual benefit; the distribution ensures the combination of member's benefits and cooperative's benefits; cooperation and community development.

At present, agricultural cooperatives play an important role in the structure of agricultural production in our country, which is reflected in the number of members and activities of cooperatives: According to statistics, in 2015, there are over 7.3 million cooperative members in the country, 6.7 million households and individuals of which are members of agricultural cooperatives, accounting for about 45% of total agricultural and rural households. Some agricultural cooperatives have innovated in the mode of operation, applied technical advances in production, linked with enterprises, joined the safe food value chain, therefore the cooperative's performance and the members' incomes has been improved, the cooperative economic role has been affirmed for member.

However, the situation of small-scale and decentralized production, traditional and common practices in farming, animal raising and processing products are difficult to change, there are many difficulties in controlling food safety. On the market, good quality and ensuring food safety products is confused with conventional products, which makes it difficult to distinguish and choose. The society is very concerned about hygiene, food safety and their harm to the human body and social security. In the circumstances, agricultural cooperatives are a way for small farmers to participate in the supply chain of safe food to consumers. Base on these issues, we conducted a study on "The status of agricultural cooperatives involving in the food safety value chain".

### **Status of agricultural cooperatives in the transition process under the Cooperative Law 2012**

In July 2016, the transition period of the cooperatives under the Cooperative Law 2012, the cooperatives did not comply with the deadline for re-registration under the Cooperative Law in 2012. Up to December 1<sup>st</sup>, 2016, there were 7,869 cooperatives (of total 11727 agricultural cooperatives) registered and re-organized according to the Cooperative Law, 5,633 cooperatives of which re-registered. In the agricultural cooperatives that didn't re-register, about 1,097 cooperatives had stopped working and 277 cooperatives were operating badly, they would have to carry out procedures for dissolution or transfer to other forms in accordance with the Cooperative Law 2012.

In terms of the number of members and activities of the cooperative, the country now has 11,727 agricultural cooperatives, an average of 615 members per cooperative. The production and business value is about 44,555 USD/cooperative. Average profit is about 8,911 USD/cooperative/year; The average income of members and employees is about 44 USD/person/month. Most of the agricultural cooperatives now provide services for agricultural production and rural life (minimum services is 3 and, maximum services is 16), including: Provide input services (seeds, supplies, fertilizers, irrigation, etc.), preservation, processing and consuming products; management and exploitation of infrastructure for agricultural production, to cooperate with enterprises to invest in production, processing and consuming of agricultural products. Some agricultural cooperatives have innovated in the mode of operation, applied technical advances in production, linked with enterprises, joined the agricultural product value chain. However, the supply of other important services such as preservation, processing and consuming products has not been paid attention, so the number of agricultural cooperatives implementing contract farming for farmers only accounts for about 10%, therefore, the cooperative has not represented a role in supporting to increase the production value for farmer households.

### **Assessment of the status and results of transformation of the organization form and mode of operation of agricultural cooperatives under the Cooperative Laws 2012 show the following characteristics:**

The process of transforming agricultural cooperatives under Cooperative Law 2012 has not been completed as scheduled by the Government on 30/06/2016. The progress of registration of cooperative activities is rather slow: 7.3% in 2014, 18.87% in 2015, to 30/6/2016 is 69.9%. Agricultural cooperatives have not been actively converted due to the lack of real motivation. The awareness of members is limited so they prepared the procedures for the conversion too close the deadline. Therefore, many cooperatives hasn't transformed successfully, they need to finish (Department of Cooperatives and Rural Development-MARD, 2016).

Surveys in 9 provinces show that 30% of the cooperatives have successfully transformed in time, 51% of the cooperatives have converted but have not been successful according to the evaluation of the project and local authorities. The experience of 27 successful cooperatives under the Cooperative Law 2012 shows that cooperatives have been proactively implementing the transition from 2013-2015 to be successful as the transition needs to be well prepared and time. Therefore, the extension of the cooperative transition time and dissemination to have more cooperative members changing the awareness of cooperatives under the Cooperative Law 2012 (Tran Thi Thai, 2017).

The process of transforming the cooperative has not been successful because most of the cooperatives have changed their organization or re-registered under the Cooperative Law 2012, but the rate of cooperatives actually change their mode of operation, the efficiency of activities is still low and the number of newly established cooperatives is also low.

To overcome this situation, the state level should implement comprehensive solutions in order to create favorable business environment in agriculture and rural areas for agricultural cooperatives, equal to enterprises to attract new cooperatives would be established and come into operation effectively. In addition, it is necessary to conduct research and assessment of indicators on business environment in agriculture and rural areas in order to create a healthy environment for the operation of agricultural cooperatives.

## **Real situation of cooperatives involving in food safety value chain**

The problem of supplying agricultural products ensuring food safety in urban areas is the most urgent problem in Vietnam today. According to the results of the program and project of safe vegetables show that, Although the production organization of small-scale farmers has partly satisfied the requirements of creating safe products through collaborative groups and cooperatives, other issues in the supply chain such as: Linking businesses and cooperatives, advertising and trade promotion, building a product identification system, provide origin information, linking with modern consumers in the inner city (safe vegetable shops, supermarkets, distribution companies) should be given priority (Dao The Anh, 2017).

In 2013, the National Agro-Forestry-Fisheries Quality Assurance Department (belong to MARD) implemented a policy of developing a safe food supply chain, Then, in 2016, MARD launched the program "Green Address - Clean Agriculture". By April 2017, there were 557 safe food and agricultural product supply chains in 62 provinces and cities. In the above mentioned safe food supply chains, agricultural cooperatives participate in 150 chains. Thus, the percentage of cooperatives participating in the safe food chain was 26.9%. There are 227 addresses of safe food business. At the time of launching the program (May 2016), according to MARD statistics, only 36 provinces and cities reported that 282 supply chains for agricultural and fishery products have been developed and MARD has also officially announced 69 addresses for the supply of agro-products that have been certified for food safety control by chain.

2016 is the year when the government concentrates on communication on cooperative economy in order to promote cooperative transformation according to the Cooperative Law 2012. However, the construction of large-scale commodity value chains and the establishment of cooperative alliances for the consumption of products are not really paid attention. The number of cooperatives involved in the product value chain has not been much; in some provinces, new cooperative models have not yet been established in association with the development of commodity value chains. The support, consultancy and service activities have not met the diversified needs of cooperatives in terms of both quantity and quality, especially in trade promotion, credit, science and technology. Some Cooperative Alliance have no Cooperative Support Fund.

Operational quality of agricultural cooperatives has been strongly changed since 2015 and especially in 2016, thus the number of cooperatives that operate effectively has increased from around 10% in 2014 to over 30% in 2016. The average revenue is 49,010 USD/cooperative, the average profit is around 8,911 USD/cooperative, the average income of members and employees is 66 USD/month. There are many cooperative alliances and cooperatives operating effectively, the revenue was over 445,553 USD/year as: Anh Dao Agricultural Service Cooperative (Lam Dong Province), Phuoc An Trade and Service Agricultural Cooperative (Ho Chi Minh City), Tam Vu Dragon Fruit Cooperative (Long An Province), Evergrowth Agricultural Cooperative (Soc Trang Province), Quy Hien livestock cooperative (Lao Cai province), Phuoc Hung agricultural cooperative (Binh Dinh province).... These cooperatives are mainly in the specialized areas of agriculture, quite far from urban areas and occupy a small amount.

However, only agricultural cooperatives in the peri-urban areas of big cities such as Hanoi and Ho Chi Minh with near-market advantages have been proactive in accessing safe food supply chains, especially safe vegetable and fruit cooperatives have more participation rate than other fields. For example, in Hanoi, a number of specialized farming areas have been established in the direction of high quality and safety: safe vegetables area in Van Noi (Dong Anh), Van Duc, Dang Xa (Gia Lam); High quality rice production area (Chuong My, Phu Xuyen); area of fruit trees combining ecotourism (Tu Liem, Soc Son); Area of pig raising ( Dong Anh ); area of dairy farming along the Red River, Duong River, Ca Lo River (Gia Lam, Dong Anh, Thanh Tri, Soc Son) and aquaculture areas (Thanh Tri and Dong Anh). Experience shows that good production models for safe vegetables are cooperatives or collaborative groups. Enterprises that participate in preliminarily processing and distributing cooperate closely with cooperatives and collaborative groups.

Hanoi has more than 40 safe vegetable pre-processing facilities mainly in the form of agricultural cooperatives, 5 facilities of which with high capacity (from 2,000-5,000 kg / day) in the vegetable production areas such as Yen My, Duyen Ha (Thanh Tri); Thanh Da (Phuc Tho); Van Duc (Gia Lam); Tien Le (Hoai Duc) . The remaining is small processing facilities with a capacity of 200-1,000 kg / day and they are also associated with safe vegetables production activities of cooperatives including small-scale farmers. General characteristics of the pre-processing houses is having areas for washing, preliminary processing, sorting, packing vegetables, having water sources to ensure quality standards. However, most of the pre-processing houses have only operated with a part of their capacity. In the case of Tien Le Cooperative, with the support of many projects, a relatively modern pre-processing area of 40 m2 was built for the cooperative, but this area was also rarely used for pre-processing vegetable for cooperative members. The reason is that the scale of production of each household is small, there is no stable consumption contracts for products, famers consume their products. On the other hand, in order to reduce the costs (preliminary processing fee, transportation cost), the farmers conduct preliminary processing in the field or their house.

### **Research on the cases of agricultural cooperatives involved in the supply chain of safe vegetables**

#### ***The case of cooperatives participating in the peri-urban short value chain, but loses comparative advantage***

Dao Duc Safe Vegetable Cooperative (Van Noi, Dong Anh) was established in 2003, from 12 members in the begining, now the cooperative has 352 members with 25 ha of land for all type of vegetables production in Van Noi safe vegetables zone. The cooperative produces and supply 100 tons of vegetables per month, mainly leafy vegetables and the most effective vegetables are mustard greens, choy sum and especially super sweet melon that bring to farmers 891 USD for 2,5 months. This is a cooperative with good vegetable production capacity and has a large market share of safe vegetables in Hanoi. Through the field survey, Van Noi safe vegetable area has a huge advantage with the location at the gateway to the capital, only takes ten minutes to provide vegetables to shops, supermarkets. However, these advantages have not been used in practice, Dao Duc safe vegetable cooperatives (and many agricultural cooperatives in Van Noi) are facing many obstacles in vegetable consumption and it is very difficult to control the practice of the members. The cetification of VietGAP (Vietnamese Good Agricultural Practices) have not been implemented regularly so there is no trust of consumers. The operation scale of Dao Duc safe vegetable cooperatives is very fragmented, Cooperatives can not control the production and consumption processes of their members. The cooperative also has a lot of awareness and effort to pay attention to safe vegetable production, but strict monitoring of vegetable safety is beyond the capacity of the cooperative's staff, and the involvement of members in quality and safety management is weak. In the commercial phase, there is still the phenomenon of mixing safe vegetables and unsafe vegetables for sale, so consumers loss their belief, leading to loss of market share. This is a failure of many cooperatives producing vegetables in the suburban area, Although they have good production capacity and are close to the market, they are not able to develop value chain and quality management in the chain so they are competed by the non-certified vegetable channels.

#### ***The case of cooperatives involving in the peri-urban short value chain, supplying safe vegetables***

Here we analyze the case of Tien Le Cooperative (Hoai Duc, Hanoi) and Tien Kha Cooperative (Dong Anh, Hanoi). The common characteristics of the concentrated safe vegetable production areas of Hanoi are the participation of cooperatives. However, the role of cooperatives is quite different. Tien Le Cooperatives play an important role in organizing VietGAP quality certification, supervising safe production techniques and signing sales contracts. Meanwhile, Tien Kha Cooperative is only an intermediary actor for receiving government support and looking for consumers, the cooperative is not responsible for quality management.

<b>Role of cooperatives</b>	<b>Tien Le Cooperative (%)</b>	<b>Tien Kha Cooperative (%)</b>
Implementation of activities supported by the gorvenment	100	100

Technical supervision	16.67	0
VietGAP joint certification	100	0
Supporting product consumption	20	0
Proposing to cooperative	Organizing trade promotion and signing sales contracts	Looking for consumers

Table 1. The role of farmer organizations in the supply chain of vegetables (%)

Source: Survey data from CASRAD, 2014

Table 2. Vegetables consumption of farmers' organizations in the vegetable supply chain (%)

The form of consumption	Tien Le Cooperative	Tien Kha Cooperative
1. Self-consumption	80	100
2. Consumers		
+ Collectors	30.00	66.67
+ Wholesale markets	58.89	94.44
+ Retailers	51.11	21.11
+ Collective kitchen	18.89	0.00
3. Consumption through cooperatives		
Rate of participating households	20	0
Requirements of customers purchased via cooperative	- Fresh, tender, washed, sorted - Packing, tied, stamping - Shipping to the store - Average daily purchase volume: 50 - 100 kg	

Source:

Survey data from CASRAD, 2014

Although vegetable production is safe, cooperatives have not built a sustainable consumption linkage with enterprises and supermarkets, so farmers still organize their own consumption of vegetables at high rates.

Table 3. Effectiveness of farmer organizations participating in the vegetable supply chain

Criteria	Unit	Tien Le Cooperative	Tien Kha Cooperative
Total output of vegetables / household / year	Kg/household	5,054	3,960
Total cost	USD	411	282
Total revenue	USD	2,031	1,182
Mixed income	USD	1,620	900

Share of income from vegetables in total household income	%	62	38
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Source: Survey data from CASRAD, 2014

To build and develop pre-processing facilities, wholesale markets and safe vegetable consumption networks. The good thing is that beside the consumption of vegetables in wholesale markets, at present, Giao Long Investment Joint Stock Company (brand name of Lien Thao) has bought vegetables in Tien Le Cooperative. Therefore, the level of specializing in the growing of vegetables in Tien Le is higher than in Tien Kha.

***The case of cooperatives participating in long value chain, providing safe food for Hanoi: Tu Nhien Cooperative (Dong Sang, Moc Chau, Son La)***

Tu Nhien cooperative is an organization that has set up a collaborative groups of farmers, producing safe vegetables, experimenting and selecting quality vegetable varieties, transferring techniques of production, harvesting, preliminarily processing, packing and transporting safe vegetables to farmers, and building high quality vegetable distribution channels in Hanoi market, in particular, building a strong linkage with major supermarket chains in Hanoi and neighboring provinces such as Fivimart, Metro, AEON and food stores.

The cooperative has 35 members, producing and trading vegetables and fruit. Cooperative has successfully converted in 2015. Revenue in 2015 reached 218,321 USD. The cooperative has created many jobs locally, helping to increase the income of its members. Capital growth is now 22,277 USD, up 150% compared to the early period of establishment. The revenue reached 84,655 USD in 2014, 218,321 USD in 2015 and 104,705 USD in the first 6 months of 2016

The products of the cooperative (4 groups): vegetables for leaf, vegetables for tuber, vegetables for stem and flower, spice vegetable . In the first nine months of 2016, 140 tons of vegetables were consumed in supermarkets in Hanoi with stable prices and VietGAP standards.. The output of vegetables distributed to businesses in Hanoi has increased from about 200 tons/year to over 450 tons/year, Fivimart Supermarket in Hanoi accounts for over 50% of vegetable consumption. Currently, the cooperative has been involved in the supply of safe vegetable products in the food safety value chain.

Table 4. Vegetable output is distributed through safe food supply chains (Unit: kg)

Retailer	Farmer Dinh Thi Xoa	Farmer Nguyen Thi Luyen	Farmer Nguyen Thi Tam	Farmer Nguyen Van Duyen	Total
FIVIMART		225,060			225,060
Metro		155,580		64,410	219,989
AEON				74,273	74,273
Others	4,153	40,775	3,405	14,496	62,829
Safe vegetable shop	1,885	23,132	758	2,858	28,633
Ta Niet Group	24,829	3,423			28,252
Big Green			18,535	140	18,675

Bac Tom			12,405		12,405
Son Ha				2,715	2,715
VIG Company	2,462				2,462

Source: Off-season Vegetables ACIAR project , 2016

In recent years, cooperatives have participated in the safe food supply chain of the Ministry of Agriculture and Rural Development, The actors involved in the project are more profitable than the outside chain. Specifically, the comparison of the efficiency of tomato consumption shows that: For the channel in the project, the sale price of producer is 0,04 USD/kg higher than the price in local market. Value added of producers is 0.2 USD/kg, collectors and retailers are 0.03 USD/kg and 0.21 USD/kg respectively. Compared with the consumption channel outside the project, the added value of the collector or retailer is lower (0.02USD/kg and 0.08 USD/kg).

Table 5. Consumption efficiency of 1 ton of tomatoes between the channels (2016)

Unit: USD

Actor	Safe food chain				Outside chain			
	Cost	Buying price	Selling price	Added value	Cost	Buying price	Selling price	Added value
Producer	0.22		4.23	0.02	0.22		0.38	0.16
Collector	0.21	0.42	0.67	0.03	0.04	0.38	0.45	0.02
Retailer	0.23	0.67	1.11	0.21	0.02	0.45	0.55	0.08

Source: Off-season Vegetables ACIAR project , 2016

The table below provides more details on cost accounting of the buying actor per ton of tomatoes.

Table 6. Consumption efficiency of 1 ton of tomatoes of collector in project (2016)

Type of cost	Unit	Quantity	Unit price	Total (USD)	(%)
The cost of buying product	Kg	1,000	0.45	450	76.05
Packing (plastic bags ...)	USD			6.68	1.14
Transportation	USD			60.15	10.27
Transportation loss 8%	Kg	80	0.45	36	6.08
Labor for pre-processing	Wage	2	4.46	8.92	1.52
Other	USD			28.96	4.94
Total cost	USD			558.9	100.00
Revenue	Kg	920	0.67	616.4	
Value added (VA)	USD			28.96	

Source: Off-season Vegetables ACIAR project , 2016

In structure of costs during collection and selling process of collectors (cooperatives), Input costs accounted for the largest proportion of 76.05%, followed by transportation costs accounted for 10.27%, other costs accounted for 4.94%. Due to the high rate of loss in transportation (8%), in total cost, this cost accounted for over 6%.

<b>Selling price</b>	<b>0.42 usd</b>	<b>0.67 usd</b>	<b>1.11 usd</b>
<b>Farmers</b>	<b>Collecting, pre-processing (HTX)</b>	<b>Retailers</b>	<b>Consumers</b>
<b>Value added</b>	<b>0.2 usd</b>	<b>0.03 usd</b>	<b>0.22 usd</b>

Source: Off-season Vegetables ACIAR project , 2016



Fig. 1. Value added per kg of tomatoes in the safe food chain

***The case of cooperatives participating in long value chain, providing safe vegetable for Ho Chi Minh city: Anh Dao Cooperative (Dalat, Lam Dong)***

Anh Dao Cooperative was established in 2003 with 7 members and total initial capital of 4,455 USD. Cooperative has successfully converted in 2014. Anh Dao Cooperative is one of the effective production cooperatives in Lam Dong province. The cooperative has a relatively large vegetable production area, with 73.1ha of vegetables production according to VietGAP standards, mainly concentrated in Da Lat city and Lac Duong district, the annual output is 42,000 tons.

Anh Dao Cooperative chooses the path of sticking with Dalat vegetables, because this is the advantage, the direction is favorable with the members who are farmers growing vegetables. At present, more than 70 types of VietGAP vegetables bearing the brand name Anh Dao are available around the country including Coopmart supermarket. Anh Dao Cooperative also take the lead in the cooperation with cooperatives in neighboring provinces such as Tan Phu cooperative (Dong Nai) to open the distribution of safe vegetables and ecome the agent for Anh Dao vegetable brand.

From a startup cooperative with 311 USD of capital and a few hectares of land, after more than 10 years, Anh Dao became a million dollar cooperative, producing safe vegetables that got VietGap certification on the land of 270 ha, 127 ha of which are used by members to grow more than 70 varieties of vegetables, and they are consumed throughout the country and exported from 4,000-5,000 tons of vegetables and fruits mainly to markets such as Korea, Taiwan, Singapore, Cambodia and even Europe either directly or through pre-processing, packaging.

Currently, the cooperative has two retail stores for consumers in Ho Chi Minh City. Average revenue in 2014 is 7,128,854 USD, 8,019,960 USD in 2015 and 9,802,174 USD in 2016. The cooperative also invested 1,247,549 USD with interest-free refunds and guided cultivation techniques for 73 out of 180 labors that are ethnic minorities of the Central Highlands in Lac Duong district to grow safe vegetables in the direction of high-tech agriculture.

Anh Dao is a new style cooperative that has effectively applied the open mechanism of the Cooperative Law 2012, has done a good job of linking and promoting the role of the cooperative, as: Farmers only need to produce according to the standard, cooperative will take care of the rest; support the farmers, linking not admitting; collective association in a flexible way; applying science and technology into production and business; competing by brand; dynamic in management, application ... Anh Dao cooperative produced with closed process from farming, harvesting, preliminary processing and consumption. The products of the cooperative are diverse and abundant. The products are quite good quality, most of the products have been controlled in terms of quality (analysis of pesticide residue, pathogenic microorganisms ...). Thanks to always follow the safe production process, not only Coopmart supermarket but many other enterprises also buy vegetables from cooperatives. Therefore, the cooperative is increasingly developing both in terms of market and attracting more members.



Fig. 2. Common vegetable supply chain at cooperatives

In the common supply chain, there is a lack of linkage in actors' activities and there is no main actor to maintain the linkages in the chain sustainably. The linkage in the chain is weak at all stages:

**Input of production:** cooperative will represent the members to select the material supply agents in the local area or associate with company of input material supplying for buying, Cooperatives can pay by cash or buy oncredits then pay later. This association is based on acquaintance, trust

**Producers:** Cooperatives and producers select varieties to produce based on their experiences and relationships. Supply of seeds is strictly controlled from the input, thus limiting the outbreak of disease.

**Harvesting and Processing:** Most of the products are consumed through contracts with Coop Mart, Big C, Metro,.... so the volume of products is not redundant due to market fluctuations. In addition, the cooperative has a system of preliminaries so the products are guaranteed hygiene and safety, packaging and labeling..

**Transportation:** Vegetables are transported to gathering points, then loaded onto trucks and transported to provinces, usually harvested in the morning and transported to the provinces in the afternoon and to the markets in the early morning of next day

**Distribution:** 50% of vegetables in this chain are transported to Ho Chi Minh City, 30% are transported to other provinces. Mainly transported to reputable retailers, supermarkets, where vegetables are delivered to the consumer.

### **Value chain has linkage between cooperatives and enterprises**

Effort of cooperative members in recent years is to increase the proportion of products supplied in the chain. In the vegetable chain at the cooperative, the outstanding point is that there were key actors operating the chain, these actors have impluse the formation of other links in the whole chain. The two main actors in the chain are Cooperatives and Supermarkets. Supermarkets work with cooperatives to develop product consumption contracts. From the requirements of the contract, The cooperative organizes production, infrastructure investment, creates operating regulations at the stage of production inputs, organizes and plans production, links with households to produce, transport, preliminary process and distribute.

The bright spot in the chain of vegetables in the cooperative is creating more and more the linkage chains that have high specialization and high binding by linking strategies between retailers and cooperatives. Cooperative plan between Coop Mart supermarket and Anh Dao cooperative in forming the concentrated clue in purchasing and processing in Da Lat. In addition, the linkages at the production stage were organized quite closely from the input and production plan. Cooperatives represent the producers to negotiate the price of materials with the agents to buy materials for the cooperative members and then redistribute them to the members. With this form, producers can reduce the cost of production by 5% and ensure quality of input materials.

The linkage chain is strengthening and creating its own brand as vegetables in the chain must meet VietGAP standards. As a result, the area of vegetable production under the good agricultural practice has been promoted, creating a general spreading for other production actors. However, the development of the current chain is also facing some difficulties in demanding higher and higher quality control issues, but the main difficulty is in the organization of production. The characteristics of the cooperative members in Lam Dong are their land is not concentrated in the same area but is located between the plots of other cooperatives. Therefore, the management and prevention of threats in food safety becomes difficult, In addition, the investment in infrastructure has become difficult because the producers in the cooperative do not use all services that the cooperative has invested but have to invest separately and push production costs up. Production land pollution also occur in the province, many production areas are not eligible for production due to pollution of irrigation water from other areas.

Linkage of production-trade to bring sustainable development for the value chain, but with the current conditions, supermarkets in Ho Chi Minh City can not consume all the vegetables of the cooperative. Anh Dao Cooperative provides the supermarket with over 3000 tons of vegetables per year. But that amount only accounts for 40-50% of the total vegetable output of the cooperative. Therefore, it is still necessary to target other consumption channels such as wholesale markets. According to supermarkets in Ho Chi Minh City, safe vegetables are vegetables that have to be purchased directly from cooperatives / farms. Meanwhile, vegetables in cooperatives or farms are limited in varieties. Consequently, a supermarket must be connected with 4-5 vegetable suppliers, while the wholesale market has all the vegetables that supermarkets need. Therefore, it is necessary to change the viewpoint of wholesale markets and organize the operation of trading system of safe vegetable products in wholesale markets. Hence, in order to reduce intermediate costs, the price of safe vegetable products is closer to the income of the common consumer.

The number of supermarket chains and convenience stores is rapidly increasing in Ho Chi Minh City and neighboring provinces, but supermarkets also have strategies for creating the supply of inputs for supermarket products. Many supermarkets have capital and are supported by provincial policies in attracting agricultural investment. Supermarkets have built large production areas to supply products for supermaket that lead to many chains that may be competing in the near future. In addition, supermarkets tend to sign contracts with producers about the types of vegetables that is difficult to produce, and need to invest in labor. Supermarkets also want to develop their brands, products that are purchased from suppliers then will be pre-processed and labeled by supermarkets. This leads to the identification of the product is not clear, reducing the ability of traceability and monitoring of the origin of vegetable products.

## **Limitations and constraints of agricultural cooperatives participating in the safe food supply chain**

The constraints in the safe agricultural production chain with the participation of many small scale farmers as in the case of vegetable production, cooperatives need to show the clue role. Because enterprises can not sign contracts with each household. The role of cooperatives is very important, but now the cooperatives stand to buy agricultural products is limited because of weak business capacity.

At the same time, the government should create mechanisms and policies to encourage businesses to produce and trade in safe agricultural products such as Trucks used to transport safe agricultural products are allowed to circulate in the city, exempted from corporate income tax in the first period, exempted from value added tax for safe agricultural products.

The story of linking enterprises with farmers in raw material areas in supply chain, Enterprises can not sign contracts with each household but through cooperatives. At present, only new cooperatives can ensure the same mechanism of operation as enterprises, However, this form of cooperative is not much, the management capacity to link with successful enterprises is limited.

### ***Key constraints of agricultural cooperatives when involving in the food safety chain***

The majority of agricultural cooperatives have changed their form in accordance with the Cooperative Law 2012, but the mode of operation has not changed, the thinking is still heavy on administration, still subsidized by the old style cooperative.

The majority of agricultural cooperatives are currently focusing only on input service activities for agricultural production.: Supply of seeds, materials, fertilizers, plant protection, inland irrigation, etc.; The output services are very important such as: preservation, processing, marketing products are not interested, therefore, the number of cooperatives consume products for farmers is less, only about 10% of cooperatives have contracts to buy a part of product for farmers. Therefore, there is no support for increasing in production and value of agricultural production. Many agricultural cooperatives are confused in orienting activities and investing in production and business development. There are not many good services to meet the demand of producing goods. There is a lack of close cooperation between cooperatives and their members so the efficiency operation of agricultural cooperatives is limited: Considering the possibility of re-expanding activities of production services and the benefits that cooperatives bring to members, only about 10% of agricultural cooperatives operate at high efficiency; about 80% of cooperatives is average and weak in operation; 9.75% of cooperatives operate poorly or stop working (*Now, there are 1,062 cooperatives*). Due to the limited operating efficiency, the benefits to the members are not high, so the farmers don't join ardently and have a strong attachment to the cooperative, they have not considered the cooperative as "their own house".

The formation of linkage chain of production and consumption between farmers, farmers organizations, enterprises have many limitations. At present, the demand for linkage is great, but the number of cooperatives that can associate with enterprises to sell products is still less. Most farmers still have to "self-produce, self-selling", leading to high risks in production, consumption and income of the people. In the fields of commodity production as rice in the Mekong Delta, dairy cows, sugarcane, coffee, pepper, only about 10-15% of the agricultural products are consumed through collaborative group and cooperatives.

### ***Difficulties of agricultural cooperative***

The awareness of agricultural cooperatives at all levels, sectors and farmers on the role of agricultural cooperatives is not the same as the nature of cooperatives under the Cooperative Law 2012. Regulations on the operation, assets and ownership of assets of the cooperative and members, supporting policies for the development of cooperatives and especially the responsibility of state management of ministries and branches for agricultural cooperatives are still common, this is the reason why people hesitate to join the cooperative.

The situation of capital and funds of agricultural cooperatives is still difficult: The average capital of agricultural cooperatives is low and mainly is fixed assets that have been used for a long time, the factories and equipment has been downgraded, and is backward. Most of the agricultural cooperatives lack capital for production and business; it is difficult to access loans from credit institutions due to the need to mortgage their assets, Meanwhile, difficulties in mobilizing capital from members affect the production capacity and competitiveness of cooperatives.

The quality of human resources in the management of agricultural cooperatives is currently low. Now, the qualification of the main staff of the cooperative is limited, lack of special training in the market. The business and production development has not kept pace with the development of the market mechanism, and there is a lack of acumen and dynamism in the organization of production and business. Beside objective factors that are barriers of

agricultural cooperatives in accessing food safety value chains, it is modernizing very quickly as mentioned above. Agricultural cooperatives should actively improve their capacity to continue and properly implement cooperation agreements with enterprises on business and production planning, information recording, internal quality management and traceability. Cooperatives need to be proactive in planning production and expanding potential markets to promote the expansion of scale and model in the cooperative.

The legal framework and policy system to support the development of cooperatives is not appropriate and lack of synchronism: policies that support cooperatives are many but not strong enough and lack synchronism, lack of breakthrough mechanisms and policies to support strongly and practically to the cooperative. After the pulic of Cooperative Law 2012, the Government issued many policies for cooperatives in general and agricultural cooperatives in particular, but some were general, not specific and not suitable with the characteristics of agricultural cooperatives.

Agricultural cooperatives should be supported in terms of registration and trademark protection, though safe vegetables now have a reputation in the market. However, the lack of registration of trademark protection can lead to the dispute, or forged trademarks on the market, causing discredit of safe vegetable products.

## CONCLUSION

Involving in safe food supply chain models is a way to motivate agricultural cooperatives to change methods of production and market access, thereby increasing the value of their products and the incomes of small-scale farmers who participate in cooperatives. However, currently the number of agricultural cooperatives accessing and participating in safe food value chains is limited, accounting for only about 27% of the total certified food safety supply chain by Mard. However, this is the successful chain organization model in Vietnam in recent years. Cooperatives play an important role in the organization of food safety certificates and good agricultural practices for small-scale producers, creat opportunities for many small farmers to involve in the safe food supply chain. Opportunities for agricultural cooperatives to involve in the supply chain of safe food is very large.

To ensure sustainability, the food supply chain needs to develop management model following the value chain, cooperation contract between cooperative/or farm and enterprise through clear quality standards is a prerequisite condition for success.

Government policies should focus on supporting agricultural cooperatives as: creating an equal business environment, capacity building for managers of cooperatives, promoting product marketing activities, cooperating with the cooperative to use promotional tools, increasing consumer belief for safe products, are the bridge between the cooperative and the market, supporting the preparation of procedures for certification of quality standards, protection of trade marks, legality in relation to the export of agricultural products.

There are still many difficulties for cooperatives, especially when it is necessary to adhere to the principles of food safety management stipulated in the Law on Food Safety which is based on risk analysis for food safety and traceability. In order to comply with this principle, it is necessary to implement a food safety control mechanism throughout the entire production chain with the participation of actors in the chain, including the cooperative, small-scale farmers and members of the cooperative.

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