

Development of Organic Agriculture in Vietnam: Some Theoretical and Practical Issues

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ABSTRACT: Producing and consuming organic products is no longer strange to many countries in the world and Vietnam, when there are problems of environmental pollution, ecological imbalance, diseases, etc., increasingly threatening human life and the sustainable development of the green planet. Organic agriculture is an inevitable development trend to meet sustainable development needs. Organic agriculture ensures improving the quality of agricultural products, creating clean products, ensuring food hygiene and safety while helping to improve economic efficiency and contribute to the protection of the ecological environment, etc. With the integration of Vietnam's economy, the development of organic agriculture has many opportunities, challenges, and limitations. This study analyzes the current status of organic agriculture development in Vietnam and the advantages and disadvantages of organic agriculture development, thereby making recommendations to the Government, Ministries, and Departments.

Keywords: Organic production, organic agriculture, organic farming development

I. INTRODUCTION

Traditional agriculture with synthetic fertilizers, pesticides, and growth regulators has caused negative impacts on ecosystems, the environment, and human health. Therefore, many countries worldwide have been making efforts to transition to safe organic agriculture. The area of organic agricultural land worldwide has increased from 11 million hectares in 1999 to 74.9 million hectares in 2020, of which 47.9% of the land is concentrated in Oceania (35.9 million hectares). [1]

In recent years, using organic products has increased and has become an inevitable trend worldwide, strongly influencing the global market. Organic products have brought practical benefits to human health and positively impacted the conservation of natural resources and biodiversity, solving the challenges people face, such as climate change, epidemics, unsustainable production, consumption, etc.

Agriculture is an economic sector with strengths and long traditions in Vietnam. Vietnam is considered a potential country in developing organic agriculture. In recent years, organic agricultural production in Vietnam has grown enormously, especially in research and scientific and technological advances to the show and processing of farm products. However, organic agricultural products are still less competitive in terms of quality design, and many products do not meet the requirements of food hygiene and safety. Currently, organic agricultural production is still mainly on a small scale and scope. In that situation, developing a legal corridor is necessary to support the development of organic agriculture.

Therefore, the research team: "Development of organic agriculture in Vietnam: Some theoretical and practical issues," aims to analyze the current status of organic agricultural production in Vietnam and point out advantages and disadvantages. And difficulties in developing organic agriculture in Vietnam, thereby proposing some solutions to develop organic agriculture in Vietnam in the coming period.

II. LITERATURE REVIEW

In the world, there have been many studies on organic agriculture, such as Lampkin (1990) [3], Hans, R.Herren (2011) [2]. Ullah et al. (2015) [5] have shown that the demand for clean products safe for human health increases as income increases. Therefore, the agricultural industry needs to change the current way of production and prioritize investment in green agriculture. Organic agriculture offers many economic and

environmental benefits by avoiding harmful chemicals and fertilizers, such as conserving non-renewable resources, increasing the quality of agricultural products, and preserving the environment. Health protection for consumers. Toward Sustainable Agricultural Systems in the 21st Century Report [4]. Research indicates that addressing future challenges will require changes such as pest-resistant varieties, soil conservation, integrated pest management, and the use of crop diversity (including cover crops, crop rotation, and crop rotation. cultivation) and biological methods.

In Vietnam, research on organic agriculture is attracting the attention of researchers, but the number of studies is still limited; some studies on organic agriculture: Nguyen Van Bo (2017)[5]. Research shows that the opportunity for organic agriculture is increasing due to strong domestic and international demand for safe products. However, today, organic agricultural production in Vietnam also faces many difficulties and challenges such as food, income, management, environment, etc. Mai Van Quyen & Vu Thi Quyen (2017)) research on "Organic agriculture in the world and Vietnam" [3]. The author has pointed out that organic agriculture is an inevitable development trend of sustainable agriculture that countries worldwide have long been concerned about. However, due to the general difficulties of organic farming, the land area for organic agriculture in the world and Vietnam, in particular, is still low. Cao Dinh Thanh (2019) has studied the development orientation of organic agriculture in Vietnam [2]. The author proposes several measures to develop organic agriculture, including Raising awareness about products Organic; Science and technology solutions; Use organic fertilizers to replace chemical fertilizers and biological pesticides.

III. METHODOLOGY

To achieve the research purpose of the article, the authors used several research methods:

- Methods of collecting data and documents: Using secondary data collected from conference articles, scientific articles on magazines and electronic newspapers, and data published by domestic and foreign organizations.
- The author uses the descriptive statistical analysis method to analyze and evaluate the policy of organic agriculture development in Vietnam.

IV. FINDINGS

4.1. Organic agriculture

- Concept:

Organic agriculture is a food production method that aims to develop economically and environmentally sustainable systems, emphasizing local renewable resources and the minimal use of resources. So far, there have been many different definitions of organic agriculture, but all emphasize that it is a system based on the management of ecosystems.

The Codex Alimentarius Commission (CAC) has developed the concept of organic agriculture based on experts worldwide. Accordingly, organic agriculture implies a production management system (for crops and livestock) that emphasizes management practices rather than inputs. Achieving this requires the application of chemical, biological and cultural measures rather than synthetic materials (Le Guillou and Scharpe, 2001).

According to the International Federation of Organic Movements (IFOAM), organic farming is a form that avoids or essentially eliminates synthetic fertilizers, pesticides, and plant growth regulators. Additives in animal feed to reduce pollution, ensure human health, and create clean agricultural products. Organic agriculture is economically viable to ensure the crop and livestock ecosystem and build quality and safe products for users. It maintains and improves the quality of life—soil fertility level.

Thus, we can understand that organic agriculture is a production system that allows optimal exploitation of resources to create products of good quality and meet the requirements of food hygiene and safety. While ensuring a sustainable ecosystem, a production system does not use or prohibit synthetic chemicals such as synthetic pesticides, antibiotics, synthetic fertilizers, genetically modified organisms, and growth hormones.

To develop organic agriculture, it is necessary to increase the widespread application of organic methods (organic fertilizers, biological drugs, etc.) in agricultural production and gradually increase the production rate—certified organic products according to the requirements of domestic and international markets. The development of organic agriculture needs to be done at all scales and levels from families, cooperative groups, and business cooperatives to increase the value of organic products and create a safe environment for producers. Therefore, to develop organic agriculture, it is necessary to mobilize the participation of managers, scientists, organizations, and economic sectors, especially businesses, cooperatives, and households.

- The role of organic agriculture

Organic agriculture protects human health: Food hygiene and safety is hot issue of today's society. It directly affects the quality of life and affects the community's overall development of society. As society is developing, people's living standards are getting higher and higher, so people's demands for quality food and

food are increasing. The general situation of contaminated food on the market due to pesticides, herbicides, growth promoters has contributed to an increase in chronic diseases such as cancer, diabetes, heart disease. This has become a problem that adversely affects public health. Developing organic agriculture contributes to ensuring the food security of each country in general and meets the needs of a part of society for clean and safe agricultural products with high nutritional value and beneficial effects. Beneficial to human health in particular.

Organic agriculture contributes to the protection of sustainable ecosystems. In organic production, synthetic inputs are generally not used in all organic production/supply chain stages, and people and the surrounding environment are not permitted. Harmful; minimize pollution from production and processing activities to the facility and the surrounding environment.

Organic agriculture has increased the use of natural seedlings, increased the diversity of agricultural production, reduced pollution of soil, water, and agricultural products by not using chemical fertilizers, pesticides, pesticides for plants, feed sources containing growth stimulants in livestock, etc. To maintain, maintain and increase soil fertility, strengthen biological cycles on the farm, especially nutrient cycles, protect crops based on prevention instead of cure, diversify crops and livestock suitable for local conditions.

Principles of organic farming: According to IFOAM, organic agriculture should be guided by four principles:

- + Principles of health: Organic agriculture sustains and promotes the health of the soil, flora, and fauna, people, and the planet as a whole and inseparable;
- + Principles of ecology: Organic agriculture is based on the vitality and cycles of ecosystems, which work, simulate, and help improve ecosystems;
- + Principle of fairness: Agriculture

4.2. The evolution of organic agriculture

The development of organic agriculture that began in the 1920s and 1940s was based on the ideas of organic farming by Steiner, Rodale, Howard, and Balfour. They were at the forefront of the natural and biological movement. Organic agriculture. Much of the interest has focused on soil fertility's biological basis, the relationship between biology and human and animal health. In the 1940s and 1950s, organic agricultural production models in Europe, America, and Australia were formed, inspection and supervision issues were raised, implementation and standards and systems were established. Development of organic agriculture. In 1970, the first organic agricultural products were born on farms in the US. They introduced farm organic production standards. Many groups developed organic product certification systems to ensure their products were manufactured according to farm standards.

In the late 1970s to early 1980s, many organic farming organizations developed producer certification. In the mid-1980s, several organizations specializing in organic product certification were established, such as SKAL (Netherlands), KRAV (Sweden), FVO (USA)... Since 1990, organic farming has grown quite enormously in the world. Several technical improvements, especially biological pest management and efficient farming system allocation, have been widely developed in many countries worldwide. The International Federation of Organic Farming Movements (IFOAM) has released its baseline standards, a general guide to national standards and certification systems worldwide. In December 2000, the US Department of Agriculture issued a regulation on organic food 2002. In Europe, the European Organic Certification Process Regulation 2092/91 was adopted. In 1991. In 1992, countries cooperated and developed the Codex Alimentarius standard for organic products, adopted in 1999.

According to the statistics of FiBL & IFOAM (2022), in 2022, there will be 190 countries worldwide certified with organic agricultural production. There are 74.9 million hectares of organic farmland, accounting for 1.6% of the global agricultural land area (Figure 1).

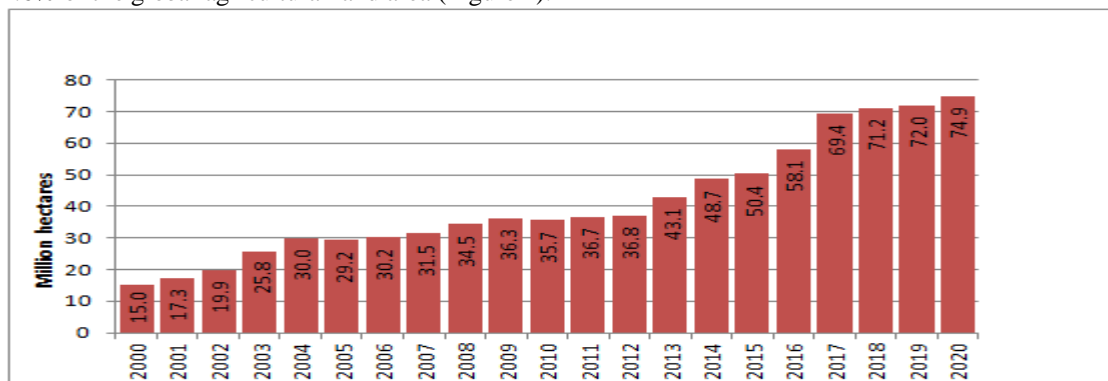


Figure 1. Area of organic agricultural land in the world in the period 2000-2020

SOURCE: FiBL & IFOAM (2022)

IV. CONCLUSION

A conclusion section must be included and should indicate the advantages, limitations, and According to the statistics of FiBL&IFOAM (2022), more than 70% of organic agricultural land is concentrated.

According to the statistics of FiBL&IFOAM (2022), more than 70% of organic agricultural land is concentrated in Oceania and Europe (Table 1.1). The countries with the most significant organic agricultural land in the world include Australia (35.7 million hectares), Argentina (4.5 million hectares), Uruguay (2.7 million hectares), India (2.7 million hectares), million hectares), France (2.5 million hectares) but the countries with the most significant percentage of organic agricultural land in the world are Liechtenstein (41.57%), Australia (26.51%), Estonia (22.41). %), Sao Tome and Principe (20.69%), Sweden (20.43%).

Tablet 1. World: Organic agricultural land (including in-conversion areas) by region

Region	Organic agri. land 2019 [ha]	Organic agri. land 2020 [ha]	1 year growth[ha]	1 year growth[%]	10 years growth [ha]	10 years growth [%]
Oceania	35.873.526	35.908.876	35.350	0,1%	24.525.183	215.,%
Europe	16.494.412	17.098.134	603.222	3,7%	6.549.611	62,1%
Latin America	8.296.331	9.949.461	1.653.129	19,9%	2.983.312	42,8%
Asia	5.713.875	6.146.235	432.360	7,6%	2.460.086	66,7%
North America	3.647.623	3.744.163	96.539	2,6%	724.476	24,0%
Africa	1.937.873	2.086.859	148.986	7,7%	1.017.163	95,1%
World	71.957.852	74.926.006	2.968.154	4,1%	38.257.102	104,3%

Source: FiBL & IFOAM (2022)

While the total land area devoted to organic agriculture in Asia is 6.15 million hectares, accounting for only 8.2% of the total land area for organic agriculture in the world, accounting for the highest proportion 53.69% of the total number of organic production facilities worldwide.

Table 2. World: Development of the numbers of producers by region in 2020

Region	2019 [no.]	2020 [no.]	1 year growth [no.]	1 year growth [%]	10 years growth [no.]	10 years growth [%]
Asia	1.588.400	1808464	221.228	13,9%	1.197.342	195,9%
Africa	850.490	833.986	-16.795	-2,0%	306.073	58,0%
Europe	428.677	417.977	-10.700	-2,5%	128.349	44,3%
Latin America	224.388	270.472	46.084	20,5%	-37.075	-12,1%
North America	22.153	22.448	295	1,3%	5.850	35,2%
Oceania	16.117	15.930	-187	-1,2%	1.744	12,3%
World	3.129.893	3.368.254	238.360	7,6%	1.601.464	90,6%

Source: FiBL & IFOAM (2022)

4.3. Current status of organic agricultural production in Vietnam

In recent years, Vietnam's agriculture has developed enormously and achieved remarkable achievements in terms of productivity, output, product diversity, and production scale, which has created a relatively large volume of products to ensure the safety of the whole population. For domestic consumption and export. However, in our country, the problems of environmental pollution, food poisoning, biodiversity loss,

outbreaks of pests and diseases, etc. Still appear in many places. Therefore, only organic production can overcome the above limitations.

a. About policy

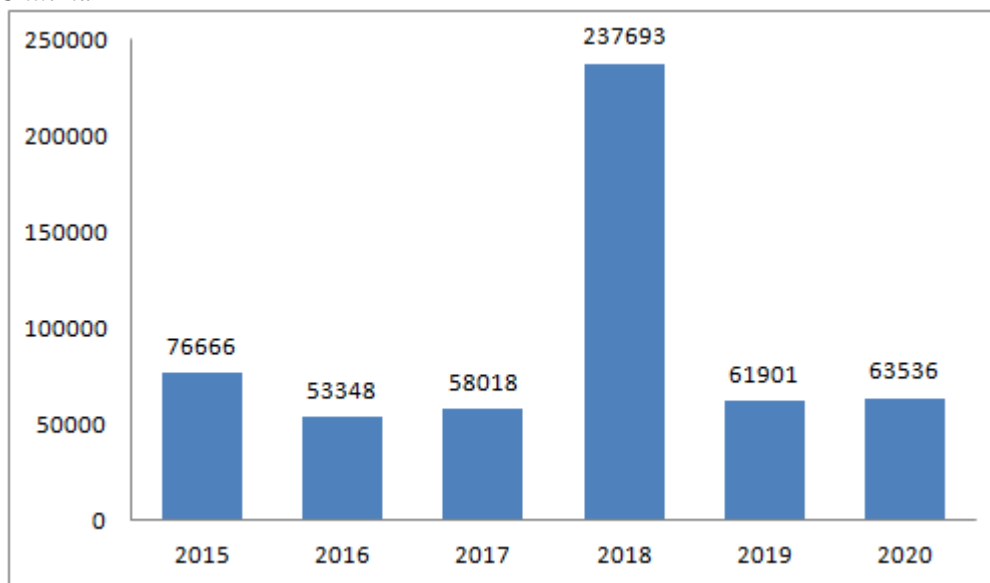
The Government of Vietnam aims to develop sustainable and environmentally friendly agriculture to improve the productivity and competitiveness of agricultural products, in which organic agriculture plays an important role. The Government's interest in organic agriculture has been increasingly evident. At the end of 2011, the Government allowed the establishment of an Organic Agriculture Association to be established and operated; In 2012, the Prime Minister issued Decision No. 01/2012/QĐ-TTg on several policies to support the application of Good Agricultural Practices (VietGAP) in agriculture, forestry, and fishery. Including organic farming, in 2017, promulgating the Vietnamese organic standards TCVN 11041 2017; In 2018, the Government issued Decree 109/2018/ND-CP on organic agriculture, which specifically stipulates policies to encourage the development of organic agriculture; In 2019, Circular 16/2019/TT-BNNPTNT promulgated detailed regulations on organic agriculture, followed by Decision 885/QĐ-TTg approving the organic agriculture development scheme for the period 2020-2030.

b. About production

For Vietnam, the history of organic farming has been established for a long time. However, due to policy mechanisms in consumer markets, the ability to apply scientific and technological achievements to organic production is still limited. Therefore, the area of organic agricultural land in our country is still limited, concentrated mainly in a few provinces and cities such as Ben Tre, Hanoi, Hoa Binh, Lam Dong, Ho Chi Minh City, etc. According to data published in 2022 (FiBL and IFOAM, 2022), the area of organic agricultural land in Vietnam is shown in Figure 2:

Figure 2. Area of organic agricultural land in Vietnam in the period 2015-2020

Unit: ha



Source: FiBL & IFOAM (2022)

Figure 2 shows the area of organic agricultural land in Vietnam over the years according to IFOAM data. It can be seen that from 2015 to 2018, the site of organic farmland has increased 3.1 times, from 76.67 thousand hectares to 237.69 thousand hectares. However, the process of organic agricultural production always requires compliance with the strict requirements of organic standards, so many producers give up this form of agricultural output. The total area of organic agricultural land decreased sharply in 2019.

In 2020, the land area for organic agricultural production in Vietnam had increased and reached 63,536 thousand hectares. In addition, Vietnam has 100 thousand hectares of water surface for organic/ecological aquaculture and 12.45 thousand hectares of ancient forest to exploit natural organic products. It can be seen that the organic sector continues to grow, in part due to COVID-19, consumer awareness of safe, local, and organic food has increased, consumers are concerned with the issues of organic food. Health issues, focusing on avoiding disease and building personal immunity. As a result, the demand for organic food has increased significantly and is expected to increase in the coming years. However, the proportion of organic agricultural land area accounts for only 0.5% of the total agricultural land area of the country, and this is still too small compared to 74.93 million hectares of organic farming in the world. This shows that the potential for organic

agriculture in Vietnam is still outstanding when the demand for organic products in Vietnam and other countries increases.

c. About the market

According to the survey data in 2022 of FiBL & IFOAM, the whole country has 46/63 provinces and cities with organic production; the number of farmers involved in organic production is 17,174 people; 732 producers engaged in organic agriculture production, 304 certified producers. Vietnamese organic agricultural products, including vegetables, fruits, grains, coffee, etc. are consumed in countries and exported to 180 countries worldwide. The current export markets of Vietnam's organic agricultural products are the US, EU, UK, China, Japan, Korea, Russia, Singapore... These are also the world's most significant organic agricultural products consuming markets. Now on. In 2020, the total export value of Vietnam's organic agricultural products reached 293.3 million euros, exporting 13.441 million tons to the EU market, up 2.3% compared to 2019 (10,946 million tons). With the organic agriculture development project just approved by the Government, the ministries - branches, and related agencies will continue to support localities, associations, businesses, and producers to understand the objectives and tasks of the farmers. Services to promote potential towards organic farming and breeding according to the scheme.

d. Models of organic farming

To affirm the quality of agricultural products, up to now, many organizations and individuals involved in organic agricultural production have invested in science, technology, and capital, in which focus is on building brands ensuring the prestige of agricultural products. Credit in the market. In 2017, for the first time, the Ministry of Agriculture and Rural Development announced that two farms of two enterprises, Vinamilk and TH True Milk, had met the organic criteria according to the standards of international organizations. Along with the two dairy farms of the above enterprises, the country now has many organic agricultural production facilities with agricultural products that have been successfully certified and exported by international organizations. to major markets such as the EU, US, China. Including Vien Phu Company producing organic rice and vegetables, Dalat Organic Company growing organic vegetables, Ecolink Company, and Hung Cuong Company building an international accreditation system (ICS) based on a network of organic tea farmers like Shan Tuyet in Lao Cai and Ha Giang provinces. Vinasamex anise from Yen Bai. .. In addition to enterprises producing organic agriculture, there are now many households participating in production and business under this model stably and sustainably across the country.

4.4. Advantages and disadvantages in the process of organic agriculture development in Vietnam

- Favorable:

+ Our country has the strength of long-standing traditional agriculture. People have accumulated much experience in agricultural production, know how to use green manures, manure, kitchen ash... to make organic fertilizers the muscle in agriculture.

+ Our country is located in a tropical climate, monsoon, hot and humid, with much rain, so it is very convenient to convert organic substances into minerals for the growth of plants and animals. In addition, Vietnam also has many underground resources, containing abundant natural minerals such as apatite, phosphorus, mica... and minerals containing many trace elements essential for Crops.

+ The Prime Minister approved the scheme on organic agriculture development for 2020-2030 in June 2020. After more than one year of implementation, many effective organic farming models have appeared in localities. Statistics of the Ministry of Agriculture and Rural Development (MARD) show that, currently, many localities have participated in organic agricultural production. Although lagging behind many countries in the world.

V. CONCLUSION

Developing organic agriculture is a process that requires the attention and support of the State and localities in planning, building infrastructure, supporting processing and trading products. The Government and Ministries and sectors related to organic agriculture, such as the Ministry of Agriculture and Rural Development, the Ministry of Science and Technology, and the Ministry of Health, should soon issue-specific policies to support agriculture. Organically developed, policies should focus on:

- Planning and protecting land and water sources that are currently not or less polluted and are still suitable for commodity-oriented organic agricultural production.

- Completing the system of standards and regulations on production, processing, quality certification, inspection, and supervision related to organic agriculture.

- Most of Vietnam's potential organic products are located in areas with difficult traffic conditions, unfavorable conditions for storage, temporary storage, and processing, so the State needs to support investment

in grassroots. Infrastructure, especially infrastructure for processing organic fertilizers, bio-fertilizers, and microorganisms on-site, reduces transportation costs.

- Help businesses build brands, develop markets and promote products.

- Building and developing the supply chain of organic agricultural products to change awareness and knowledge about food hygiene and safety; help control each stage and process to create safe quality products. At the same time, we make close links between establishments participating in the production chain, building trust for consumers, promoting organic production, and trading organic food.

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