

# Sustainable development for Vietnam agriculture

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**Abstract.** Agriculture is one of the important and complex sectors, it is not only a simple economic sector but also a biological - technical system. Because the basis for agricultural development is the use of bio-energy - plants and animals. Agricultural sector, if understood in a narrow sense, is only the cultivation, husbandry and service sectors. As for agriculture, in broad terms it also includes forestry and fishery. Agriculture provides food and food for social needs, agriculture is the basic material production industry, plays a major role in economic development in most of the country, especially in developing countries. At present, Vietnam's agriculture has great potential and can be enriched from agriculture. However, wastage and loss in agriculture are still high in the stages of processing, harvesting and preserving. Mechanization is still low, lower than Thailand, so agricultural labor productivity is not high. Over the past years, Vietnam's Agriculture has achieved important developments, contributing to the development of Vietnam's economy. However, to achieve higher goals in the next 10 years, Vietnam's agriculture needs to promote its strengths, such as: Well implementing land policies in agriculture; training high quality human resources; building a credible agriculture, which is clean, safe, quality agriculture and organic agriculture; protect natural environment, such as: land, climate, weather, hydrology, etc. In order to ensure sustainable agricultural development.

## 1 Introduction

In order for Vietnam's agriculture to become one of the 15 most developed agricultural countries in the world; Particularly, the field of processing agricultural products must be in the top 10 developed countries of the world. Vietnam strives to be the world's leading furniture export center, the world's largest shrimp producer, etc. The immediate goal is to reach the export ratio of 42-43 billion USD in 2019. The reason that we set such goals is because, in 2018, the Agriculture sector with a record export turnover of over 40 billion USD of agricultural and forestry products has been shown to be an important pillar. The importance of the economy has become a strong driving force for the Vietnamese economy. In 2018, Vietnam's agriculture achieved a strong growth with 3.76%, which is considered to be the highest in the past 7 years [5]. It can be said that these are remarkable achievements of Vietnam's Agriculture sector in 2018. However, in order to achieve higher

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goals after 10 years, Vietnam Agriculture needs to take firm steps, such as: prioritizing capital investment for agriculture; implement mechanization and modernization in agriculture; focusing investment on clean agriculture, organic agriculture; implementing policies on agricultural export tax exemption and reduction; focusing investment on processing technology; ... These are urgent solutions to help Vietnam's agriculture develop sustainably. In this article, the author clarifies the reality of Vietnam's agriculture over the past time; shortcomings and obstacles of the agricultural sector, thereby proposing some solutions to remove difficulties for Vietnam's agriculture in the coming time.

## **2 Materials and research methods**

The author used resources from reports of Vietnam's agriculture over time; magazine articles published related; data from statistics and environment agencies; articles by a number of domestic and foreign authors, textbooks on agricultural economic principles of Hanoi University of Agriculture ... by means of survey, statistics, analysis, comparison, inductive and deductive to solve problems that have been raised.

## **3 Research results**

### **3.1 Situation on Vietnam's agriculture**

Results of the agricultural sector from 2013-2017: After 5 years of implementing the agricultural sector restructuring project of the Ministry of Agriculture and Rural Development (MARD), announced in November 2018, up to September 2018, the total number of enterprises operating in the field of manufacturing, processing and trading of agricultural products was over 49.6 thousand enterprises, accounting for 8% of the total number of enterprises nationwide, including over 8,600 enterprises directly producing, an increase of 2.5 times compared to 2012. During this period, there were 13,000 agricultural cooperatives and over 62,500 cooperative groups reorganized and newly established under the Cooperative Law 2012.

Household economy continued to be supported. support and organization in a larger scale. The farm economy has developed rapidly, by the end of 2017, the country had about 35,500 farms, an increase of 50.8% compared to 2012. In the period of 2013-2017, the agricultural sector maintained its growth with an average of 2.5%/year. The quality of growth in agriculture is improving day by day. The value-added ratio in the total agricultural production value has increased from 63.9% in 2012 to nearly 80% in the first 9 months of 2018. Also according to the Report of the Ministry of Agriculture and Rural Development, the structure of the agricultural sector has changed. translate into more effective direction, shifting growth based on quantity increase to quality and added value; promote advantages, adapt to market demands and adapt to climate change. Each sector, advantage product and favorable market has increased rapidly in terms of area, productivity, output, quality and proportion of contribution to growth. In the total value of agricultural production, the proportion of aquaculture production value increased from 22.48% in 2012 to 24.95% in 2017; Similarly, forestry production value increased from 2.69% to 3.79%. Also in the period of 2012-2017, the proportion of value added of aquatic products increased from 18.8% to 20.5%, forestry increased from 3.8% to 4.5%. Along with that, the domestic agricultural industry has witnessed the emergence of more models of cooperation, linking production, storage and processing associated with the consumption of agricultural products along the value chain, bringing economic efficiency. forward. As of September 2018, the country has formed more than 1,000 chain models with over 1,400

products and nearly 3,200 locations selling products that comply with good production standards and food safety to meet market requirements. In the field of crop production, the Ministry of Agriculture and Rural Development and localities conducted a review of the planning, strongly shifting the structure of key crops suitable to the advantages of regions, regions, localities, market demands and climate change conditions. As a result, over the past 5 years, about 200,000 ha of inefficient rice cultivation have been converted to more effective crops.

Strengthening the restructuring of varieties, promoting intensive farming and preventing pests, applying scientific and technical and mechanization to increase productivity, quality and reduce production costs. Thereby, the output and quality of key crops had the advantage of sharply increasing, meeting increasing domestic consumption demand and increasing competitiveness in export activities. After 5 years (from 2013-2017), the added value of cultivation increased by 7.8%, and income per hectare increased by 4.8%. In particular, fruit trees contributed to crop growth from 12% in 2012 to nearly 32% in 2017; High value industrial crops contributed 43%, up nearly 16%. In the field of animal husbandry, increasing the application of modern and high technology has helped the breeding herd to be significantly improved, many new breeds with high productivity and quality with advanced techniques have been put into production. Export common. Many localities and enterprises have organized links along the product chain from production to the market, in the form of outsourcing, business cooperation and farmers working together. After only 5 years of restructuring, the output of live meat of all kinds increased by 30%, poultry meat increased by 17% on average; pork, beef increased by 12.7%, dike meat, sheep increased by 14%, fresh milk increased by 47%; poultry eggs increased by 18.7% ... In the field of fisheries, focusing on organizing production according to the value chain, good farming practices, ensuring food safety; re-organizing marine production and enhancing the application of advanced techniques for preserving and catching marine products. In the past 5 years, total fishery production has increased from 5.92 million tons to 7.2 million tons. The growth rate of production value reached 4.7%/year, the added value reached 4.3%/year. The value per hectare of water surface for aquaculture in 2017 reached 206.8 million tons, an increase of 1.4 times compared to 2012. The forestry sector also changed from small timber plantations to large timber forests; developing cooperation, linking along the value chain and improving the added value of processed wood products. The output of planted forest timber has satisfied 80% of the domestic demand for raw materials for processing industry, up 18%; Forest coverage rate increased from 40.7% to 41.45%. The value of forestry production increased by 7.29%/year, the added value increases by 6.3%/year ... Up to now, Vietnam's agricultural, forestry and fishery products have been present in nearly 200 countries and territory. Particularly for export, Vietnam's agricultural products have risen second ranking in Southeast Asia and 15th ranking in the world. The competitiveness and position of Vietnamese agriculture are increasingly enhanced. Export turnover has increased sharply over the years. In the period of 2013-2017, the total export turnover of agricultural, forestry and aquatic products reached US \$ 157.49 billion, an average of US \$ 31.5 billion/year, an increase of 51.2% compared to the average of the 5-year period. before. According to the General Statistics Office, in 2018 exports of agricultural, forestry and aquatic products reached 30.8 billion USD. Commodities with export turnover of USD 3 billion or more are shrimp, vegetables, rice, coffee ... Particularly, in the first quarter of 2019, the export turnover of agricultural, forestry and aquatic products reached 7.8 billion USD. The structure of export products is also transformed in the direction of increasing the proportion of high quality, advantageous and processed products to increase the competitiveness of export agricultural products. Achievements in the restructuring process of agriculture have contributed to speeding up the implementation of the National Target Program on new rural construction. By the end

of October 2018, there were 3,597 communes (reaching 40.3%) nationwide meeting the standards and 55 district-level units completed building new rural areas, exceeding the set targets. ()

Agricultural results in 2018, 2019: The world market in 2018 had many fluctuations, the focus is the US-China trade war; the increase in protection through standards on quality management and food safety and hygiene of countries that are Vietnam's major agricultural markets such as the US, EU, China, Japan, and Korea, etc. with imported agricultural products; sharp decline of prices of industrial crops on the world market, especially pepper ... However, Vietnam's agricultural sector has achieved considerable success: estimated for the whole of 2018, exports of agro-forestry fisheries will reach a record high of 40 billion USD. This is a record number of Vietnam's agricultural sector, confirming its position as a major power exporter of agricultural products in the world. Notably, export market share was maintained, strengthened and expanded. The five main import markets of Vietnam's agricultural, forestry and fishery products are China, the United States, Japan, ASEAN and South Korea with a market share of 22.9%, respectively (an increase of 3.6% over the year 2017), 17.9% (up 9.4%), 19.1% (increase 7.1%); 10.64% (up 11.0%) and 6.9% (up 29.4%). Emerging markets, niches (Middle East, Africa, Eastern Europe) have all been oriented to develop methodically and in a complementary manner to key markets. According to Mr. Ha Cong Tuan, Standing Deputy Minister of MARD, while the key industrial products such as rubber, coffee and cashew in 2018 had decreased export value, the growth of commodities. including: wood, fishery, livestock, vegetables with increased depth of processing helped to compensate. This is also one of the reasons helping the agricultural sector maintain export growth of over 40 billion USD. According to DSc. Dang Kim Son - former Director of the Agricultural Research and Development Institute, in 2018, the agricultural sector prospered thanks to changes in production structure and reduction of rice area. Agricultural production has changed strongly to high quality, ensuring hygiene and safety. Vietnam's seafood and fruit grow strongly. According to economist Vu Dinh Anh, the success of the agricultural sector in 2018 is because we have identified agricultural exports as one of the economic spearheads. In the past 2-3 years, the restructuring of livestock crops, especially towards high-value and high-quality livestock plants, along with the change of management methods in export in general and export of agricultural products in particular, technology, production organization and export organization have created basic advantages for Vietnamese agricultural products. The implementation of international commitments, despite many difficulties, many of our agricultural products have natural advantages as well as relative advantages, thus, the export of agricultural products achieves high achievements in terms of scale, turnover and added value.

According to Minister Nguyen Xuan Cuong In 2019, our agriculture continued to integrate more deeply, and at the same time faced with many difficulties and challenges such as the African swine cholera epidemic and spread across the country, causing damage. unprecedented for the livestock industry; impacts of climate change lead to extreme weather patterns, droughts, floods, forest fires, landslides and saline intrusion more serious; The impact of trade war between major economies makes the production and import and export of key agricultural products always face risks, new regulations on traceability and real safety standards. More and more products ... In this context, the Party Central Committee, the National Assembly and the Government timely led and adjusted mechanisms and policies, harmonized with international practices and created a favorable environment, inspired creativity and aspirations to rise up in the whole industry to strive to stick to reality, overcome difficulties and challenges, implement drastically solutions to value chain structure, innovation of growth model above all in all fields, unfreeze the investment resources of the whole society. As a result, in 2019, Vietnam's agriculture still maintained a good growth momentum, many targets reached and exceeded the plan,

accordingly, the GDP growth rate of the whole sector was estimated at about 2.2%; the rate of communes meeting new rural standards will be 54%; export turnover of agriculture, forestry and fishery is estimated at 41.3 billion USD; Forest coverage rate is 41.85%. Also in 2019, MARD has actively reviewed and adjusted appropriate strategies, plans and production structures based on advantages, markets and adaptation to climate change. The market opening and trade promotion of agriculture, forestry and fisheries are focused, promptly solved problems to promote exports to traditional markets and expand more to potential markets. Trade surplus of agriculture, forestry and fishery highly increased. Creating a favorable environment and supporting cooperative economic development, businesses thrive, becoming a driving force for agricultural and rural development and restructuring agriculture; forming links between producers and enterprises and cooperatives. Implementing synchronously many solutions to encourage, promote research, apply science and technology, create three axes of quality products and food safety. The National Target Program on new rural construction finishes early 1.5 years. Proactively organizing the drastic and synchronous implementation from the central to local levels in the prevention and control of the African swine cholera epidemic has achieved markedly positive results. Agricultural infrastructure was strengthened; irrigation and disaster prevention has made many positive changes, gradually proactively responding and mitigating damage caused by natural disasters. Thus, the Agriculture and Rural Development sector in 2019 continued to effectively implement comprehensive, focused, sectoral schemes and plans under market mechanisms and scientifically applying new technologies is the main driving force to create added value and innovate growth models; overcoming challenges, opening up export and import markets; improved investment environment, national competitiveness of commodity agricultural products has made progress. Completed and exceeded 03/04 targets, namely: AFF export turnover was estimated at 41.3 billion USD, trade surplus reached a high of 10.4 billion USD, up 19.3%; Forest coverage rate reaches 41.85%; The percentage of communes meeting new rural criteria is 54%, with 111 standardized district units/ completing new rural construction tasks. The low target was GDP growth of 2.2% (mainly due to the African swine cholera epidemic which reduced about 1.1% of the sector growth).

### **3.2 Difficulties and obstacles of Vietnam's agricultural sector**

Vietnam, from an outdated agricultural country, having to import food, after 30 years of renovation, Vietnam has become a commodity agricultural producing country, not only meeting domestic consumption needs but also becoming a leading agricultural exporter in the region and in the world. In addition to the achievements obtained, Vietnam's agricultural sector still has limitations, difficulties and challenges that need to be focused on overcoming in the coming time. According to the Minister of Planning and Investment Nguyen Chi Dung, Vietnam's agricultural sector currently has 10 main groups of problems causing difficulties, obstacles and limitations of development activities of Vietnam's agricultural sector, namely:

Firstly, enterprises still have difficulties in accessing land to organize production. Planning for agricultural land use, especially planning for material areas has not been implemented effectively, and there is a lack of stability.

Secondly, enterprises still face difficulties in accessing credit capital, partly due to the lack of specific regulations and guidelines on the valuation of assets on agricultural land as a basis for determining the value of loan security assets. bank capital.

Thirdly, the mechanical industry supporting agriculture in Vietnam is still limited in quantity and quality. Currently, most of machinery and equipment of the enterprises are imported from abroad because the manufacturing of agricultural machinery in Vietnam is

still very primitive, not meeting the market demand.

Fourthly, difficulties in plant varieties and animal breeds, most enterprises now have to import plant and animal breeds from abroad. Some enterprises reflect that although many genes and plant varieties are found to be very good from domestic research results, they cannot or are difficult to access and receive transfer from State research institutes.

Fifthly, the consumption market is not sustainable; the chain is not close with major retail distributors; there are no organizations or agencies supporting enterprises on market analysis and forecasts, recommendations on output and selling prices.

Sixthly, the majority of human resources is at low level, with a high degree of freedom and high fragmentation; have not been trained in the progress of technology and techniques. Although the rural labor force is plentiful, the industrial awareness is not high, it takes a lot of time for training and advocacy. The relationship between rural labor and enterprises has not been attached, stable.

Seventhly, incentives for technological investment in agriculture are not strong enough; there are still many barriers to the recognition and marketing of applied technology products in agriculture; Mass production is still slow and small, so the efficiency is not high.

Eighthly, infrastructure for agricultural production such as transportation, irrigation, and underdeveloped aquaculture infrastructure increases the cost of renovation, transportation and preservation of agricultural products.

Ninthly, many administrative procedures, business conditions in agriculture are unreasonable, supportive policies for development enterprises have not been strictly implemented in some localities.

Tenthly, there are many restrictions on state management and communication on food safety, affecting production and business activities of enterprises operating in the agricultural sector.

### **3.3 Some solutions to remove difficulties for Vietnam's agricultural industry**

In order for Vietnam's agricultural sector to develop sustainably, according to Deputy Prime Minister Trinh Dinh Dung Vietnam needs to do well the following solutions:

- First of all, perfecting institutions, mechanisms and policies in a uniform manner to create an environment and a driving force for agricultural and rural development. In which, creating favorable conditions for farmers and businesses to access resources in an equitable and transparent manner, such as land, resources, capital, science and technology ... to produce goods. This is an important solution to reform the growth model in agriculture.

- Specialized production areas should be formed focusing on key national, regional and local key product groups associated with branding and domestic and international market demand.

- Must focus on removing bottlenecks, creating production dynamics for large specialized farming areas. It is clear that high-tech agricultural production and centralized production certainly require a lot of land. At present, the land limit is specifically required to handle this problem, but it is necessary to adjust and amend the laws related to land.

- It is necessary to review and adjust the planning strategies and plans of branches, domains and products in order to promote the potential and advantages of the nation, the region and the locality. Linking the planning to the needs and developments of the market, attaching importance to the domestic market but having to take the regional and international markets as targets so that we can raise the competitiveness of products and link the planning with climate change adaptation”.

- Planning infrastructure investment in service of agricultural production, clearly defining capital sources for infrastructure investment. The state capital invests in major

infrastructures, the capital of enterprises invested in infrastructure of industrial parks and industrial clusters, serving agriculture, processing and hi-tech parks. Capital of people involved in the production process. Production must be reorganized, developing appropriate forms of production organization in the direction of cooperation and association along the value chain. Here, intermediaries must be reduced in order to lower production costs, expand effective production models, especially high-tech agricultural production models, organic technologies...

- Expanding and promoting the link of 4 houses, and according to Deputy Prime Minister Trinh Dinh Dung, there must be another house, the “bank”, because without credit, without capital, it cannot be done. In which, taking cooperative enterprises, farm owners as the center, is the driving force for the development process, is the organizer of production, and is the provider of input services and product consumption in such value chain and farmers act as producers and benefit from the distribution of their labor and capital contribution. It is necessary to have policies to regulate and support farmers who still have difficulties in living.

- Promoting the development of industries, cottage industries, handicrafts and services in rural areas to create jobs, reduce labor in agriculture, and facilitate modernization of rural agriculture.

- It is necessary to strengthen research and transfer of scientific and technological applications in agriculture, especially biotechnology in all stages of the agricultural sector.

- Reorganizing the domestic trading system, agricultural products and expand export markets.

- Improving the quality of human resources in agriculture in general, especially training and equipping knowledge for people so that people have enough knowledge and information to capture the market and create products with high productivity and quality.

- Developing policies to encourage production as well as business services to meet the requirements of implementing the strategy for agricultural and food development according to the above-mentioned requirements.

- Taking the domestic market as the foundation - our food and drink market is very developed - the products consumed in the country must have clear standards of quality for people to check. The State promulgates laws to punish fairness and punishment.

- Encouraging manufacturers to create high-quality products with registered production processes, products of origin, organized for sale, and guaranteed for consumers with clearly, specific services. Supermarkets and markets must have kinds of quality assurance stores. The local government can open a fair (2-4 times per month) for farmers to sell their own quality products with tax and rent free policy. Creating conditions for producers and consumers to meet and exchange.

- Bringing biological sciences and related technical disciplines to a key position to facilitate the development of high-tech agriculture, improving food processing processes to ensure hygiene and safety, create high quality new products. At the same time, through information technology, it is a tool to spread techniques, discovers new innovations, and provide quick information about products and markets. Ensuring smooth information along the product value chain from the beginning to the end consumer.

- Establishing a development investment fund to implement the above strategy. Funds come from central, local state budgets and the contribution of enterprise involved in this strategic implementation program.

- Encouraging domestic and foreign enterprises to participate in the above-mentioned development strategies at all stages and sizes, for manufacturing, processing or trading in domestic and foreign markets.

- Focusing on developing agricultural products with specific characteristics and regional specialties. The diversity of climate, land, geographical position is a condition for each

locality, each region and region in Vietnam to have a variety of rich and diverse agricultural and specialty products. These types of agricultural products and specialties of Vietnam are not only loved by the people in the country, but are also well received by many countries around the world. Products with specific characteristics, such as: Hung Yen longan, Luc Ngan - Bac Giang litchi, Chau Thanh - Long An dragon fruit, Cat Chu mango, Bo Ha orange, Bo Ha grapes, Ninh Thuan grapes, Dong Cao chicken ... However, for Vietnam's agriculture to develop, localities need to expand production scale, prioritizing the development of regions and regions with specific products and specialties to meet the needs of the domestic market and expand exports abroad. Supporting capital, land use rights for each type of agricultural product with export strengths, attaching importance to infrastructure development, post and communication. Establishing large-scale production areas to meet processing and export demands.

- Applying scientific and technological advances to production, the application of scientific and technical advances to agricultural production is essential in the context of globalization today. To promote the application of scientific advances to production, there should be a link between farmers and scientists and entrepreneurs. The State should have investment policies for scientists to research new products to increase productivity, quality and efficiency in agricultural production; increasing investment capital for agricultural extension programs, transferring scientific and technical advances; encouraging and creating cohesion between farmers and enterprises, ensuring output for products...

- Forming strong agricultural corporations, the establishment of strong agricultural groups is essential in the context of globalization and economic integration today. Establishment of strong agricultural groups helps Vietnamese agricultural products be stable and develop the domestic market as well as being able to compete with international agricultural products. Especially, in recent times, many types of agricultural products of other countries have entered Vietnam market and competed very strongly with Vietnam's agricultural products. Therefore, the Party and the State have policies to encourage enterprises to invest in agriculture such as Decree No. 210/2013/ND-CP on December 19, 2013, encouraging enterprises to invest in agriculture and countryside.

## **4 Conclusion**

Vietnam's agriculture plays a major role in developing the country's economy, especially contributing to hunger eradication and poverty alleviation, job creation and income generation for rural residents. Vietnam's agriculture has become an important commodity production industry, participating more and more deeply in the process of international economic integration. Vietnam's agriculture has been strongly shifting from quantity-oriented production to efficiency and quality, ensuring food safety and sustainability. The 10th Party Congress emphasized that, now and for many years to come, the issue of agriculture, farmers and rural areas is of particular strategic importance; promoting industrialization and modernization of agriculture and rural areas, solving synchronously agricultural issues, rural areas and farmers today are urgent issues that the Party and the Government as well as the whole society must be particularly and it is an important task to take Vietnam's agriculture to a sustainable development, on par with other countries in the region and around the world, ensuring food safety and security for all society.

And there are many seminars that bring together many leading scientists and experts in the field of agriculture and rural areas, we have the right to hope for practical and appropriate policies and solutions to bring Vietnam Rural-agriculture develop harmoniously and in accordance with the requirements of international economic integration. Standing on the great successes that have been achieved and facing the facing challenges of the sustainable development of agriculture in the country's agriculture, appropriate measures

and development paths are needed to balance development and sustainability. Only in this way, agriculture can develop in a long-term and stable manner, successfully implement a new rural face in the spirit of the Resolution 26 of the Party Central Committee's Secretariat.

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