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Sustainable Development of Livestock Production in Vietnam: Driving Forces, Challenges, and Strategies

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ABSTRACT/TOM TẮT

At the end of the last decade, livestock production in Vietnam has been facing a severe crisis and posed a big question on the pathway and strategy for its sustainable development. This manuscript aims to identify the driving forces and challenges to the development of livestock production in Vietnam in the last decade through statistical data analysis and policy review and to give some implications for its sustainable development in the future. The livestock industry in Vietnam has undergone a structural transformation into an intensive production system with an increase in the number of medium and large-scale farms to produce more products to meet the increasing demand of domestic consumers. In the coming years, it is projected to develop towards higher profitability and better product quality while ensuring food security and environmental protection. Threats of animal disease transmission, extreme market fluctuation, and environmental pollution risks from excessive animal waste are now emerging challenges. Sustainable development strategies and policies should focus on developing an integrated livestock-crop-aquaculture production system, encouraging the adoption of good agricultural practices and biosecurity measures, and expanding contract farming models.

Vào những năm cuối thập niên vừa qua, ngành chăn nuôi ở Việt Nam đã đối mặt với một cuộc khủng hoảng nghiêm trọng, từ đó đặt ra câu hỏi về định hướng và chiến lược cho sự phát triển bền vững. Mục tiêu của bài viết này là tìm hiểu các động lực cũng như những cản trở đối với sự phát triển của ngành chăn nuôi ở Việt Nam trong thập niên vừa qua bằng cách phân tích các số liệu thống kê và đánh giá các chính sách, từ đó đưa ra những khuyến nghị cho sự phát triển bền vững trong tương lai. Ngành chăn nuôi của Việt Nam đã trải qua những thay đổi đáng kể theo hướng thâm canh hóa với sự gia tăng của các trang trại quy mô vừa và lớn, sản lượng hàng hóa sản xuất ra ngày càng lớn nhằm đáp ứng nhu cầu ngày càng tăng của người tiêu dùng trong nước. Trong những năm tới, ngành chăn nuôi được dự báo sẽ tiếp tục phát triển theo hướng nâng cao lợi nhuận và chất lượng sản phẩm trong khi đảm bảo an ninh lương thực và bảo vệ môi trường. Mối đe dọa về việc lây lan dịch bệnh, sự biến động - 3 - mạnh của thị trường, và các nguy cơ gây ô nhiễm môi trường từ lượng

lớn chất thải chăn nuôi đang là những thách thức lớn hiện nay. Các chiến lược và chính sách phát triển nên tập trung vào việc phát triển một hệ thống sản xuất kết hợp chăn nuôi – trồng trọt – nuôi thủy sản, khuyến khích việc áp dụng các hướng dẫn thực hành nông nghiệp tốt và an toàn sinh học, đồng thời mở rộng các mô hình sản xuất theo hợp đồng.

1. INTRODUCTION

Livestock production in Vietnam plays an important role in the socio-economic development. Livestock production not only provides enough food for domestic consumption, but also generates employment and income for a high number of farmers in rural areas. In 2011, 63% of total farming households or 42% of total rural households involved in livestock production (Nga et al., 2014). Livestock production provided a livelihood for 6.0 to 6.6 millions rural households out of 8.5 million farming households in 2016 (General Statistics Office of Vietnam, 2016). The livestock production sector has a high growth rate in the last years (about 4,5-5%/year in the period of 2011 -2015 and 6% in 2016-2018). The animal-origin products meet better the domestic consumption demand in term of both quantity and quality (Van, 2016). In the coming years, livestock production sector in Vietnam will be projected to rise due to the rapid increase of consumption requirement in the domestic and international market.

However, at the end of the last decade, livestock production in Vietnam has undergone a huge crisis that made it more unstable and posed a big question on how to overcome the challenges and develop sustainably. The livestock production sector became more susceptible and vulnerable to the extreme fluctuation of the market and the attack of animal diseases and the socio-economic crisis caused by the pandemic. Under the challenging socio-economic conditions, the analysis of driving forces and challenges needs to be taken into account when formulating policies and strategies for sustainable development of livestock industry.

This manuscript aims at identifying the driving forces and challenges to the development of livestock production in Vietnam in the last decade throughout secondary data analysis and policy review and giving some implications for its sustainable development strategies in the future. Data and information are sourced from various resources, mostly from General Statistic Office, legal documents from national authorities, and other published references. The personal observation and opinions of the authors are presented and not represented or reflected the governmental policies. The manuscript starts with an overview of livestock production of the nation over the last decade. Major driving forces and emerging

challenges are then analyzed before giving implications of policies and intervention actions for sustainable development of the industry in the coming years.

2. OVERVIEW OF LIVESTOCK PRODUCTION DEVELOPMENT IN VIETNAM IN THE LAST DECADE

2.1. Changes in livestock population and meat production

In recent years, due to the rapid growth of the economy, the livestock production has been developed to meet the increasing demand of domestic consumption. However, the development of livestock production sector has changed significantly over some last years. The change has seen in not only population of livestock herds, but also the production scale of animal farms. Figure 1, 2 and 3 show the variation of population of pig, buffalo, cattle, and poultry over some last years. Figure 4 and 5 indicates the variation in meat production and consumption in the last decade.

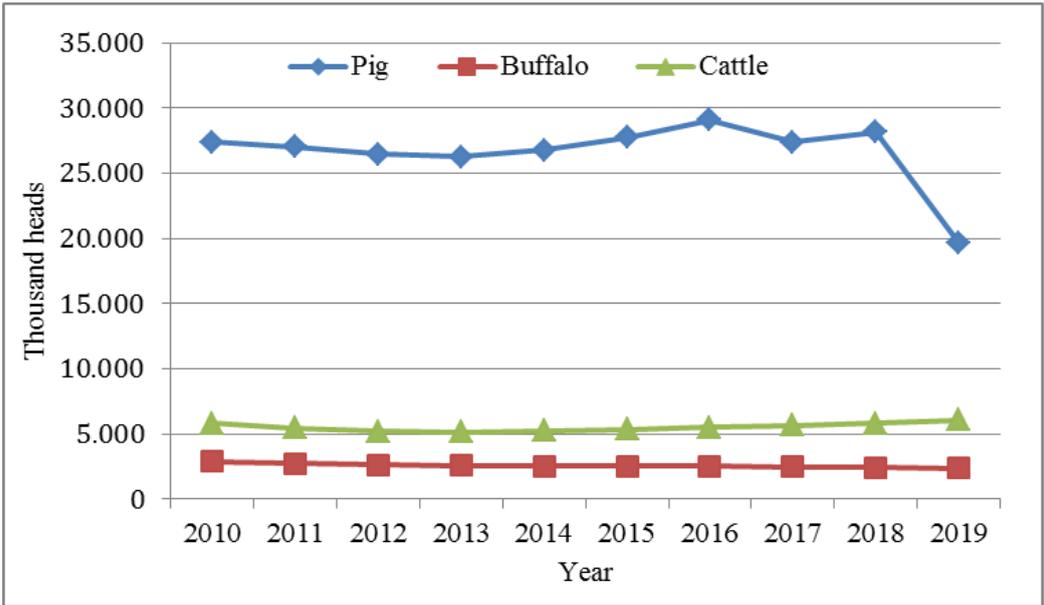


Figure 1. Changes in population of some livestock herds over the last years

Source: General Statistics Office of Vietnam (2020)

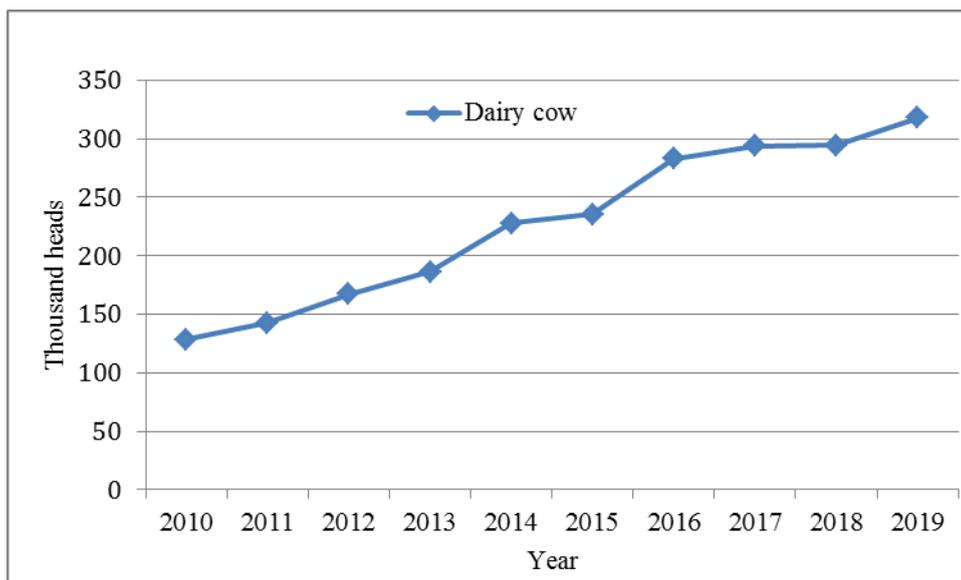


Figure 2. Changes in population of dairy cattle over the last years

Source: General Statistics Office of Vietnam (2020)

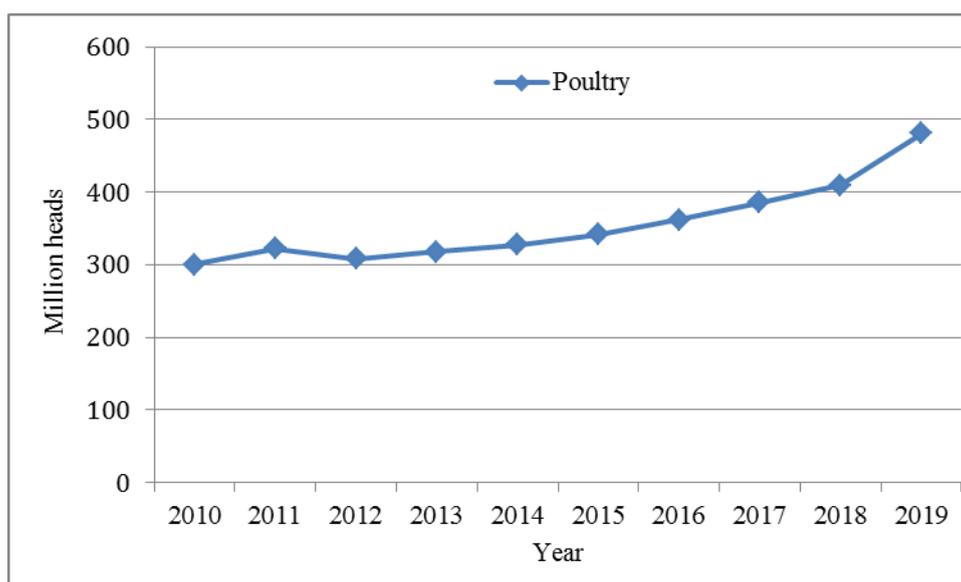


Figure 3. Changes in population of poultry herds over the last years

Source: General Statistics Office of Vietnam (2020)

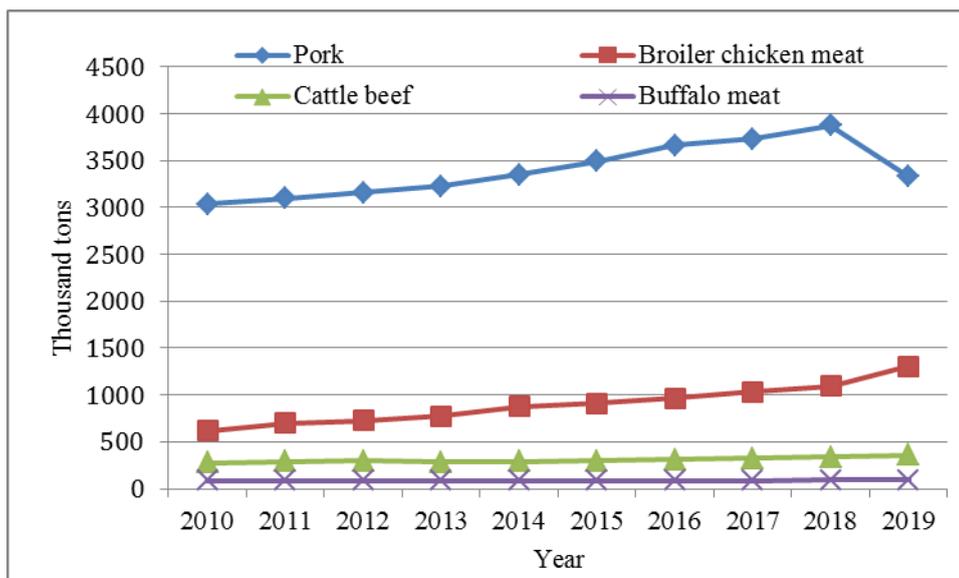


Figure 4. Changes in meat products over the last years

Source: General Statistics Office of Vietnam (2020)

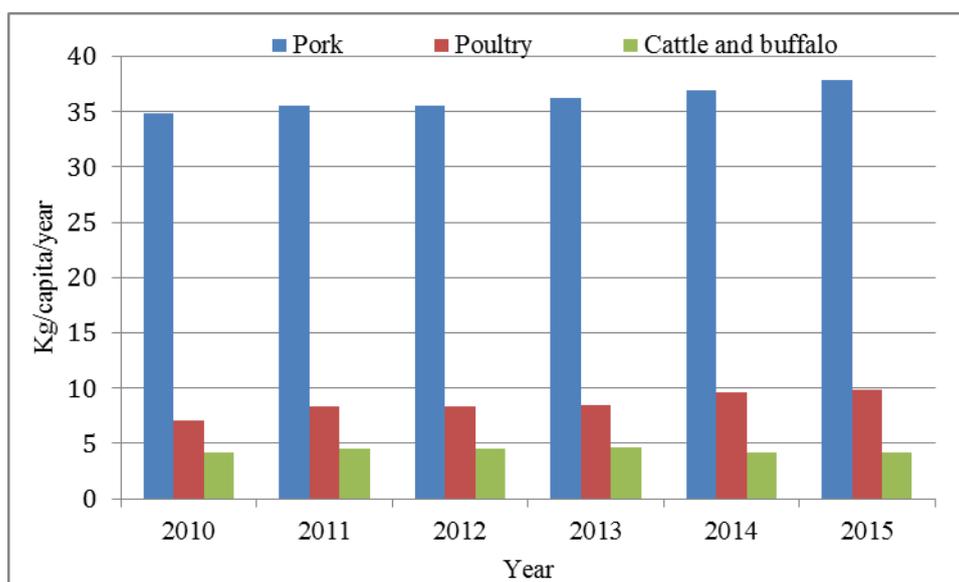


Figure 5. Changes in average meat consumption per capita per year

Source: Department of Livestock Production (2016)

A big change has been seen in the pig population. There were three time points in which the pig population went down, including the year 2013, 2017, and 2019 (Figure 1). In the first fall, the pig population decreased

from 27.4 million heads in 2010 to 26.3 million heads in 2013 due to the shock of food safety incident. A number of pig farms were caught using forbidden chemicals in animal feed such as Clenbuterol, Sanbutamol. As a sequence, declined pork consumption in the domestic market caused a significant decrease in pig herds. In the second decline in 2017, pig population went down from 29.1 million heads in 2016 to 27.4 million heads due to the outbreak of infectious foot and mouth disease and the fall in fattening pig price. Recently in 2019, the African swine fever virus spread rapidly across pig farms in the whole country and caused a serious economic and production loss. Ministry of Agriculture and Rural Development (2019) reported that more than 6 million heads of pigs, equal to 20% of the total national pig herd, died or culled due to the virus attack, causing a significant decrease from 28.1 million heads in 2018 to 19.6 million heads in 2019. The pig production is now showing signs of recovery thanks to better farm management, especially good biosecurity measures by most farms.

The population of buffalo decreased slightly by 489.1 thousand heads from 2010 to 2019, while the number of cattle herd increased steadily from 5808.3 thousand heads in 2010 to 6060 thousand heads in 2019 (Figure 1). While the beef cattle population decreased by 0.9% per year in the period 2008-2018 (Ministry of Agriculture and Rural Development, 2019), a rise in dairy cow herd was significant in the last decade (from 128.6 thousand heads in 2010 to 317.7 thousand heads in 2019, Figure 2).

Poultry population developed well over the last decade from 300.5 million heads in 2010 to 481.1 million head in 2019, equal to more than 5% of annual growth rate. As the shock in the pig production, a high number of farming households switched from pig to poultry production. The higher demand of poultry meat in the domestic market and the better biosecurity measures to prevent poultry herds from infectious diseases resulted in a significant growth of poultry population in the last decade (Ministry of Agriculture and Rural Development, 2019).

Despite changes in animal population, the meat production has increased in the last decade, except pork production in 2019 (Figure 4). Ministry of Agriculture and Rural Development (2019) reported that in the period 2008-2018 pork, poultry, beef and buffalo meat production grew by 3.3%,

9.4%, 4.0%, and 2.6% per annum, respectively, thanks to a better growth performance and a higher body weight of animals at slaughter age.

Average live body weight of pigs at slaughter, for example, increased from 65.4 kg/head in 2008 to 76.7 kg/head in 2018, resulting in a higher production of pork (Ministry of Agriculture and Rural Development, 2019).

The growth of animal production meets better the increasing demand of consumers for foods of animal origin. In the last years, domestic consumption of animal source foods in the country has risen annually. The consumption per capita per year increased from 35 kg to 38 kg for pork and from 7.1 kg to 9.9 kg for poultry meat in the period 2010-2015 (Figure 5). Pork is one of the most important meat types in Vietnam that shares more than 70% of total consumed meat in the domestic market, followed by poultry meat, beef and buffalo meat share a least proportion.

2.2. Changes in production scale

One of the most remarkable change in livestock production in Vietnam over some last years is the intensification and the rapid development of large-scale farms. The 2016 national agriculture census showed that the number of households engaged in livestock production decreased, but the number of intensive livestock farms increased by 3.3 times (or 45.7%/year) when compared with those in 2011 census (General Statistics Office of Vietnam, 2016). Ministry of Agriculture and Rural Development (2019) reported that the number of large-scale livestock farms increased rapidly from 6,267 farms in 2011 to 19,639 farms in 2018, which shared 53% and 40% of total pig and poultry production, respectively. A decline trend was observed in small-scale farms, where number of small-scale pig farms reduced from 4.13 million households in 2011 to 2.9 million households in 2018 and number of small-scale poultry farms decreased from 7.9 million to 7.8 million households in the same period.

3. DRIVING FORCES FOR LIVESTOCK PRODUCTION DEVELOPMENT

3.1. Increased demand for high quality animal products

In recent years, demand for animal origin products in Vietnam has been increasing significantly due to the economic growth and living standard improvement, creating an opportunity for the development of livestock production. Statistical data showed that in 2019 the total population in Vietnam was 96,484 thousand people (General Statistics Office of Vietnam, 2020), creating a great potential market for animal production to meet the rapid demand for food consumption of citizen. In 2018, the total GDP per capita reached to 2,587 USD (General Statistics Office of Vietnam, 2018). The average income per capita per month increased significantly by three times, from 1,387 thousand dong in 2010 to 4,295 thousand dong in 2019 (General Statistics Office of Vietnam, 2020). The high income results in the change in the consumption pattern towards a higher proportion of protein-rich products such as meat, eggs, milk, etc. The average amount of meat and eggs consumption per capita per month increased from 1.8kg meat and 3.6 eggs in 2010 to 2.2kg meat and 4.0 eggs in 2018 (General Statistics Office of Vietnam, 2020).

3.2. Increased consumption of animal origin food

Besides that, the acceleration of urbanization in recent years was also considered as the driving force for the increasing consumption of animal origin products. The share of urban citizens in total population increased from 30.39% in 2010 to 35.05% in 2019 (General Statistics Office of Vietnam, 2020). Urban citizens consumed a higher amount of meat than the rural people, but the gap is narrowing. General Statistics Office of Vietnam (2020) showed that the meat consumption per capita per month in 2010 differed between urban citizens and rural people (2.1kg and 1.7kg, respectively), but it reached the same level between two regions in 2018 (2.2kg). Similarly, the food expenditure for animal products between 2002 and 2012 went from 32.7% to 37.8% among urban households, and increased from 23.4% to 34% among rural families (World Bank Group, 2016). It is estimated that the urban population will raise rapidly and the

living standard will be significantly improved, showing a great potential for animal production development in Vietnam.

3.3. Potential for exportation of animal products

Another driving force for livestock production sector in Vietnam is the exportation potential of animal origin products. The improved economic environment helps Vietnam integrated more into the global trade community. Vietnam is now an active member of ASEAN and member of the World Trade Organization. By attempting to negotiate for Free Trade Agreements (FTAs) with many important trading partners, the country is not only to lower import tariffs and eliminate quotas, but also to increase market access for goods, including animal origin products.

3.4. Great incentives from governmental policies and subsidies

Governmental policies and subsidies also stimulated the rapid transition to the intensive livestock production. The government issued a project on “Agricultural restructuring towards raising added values and sustainable development” to foster the shift from scattered small-scale farms into concentrated large-scale farms. In this project, the government focused on re-planning the livestock production development policies, encouraging the investment of private sector in livestock production, improving the efficiency of public investments, reforming the institution, and adjusting the policy system (Prime Minister of Vietnam, 2013). Another important policy on supporting household livestock farms namely “The scheme for animal husbandry restructuring with the aim of value added improvement and sustainable development” in the period of 2015-2020 was also launched in 2014. The restructure program of livestock production sector was focused on the small and medium-scale farms to enhance its value-added and sustainability. The program consisted of four main contents, including: 1) the regional movement from highly populous regions to low population density areas (pig population in Red River Delta was set to decrease from 25.74% to 15% of total national swine population in 2013-2020, while the pig population in the northern mountainous area was targeted to increase from 24,1% to 30% in the same period); 2) Changes in proportion of animal species towards reducing pig population (from 74.2% of pork production in 2013 to 62% in

2020) and increasing poultry and cattle meat production (from 17.3% and 8.5% in 2013 to 28% and 10% in 2020, respectively); 3) Restructure of livestock production systems by encouraging the shift of household livestock farms towards industrialized and controllable farms with a high biosecurity level and less environmental impacts; 4) Improvement of livestock commodity and value chains by developing the network between farmers and enterprises (Ministry of Agriculture and Rural Development, 2014). A number of technical, socio-economic and institutional policies have been proposed and implemented to foster the productivity and economic efficiency of household livestock farms, thus it helps facilitate the intensification of livestock industry in the last decade.

4. SOME DIFFICULTIES AND CHALLENGES

Although the livestock production sector has grown at a high rate recently, it still remains some difficulties and challenges as discussed below.

4.1. Threats and risk of animal diseases

The first and foremost challenge is threats and risks of animal diseases. Since 2003, many animal farms in most provinces have been facing with the outbreak and repeat of several infectious diseases such as avian influenza, Porcine Reproductive & Respiratory Syndrome (PRRS), Foot and Mouth Disease (FMD), and African swine fever (ASF). In 2007, the PRRS had occurred at 13.355 farm households in 14 provinces, causing a loss of approximate 30,000 heads of pigs. In 2008, the disease had been broken in 28 provinces and the number of culling pigs was 10 times higher than that in 2007 (Binh et al., 2010). In 2010, the PRRS has broken in 49 provinces and 812,947 heads of pigs were contaminated and 442,961 pigs have been culled (Tien, 2010). The FMD is one of dangerous diseases in Vietnam. In 2010, this disease has been broken in 13 provinces with 3,000 contaminated heads of animals. Again in 2018, the outbreak of FMD widely in the whole nation caused a remarkable decrease in total pig population. Recently, the ASF, a viral disease, has attacked a number of pig farms and caused a huge loss of animal population. As reported by the Department of Livestock Production, a total of 6 millions heads of pig or 20% of total pig population of the whole nation was died or culled due to ASF attack (Ministry of Agriculture and Rural Development, 2019). Among various reasons for the disease outbreak, the highly intensive production and inappropriate agricultural practices, especially the low hygiene conditions and poor prevention program are the most important causes of disease attack.

4.2. Extreme market fluctuation of input materials and output products

The second challenge is the extreme fluctuation of animal feed and animal product prices in the market. In recent years, the price of animal feed has been increasing significantly, causing an extreme impact on livestock production. One of the reasons is the excessive dependence on the imported raw materials for feed formulation. In estimation, about 70-80% of raw materials (including cereals, protein-rich ingredients, mineral and vitamin substances) for animal feed production are imported annually (N. Hanh, 2021). Thus, farmers have many difficulties in expanding their production scale. On the other side, the price of output products has decreased remarkably (Figure 6). In 2017, the extreme falling of both pigs and poultry products caused a big loss for producers. The average price of live fattening pigs in southern market downed from 41,100 dong/kg in November 2016 to 26,000 dong/kg in July 2017, equivalent to a decrease of 63.26% (Figure 6). Farmers are now facing extreme challenges from the price fluctuation in both input and output market, causing the unsustainable production.

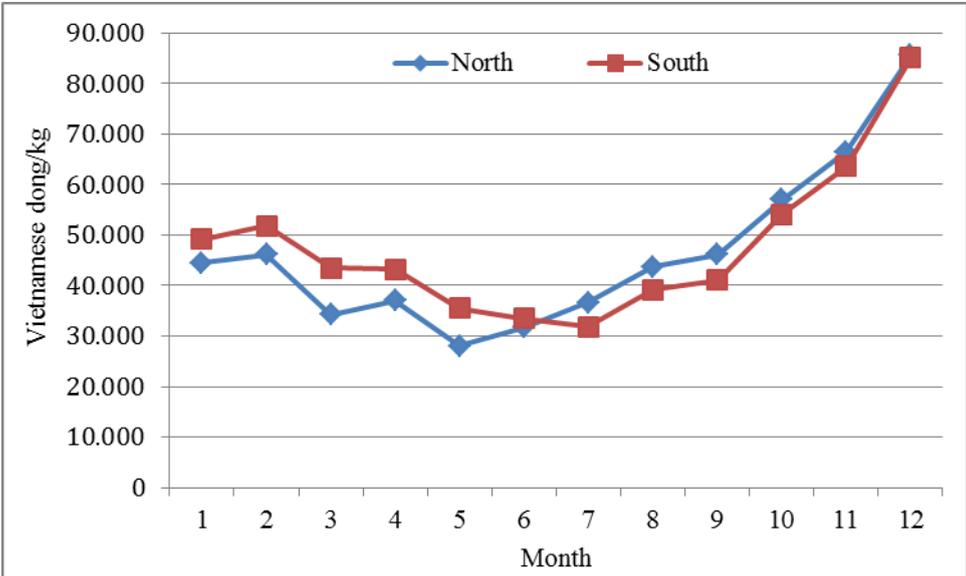


Figure 6. Changes in average price of live fattening pigs in 2019

Source: Department of Livestock Production (2020)
Average exchange rate in 2019: 23,155 Vietnamese dong = 1 USD, source: Vietstock.vn

4.3. Threats of environmental pollution from intensive production

The third challenge is threats of environmental pollution from intensive animal production. The expansion of animal herd size produces an extreme amount of wastes (including liquid and solid wastes) that need a comprehensive and effective management and treatment system. However, a high proportion of animal wastes have not been managed and treated well. In 2018, 3.2% of intensive livestock farms and 47% household livestock farms did not adopt any waste treatment systems (Ministry of Agriculture and Rural Development, 2019). In estimation, around 40 to 50% of total animal waste produced on-farm have been treated and the remaining part was discharged directly into the surrounding environment without any treatment methods (Department of Livestock Production, 2014). The high concentration of livestock farms in the populous regions (Pig population in the Red river delta and Mekong delta shared 26% and 12% of total pig herd in 2018, Ministry of Agriculture and Rural Development (2019)) also pose a serious threat to the environmental pollution.

5. SUSTAINABLE DEVELOPMENT OF LIVESTOCK PRODUCTION SECTOR: PATHWAYS AND STRATEGIES

In 2020, the government has issued the development strategy of livestock production sector for the period of 2021-2030, prospect towards 2045. According to this decision, livestock production will be fostered to achieve a rapid growth rate (4-5% per year in 2021-2025, 3-4% per year in 2026-2030) to meet the domestic consumption and for exportation (share of exported products will be 15-20% of total pork production and 20-25% of total poultry meat production). In order to gain that goal, the livestock production will be oriented toward a concentrated intensive farming system with high biosecurity, food safety, and environmental protection. In 2030, the livestock population raised in intensive large-scale farms will share a high proportion in total livestock herds (more than 70% of pig herds, 60% of chicken herds, 60% of dairy cow herds and 30% of beef cattle herds). Besides that, the organic livestock production and traditional livestock production systems that produce a high and safety food will also be encouraged to develop in the coming years. The environmental issues will be well-controlled by developing the waste treatment system at the livestock farms. Furthermore, the disease prevention and control program should be implemented effectively to limit its affects on livestock production of farm households (Prime Minister of Vietnam, 2020).

For sustainable development of livestock production sector in Vietnam in the coming decade, we proposed the following implications based on the analysis of above-mentioned difficulties and challenges as following:

5.1. Livestock-crop-aquaculture integration and circular economy

Integrated livestock-crop-aquaculture production system is an effective and sustainable production model that have been employing by most farmers in Vietnam for many years. At the farm level, when applying the integrated farming system, the animal waste and crop residues are often strongly recycled and reused within the farm rather than discharged into the environment, resulting in effective use of local resources and saving

production cost. At the regional level, the integration of livestock production and crop cultivation can be conducted by encouraging the appropriate treatment methods of organic waste (such as by composting or vermicomposting) to produce more organic fertilizers or soil amendments for crop cultivation. The effective treatment and management of animal waste will not only help reduce risk of environmental pollution, but also generate more income for farmers from selling organic fertilizers and soil amendments. Therefore, it is a cost-effective production system that should be encouraged to develop more in the future.

Integration of livestock and crop production also helps increase the resilient capability of producers to cope with the extreme fluctuation context in the market. H. Q. Hanh et al. (2017) confirmed that integrated livestock-crop production is an important resilience strategy of Vietnamese farmers to enhance the efficiency of household resources utilization and reduce risks from the ever-changing circumstances of physical and economic environments. By employing the integrated livestock-crop production system, farmers can diversify their production activities and adjust the production scale to adapt better with the changes in the market and to meet better the demand of consumers. Moreover, the integration of livestock and crop production helps increase the use of household resources (land, labour, capital) and take the most advantage of market development. It is believed that integrated farming system will be an effective and sustainable mode of environmental exploitation that should be widely applied by livestock farms in Vietnam in coming years.

5.2. Implementation of good agricultural practices and improvement of biosecurity measures

Implementation of good agricultural practices (GAP) is considered as one of the important solution to the sustainable development of livestock production because it has many benefits for producers, consumers, animals, and the environment. As defined by the Food and Agriculture Organization, good agricultural practices are the “collection of principles to apply for on-farm production and postproduction processes, resulting in safe and healthy food and non-food agricultural products, while taking into account economic, social and environmental sustainability.” (Food

and Agriculture Organization, 2016). The GAP scheme covers most important parts that are necessary for safe and sustainable agricultural production, including food safety and traceability, environmental protection and conservation, workers' health and welfare, and the welfare of animals. Therefore, when adopting GAP standard, farmers can producing a safe and good quality product that is now widely recognized for exportation throughout the world.

In order to get a better prevention and control of the animal diseases, especially infectious epidemics, the biosecurity measures need to be strictly implemented on farm together with the vaccination program. The recent experience of most intensive large-scale farms in Vietnam in preventing the African Swine Fever virus without any available vaccine is the improvement of biosecurity measures on farm. As the government incentive for livestock farms to move to a concentrated area away from central populous regions, farmers can improve the biosecurity measures better. The extension services are of great importance to enhance the awareness and practical skills of biosecurity measures for farmers.

5.3. Contract farming development

Contract farming is clearly demonstrated as a significant way for sustainable development of livestock production in particular and agriculture in general. According to Catelo and Achilles (2008), contract farming in livestock production plays as an important role in the supply chain such as delivering a required volume of the output and supplying good quality of food that meet better the demand of both domestic and export markets. Contract farming also helps integrate smallholder livestock producers in mainstream markets and that contribute significantly to their livelihoods. In Vietnam, the contract farming has been emerged and developed rapidly over the last years in many pig, poultry and dairy cow farms (Catelo & Achilles, 2008). Experience in livestock contract farming of these farms indicated that when signing of the contract with integrator company, farmers get a lot of supports, including the technical assistance and input material provision (good quality of animal breeding, animal feed, veterinary medicine, etc.). Therefore, growth performance and profitability of livestock production of contracted producers were better than non-contracted farms.

Especially, when there were shocks in the market (the sudden falling down of live fattening pig price in 2017 and the outbreak of African Swine Fever epidemic in 2018, for instance), the contract farming was really a mechanism to maintain the production and to save farmer's livelihood. Therefore, in order to improve the efficiency and sustainability of livestock production sector, the government should facilitate the development of contract farming, especially between the smallholder producers with integrator companies.

6. CONCLUSIONS

Over the last decade, the livestock production sector in Vietnam has undergone a structural transformation into an intensive production system. There has been a decrease in the number of small-scale farms and an increase trend in the number of medium and large-scale farm holdings. Pig, poultry, and cattle production systems have been all developed at a high rate, except some specific time points, and met better the increasingly demand for animal origin products of consumers in the domestic market.

In the coming years, the livestock production sector in Vietnam has been set to be developed towards higher profitability and product quality while ensuring food security and environmental protection. The increasing demand for food of animal origin products in both domestic and international markets brings an opportunity for the continuous growth of livestock production in the coming years. However, a number of difficulties and challenges such as the threats of disease transmission, extreme market fluctuation, environmental pollution threats from excessive amount of animal waste are now emerging, leading the question about sustainable development pathways and strategies. A comprehensive development strategy and policy is needed, in which it should emphasis on developing an integrated livestock-crop-aquaculture production system, encouraging to implement good agricultural practices and biosecurity measures, and developing contract farming models.

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GRAESE : Groupe de Recherches Asie de l'Est et du Sud Est



Le **GRAESE** (Groupe de Recherches sur l'Asie de l'Est et du Sud Est) regroupe des chercheurs concernés par les problèmes du développement en Asie Orientale et Sud Orientale. A son origine se trouvent des académiques et des chercheurs ayant participé à des projets de recherche, d'enseignement et de coopération dans cette région du monde depuis le milieu des années 1990. En Belgique, ces activités ont associé, dès le début, des chercheurs de l'UCL, des FUSAGX, et de l'ULG qui poursuivent une coopération régulière depuis une quinzaine d'années. En Asie ces activités ont concerné un grand nombre de chercheurs et d'académiques de diverses universités et institutions vietnamiennes, laotiennes, cambodgiennes, thaïlandaises et chinoises. L'Université Agronomique de Hanoi (UAH) est un partenaire privilégié depuis le début. Ces activités ont concerné particulièrement les projets de développement agricole, les composantes socio-économiques du développement rural, les rapports villes-campagnes et les politiques affectant ces différents domaines. En outre plusieurs thèses de doctorat ont été réalisées dans le cadre de ces activités, et sous diverses formes de partenariat entre les universités belges et asiatiques concernées. Le **GRAESE** vise à donner une meilleure visibilité à ces diverses activités, à faciliter la circulation de l'information entre les chercheurs et centres de recherches concernés, et à appuyer et soutenir l'intérêt en Belgique et en Europe pour les problèmes du développement asiatique dans un public plus large.

En pratique le **GRAESE** a pour objectif :

- 1) de stimuler la recherche interdisciplinaire concernant les problèmes et les enjeux du développement en Asie orientale et sud orientale
- 2) de publier sous forme de Working Papers (format papier ou online) des résultats de recherche liés aux projets en cours et aux questions concernant les diverses thématiques du développement appliquées à l'Asie orientale et sud-orientale, avec une attention particulière aux thèmes évoqués ci-dessus.
- 3) de réaliser des publications scientifiques de divers types concernant ces problèmes et réalisées par des chercheurs des différents centres partenaires en Europe et en Asie.
- 4) de fournir un lieu de rencontres entre chercheurs concernés par ces thèmes, particulièrement dans le cadre des doctorats en cours.
- 5) d'organiser des activités d'enseignement et d'information sur les problèmes du développement de l'Asie de l'Est et du Sud Est, notamment à travers l'organisation de conférences et séminaires donnés par des académiques et chercheurs asiatiques de passage en Belgique.

En Belgique les activités du **GRAESE** sont coordonnées par Ph. Lebailly (UEDR-Gembloux-ULiège) et J.Ph. Peemans (CED-UCL). Le secrétariat du **GRAESE** est assuré par l'UEDR.

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