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Law on Planning and Plans for Human Resource in the Field of Agriculture in Vietnam: Current Situation and Solutions

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Article History:

Received: 25 February 2025; Accepted: 20 March 2025; Published: 28 March 2025

Abstract

Currently, policies and laws on planning and plans for human resource development in the field of agriculture are expressed through regulations on capacity building, arrangement, allocation and renewal of agricultural human resources as well as the process of implementing the allocation arrangement and renewing agricultural human resources. In Vietnam, the development of human resources in the field of agriculture is of great interest when the Party and the State have issued many guidelines and policies since the 2010s. However, for the planning and plans for human resources in the field of agriculture, Vietnam (especially in the period of 2020 to now) is still open. Thus, the article focuses on evaluating the political and legal bases for developing policies and laws on human resource development in general and in planning and planning activities in particular. From there, make recommendations for improvement in the coming time (in the period of 2025 to 2030) in Vietnam.

Keywords

Human Resources in Agriculture, Agricultural Workforce Planning, Agricultural Human Resource Law, Workforce Development in Agriculture

Volume 15, 2025

Publisher: The Brooklyn Research and Publishing Institute, 442 Lorimer St, Brooklyn, NY 11206, United States.

DOI: 10.1080/ijhss.v15a1

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Citation: Khuyen, H. K. (2025). Law on Planning and Plans for Human Resource in the Field of Agriculture in Vietnam: Current Situation and Solutions. *International Journal of Humanities and Social Science*, 15, 86-95. <https://doi.org/10.1080/10.1080/ijhss.v15a7>

1. Statement of the Problem

From an international legal perspective, the ASEAN Economic Community Blueprint 2025 (AEC) (ASEAN, 2024) emphasizes that, in order to have a competitive, innovative and dynamic ASEAN, one of the key goals to concentrate on is “to promote the creation and protection of knowledge”. To achieve that goal, it is necessary to have policies on productivity growth, innovation, research, development and commercialization of technology. In other words, ASEAN's long-term competitiveness depends on significantly improving the total labor efficiency and productivity of ASEAN member states if ASEAN wants to move towards the Global Value Chain (GVC). The total labor efficiency and productivity performance of countries are determined by the using efficiency of inputs and the advancement of knowledge, innovation, and technological advancement.

At the international level, in terms of capacity building for human resources and human resource innovation, the ASEAN Community Master Plan 2025 says that the challenge for an innovative ASEAN is to invest in research and development (R&D) and human resource development; to improve the policy and institutional environment (for example, intellectual property institutions) so as to ensure quality, disseminate technology and innovate investment in research and development of human resources. In order to solve these challenges, it is vital to promote strategic partnerships among academia, research institutes and the private sector towards the capacity development for human resources and the creation of efficiencies for technology transfer and commercialization; Strengthen the support system, create and apply a favorable environment to nurture highly mobile, intelligent, creative, developed and knowledgeable human resources; Focus more on the spirit of entrepreneurship and develop start-up business incubation programs; Integrate and empower people through information technology.

2. Literature Review

Now, policies and laws on human resource development in the field of agriculture in general and human resource planning activities in the field of agriculture in particular play an important role in the national development. Accordingly, it can be seen that in recent years, policies and laws on the development of human resources in the field of agriculture have been formed and developed through lots of different stages. If the first stage is to prepare for the shortage of forces in agriculture, the next stage must face a shortage of qualified, professional, technical and managerial human resources to suit the expansion of institutions. The next stage recognizes the role of human resource development as a driving force for socio-economic development, of the sector and the region. In the current period, nations emphasize the process of educating, training and fostering in order to improve work performance, develop the ability to manage, lead and decentralize human resource management to strengthen effective management, improve transparency and accountability to reduce bureaucracy and corruption in the process of developing the agricultural sector. Besides, in order to ensure the development of modern, smart and sustainable agriculture, it must be associated with the rights and interests of agricultural human resources. This helps to promote the dedication and motivation of agricultural workers to the industry, and to create a more sustainable and efficient working environment. Hence, it is very necessary to study and improve policies and laws on planning and plans for human resources in the field of agriculture today. This is the first and very important policy and law if nations want to improve policies and laws on human resource development in the field of agriculture, and Vietnam is not out of this trend.

3. Research Methods

The method used in this study is a qualitative research approach on the provisions of policies and laws on human resource development in general and human resources in the field of agriculture in particular in Vietnam. Those are the major guidelines and policies of the Communist Party of Vietnam in the documents of the congresses; provisions in the State's policies and laws on human resource development in the field of agriculture. With that main research method, it can be seen that the issue of building and implementing policies and laws on human resource development in the field of agriculture in general and in the planning activities of human resources in the field of agriculture in particular has had successes as well as certain limitations, and thereby make recommendations for improvement in Vietnam in the upcoming time.

4. Discussion

4.1 Assessment of political and legal bases related to human resource development and the formulation of human resource planning and plans in the field of agriculture

In Vietnam, there is a very clear awareness of capacity building, arrangement, allocation and innovation of agricultural human resources that have made a great contribution to the agricultural sector in particular and food security in the world in general. It can be seen that in recent years in Vietnam, the Party's documents and the State's policies have "indirectly" stipulated the issue of human resource development in the field of agriculture in strategies such as: strategies on human resource development; strategies on high-quality human resource development; strategies on raising awareness, popularizing skills and developing human resources for digital transformation, etc. Specifically:

Firstly, it is about the Party's major lines, viewpoints and policies:

(1) At the 11th Congress (2011), the Communist Party of Vietnam emphasized: "Developing and improving the quality of human resources, especially high-quality human resources, is a strategic breakthrough and a decisive factor in promoting the development and application of science and technology, restructuring the economy, transforming the growth model and being the most important competitive advantage, ensuring rapid, efficient and sustainable development" (CPV, 2021, p.130). This view marks a development step in the Party's awareness of the role of the human factor in the country's rapid and sustainable development strategy. The Party considers the development of high-quality human resources including agricultural human resources as one of three breakthrough stages of the country's development strategy in the new period.

(2) At the 13th Congress (2021), the Communist Party of Vietnam continued identifying: "Human resource development, especially high-quality human resources; Prioritize human resource development for leadership, management and key areas based on improving and creating big, comprehensive and basic changes of the quality of education and training associated with the mechanism of recruiting, using, treating talents, promoting research, transferring applications and strongly developing science and technology, innovation" (CPV, 2021, p.203-204) is one of three strategic breakthroughs. The Congress also set a requirement to "Train people in the direction of having ethics, discipline, sense of civic and social responsibility; having life skills, work skills, foreign languages, information technology, digital technology, creative thinking and international integration (global citizenship)" (CPV, 2021, p.232-233). This is an extremely correct policy, expressing the Party's new thinking and vision on human resource development in areas of social life, including the agricultural sector, especially high-quality human resources to meet the requirements of the country's rapid and sustainable development in the new period.

Secondly, it is about the State's policies and laws. To concretize the Party's views, policies and guidelines on human resource development in general and human resources in the field of agriculture in particular, the State has issued several important, indirectly important related policies and laws. Important such as:

(1) *Decision No. 579/QĐ-TTĐ dated April 19th, 2011 of the Prime Minister on Approving Vietnam's Human Resources Development Strategy in the period of 2011 – 2020.* With the overall goal of striving to achieve several key human resource development targets by 2020: The rate of trained workers is 70%; The rate of vocational training workers is 55%; The number of university and college students is 400 students/10,000 people; There are more than 10 vocational schools and over 04 universities of international rank. At the same time, with the guiding view of promoting the decisive role of the human factor, human resource development is a breakthrough for the successful implementation of the Socio-Economic Development Strategy; developing comprehensive human resources in terms of physical strength, knowledge, skills, behavior and political and social consciousness, however, still needs to have the focal point, focus on talent development, and build a team of leading experts in the industry. To implement those major perspectives and goals, ministries and branches are required to focus on practical solutions to develop human resources and human resource training must be linked to social needs and labor market needs; using, evaluating and compensating human resources must rely on capacity, results, and work efficiency; overcome the psychology and phenomenon of over-valuing and promoting "Degree" formally in recruitment and human resource assessment, etc. Simultaneously, ministries, branches, localities, units and organizations build human resource development plans and projects under the scope of management; Integrate the Strategy's goals, perspectives and development solutions into the planning, programs and human resource development projects of the industry, locality and units and organizations.

(2) *Decision No. 146/QĐ-TTg dated January 28th, 2022 of the Prime Minister on raising awareness, universalizing skills and developing human resources for national digital transformation by 2025, orientation to 2030.* Meanwhile, it aims to train 1,000 digital transformation experts in industries, fields and areas to be the core force of digital transformation nationwide; 100% of digital universities must complete the model of digital organization, digital management, digital operations, digital data standardization and the digital learning materials warehouse that is open and invested in synchronously equipped with infrastructure, technology platforms, learning and practical equipment, ready to enroll and train digital transformation human resources. By 2025, strive for 100% of leaders, officials, civil servants, public employees and workers in state agencies to take part in training annually to raise awareness about digital transformation, digital skills and digital technology; 100% of officials specializing in digital transformation and information technology are trained, fostered and trained as well as update knowledge of digital technologies. Simultaneously, more than 5,000 high-quality engineers, bachelors, and practical specialists in digital technology at universities and colleges with strengths in digital transformation training are trained.

(3) *Decision No. 1058/QĐ-TTg dated September 14th, 2023 of the Prime Minister approving the Strategy for Rural Industry Development to 2030, with a vision to 2045.* Accordingly, to develop arural industry that is effective, sustainable, multi-valued, integrated and based on the potential and advantages of natural and socio-economic conditions of the local, ensuring green growth, production along the value chain, applying new science and technology, innovation and contributing to protecting the landscape in the rural environment, it is essential to thoroughly grasp and implement solutions, including solutions on agricultural human resource development. Specifically: Supporting training and fostering leadership, management and digital transformation skills for enterprises, cooperatives, and production and business establishments in the field of rural industries; Training to improve skills; Supplementing knowledge about science and technology, production processes, information technology, designing and innovating product designs for labors. Priority is given to training workers in enterprises, cooperatives, producer households, concentrated raw material areas and industrial clusters; Building a model for training linking among vocational education establishments, enterprises, cooperatives and production establishments in the field of rural trades; Training and improving workmanship, conversing one part of agricultural labor to rural sectoral activities.

Thirdly, it is about policies and laws of the Ministry of Agriculture and Rural Development. Aware of the vital role in the development of the country's human resources in the context of international integration linked to the development of the knowledge economy and the 4.0 Industrial Revolution, the Ministry of Agriculture and Rural Development has issued policies on developing human resources in the field of agriculture such as: Decision No. 2534/Decision-BNN-TCCB dated October 26th, [MARD \(2011\)](#) of the Minister of Planning and Developing Human Resources for the Agriculture and Rural Development sector in the period of 2011-2020; Resolution No. 638-NQ/BCS dated March 18th, [PB \(2013\)](#) of the Staff Committee of the Ministry of Agriculture and Rural Development on Several solutions to improve the capacity of civil servants and public employees of the Ministry of Agriculture and Rural Development; Decision No. 1323/Decision-BNN-TCCB dated June 17th, [MARD \(2014\)](#) of the Minister of Agriculture and Rural Development approved the Project to Improve the quality of human resources in Agriculture and Rural Development sector in the period of 2014 – 2020. Accordingly, to concretize the socio-economic development strategy in the period of 2011 - 2020 of the agricultural sector in terms of human resources. Concurrently, to determine the industry's perspective, direction and human resource development solutions to ensure sufficient quantity, reasonable structure and qualifications, form a team of high-quality human resources according to standards region and gradually move towards international standards to successfully implement the goal of industrializing and modernizing the industry and contribute to the successful implementation of the goals of building and protecting the country. The Ministry of Agriculture and Rural Development has determined policies on planning and plans on human resource development in the field of agriculture by groups (*See also Appendix*):

(1) Regarding planning and plans on human resource development according to training level, training level structure, human resource structure of the whole agricultural sector, human resource structure working in the field of rural development economy (including agricultural household economy, farm management, agricultural product market), human resource structure working in the field of irrigation, human resource structure working in the field of fisheries.

(2) Regarding planning and training specific human resources for the whole industry (agriculture, forestry, irrigation, fisheries) according to levels of qualifications (from elementary level, intermediate level, engineering university, master's degree, doctorate).

(3) Regarding planning and training vocation for rural workers in the whole industry (agriculture, forestry, irrigation, fisheries).

(4) Regarding human resource development planning for each specific subject, including: a team of central and local civil servants and public employees; a team of science and technology staff; a team of teachers and lecturers of the agricultural industry from the education system – training (intermediate professional, college, universities and post-universities) and vocational training (vocational colleges, vocational secondary schools, vocational primary schools); The workforce working at enterprises of the sector (including production and business establishments, companies, agriculture and forestry farms in the field of agriculture and rural development); The workforce directly engaged in agriculture in rural areas (in cooperatives, cooperative groups, farms, farm households).

(5) Regarding the planning for human resource development according to socio-economic regions, including 6 regions: Northern Midlands and Mountainous Regions; the Red River Delta; North Central and Central Coast regions; Central Highlands; the Southeast region; Mekong Delta.

Therefore, basically, policies and laws on planning and plans for human resource development in the field of agriculture have covered aspects of quantity, structure, and quality of subjects participating in agricultural activities. With this policy, it has partly oriented people to clearly see the role and responsibility of training and using human resources, turning human resource challenges (large numbers, low skills, no industrial styles, etc.) into advantages (mainly through training), which is the task of the whole industry and the whole society, social (of leaders, schools, businesses and families as well as each employee in the industry). This is to express the viewpoint of human development, socio-economic development for people and by people, which is one of the basic contents of sustainable development.

General assessment: The Party and the State have been deeply aware of the position and role of national human resources in general and human resources in the field of agriculture in particular. With those regulations, they have been:

(1) Affirming the empowerment of human resources in agriculture in particular (farmers, agricultural enterprises, civil servants and public employees) and other sectors in society in general to have access to skills and knowledge to improve professional qualifications and skills (for farmers directly engaged in agriculture); effective, feasible and highly applicable management and research methods (for officials, civil servants and public employees); ensure more efficient and sustainable food production (for manufacturing enterprises in the field of agriculture).

(2) Besides, being very aware of the problem of the capacity of agricultural human resources can be measured through key indicators such as: the level of skill improvement; the problem of improving productivity and efficiency; the ability to have access to markets and the adoption of sustainable practices; feedbacks from participants, consumers, etc. Specially, in the context of the industrial revolution, technology plays an important part by providing advanced tools for precision agriculture, efficient resource management, data analysis for market trends and online platforms for knowledge sharing and networking. This enhances productivity and innovation in agribusiness.

Fourthly, there are some shortcomings and obstacles of policies and laws on planning and plans for human resource development in the field of agriculture.

Overall, policies and laws on planning and plans for human resource development in the field of agriculture in Vietnam during the past have been limited and pose great challenges. That is, although there are separate and specific policies and laws on planning and plans for human resource development in the field of agriculture, the process of organizing the implementation, management, and supervision of the implementation process is not yet available. Meanwhile, this is a very important policy development activity in the current context in Vietnam. Without this policy, it will be impossible to orient and develop policies on training, vocational training, attracting, compensating and using agricultural human resources substantively and comprehensively. For that reason, this is the first policy in the policy on human resource development in agriculture. In addition, with the Party's policy on forming and developing a sustainable growth agricultural model associated with environmental protection, this poses a lot of challenges for state agencies, organizations and individuals in society need to renew their cognitive thinking from "agricultural production thinking" to "agricultural economic thinking" (PCC, 2022). In fact, nowadays, according to a report by the Ministry of Agriculture and Rural Development, less than 2% of the total number of students enrolled annually enroll in universities in agriculture, forestry and fisheries; some traditional agriculture majors have few or even no students enrolled; workers in the agriculture, forestry and fisheries sector account for about 26% of the total number of workers in the country... the number of trained workers with degrees and

certificates reached a very low rate of about 4.6%; the training is not evenly organized, not covering all key production areas; the team of managers with strategic thinking, scientists and leading experts who are able to advise and advise on regional and international policies is still small, etc (CPC&HU, 2024). Additionally, according to statistics from the Ministry of Education and Training, in 2022, the country will have more than 521,000 students enrolled in 25 training fields. In which, only 7,100 students were enrolled in agriculture, forestry, fisheries, and veterinary medicine, accounting for 1.37% (Van Nhi, 2023). The reason for the above situation is that for sectors in the fields of agriculture, forestry and fisheries, the State's investment policy for these sectors is not strong enough; lack of information and clear career orientation; Many students and parents still have the notion that these industries do not bring high income; self-financing at universities training for the agricultural sector can be very detrimental to enrolment, etc. Therefore, without a strong and drastic solution, this practice has a very negative impact on human resources in the fields of agriculture, forestry and fisheries, risking not achieving the goals of industrialization and modernization of agriculture and rural areas.

4.2 Solutions to Perfect

In order for policies and laws on planning and plans for human resource development in the field of agriculture to become the most important policy in ensuring the development of a sustainable agriculture in Vietnam in the upcoming time, it is necessary to develop, perfect and improve the effectiveness of strategies for planning and plans for agricultural human resource development in general and high-quality agricultural human resources in particular to meet the requirements of promoting the country's industrialization, modernization and international integration. Accordingly, the strategy for planning and plans for agricultural human resource development in general and high-quality agricultural human resources in particular is an important and legal basis for agricultural human resource development. Specifically, the following content requirements must be guaranteed:

First, it is necessary to reorient planning and plans for human resource development in the field of agriculture towards climate change adaptation, emission reduction, resilience and sustainable productivity growth of the agricultural sector. Because currently, the domestic agricultural market is being affected by the international agricultural market, when it has just faced economic and political crises like the war in Ukraine, which has further disrupted the international market and value chain for both agricultural goods and main inputs, especially energy and fertilizers; must be facing the challenges of climate change affecting agricultural production like problems of the extreme weather (droughts, floods, heat and storms). Additionally, in the face of the United Nations' demand for providing adequate, affordable, safe and nutritious food for the growing global population; provide livelihoods for human resources; and take necessary measures to increase the environmental sustainability of the industry.

Second, encouraging agricultural human resources to develop business skills and human capital, promoting innovation and promoting the application of methods and technologies to enhance resilience towards a sustainable agriculture in the future. Human capital development is considered the main source of knowledge and skills in the process of agricultural innovation. Without technical knowledge, no technology-based management process has been detrimental to their competitiveness.

Third, building specific capacity for each subject group. For example, for the agricultural extension team: human resource planning for agricultural extension, job analysis, recruitment and training of agricultural extension staff, performance evaluation, supervision, management of rewards and incentives, improvement of the quality of working life and organizational development for agricultural extension. The resource plan forecasts the future staffing needs of extension organizations. With rapid changes in technology, farmers' needs, the market situation and the competitive environment, planning for human resources has become an important task and a full method of encouragement. A human resource plan includes plans for future personnel needs, their required skills, employee recruitment, and personnel development. Forecasting human resources and testing human resources are the two most important components of this type of setup plan. Human resource forecasting will come to anticipate an organization's future demand for the quantity, type, and quality of different types of employees. The assessment of future needs must be based on the analysis of current and future policies and growth trends. Forecasting techniques include formal expert surveys, Delphi techniques, analytical statistics, budget analysis and planning, and computer models. Examining and reporting human resources on skills, abilities and performance of all employees in an organization.

Forth, the Ministry of Agriculture and Rural Development needs to coordinate with relevant ministries and branches to evaluate the current status of agricultural human resources to determine advantages, difficulties and specificities

of agricultural human resource development; On that basis, forecast the development demand in terms of quantity, quality and structure of appropriate agricultural human resources. This is the basis for developing and perfecting the master plan, determining perspectives, objectives, directions and solutions to develop agricultural human resources to meet the requirements and tasks of agricultural and rural development in our country in the upcoming time.

Fifth, regulatory reform is a continuous and evolving process to address technological developments and changes in input and output markets, as well as to meet international obligations. The recently improved regulatory framework is expected to improve the food safety and quality situation in the province for the benefit of the livestock sector as a whole, although it is too early to assess its impact.

Sixth, there is a strategy to propagate and change the society's perception of the position and role of the agricultural sector and the development of human resources for agricultural and rural development; agricultural occupation should be recognized as an official occupation and employees engaged in agricultural occupations should enjoy the same rights and obligations as employees in other occupations (paid according to professional qualifications like other professions, entitled to participate in social insurance, health insurance, unemployment insurance, PIT payment). This is a viewpoint that needs implementing synchronously and consistently, and including in the Party and State's policies and laws on labor force development in the upcoming period.

Seventh, in the process of planning, it is necessary to have regulations related to the salary and employment mechanism for agricultural apprentices more reasonably, and it is necessary to have a mechanism to bind agricultural enterprises in recruiting and employing trained laborers, considering agriculture as a business with mandatory conditions on technical regulations (to establish and maintain operations) to ensure the safety and quality of agricultural products, ensure human health and life along with the welfare of animals and plants. Thus, it will reduce the difference between labor in different industries and attract agricultural apprentices.

Eighth, additionally, the current agricultural human resource development planning and plans wanting to have a high-quality and equal agricultural workforce require planning for the system of training, research and technology transfer facilities. Mobilizing private sector participation and international cooperation in human resource development, Applying digital transformation in agricultural human resource development, etc. In the process of planning and plans for agricultural human resource development, having a clear roadmap for fundamentally restructuring the system of agricultural vocational training institutions based on completing training programs close to market demand is necessary.

Ninth, in planning and plans for agricultural human resource development, the legal factor to develop agricultural human resources is also very important. Hence, there needs to be a roadmap plan for improving institutions and policies for developing agricultural human resources: Completing, amending and supplementing documents to synchronize regulations among Laws: Law on Vocational Education, Law on Education, Law on Employment and Labor Code. Implementing activities to evaluate and summarize Law on Vocational Education to amend and supplement Law on Vocational Education in accordance with the new context and stage of development; Completing and amending Law on Cooperatives 2012 in the direction of supplementing the codification of vocational training and developing vocational training funds in agricultural cooperatives.

Tenth, it is necessary to soon promulgate agricultural human resource development plans by 2030, with a vision to 2045 in accordance with the socio-economic development plans of each sector, region and locality in the direction of openness, streamlining, suitability, quality and efficiency.

Eleventh, it is necessary to develop a set of assessment indicators on the quality of agricultural human resources (Human Resource Index - HRI) to serve as a basis for managing and monitoring agricultural human resources when planned. Clearly, the role of agricultural human resources decisively influences crop/livestock performance and the outcome of the production process. Evaluating the quality of agricultural human resources needs to rely on two indicators: labor productivity and profit per worker. To have those two indicators, it is necessary to ensure well in: human resource management activities in agriculture, including recruitment, selection, training, evaluation, motivation, compensation and welfare system, and discipline labor; Evaluate the feasibility of human resource management activities; Analysis of the relationship between agricultural human resource management activities and risks at different levels, such as production risks and legal risks, at the individual level, at the level of the working group and at the level of the enterprise; Comparison of agricultural human resource management activities with those in other sectors; Analysis of the growing demand for human resources management skills for agricultural

management staff and appropriate management behaviours at the different levels of decentralization and the consequences for managerial training.

5. Conclusion

From the perspective of political and legal ideology, related to the development of the agricultural sector in general and the development of agricultural human resources in particular, the Party and the State focus on and are very concerned. Therefore, during the past time in Vietnam, there have been several important policies and laws issued such as: Resolution No. 19-NQ/TW dated June 16th, PCC (2022) on agriculture, farmers, and rural areas by 2030, with a vision to 2045 of the 13th Party Central Committee; Decision No. 1058/Decision-TTg dated September 14th, 2023 of the Prime Minister approving the Strategy for rural industry development by 2030, with a vision to 2045, etc. Besides, in fact, in front of the context and challenges in the new situation such as: The application of high technology, information technology 4.0 will rapidly expand the scale of applications in production; The mechanization of agriculture under the impact of technology 4.0 will also have new developments, and the efficiency of using machines will be much higher than today; The pressure of climate change and resource decline will require industry human resources to make changes and adaptations such as increasing the use of technology, reducing resource use, reducing emissions, increasing resilience, increasing flexibility, and adapting to climate change, etc. Thus, to build a team of agricultural workers who are qualified, dynamic, creative and ready to meet the challenges of modern agriculture, having a strategy and project for planning and plans for human resources in agriculture in Vietnam in the new period of 2025-2030 is required. It is essential to innovate training and development of agricultural human resources; implement policies to attract and retain talent in the agricultural sector; develop a support system for agricultural entrepreneurship and innovation; and apply technology to the management and development of human resources.

Conflict of Interest: None declared.

Ethical Approval: Not applicable.

Funding: None.

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APPENDIX

Table 1: Specific human resource training planning in the entire agricultural sector according to Decision No. 2534/QD-BNN-TCCB

Time	Contents of the sector-wide human resource training planning
In the period of 2011 – 2015	To train a total of 682,750 people at all levels from elementary to doctorate, of which: - Forestry: 68.000 people - Agriculture: 412.750 people - Irrigation: 123.000 people - Fisheries: 79.000 people...;
In the period of 2016 – 2020	To train a total of 556,800 people at all levels from elementary to doctorate, of which: - Forestry: 65.300 people - Agriculture: 320.200 people - Irrigation: 70.300 people - Fisheries: 101.000 people

Table 2: Specific human resource structure training planning in the entire agricultural sector according to Decision No. 2534/QD-BNN-TCCB

Time	Contents of the sector-wide human resource training planning
In the period of 2011 – 2015 (On average, 136.550 people are trained annually)	<p>1. On average, 300 PhDs are trained each year, of which:</p> <ul style="list-style-type: none"> - Forestry: 40 doctors/year, - Agriculture: 130 doctors/year, - Fisheries: 50 doctors/year, - Irrigation: 80 doctors/year; <p>2. Training 2.720 masters/year, of which:</p> <ul style="list-style-type: none"> - Forestry: 260 masters/year, - Agriculture: 1.680 masters/year, - Irrigation: 480 masters/year, - Fisheries: 300 masters/year; <p>3. Training 14.480 engineers/year, of which:</p> <ul style="list-style-type: none"> - Forestry: 1.780 engineers/year, - Agriculture: 11.390 engineers/year, - Irrigation: 3.250 engineers/year, - Fisheries: 2.060 engineers/year; <p>4. To train 26.500 people at the level of colleges and vocational colleges/year, of which:</p> <ul style="list-style-type: none"> - Forestry: 2.540 people/year, - Agriculture: 16.270 people/year,

	<ul style="list-style-type: none"> - Irrigation: 4.650 people/year, - Fisheries: 2.950 people/year; <p><i>5. To train 35.350 people at the professional intermediate and vocational intermediate levels/year, of which:</i></p> <ul style="list-style-type: none"> - Forestry: 3.390 people/year, - Agriculture: 21.840 people/year, -Irrigation: 6.200 people/year, - Fisheries: 3.920 people/year; <p><i>6. Training 57.200 technical staff at the elementary level/year, of which:</i></p> <ul style="list-style-type: none"> - Forestry: 5.500 people/year, - Agriculture: 35.250 people/year, - Irrigation: 10.070 people/year, - Fisheries: 6.380 people/year.
In the period of 2016 – 2020 (Average annual training implementation: 111.355 people)	<p><i>1. On average, 185 PhDs are trained each year, of which:</i></p> <ul style="list-style-type: none"> -Forestry: 35 doctors/year, - Agriculture: 60 doctors/year, - Irrigation: 50 doctors/year, -Fisheries: 40 doctors/year; <p><i>2. Training 2.520 masters, of which:</i></p> <ul style="list-style-type: none"> - Forestry: 260 masters/year, - Agriculture: 1.500 masters/year, -Irrigation: 410 masters/year, -Fisheries: 350 masters/year; <p><i>3. Training 18.000 engineers, of which:</i></p> <ul style="list-style-type: none"> - Forestry: 1.940 engineers/year, - Agriculture: 10.330 engineers/year, - Irrigation: 3.080 engineers/year, - Fisheries: 2.650 engineers/year; <p><i>4. Training 25.125 bachelors at the college level, of which:</i></p> <ul style="list-style-type: none"> - Forestry: 2.595, - Agriculture: 14.900, -Irrigation: 4.100, - Fisheries: 3.530; <p><i>5. Training 28.550 technicians at the intermediate level, of which:</i></p> <ul style="list-style-type: none"> - Forestry: 3.240, - Agriculture: 15.760, -Irrigation: 5.130, - Fisheries: 4.420 <p><i>6. Training 36.975 technicians at the primary level, of which:</i></p> <ul style="list-style-type: none"> - Forestry: 4.210, - Agriculture: 20.355, - Irrigation: 6.670, - Fisheries: 5.740

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