CHAPTER 23 **CROPLIFE VIETNAM**

OVERVIEW

Early in 2022, Prime Minister Pham Minh Chinh signed Decision 150[1] approving "The 2021 - 2030 Strategy for Sustainable Agricultural and Rural Development, with a Vision to 2050." This strategy aims to realise the Resolution of the 13th Party Congress and is integrated with Vietnam's commitment to the United Nations Food Systems Summit and the 26th United Nations Climate Change Conference of the Parties (COP 26).[2]

For the first time ever, a strategy of developing the agriculture sector with the promotion of innovation and a clear development orientation has been touted. It strongly states the need to transform agriculture from focusing on productivity alone to prioritising quality, efficiency, and adapting to climate change. This transformation will also focus on solving the current limitations and, at the same time, providing solutions to promote more sustainable development for Vietnam's agricultural and rural areas. The goal is that, by 2050, Vietnam will be one of the leading agricultural countries in the world. Vietnam will rise with a modern, efficient, and environmentally-friendly agricultural product processing industry.[3]

While Vietnam's smallholder farmers are under increasing pressure to produce more sufficient food for a growing population, there are also promising opportunities for Vietnam to strengthen its position amongst global agricultural players. CropLife Vietnam and our member companies applaud and fully support the Government's Strategy for Sustainable Agricultural and Rural Development. We believe that innovation in agriculture is key to allowing farmers to produce diverse, affordable, and nutritious food while also reducing emissions, halting biodiversity loss, and improving livelihoods in rural communities. To achieve this, farmers need to be given timely and equitable access to the tools they need to grow efficiently on the farm. We also believe a systematic and holistic approach is needed to reinforce policies that encourage agriculture innovation that is supported by a transparent, science-based regulatory system consistent with international best practice.

The year 2023 marked a crucial year in CropLife's collaboration with local partners in promoting innovation and responsible practices in agriculture. CropLife Asia and CropLife Vietnam signed important documents of cooperation on plant protection and biotech with relevant agencies under the Ministry of Agriculture and Environment (MOAE).

According to the MOU on the implementation of the 2023 - 2028 Sustainable Pesticide Management Framework (SPMF),[4] the Plant Production and Protection Department (PPPD) and CropLife Vietnam signed the 2024 Work Plan,[5] which marked the first anniversary of the programme's implementation. SPMF is among CropLife International's key projects prioritised for implementation in various countries in Africa, Asia, and Latin America. Its comprehensive, long-term, and overall scale of impact aims to facilitate the transformation of the pesticide management and use system towards sustainability. Vietnam is among the three selected countries for this programme in Asia, along with Thailand and Indonesia. The programme aims to provide farmers with access to the best crop protection technologies and the most efficient and sustainable farming practices, including adequate measures to avoid cross-contamination, while also promoting cooperation and partnership with stakeholders in the value chain. The five-year MOU, together with the first year of implementation, further demonstrates CropLife's commitment to supporting MOAE and the PPPD in the transition to more sustainable food and environmental systems that

1 Decision 150/QD-TTg dated 28 January 2022 of the Prime Minister on approving the sustainable agriculture and rural development strategies for the period 2021 - 2030, with a vision toward 2050 (Decision 150).

2 "Vietnam pledges to realise commitments at COP 26" Vietnam News, 8 December 2021. Available at: <https://vietnamnews.vn/society/1095099/vietnam-pledges-to-realise-commitments-at-cop26.html>, last accessed on 2 July 2024.

3 "Activate innovative thinking to develop 'agriculture - countryside – farmer'" *Nong Nghiep Vietnam*, 17 February 2022. Available at: <https://vietnamagriculture.nongnghiep.vn/activate-innovative-thinking-to-develop-agriculture--countryside--farmer-d315865.html>, last accessed on 1 July 2024.

4 "Signing Ceremony of the Memorandum of Understanding on the Implementation of the Sustainable Pesticide Management Framework Programme" *Ministry of Agriculture and Rural Development Portal*, 12 July 2023. Available at: <https://mard.gov.vn/Pages/le-ky-ket-ban-ghi-nho-hop-tac-thuc-hien-chuong-trinh-khung-quan-ly-thuoc-bao-ve-thuc-vat--.aspx>, last accessed on 15 July 2024.

5 "Plant Protection Department and CropLife Vietnam Sign Agreement to Implement the 'Sustainable Pesticide Management Framework' Programme in 2024" Plant Protection Department, 11 January 2024. Available at: <https://www.ppd.gov.vn/tin-moi-nhat/cuc-bao-ve-thuc-vat-va-croplife-vn--ky-ket-trien-khai-chuong-trinh--khung-quan-ly-thuoc-bao-ve-thuc-vat-ben-vung-nam-2024.html>, last accessed on 25 July 2024.

protect human health, conserve the environment, and improve the quality of agricultural products.

Through this partnership, CropLife will support the industry to maximise its efforts, promote the implementation of frameworks for the use and management of sustainable plant protection solutions, and accelerate the application of scientific innovation in agriculture in Vietnam. The main tasks in 2024 were to: (i) Review, assess, and improve policies on management and use of pesticides in a scientific, advanced manner and in harmony with international standards and local regulations; (ii) promote the application of advanced solutions on pesticides; (iii) provide platforms to train, coach, and create innovative approaches to enhance the effectiveness of the responsible, safe, and effective use of pesticides; (iv) strengthen communication on the role of pesticides, and; (v) apply new solutions and cooperation results between the PPPD and CropLife Vietnam in the implementation of a sustainable pesticide management framework.

In October 2023, CropLife Asia and the Department of Science, Technology, and Environment of MOAE signed an MOU on promoting research, development, and application of advanced solutions and biotechnologies in agriculture for the 2023-2030 period.[6] The MOU states that the two parties will promote communication, information sharing, policy consulting, training, and in-depth scientific seminars to update and encourage the application of solutions and achievements of advanced biotechnology and innovation in agriculture. It also states that the parties will help farmers access and apply new scientific advances in agriculture for the sustainable agricultural development of Vietnam. This MOU marked a new stage of cooperation in promoting scientific solutions in agriculture, especially during the implementation of new Government resolutions and policies promoting the application of biotechnology.

To realise and consolidate the commitments in the cooperation programmes above, in this chapter, we will discuss some priority issues and recommendations to support and promote the access of Vietnam's smallholder farmers to new plant science solutions and advanced technologies in an effective and responsible manner – aiming towards modern, sustainable, and responsible agricultural cultivation.

I. PROMOTING SCIENCE AND EVIDENCE-BASED MANAGEMENT SYSTEMS AND DECISION-MAKING FOR AGRICULTURAL INPUT INNOVATIONS

Relevant authorities: The National Assembly; the Office of the Government (GOO); and the Ministry of Agriculture and Environment (MOAE)

1. Review and amend the Law on Plant Protection and Quarantine (2013) and Circular 21/2015 to consolidate and implement a scientific and sustainable legal framework for pesticides

Issue description

CropLife Vietnam is a strong supporter of the FAO-WHO International Code of Conduct on Pesticide Management,[7] especially in the process of developing and implementing a framework for the registration, use, and management of pesticides, including in Vietnam. In early 2024, the Prime Minister issued Decision 53[8] on reviewing and supplementing the Law on Plant Protection and Quarantine (the Law on Plant Protection). This policy is particularly suitable in the context of domestic agricultural development and the current trend of development and application of science in agriculture.

6 "CropLife Asia Supports the Development of Agricultural Science and Technology Applications in Vietnam" *Government Newspaper*, 18 October 2023. Available at: <https://baochinhphu.vn/croplife-chau-a-dong-hanh-phat-trien-ung-dung-khoa-hoc-cong-nghe-nong-nghiep-viet-nam-10223101818161127 3.htm>, last accessed on 25 July 2024.

7 "Industry Statement on the International Code of Conduct on Pesticide Management" *CropLife Vietnam*, 13 June 2024. Available at: <https://croplifevietnam.org/tuyen-bo-cua-nganh-ve-bo-quy-tac-ung-xu-quoc-te-ve-quan-ly-thuoc-bvtv.html>, last accessed on 25 July 2024.

8 Decision 53/QD-TTg dated 15 January 2024 of the Prime Minister on the issuance of the 2024 Work Program of the Government and the Prime Minister (Decision 53).

The Law on Plant Protection and other important regulations (specifically Circular 21[9]) on the registration, use, and management of pesticides need to be improved to encourage innovation and accelerate the application of advanced plant protection products. These revisions should be based on risk assessment, quality improvement, and the promotion of the roles and responsibilities of relevant parties.

Recommendations

Following the direction of the MOAE as well as PPPD, in May 2024, we submitted comments on the review and revise of the above-mentioned Law on Plant Protection. Some key points are as follows:

- Supplement and clarify special terms and definitions related to new generation pesticides and the application of new technology. With increasingly high levels of R&D of plant protection solutions, and the diversity of the transfer and application of plant protection solutions/pesticide products on the market, clear and specific definitions are crucial to meet practical needs and increase effectiveness in the management and implementation of regulations.
- Consider changing the management of pesticides from the current annual lists to registration licenses.
- Consider clarifying and specifying some criteria for assessing the safety of pesticides for human health, the environment, and the ecosystem. These should be based on internationally recognised risk assessment criteria instead of hazard assessment when considering the removal of pesticides and the registration process for products that may pose risks to the environment and human health. Risk assessment should only be applied to finished pharmaceutical products and not to active ingredients.
- Create favourable conditions for pesticide testing/registration to supplement/explain before the council makes the final decision.
- Apply stricter regulations in controlling and penalising violations when pesticides are not used as recommended and to the trading and use of fake pesticides and those with ingredients not matching their certificate and packaging.
- Supplement regulations for trading pesticides on digital/e-commerce platforms and for using pesticides according to a rotation mechanism.

Alongside our specific contributions, within the framework of the cooperation programmes between CropLife Vietnam and the PPPD, we propose to continue implementing various technical support activities for the review and revision process as follows:

- Coordinate on organising and introducing domestic and foreign experts to conduct capacity-building programmes on pesticide risk assessment and methods to assess and manage new generation pesticide products.
- Hold scientific and technical seminars and support the organisation of policy consultation workshops on a sustainable framework for pesticide management.
- Share advanced, effective management models from around the world which are suitable for the agricultural conditions and farming practices of Vietnam.
- Enhance the quality and effectiveness of training activities for farmers and agents in the safe, effective, and responsible use of pesticides through traditional (face-to-face classes and training on some key crops) and digital approaches (online training platforms - e-learning for farmers).
- Share models of pesticide quality management and, handling fake pesticides in from around the world and as well as supporting the organisation of consultation conferences for the reviewing and revision of policies.

9 Circular No. 21/2015/TT-BNNPTNT dated 8 June 8 2015 of the Ministry of Agriculture and Rural Development on the Management of Pesticides (Circular 21).

2. Maintain the approval process for genetically modified (GM) crops in line with current regulations

Issue description

Vietnam has a relatively strict and scientific legal framework on GM crops. It is considered an advanced model to which many countries in the region and the world can refer. To date, MOAE has issued certificates of food/feed approval for GM products for maize, cotton, soybeans, canola, etc.[10] Vietnam also officially authorised the cultivation of GM maize in 2015.[11]

After almost 10 years of cultivation in Vietnam, GM maize has had positive socio-economic effects for maize farmers. These include more sustainable farming habits and promoting and maintaining domestic maize production, helping to reduce the need to import animal feed. Farmers have accepted this new crop breeding technology as well as its suitability in agricultural production in Vietnam. Many reports show gradual annual increases in the area and rate of GM maize cultivation compared to traditional hybrid maize, according to the PPPD, and the Vietnam Seed Trade Association. In 2022, the total cultivation area of GM maize in Vietnam was 220,000 hectares, an increase of 21 per cent on 2021 and representing about 26.5 per cent of the total maize area in the country. The total cumulative area of GM maize cultivation from 2015 to 2022 was more than 700,000 hectares.[12]

Potential gains/concerns for Vietnam

GM maize produce higher yields than conventional varieties of the same genotype, as they retain the yield potential of the original while effectively controlling pests. Typically, a yield of 30.4 per cent is expected, and production costs are reduced from USD 26.47/hectare to USD 31.30/hectare. GM technology is a major factor in the reduction of pesticide use. On average, farmers earn 4.5 - 5 million VND/hectare more in profit from GM maize than non-GM maize.[13]

Recommendations

It is crucial to continue to enforce the legal framework for assessing GM products to maximise the benefits of biotechnology and the Resolution on the development and application of biotechnology for Vietnam's sustainable development while complying with the existing legal system. Therefore, we would like to make the following recommendations:

- Evaluate and license GM crop products for food and feed as mentioned under current regulations to limit trade disruptions related to these products.
- Amend and supplement some technical instructions (VCU and DUS standards) for licensing new GM maize varieties alongside recognised superior and new background varieties. The revision of these standards is necessary and consistent with the Law on Crop Production. This would address technical obstacles for businesses registering and marketing different maize varieties and diversifying the source and choice of varieties to suit each cultivation condition. It would also promote the application of improved maize varieties created by genetic transformation as well as by gene editing and many new hybrids applying biotechnology in the future.

10 "Biosafety Management of Genetically Modified Organisms, Genetic Materials, and Products of Genetically Modified Organisms in Vietnam" *Legal Department Information Portal*, 9 August 2020. Available at: <https://vupc.monre.gov.vn/bao-ton-va-su-dung-ben-vung-da-dang-sinh-hoc/1646/quan-ly-an-toan-sinh-hoc-doi-voi-sinh-vat-bien-doi-gen-mau-vat-di-truyen-va-san-pham-cua-sinh-vat-bi?>, last accessed on 30 September 2024.

11 "Genetically Modified Maize Officially Cultivated in Vietnam" *Vietnam News Agency*, 18 March 2015. Available at: <https://baotintuc.vn/thoi-su/ngo-bien-doi-gen-chinh-thuc-duoc-trong-o-viet-nam-20150318173153825.htm#:~:text=Chi%E1%BB%81u%2018%2F3%2C%20B%E1%BB%99%20N%C3%B4ng,ph%E1%BB%95%20bi%E1%BA%BFn%20t%E1%BA%A1i%20Vi%E1%BB%87t%20Nam>, last accessed on 30 September 2024.

12 "Biotech Crops – 10 Years in Vietnam" *Nong nghiep Vietnam*, 5 October 2024. Available at: <https://nongnghiep.vn/video/cay-trong-cong-nghe-sinh-hoc--10-nam-ben-re-tai-viet-nam-tv402591.html>, last accessed on 24 January 2025.

13 "10 Years of Genetically Modified Maize Cultivation: How Has Corn Yield Improved in Vietnam?" *Dan Viet*, 9 October 2024. Available at: <https://danviet.vn/10-nam-giong-ngo-chuyen-gen-duoc-dua-vao-trong-nang-suat-ngo-o-viet-nam-duoc-cai-thien-ra-sao-20241006181552426.htm>, last accessed on 24 January 2025.

II. CONSOLIDATE AND INNOVATE POLICIES ENCOURAGING THE APPLICATION OF SCIENTIFIC ADVANCES IN ACCORDANCE WITH THE CURRENT CONTEXT AND IN HARMONY WITH INTERNATIONAL STANDARDS

Relevant authorities: The Ministry of Agriculture and Environment (MOAE); and the Ministry of Science and Technology (MOST)

1. Promote the development and trade of biological pesticides

Issue description

Research, development, and use of biological pesticides is growing worldwide. Globally, in addition to over 600 synthetic pesticide active ingredients, there are about 300 biological pesticide active ingredients and organisms. North America has the highest rate of biological pesticide application. In Europe, biological pesticide use is growing, driven by the Farm to Fork Strategy's goal to cut chemical pesticide use by 50% by 2030.[14] In terms of popularity, biological pesticides account for the largest proportion of biological crop protection products. Meanwhile, natural chemical pesticides account for one-third of the biological crop protection market. From 2005 until today, the average annual growth of the biological pesticide market was 10 per cent. Meanwhile, the rate of chemical pesticides fell by 3 per cent per year.[15]

Biological pesticides are considered an effective tool in the Integrated Pest Management (IPM) programme when combined with other agricultural chemical products, farming methods, weather management, and input factors to ensure optimal productivity and quality in pest control. Biological pesticides are particularly effective early in the season, when the number of pests is low, and late in the season when residue control and Pre-Harvest Interval (PHI) is a priority. Limiting the development of resistance is also an advantage and outstanding contribution of biological pesticides.

In Vietnam, to specify policies on biological pesticides, the PPPD created the "Development of production and use of biological pesticides for the 2021-2025 period" programme. During management, various preferential policies on the registration of biological rather than chemical pesticides have been issued and implemented.

Recommendations

- Supplement specific definitions and provide classifications for biological pesticides: The aim should be to clearly define the types of biological pesticides, thereby providing specific legal guidelines and management procedures for each. This would allow for the effective management and use of biological pesticides as well as quality control.
- Develop a registration process dedicated to biological pesticides: Due to the fundamentally different nature and characteristics of biological and chemical pesticides, a dedicated evaluation and registration process for biological pesticide products, along with specific data requirements and appropriate scientific evaluation processes, will increase the accessibility of these products in the Vietnamese market and favourably facilitate management and operations.
- CropLife Asia and CropLife Vietnam affirm our commitment to working with the PPPD as well as relevant stakeholders to promote the application of biological pesticides in Vietnam, with the common goal of realising the policies stated in the "Project on development of production and use of biological pesticides to 2030, vision to 2050" approved by MOAE at the end of 2023.

14 "Farm to Fork Targets – Progress" *European Commission*. Available at: <https://food.ec.europa.eu/plants/pesticides/sustainable-use-pesticides/farm-fork-targets-progress_en#:~:text=The%20Farm%20to%20Fork%20and,more%20hazardous%20pesticides%20by%202030>, last accessed on 15 February 2025.

15 "Development of the Production and Use of Biological Pesticides" *Ministry of Agriculture and Rural Development Information Portal*, 3 November 2023. Available at: https://mard.gov.vn/Pages/phat-trien-san-xuat-va-su-dung-thuoc-bao-ve-thuc-vat-sinh-hoc.aspx, last accessed on 15 February 2025.

2. Allow the registration of pesticides using the same new active ingredient under intellectual property protection and registered by more than one company

Issue description

The costs and time needed to develop a new active ingredient are increasing.[16] It is increasingly challenging to perfect and introduce a new generation of active ingredients that fully meet the criteria for effectiveness and evaluating safety and sustainability according to regulations. The cost and time of discovering and developing a pesticide active ingredient is now estimated at around USD 301 million over 12.3 years.

R&D companies in the pesticide industry tend to cooperate, leverage resources, and share ideas with the common goal of creating many new generation products that are safe and highly effective, shortening the time to access new products for growers. This cooperation allows companies to be more flexible in developing new products through new active ingredient blends with superior active ingredients from other companies. This approach will bring more advanced solutions to meet agricultural production needs.

Potential gains/concerns for Vietnam

In terms of management, more and more countries are taking a risk-based management approach. This is particularly the case for the sharing of active ingredients. Many countries have encouraged this by allowing companies to transfer, co-register, and trade products with active ingredients under protection, if those companies can prove a technology transfer/sharing contract. This trend is not only seen in the pesticide industry but is also popular in the pharmaceutical sector.

R&D of biological pesticides is growing, and there is strong potential for application in the near future. CropLife members have increased their investment in biopesticide R&D activities from USD 16 million to USD 26 million, an increase of 62.5 per cent.

The above trends are consistent with the recent direction of MOAE and the PPPD. Introducing and using safer, more sustainable new generation products is intended to gradually replace old generation active ingredients. This has also been one of the fundamental focuses in the cooperation between CropLife Vietnam and the PPPD in recent years.

Recommendation

- Accept the dossier and allow the registration of new generation pesticide products using an active ingredient jointly developed by two companies. The companies will provide full documentation/evidence of their cooperation and use of the active ingredients in the development, registration, and trade of separate finished products.

3. Early legal guidance on the registration and commercialisation of gene-edited crops – promoting the application of biotechnology in agriculture

Issue description

Biotechnology in agriculture is one of the priorities of the Government in its sustainable agricultural development strategy. This encourages the use of gene editing technology on crops to create high-quality crop varieties resistant to pests and diseases and adaptable to adverse weather conditions. In recent years, scientific institutes and businesses in Vietnam have implemented R&D programmes to improve crop traits using gene editing technology. However, Vietnam lacks clear guidelines for gene edited crops, causing the use and commercialisation of these products in Vietnam to lag behind other countries.

16 "Time and Cost of Production - Development - Registration of Pesticides" *AgBioInvestor*, February 2024. Available at: <https://croplifevietnam.org/wp-content/uploads/2024/08/VNE_Time-and-Cost-To-Market-CP-2024.pdf > last accessed on 15 February 2025.

Potential gains/concerns for Vietnam

This delay in issuing legal guidance for gene edited crops will result in disadvantages for the country. Specifically, it will:

- Slow the application of scientific innovations and improvements in agriculture.
- Reduce access for farmers to enhanced crop varieties and for consumers to new, better-quality food sources.
- Limit trade competitiveness in global markets.
- Fail to leverage the benefits of existing investment in resources and research activities on domestically produced gene edited crops.

Recommendations

- Complete a specific legal framework for gene-edited crops and crop products made by improved breeding methods. This framework needs to be science-based, predictive, and harmonised with international standards to optimise the potential of technology while ensuring the effective and sustainable application of these solutions in general agricultural development.
- Do not evaluate and regulate plant varieties produced by improved methods differently from conventional plants if they are equivalent to or indistinguishable from varieties produced by conventional hybridisation.
- Regulate plants just like those produced by conventional breeding methods if: (i) the final product produced by gene editing technology (gene-edited plants) does not contain a new combination of genetic material; (ii) the final plant product carries only a stable insertion of genetic material inherited from varieties within the same species, or; there is any form of mutation involved.
- Refer to the advanced models of countries such as EU, Canada, Argentina, Japan, and ASEAN member states. Regulations on gene editing in the Philippines and Singapore provide many advantages and are models that could be applied in Vietnam. The application of these regulations optimises the effectiveness of gene editing technology in sustainable agricultural development. This is of crucial importance in light of global environmental, climate, and economic challenges.

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