CHAPTER 23 **CROPLIFE VIETNAM**

OVERVIEW

Early in 2022, Prime Minister Pham Minh Chinh signed Decision No. 150/QD-TTg[1] approving "The 2021 - 2030 Strategy for Sustainable Agricultural and Rural Development - vision to 2050".[2] The strategy helps to realize the orientation of the Resolution of the 13th Party Congress and is integrated with Vietnam's commitment to the UN Food Systems Summit and the 26th UN Climate Change Conference of the Parties (COP26).[3]

For the first time ever, the strategy of developing the agriculture sector with the promotion of innovation and clear development orientation has been touted. It strongly states the need to transform agriculture from focusing on productivity alone to prioritizing quality, efficiency, and adapting to climate change. This transformation will also focus on solving the current limitations, and at the same time providing orientation solutions to promote more sustainable development for Vietnam's agricultural and rural areas. The goal is that by 2050 Vietnam will become one of the leading agricultural countries in the world. Vietnam will rise with a modern, efficient, and environmental-friendly agricultural product processing industry.[4]

In the international context, the "2022 State of Food Security & Nutrition in the World" (SOFI) by the United Nations details the challenge of feeding a hungry world is now further exacerbated by climate change, COVID-19, and conflict – with the ongoing war in Ukraine resulting in implications to the global food supply, impacting the state of food security and nutrition for many countries directly and indirectly.[5]

The UN Food and Agriculture Organisation (FAO) also flagged risks to food security from high food and agricultural input prices. The global food import bill is on course to hit a new record of USD1.8 trillion this year, but higher prices and transport costs rather than volumes account for the bulk of the expected increase, according to a new report released by FAO in June. Worryingly, FAO is warning that many vulnerable countries are paying more but receiving less food.[6] To drive the implementation of FAO's Strategic Framework 2022-2031, which steers FAO's efforts to transform agrifood systems and promote a food-secure world for all, the organization recently endorsed new 10-year strategies on Climate Change and Science and Innovation.[7] FAO sees science and innovation as a powerful engine to transform agrifood systems and end hunger and malnutrition.

Considering both local and international contexts, 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 our position amongst global agricultural players.

CropLife Vietnam and our member companies applaud and are fully supportive of Vietnam's Government Strategy for Sustainable Agricultural and Rural Development. We do believe that innovation in agriculture is key to allowing farmers to produce diverse, affordable, and nutritious food while at the same time reducing emissions, halting biodiversity loss and improving rural community livelihoods. 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,

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

2 "Strategy for Sustainable Agriculture and Rural Development in the 2021-2030 period has been approved", *MARD Website*, 14 February 2022. Available at: <https://www.mard.gov.vn/en/Pages/strategy-for-sustainable-agriculture-and-rural-development-in-the-2021-2030-period-has-been-approved.aspx>, last accessed on 01 July 2022.

3 "Vietnam plegdes to reaise 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 02 July 2022.

4 "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 01 July 2022.

5 "In Brief to The State of Food Security and Nutrition in the World 2022. Repurposing food and agricultural policies to make healthy diets more affordable", *FAO, IFAD, UNICEF, WFP and WHO, Rome, FAO*. 2022.

6 "New UN Food Outlook report: World's most vulnerable are paying more for less food", *FAO website*, 9 June 2022. Available at: <https://www.fao.org/newsroom/detail/new-un-food-outlook-report-world-s-most-vulnerable-are-paying-more-for-less-food/en>, last accessed on 10 July 2022.

7 "FAO Council endorses new 10-year strategies on Climate Change and on Science and Innovation", *FAO website*, 14 June 2022. Available at: <https://www.fao.org/newsroom/detail/fao-council-10-year-thematic-strategies-climate-change-science-innovation/en>, last accessed on 10 July 2022.

science-based regulatory system consistent with international best practices.

In this chapter, we will discuss some key recommendations to support and promote Vietnam's smallholder farmers' access to new plant science solutions and advanced technologies in effective and responsible manners.

I. STRENGTHEN SCIENCE AND EVIDENCE-BASED DECISION-MAKING ON PLANT SCIENCE PRODUCTS AND NEW AGRICULTURE TECHNOLOGIES

Relevant authorities: Office of the Government, Ministry of Agriculture and Rural Development (MARD), Ministry of Industry and Trade (MOIT), Ministry of Natural Resources and Environment (MONRE).

Issue description

Build and conduct multi-stakeholders collaboration program to promote Sustainable Pesticide Management Framework to accelerate the transition to sustainable food systems

During the past 10 years, along with a long-term commitment to invest in R&D, we have proudly partnered with a host of Vietnamese Government agencies, research and development institutions, and academia in building and strengthening the capacity of national stakeholders in our shared pursuit of sustainable agricultural growth in Vietnam. CropLife Vietnam and its member companies have made significant investments in stewardship in Vietnam through collaborations with local stakeholders. The objectives of these programs are to maximize benefits and minimize any possible risks when using pesticides to the environment, human health, livestock, and the community. In this same spirit, we are planning to introduce the Sustainable Pesticide Management Framework in Vietnam in the next 5 years with long-term collaboration with the Ministry of Agriculture and Rural Development and related stakeholders.

The Sustainable Pesticide Management Framework (SPMF) is a multi-year holistic program in support of sustainable and responsible use of pesticides. It is a key global flagship program and foundational commitment by CropLife International, with deployment in the Africa, Asia, and Latin America regions. In Asia, Vietnam has been one of the three countries selected to benefit from this program. The program aims to build the capacity of the local countries to establish a framework that manages pesticides sustainably to protect human health, the environment and crop production in addressing the global triple challenge of climate change, biodiversity loss and food security to advance innovation in agriculture for enabling sustainable food systems.

CropLife International is a strong supporter of the FAO-WHO International Code of Conduct on Pesticide Management. SPMF reflects our ambition and commitment to accelerate the transition to sustainable food systems. This program will provide the expertise and additional resources on structural changes to create sustained outcomes, focusing on 3 key pillars:

1. Implementation of science-based regulatory framework on pesticides management along with risk mitigation measures;
2. Adoption of Crop Protection (CP) Innovation; and
3. Responsible & Effective Use of Pesticides.

The three pillars provide holistic coverage to reduce the risk of pesticides, by focusing on both an accelerated and sustainable transition. As such, farmers are equipped with a toolbox for farming that protects human health, and the environment, and optimizes crop protection both now and in the future. SPMF in Vietnam will be built on a strong foundation of shared vision, and established partnership to leverage industry efforts to support the Government's goals for long-term sustainable development of the agricultural sector, ensuring both productivity and environmental stewardship.

Our specific proposal for each of 3 key pillars is as follows:

Implementation of science-based regulatory framework on pesticides management along with risk mitigation measures

- Facilitate and support organizing capacity and capability-building programs on risk assessment and advanced CP solutions;
- Hold seminars on scientific and technical matters while supporting organizing policy consultation workshops on sustainable framework of CP management; and
- Share best practices and proven models of Agriculture Innovation Adoption.

Adoption of CP Innovation

- Facilitate agriculture innovation to showcase best models and share policy recommendation;
- Promotion of bio-pesticide and advanced CP solutions;
- Improve and support an effective transition to an e-system of CP registration and management; and
- Establish Tracking-database on Maximum Residue Limit for exportation.

Responsible & Effective Use of Pesticides

- Establishment and operation of formal e-learning platforms on CP responsible use & pest management for key crops of exportation;
- Continue 5 years Memorandum of Understanding of stewardship models collaboration in Dong Thap;
- Present the right stewardship models to change farmer's practices on CP residue management based on behaviour field studies; and
- Provide additional technical support for the synchronized operation of the National Poisoning Control Centre to handle poisoning cases related to pesticides with uniformed protocol.

Completion of regulatory guidelines for adoption of new breeding innovation and agriculture technologies

Gene Editing Crops

To realize multiple ambitious goals as mentioned above, Vietnam Agriculture Sector industry needs plant breeding innovations such as gene editing. Plants face a variety of challenges from drought, floods, heat, diseases, and pests. At the same time, demand for food is increasing and consumers' preferences are changing. Innovations in agriculture, like gene editing, will make a critical contribution to meeting these demands and making the food system more sustainable and resilient.[8]

Gene editing technology in agriculture is based on the traditional breeding process. Through gene editing, scientists can make precise, targeted changes to plants' specific DNA sequences that mirror what could occur either in nature or through traditional plant breeding, but in a more efficient way. Where GMO plants often include DNA from another organism, gene editing allows scientists to work within a plant's own genetic code. Gene editing mostly focuses on making improvements that could occur in nature but makes them in a more precise way.[9]

With regard to the next generation of plant breeding innovations, including gene editing, Vietnam has the opportunity to create new and promising solutions to the biggest problems facing production agriculture.

8 "What is gene/genome editing?", *CropLife Canada Website*, 20 November 2020. Available at <https://croplife.ca/field-notes-gene-editing/>, last accessed on 04 October 2023.

9 Ibid.

Depending on the regulatory approach Vietnam takes, gene editing tools could be accessible to a broad range of plant breeders, including the public sector and small enterprises. These tools can potentially be used across all agriculturally important crops, including vegetables, fruits, and specialty crops important to Vietnam's international competitiveness. However, science-based, risk-proportionate, and globally harmonized regulatory policies will be needed.

Recommendations

- Reinforce policies together with stakeholders that encourage agriculture innovation supported by a transparent, science-based regulatory system consistent with international best practices while taking into consideration agronomic realities in Vietnam; and
- Cooperate with multiple stakeholders to deliver the latest Plant Based Innovations innovations that can help farmers overcome increasingly complex economic and environmental challenges through case studies or demonstration of agricultural technologies that accelerate innovation, promote their responsible use, and mitigate the risks of pesticides.

II. STREAMLINE AND MOVE TOWARDS THE FUNCTIONAL IMPLEMENTATION OF A COMPREHENSIVE REGULATORY FRAMEWORK ON AGRICULTURAL INPUT PRODUCTS

Relevant authorities: Ministry of Agriculture and Rural Development (MARD); Ministry of Health (MOH); Ministry of Industry and Trade (MOIT), Ministry of Finance (MOF), Ministry of Natural Resources and Environment (MONRE), National Steering Committee 389

Issue Description & Potential Concerns

Delay & Lack of Functionality in Genetically Modified (GM) Crops Registration

Vietnam has developed a science-based, sufficient, and simplified legal framework for GMOs for both trading and local cultivation – that is considered an advanced policy model for other countries in Asia. Thus, the functional implementation of Vietnam's legal framework on GMOs is crucial to ensure the positive movement of biotech adoption in the region, promote the benefits of agricultural biotechnology and support Vietnam's government's direction toward sustainability and food security.

Vietnam has several opportunities regarding regulations on GM crops. The first is a strategic opportunity to benefit from over two decades of global commercialization of GM crops. This will help Vietnamese farmers to deal with real-world production challenges such as pest and weed control. One example is the use of GM corn as an effective Integrated Pest Management (IPM) tool that resists Fall Armyworm. According to a recent study, the GM varieties outperformed conventional varieties in terms of yield by +30.4 percent and reduced the cost of production by between US$26.47 per ha and US$31.30 per ha. The GM corn technology also reduced pesticide use. The average amount of insecticide applied to the GM corn crop was significantly lower by 78 percent (0.08 kg/ai per ha) than the average value for the conventional corn area (0.36 kg/ai per ha).[10] While GM corn is approved for cultivation in Vietnam unfortunately in recent years there has been a lack of variety registration approvals issued and growers only have access to old germplasm for GM corn.

The second opportunity is to allow the production of GM corn for animal feed to reduce reliance on foreign suppliers. According to the Department of Livestock Production[11], the most imported raw material is corn with more than 9.6 million tons. Due to the impact of the COVID-19 pandemic and especially the recent Russia-Ukraine conflict, the prices of many raw materials have increased. The prices of many feed materials, compared to March

10 G.Brookes & T.X. Dinh, "The impact of using genetically modified (GM) corn/maize in Vietnam: Results of the first farm-level survey", GM Crops & Food, 2020. Available at: <https://www.tandfonline.com/doi/full/10.1080/21645698.2020.1816800>.

11 "Vietnam spent more than 9 billion USD on importing animal feed ingredients", MARD website, 28 March 2022. Available at: <https://www.mard.gov.vn/en/Pages/vietnam-spent-more-than-9-billion-usd-on-importing-animal-feed-ingredients.aspx>, last accessed on 10 July 2022.

2021, have increased significantly. Specifically, the price of corn kernels is VND10,200/kg (up 29.3 percent); soybean meal VND16,500 /kg (up 33.4 percent); corn residue VND10,300/kg (up 23.1 percent); wheat VND9,850/kg (up 49.5 percent).

Therefore, apart from MARD's macro-direction to convert some inefficient arable land to crop production for feed material, one necessary solution is to encourage and speed up the registration and introduction of new plant varieties, including GM crops to provide farmers with enough tools that allow them to better adapt to climate changes. This in turn will help improve productivity and household income, etc.

Recommendations:

We would like to make the following recommendation:

- Accelerate the GM approval process to comply with current regulations to ensure no restrictions on animal feed imports, encourage the cultivation of GM corn by issuing Variety Registrations for Traited Hybrids, and gradually reduce import dependence.

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12 CropLife Vietnam Sector Committee members: Adama, BASF, Bayer, Corterva, FMC, Summit Agro, Sumitomo Chemical, Syngenta and UPL.