



Press Release

## WORKSHOP: CONTRIBUTIONS OF AGRICULTURAL BIOTECHNOLOGY ADOPTION IN VIETNAM

**Biotechnology adoption in corn cultivation in Vietnam shows positive impacts of higher productivity, increased farmer income and environmental improvement.**

---

*Hanoi, Vietnam - April 7, 2021 - Today, the Vietnam Seed Trade Association (VSTA) together with Vietnam Farmers' Union (VFU) and the International Service for the Acquisition of Agri-biotech Applications (ISAAA) co-organized the seminar on the topic: "Contributions of Agricultural Biotechnology Adoption in Vietnam". With the participation of representatives of state management agencies, scientists, representatives of the provincial departments of agriculture, international experts, and domestic and foreign seed companies, the seminar was a forum to share information on the status of agricultural biotechnology adoption in the world as well as in Vietnam, and particularly discussed the socio-economic impacts of biotech corn after five years of being approved for farming in Vietnam.*

Opening the workshop, Mr. Tran Xuan Dinh, Vice Chairman, General Secretary of Vietnam Seed Trade Association said that: *"In the first decades of the 21st century, we witnessed scientific breakthroughs in the agricultural sector, especially biotechnology with inventions of genetic technology, genetic engineering and microbiological technology... Many plant varieties created by biotechnology are present in Vietnam, facilitating farmers' plant and livestock restructuring and increased income thanks to increased productivity and reduced pesticide costs. The workshop is held today with a view to update and exchange information on the global agricultural biotechnology adaption as well as to assess and review the effects of agricultural biotechnology adoption in the past time in Vietnam."*

Agricultural biotechnology adoption is considered one of the outstanding scientific achievements of the last century, which is still being demonstrated by the increasing global adoption as well as the positive economic, social and environmental impacts brought to farmers, consumers and communities around the world.

According to the ISAAA report<sup>1</sup>, with the addition of three African countries, the number of countries cultivating biotech crops increased to 29 in 2019 from 26 in 2018. In particular, the top 5 countries with the largest area of biotech crops are the United States, Brazil, Argentina, Canada and India. It is estimated that 1.95 billion people, accounting for 26% of the world's population benefited from biotechnology in 2019. Dr. Rhodora Romero-Aldemita, Director of ISAAA SEAsia Center and Director of the ISAAA Global

---

<sup>1</sup>ISAAA report, "Global Status of Commercialized Biotech/GM Crops in 2019" (ISAAA Brief 55) - issued on November 30, 2020

Knowledge Center on Crop Biotechnology added: *“In 2019, the cultivation of 190.4 million hectares of biotech crops significantly contributed to food security, sustainability, climate change mitigation, and improving the lives of more than 17 million biotech farmers and their families worldwide. Vietnam is one of three countries with double-digit biotech acreage growth rate, along with the Philippines and Colombia”.*

Analyzing the effects of biotech crops on a global scale, Mr. Graham Brookes of PG Economics cited the data in the latest study<sup>2</sup> released in 2020: “In 2018, the total extra income for farmers cultivating biotech crops was 19 billion - for each extra US dollar invested in biotech crop seeds, farmers could make an extra profit of USD 4.42. In addition, had biotech crops not been grown in 2018, an additional 23 billion kilograms of carbon dioxide would have been emitted into the atmosphere, which is the equivalent of adding 15.3 million cars to the roads. According to Dr. Graham, farmers, especially smallholder farmers in developing countries, are those who benefit the most from biotech crops not only from increased crop yields (from 10% to 16.5%, depending on crop type) and higher profits (approximately USD 103/ha on average) but also from the change in farming habits to become more environmentally friendly when the amount of pesticides could be reduced, thereby lessening the environmental impact by about 19%, as measured by the environmental impact quotient (EIQ) indicator.

In Vietnam, biotech crops were officially approved for commercial farming from 2014-2015 on corn. Corn is also one of the main crops in Vietnam’s agricultural production structure and our country is also among the largest corn producers in the world. The introduction of biotech varieties with improved traits into production at that time was considered one of the key tools to further increase production yield and quality, add values, and bring more profit to corn farmers, thereby strengthening Vietnam's capability in supplying raw materials to the domestic food and feed supply chain.

After 5 years of adoption, by 2019, the total acreage of biotech corn was about 90,200 hectares, accounting for approximately 10% of the country's total corn acreage. In particular, double-digit acreage growth rates in recent years indicate the increasing farmers' adoption of this technology. Specifically, in 2015, the adoption rate was modest with about 3,500 hectares, accounting for less than 1% of the total acreage; Up to now, the adoption area has increased by more than 26 times. Compared with the period 2018 - 2019 alone, the growth rate was 86%.

In 2019 - 2020, VSTA in collaboration with the PG Economics (UK) conducted a study to evaluate and analyze the impact of biotech corn after 5 years of cultivation. The study surveyed corn farmers who had experience in growing conventional and biotech hybrid in the country’s major corn producing regions. This is also the first detailed and published farm-level study in Vietnam on biotech crops. The followings are some of the report's highlights:

---

<sup>2</sup> “GM crops: global socio-economic and environmental impacts 1996-2018”- Graham Brookes - released on July 15, 2020.

- The total area planted to biotech corn in Vietnam between 2015 and 2019 was 225,000 hectares. In 2019 (main year of study) biotech traited varieties planted in 92,000 hectares, equals to around 10% of the total Vietnam corn area.
- Biotech corn with insect resistance and herbicide tolerance traits delivered between 15.2% and 30% higher yields compared to conventional hybrid corn varieties.
- Farmers' incomes also increased by between USD 196/hectare and USD 330 hectare (*equivalent to about VND 4.5 - 7.6 million/hectare*). The aggregate income gain was a total of between USD 43.8 and 74.1 million (*equivalent to VND 1,007 - 1,704 billion*).
- In terms of return on investment (ROI), for each extra US dollar (about VND 23,000) invested in biotech corn seeds, farmers gained an average of between USD 6.84 and USD 12.55 (*equivalent to about VND 157,000 to VND 289,999*) in extra income. This is a relatively high ROI when compared to the ROI in other countries that are adopting similar technology.
- Biotech corn cultivation also resulted in a significant decrease in pesticide use, with an average reduction of 26% for herbicides and 78% for insecticides (average amounts applied per hectare), corresponding to a reduction in the associated environmental impact, as measured by the EIQ indicator of 36% and 77%, respectively.

Vietnam started producing biotech corn in a challenging period, which contributed to the fact that the biotech corn adoption rate has not increased as expected. Despite the increasing demand for corn in the livestock industry, the domestic corn acreage showed a downward trend for the past 5 years. Domestic corn production is in fierce competition with imported corn in terms of price and quality; farmers in many regions have changed to plant other crops when profits from corn cultivation were not high, especially when the domestic purchasing prices plummeted.

*“This study was conducted to obtain a more objective view of the productivity, economic benefits, and social and environmental impacts of biotech corn in Vietnam after 5 years of cultivation. The increasing adoption rate of biotech corn, especially in the context of recent pests, has shown an effectively high tolerance and adaptation to domestic corn farming conditions. At the same time, the positive study results announced today reinforce the practical data proving that the introduction of biotech corn into production is the right decision. It is still considered an important tool that helps farmers increase their income, provides more proactive feed supplies and improves the role of corn in agricultural production of Vietnam. - Mr. Dinh added.*

Mr. Graham continued: *“The study and analysis were undertaken with a reasonably representative sample of maize growers in Vietnam and the results are consistent with findings of similar studies in other countries that have used this technology. Details of the study methodology and findings can be found on open access (freely downloadable) at the peer reviewed scientific journal “GM Crops and Food” issued in October 2020.<sup>3</sup>”*

---

<sup>3</sup>*“The impact of using GM corn in Vietnam: results of the first farm level survey”, approved and published as an independent scientific research in the scientific journal on “EM Crops and Food” on October 1, 2020. Author: Graham Brookes and Dr. Tran Xuan Dinh*

Sharing at the seminar, Mr. Hoang Trong Ngai who is a corn grower and in charge of guiding farmers in the cooperative in Song Lo district, Vinh Phuc province, said: *"I and people here choose to grow biotech corn because of its good characteristics: the first is resistance to pests and diseases, and the second is good tolerance to unfavorable natural conditions and weather"*. Mr. Ngai and people in Duc Bac commune have grown more than 120 hectares of biotech corn since its introduction in 2015. Also sharing at the workshop, Mr. Nguyen Thanh Phong, a corn farmer in Nam Dan district, Nghe An province, said that he chose to grow biotech corn because of its economic benefits and efficiency in environmental protection. *"Biotech corn helps to resist up to 95% pests, while common corn varieties are almost completely destructed, especially under high temperature conditions like in Nghe An. Because pesticides are no longer needed, my family saved the cost of buying and spraying pesticides, and the yield of biotech corn has increased by up to 20%. Not spraying also helps to better protect the environment"*- he said.

In his closing speech, Mr. Nguyen Xuan Dinh - Vice Chairman of the Central Committee of Vietnam Farmer's union emphasized: *"Over the past years, the Party and the State of Vietnam have made many policies for development of agricultural sector, farmers and rural areas, adoption of biotech crops in agriculture towards ensuring food security and sustainable development... Directive 50-CT/TW dated March 4, 2005 of the Party Central Secretariat on strengthening the development and adoption of biotechnology to serve the cause of industrialization and modernization of the country identified biotechnology as a high-tech field based on the science of life, combined with technical processes and equipment to create technologies to exploit living activities of microorganisms, plant and animal cells for the industrial-scaled production of high-quality biological products for socio-economic development and environmental protection."*

*"According to Decision 429/QD-TTg dated March 24 this year on "Approving the Agricultural Biotechnology Development Project to 2023", one of the goals to be achieved by 2030 is to master a number of new generation biotechnology, create industrial-scale products for application to production practice, and increase the number of biotechnology enterprises in agriculture, forestry and fishery sector by at least 30% compared to the period 2021-2025. This also shows that agricultural biotechnology development and adoption is a general development orientation and Vietnam needs to catch up with the world trend in applying new generation plant varieties with scientifically improved characteristics towards sustainable and modern agricultural development",* added Mr. Dinh.

He also affirmed: *"After this workshop, the Vietnam Farmers' Union, the Vietnam Seed Trade Association and the Organization (ISAAA) will continue to discuss and coordinate to develop follow-up activities to raise awareness among farmers of the potentials and benefits of biotech crops as well as to overcome difficulties in research and adoption of biotech crops in practice locally."*

###

### **About Vietnam Farmers' Union**

The Vietnam Farmers' Union (VNFU) is a socio-political organization representing the peasant class in Vietnam. VNFU plays a central and core role for the peasant movement and the new rural construction, significantly contributing to agricultural restructuring and sustainable poverty reduction. VNFU has a nationwide operational network at four administrative levels: central, provincial, district and commune with more than 10,000 union establishments and over 10 million members.

### **About Vietnam Seed Trade Association**

The Vietnam Seed Trade Association (VSTA) is a socio-professional organization of people working in the field of seed trade, exchange and supply in Vietnam. VSTA was established in 2007. The VSTA current charter was approved by the Ministry of Home Affairs in Decision 413/QD-BNV dated May 16, 2007.

### **About ISAAA - International Service for the Acquisition of Agri-biotech Applications**

The International Service for the Acquisition of Agri-biotech Applications (ISAAA) is a non-profit organization with a network of international centers that aims to reduce poverty through knowledge sharing and agricultural biotechnology adoption. Clive James, Founder and Emeritus Chair of ISAAA has lived and worked for 30 years in developing countries in Asia, Latin America and Africa, dedicating his efforts to agricultural research and development issues that focus on agricultural biotechnology and global food security

### **About PG Economics:**

PG Economics is a specialist provider of advisory and consultancy services to agriculture and sectors that both service/supply agriculture and use agricultural raw materials. Its specific areas of specialization are new technology use in agriculture (e.g. plant biotechnology, new breeding techniques), agricultural production systems, agricultural markets, policy, regulation and trade agreements. The authors of this report have assessed the global impact of GM crops for 20 years and have made extensive publications on the subject, including more than 30 papers in peer reviewed scientific journals.

### **References**

- ISAAA Report, **"Global Status of Commercialized Biotech/GM Crops in 2019 "** published on November 30, 2020, including: ISAAA Brief 55, press release available at: <https://www.isaaa.org/resources/publications/briefs/default.asp>
- **"GM crops: global socio-economic and environmental impacts 1996-2018"** - Graham Brookes - released on July 15, 2020, including the full report and press release available at: <https://pgeconomics.co.uk/press+releases/25/Crop+biotechnology+continues+to+provide+higher+farmer+income+and+significant+environmental+benefits>
- **"The impact of using GM corn in Vietnam: results of the first farm level survey"**, approved and published as an independent scientific research in the scientific journal on "EM Crops and Food" on October 1, 2020, available at: <https://www.tandfonline.com/doi/full/10.1080/21645698.2020.1816800>
- Video clip of Vietnamese farmers sharing about biotech crops (released in 2020) available at:
- Download workshop's materials (presentations, infographics, photos) at: [https://drive.google.com/drive/folders/1ep2ObKBUXyOzNs96L9z38xQqBsW9\\_5Bd](https://drive.google.com/drive/folders/1ep2ObKBUXyOzNs96L9z38xQqBsW9_5Bd)

### **For press information, please contact:**

Vietnam Farmers' Union – Ms. Mai Huong - Mob: 0912.170.055 – Email: [huongmaivnfu@gmail.com](mailto:huongmaivnfu@gmail.com)