



NATIONAL ACADEMY OF SCIENCE AND TECHNOLOGY,
PHILIPPINES (NAST PHL)

an attached agency of the Department of Science and Technology (DOST)



STATEMENT ON THE SUPREME COURT DECISION on Bt talong

[ISAAA et al. vs. Greenpeace Southeast Asia (Phils) et al.
(G. R. Nos. 209271, 209276, 209301, and 209430)]

NAST PHL expresses grave concern on the serious negative effect on food security and on the research community of the Supreme Court decision 1) permanently stopping these questioned field tests for Bt talong; 2) declaring null and void the “Rules and Regulations for the Importation and Release into the Environment of Plants and Plant Products Derived from the Use of Modern Biotechnology” otherwise known as the Department of Agriculture Order No. 08, series of 2002; and, 3) temporarily stopping any application for contained use, field testing, propagation and commercialization and importation of genetically modified organisms until a new administrative order is promulgated in accordance with the law.

The activity that was permanently stopped was the field testing of a genetically engineered eggplant. The tests were being conducted in plots, 920 sq.m. each, in five different places in the Philippines. These field tests were part of a research project that was started in 2007 as an option for controlling the fruit and stem borer (FSB), the most destructive insect pest of the eggplant. The genetically engineered Bt talong would have provided an option for the farmers to control the FSB infestation of eggplant by incorporating the gene from naturally-occurring soil bacterium, *Bacillus thuringiensis* (Bt), that produces the toxin specific for the group of insects to which the FSB belongs. Bt has been used as a biopesticide for more than 50 years in

many vegetable farms all over the world and has been proven to be harmless to human beings, plants and other animals. At present, synthetic pesticides with known adverse health effects are sprayed 60-80 times to control the FSB and prevent a 70-80% yield loss in most of the 22,000 hectares of eggplant. Unfortunately, the conduct of additional field tests to determine the viability of this Bt talong has now been permanently blocked.

The Supreme Court was grossly misinformed that “genetic engineering dangerously tampers with the most fundamental natural components of life;” and that transgenic organisms do not occur in nature. In fact, there are naturally-occurring transgenic crops such as the banana which has incorporated the genes from the banana streak virus and the cultivated sweet potato (camote), which contains genes from the bacterium (*Agrobacterium*).¹

The Supreme Court has concluded that there is a lack of consensus on the safety of GM crops: “In the scope of this document, we can only highlight a few examples to illustrate that

¹Kynd T, Quispe D, Zhai H, Jarret R, Ghislain M, Liu Q, Gheysen G, and Kreuze JF (2015) The genome of cultivated sweet potato contains *Agrobacterium* T-DNAs with expressed genes: An example of a naturally transgenic food crop. *Proceedings of the National Academy of Sciences of the United States of America*, Vol. 112, No. 18, pp5844-5849.

the totality of scientific research outcomes in the field of GM crop safety is nuanced, complex, often contradictory or inconclusive, confounded by researchers' choices, assumptions, and funding sources, and in general, has raised more questions than it has currently answered." NAST PHL notes that such a conclusion was derived from a very limited literature survey, some from questionable sources. None of the references covered the statements of the Academies of Science of many developed and developing countries that there is no difference in the risks between GM crops (where only one or a few genes are introduced) and conventionally-bred crops (where thousands of genes recombine at random), a view that is shared by NAST-PHL. The information sources cited by the court, in fact, recommend that further research be conducted to assess the risks in the deployment of GM crops. Unfortunately, by permanently stopping the field tests of Bt talong, the research that would have provided the answers to the reservations on the safety of Bt talong can no longer be continued.

Furthermore, NAST PHL considers the nullification of the Department of Agriculture Order No.08, series of 2002 (DAO-08-2002) in its entirety as too harsh. The drafting of the said administrative order involved a process of extensive consultations with various stakeholders including farmer groups, scientists, academe, NGOs, the livestock industry, feed millers, food processors, commodity importers, including the representatives of foreign exporters and trading partners. These year-long consultations were conducted in Metro Manila, the Visayas and Mindanao. The DAO-08-2002 is a carefully-crafted document and has provided effective guidance "for the importation and release into the environment of plants and plant products derived from the use of modern biotechnology" for the last 12 years. It must be pointed out that this move, if not clarified, will have serious repercussions on the research and development activities especially in plant breeding as well as

the flow of the supply of food and feed specifically those that are based on crops largely harvested from transgenic lines, like soybean (2014 soybean meal imports: 2,500,000 m.t.) and corn (2014 imports: 500,000 m.t.). The possible disruption in the supply chain may cause food security issues in the near future.

Finally, NAST PHL warns of the serious consequences of temporarily suspending all applications for the "contained use, field testing, propagation and commercialization, and importation of genetically modified organisms" (Underscoring supplied). In the language of science, genetically modified organisms (GMOs) include genetically engineered plants, animals and microorganisms. Does this temporary suspension cover applications for permits to use, test, propagate, commercialize and import GMOs not only in agriculture but also in health and in industry? Unless clarified, this temporary suspension can also cause disruption in the supply of recombinant medicines like insulin and recombinant vaccines for dengue as well as processing ingredients for the food industry.

In sum, NAST PHL appeals to the Supreme Court to review the decision in light of the issues and serious consequences that may arise. In order for research and development to respond in a timely manner to the challenges of national well-being, most important of which is food security and health, we need an environment that will foster innovation through a science-based regulatory system. (08 January 2016)

Contact Person:
ACADEMICIAN WILLIAM G. PADOLINA
National Academy of Science and Technology
02.8373170 ~ secretariat@nast.ph