



NATIONAL ACADEMY OF SCIENCE AND TECHNOLOGY PHILIPPINES

NAST ASD POSITION

AGRICULTURAL SCIENCES DIVISION (ASD)

POSITION OF THE NATIONAL ACADEMY OF SCIENCE AND TECHNOLOGY (NAST) AGRICULTURAL SCIENCES DIVISION ON THE RECENT DECISION OF THE COURT OF APPEALS OF THE CITY OF MANILA EFFECTIVELY PUTTING YET ANOTHER MORATORIUM ON PRODUCTS OF MODERN PLANT BREEDING

*A legal victory for Greenpeace, a regrettable loss for Filipinos:
The continuing saga of modern plant breeding in the Philippines*

On April 17, 2024, the Court of Appeals released a decision to grant a petition by Greenpeace and its local allies to effectively impose a moratorium on the use of *Bt* Talong, a variety of eggplant that protects the plant and its fruits against a very destructive insect pest; and Golden Rice, a variety of rice that can help solve Vitamin A deficiency in humans. The court proceedings that led to this decision are just the latest of very expensive legal struggles initiated by the same group over more than 20 years, not only in the Philippines, to stop the use of modern methods to solve the problems of poverty, hunger, and degradation of the environment through plant breeding.

The same issues used by Greenpeace to convince the court were earlier dismissed by the Department of Agriculture and repudiated by 129 Nobel Prize Laureates and millions of farmers. As of 2019, similar products have been used safely by 15 million farmers in 29 countries, including the Philippines.

Consistent with its mandate to help guide Philippine society in understanding scientific and technological controversies, NAST reiterates its support for the use of modern biotechnology in plant breeding and expresses its concern that the court decision unnecessarily delays its overdue innovations.

Bt Talong is a product of a technology whose proof of concept dates back to the 1980s and was first used commercially in 1996 in the USA. Golden Rice, on the other hand, is based on the same concept; its development dates back to the late 1990s through the work of European scientists. They were developed locally by the University of the Philippines Los Banos and PhilRice, respectively, both of which are public institutions with a proven track record of service to the Filipino people.

Here is what scientific evidence generated over at least 20 years of experimentation in the Philippines tells us about *Bt* Talong:

- a. It can substantially improve farmer income by reducing losses due to insect damage
- b. It can substantially promote farmer health by reducing his reliance on harmful chemical pesticides
- c. Both of these are attained without harming the consumer or the environment

On the other hand, Golden Rice, a product of scientific work that dates back to 1998 in Europe, can effectively reduce human suffering due to Vitamin A deficiency, without any negative impact on the farmer and the environment.

The court decision amounts to weaponization of the law to favor an extreme ideology about nature; that a pristine environment must be preserved, and modern biological technology is working against this goal. This is contrary to our knowledge that nature is characterized by constant change – some of them man-made, but most of the apocalyptic changes were through natural forces. Among these are climate change, volcanic eruptions, and earthquakes. Nature is not always good for humanity.

Humanity has struggled to cope with the bad side of nature. As a whole, human intervention in the field of biology and its allied field of agriculture has given humanity relief against poverty, disease, hunger, and damage to the environment. Among these interventions are improved varieties of crops, vaccines, antibiotics, and biological fertilizers. *Bt* Talong and Golden Rice are just the latest in the parade of modern varieties of crops. If we did not interfere with nature through modern technology, we would not have attained the quality of life we now enjoy.

The court decision is strongly based on the precautionary principle, a modern concept formulated in the 1970s by the environmentalist movement that fortunately was not yet in currency at the time our most important inventions such as the internal combustion engine, electricity, and vaccines were introduced to society. Otherwise, our lawyers would still be very busy arguing today while we suffer the piles of horse manure on our streets, soots from candles used for lighting, and grief over the death of friends and relatives due to uncontrolled epidemics.

Simply stated, the precautionary principle says “look before you leap” and puts the burden of proving the absence of harm to developers of technology. While “looking” is the job of science, the requirement to prove the absence of harm or absolute freedom from all risks, known and unknown, is beyond the capacity of the scientific method. Human experience has shown that no technology is risk-free. The most advanced societies are those that are more willing to take risks.

Science can make predictions about potential harm and formulate mitigation and remedial measures. These are precisely the measures incorporated in the regulatory system that approved the introduction of *Bt* Talong and Golden Rice. The Philippine system is compliant with international standards that have been used for more than a quarter of a century and have been proven by practice to be reliable.

Like all regulatory systems, the Philippines' is not perfect. There were flaws in its application. We are alarmed that relatively trivial flaws such as the title of a representative to a local biotechnology regulating body, are given undue importance in court deliberations, while insufficiently addressing the bigger question of costs and benefits of the technology to society.

We are finally concerned that the continuing delay in the use of *Bt* Talong and Golden Rice is causing more harm than good. As we try to placate the minority which is ideologically against these modern technologies, who will be satisfied only if these technologies are kept away permanently from farmers and consumers, millions die and more suffer from the harmful effects of technologies they seek to replace.

Signed:

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