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# **Bt eggplant field trials and biosafety regulations in the Philippines**

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## Introduction

Eggplant is a household vegetable and the most consumed in the country. It accounts for about 28% of the vegetable production and is grown in more than 20,000 has across the archipelago. Its most significant insect pest is the Fruit and Shoot Borer (FSB) which can lead to yield losses of 20-92% (Francisco, 2010).

## From India to the Philippines

In June 2006, seeds of the FSB-Resistant eggplants, or simply *Bt* eggplants, were turned over from India to the Agricultural Biotechnology Support Project II (ABSP II) at the Institute of Plant Breeding, University of the Philippines Los Banos (UPLB). This came six months after a royalty-free license was granted to the university by the Indian Maharashtra Hybrid Seeds Company Limited (Mahyco) to use its eggplant lines as source of the said trait for the development of selected Philippine varieties. ABSP II and Mahyco are partnering with USAID, Cornell University, the International Service for the Acquisition of Agri-biotech Applications and the Department of Agriculture (Phil) for this particular project. Local adoption of an existing technology is viewed as a practical approach in the Philippines which has limited budget allotment for biotech research and development (Cabanilla, 2007).

The stages in the development of *Bt* crops as prescribed in the country's Guidelines for Biosafety start from Contained Trials moving to Confined Field Trials then to Multi-location Field Trials and finally to Propagation/Commercialization. The first two stages for *Bt* eggplant were completed in 2009. The following year, multi-location trials were conducted and continues to date. Seven locations were identified across the country; the choice was primarily based on the volume of locally produced eggplants. The first trials in three provinces in the northern island of Luzon proceeded smoothly until they reached Davao City in the southern island of Mindanao.

## From Luzon to Mindanao

On 13 December 2010, the mayor of Davao City issued a Cease and Desist Order (CDO) for the field trial going on inside the campus of the UPMindanao (UPMin). This was implemented on the 17<sup>th</sup> by the uprooting of all the plants. The Order cited the project's failure to comply with several conditions highlighting the failure to 'conduct a public consultation through the posting of a Public Information Sheet (PIS)' - a requirement under Administrative Order No.8 (2002) of the Department of Agriculture. The issuance of the CDO was preceded by a resolution emanating from the city's Legislative Body declaring, "there is no compelling reason for the city...to welcome *Bt* eggplant as it is provided under the Organic Agriculture Ordinance that *Bt* eggplant is a complete departure from the city's stance on sustainable agriculture and fisheries."

By 29 December, the Bureau of Plant and Industry (BPI), the national agency responsible for the regulation of GM crops, suspended the biosafety permits for the field testing at UPMin. BPI's review of pertinent documents also led them to the suspension of the same permit granted earlier to the Visayas State University in central Philippines for likewise failing to post the PIS and conducting the consultation with the municipal officials.

The *Bt* eggplant project team in Davao claimed Public Information Sheets were posted in designated areas prior to the start of the trial. The city, however, argued that for such a controversial project no one came purposely to invite them to a public consultation more so that there is local ordinance on organic agriculture. The project team did arrange public engagements but according to opposing groups those took place only after the experimental plot had been made ready and the seeds were about to be transported from UPLB. The guidelines specifically state that consultations should be done prior to the application of a permit. A Farmer-scientist group, MASIPAG, expressed that concerns about GM crops stem from the fact that government has not done any monitoring on the impacts of *Bt* corn ten years after its commercialization.

The experience in Davao prompted a neighboring location to “start right”. The provincial government of North Cotabato and the municipal government of Kabacan initiated public consultations themselves. The host academic institution, the University of Southern Mindanao likewise conducted its own in-house consultations. Both local governments as well as the university gave their support for the project.

The following year, in June 2011, BPI granted the request of ABSPII to resume the field trials at UPMindanao. The proponents went through the requirements again including the posting of the PIS. By this time, however, the city mayor and the council were more straightforward in their objection. The stand of the city is basically based on its Organic Agriculture Ordinance which organic farmers and anti-GMO groups strongly pointed out to the local officials.

Early this year, groups from various sectors including the local government of Davao City signed a petition to the Supreme Court (SC) asking for a total ban of *Bt* eggplant trials. On 02 May, the highest court issued a Writ of *Kalikasan* (nature) where all respondents will be summoned to present "all possible defenses" in favor of the field trials. The Writ also temporarily stops new applications for field testing. On 15 June, more activist groups joined the petitioners in urging the SC to likewise issue a Temporary Environmental Protection Order and a Writ of Continuing Mandamus that will put a stop on all on-going field tests. To date, the SC has yet to act on these petitions. Meanwhile, trials on the *Bt* eggplant are now for the hybrid variety. According to ABSPII Newsletters, results of the open pollinated variety tests showed that *Bt* eggplant lines had ‘high resistance against the FSB’.

### **From written provisions to real practice**

The legal framework for biosafety in the Philippines is very comprehensive and involves about four sets of documents: from a policy statement to specific guidelines. Its strategy serves as a model among Asian countries (Cabanilla, 2007) and its guidelines are among the most stringent (Cruz, 1999). As an example: each stage of *Bt* crops, from contained laboratory trials to commercialization, has to be assessed and approved by two departments: Science and Technology and Agriculture. In the US, the notification is only with the Department of Agriculture.

The framework is also very inclusive. The National Committee on Biosafety, the lead body coordinating and harmonizing inter-agency and multi-sectoral efforts to develop biosafety policies, involves three more national agencies (Health, Environment and Natural Resources, Trade and Industry); five scientists from various disciplines; and three community representatives from the consumer, industry, and agriculture sectors.

The framework upholds public participation, transparency, and consensus as principles in reaching biosafety decisions. It invokes constitutional policies such as right to information, right to participation, and local autonomy as among the basis for framing and implementation guidelines.

This 'spirit of the law' came to life in the Davao experience when stakeholders made local officials accountable in interpreting the biosafety provisions vis-à-vis an existing local ordinance and a national law on organic agriculture. From then on, the Bureau of Plant Industry, the *Bt* eggplant project itself and the succeeding implementers all made sure no short cuts are resorted to. Eggplant farmers supportive of the technology are pushing for more and continuing education. Such adherence by the key players and vigilance by stakeholders will ultimately benefit the country which regards biotechnology as "one of several means" to achieve and sustain food security.

#### **Literature:**

ABSP II Newsletters @

[http://www.isaaa.org/programs/supportprojects/abspii/download/ABSP\\_Newsletter\\_vol2\\_no2.pdf](http://www.isaaa.org/programs/supportprojects/abspii/download/ABSP_Newsletter_vol2_no2.pdf)

**Cabanilla, Liborio S.** 2007. Socio-Economic and Political Concerns for GM Foods and Biotechnology Adoption in the Philippines. *AgBioForum*, 10(3): 178-183

**Cruz de la, Reynaldo.** 1999.. Agricultural Biotechnology and the Poor: proceedings of an international conference, Washington, D.C., 21-22 December 1999. Philippines: challenges, opportunities and constraints in agricultural biotechnology. CGIAR Publications

Executive Order 514 Establishing the National Biosafety Framework, Prescribing guidelines for its implementation, Strengthening the National Biosafety Committee of the Philippines, and for other purposes @

[http://www.ncbp.dost.gov.ph/index.php?option=com\\_content&view=article&id=173&Itemid=100146](http://www.ncbp.dost.gov.ph/index.php?option=com_content&view=article&id=173&Itemid=100146)

**Francisco, Sergio R.** 2010. Crop Biotech Update

@<http://www.isaaa.org/kc/cropbiotechupdate/article/default.asp?ID=7020>

Office of the President of the Republic of the Philippines. Policy Statement on Modern Biotechnology. 16 July 2001 @

[http://www.ncbp.dost.gov.ph/index.php?option=com\\_content&view=article&id=173&Itemid=100146](http://www.ncbp.dost.gov.ph/index.php?option=com_content&view=article&id=173&Itemid=100146)

Philippine Biosafety Guidelines Series 1. 1990 @

[http://www.ncbp.dost.gov.ph/index.php?option=com\\_content&view=article&id=173&Itemid=100146](http://www.ncbp.dost.gov.ph/index.php?option=com_content&view=article&id=173&Itemid=100146)

Organic Agriculture Act Of 2010. (This law aims to encourage and promote organic farming throughout the country, and to lessen dependence on chemical fertilizers and pesticides in agriculture production.)