Current Status of GM Corn in the Philippines

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Current Status of Commercialized GM Crops in the Philippines: Biotech Corn and Golden Rice
ISAAA
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Bt corn MON810 developed in the US against European Corn Borer could be a solution against Asiatic Corn Borer.
Regulatory trials under DOST and DA evaluated the efficacy and safety
Bt corn - the first GM crop commercialized in the Philippines

- Approved for planting in 2002 after complying with all the requirements and have undergone prescribed set of procedures
  - i.e. conduct of risk assessment and efficacy validation during contained conditions and multi-location field trial

Considered a major strategic development in agricultural biotechnology since Bt corn is the first major transgenic food/feed crop commercialized in Asia (James, 2003)

*Serrano, 2012*
Factors contributing to the successful formulation and effective implementation of DA AO 8*

- Articulate corn-farming sector
- Cooperative technology developer
- Active and trustworthy science community
- Responsive regulatory system
- Science-based, participatory, product-based regulatory approach
- Early recognition of the need for biosafety regulation
- Consistent policy on biotechnology

*Halos, 2008
Phases of Commercialization

- **Approval** (2002)
- **Exponential growth** (2003-10)
- **Near saturation** (2011-20)

CONVENTIONAL CORN

BT CORN
Philippine Biotech Corn Hectarage, 2003-2020

Bt/Ht = 677,644
Ht = 2,720

Source: BPI, 2021
Bt Corn Approvals in the Philippines

- 2002: MON 810
- 2005: Bt11
- 2010: MON 89034
- 2013: TC 1507
- 2018: MIR 162
Reasons for biotech maize adoption in the Philippines

- Higher yield - 83% of respondents
- Pest resistance - 49%
- Good product quality - 48%
- Availability of financial assistance - 47%
- Lesser production cost - 38%
- Availability of seeds - 32%
- Inspired by other farmers - 28%
- Peace of mind - 25%

With 409 respondents in Pangasinan, Iloilo and South Cotabato

(Torres et al. 2013)
Farmers Benefits from Biotech Corn in the Philippines

Lower production costs
  • 60% reduction in pesticide use
  • Lower labor costs associated with weeding and spraying

Higher yields
  • 34 to 41% higher yield over non-\textit{Bt} corn

Higher income
  • P 7,080 to P 10,132 more than non-\textit{Bt} corn
Crop Biotech Benefits to the Philippines

Economic Assessment of GM Corn Use in the Philippines
Flor Alvarez, Abraham Manalo, Ramon Clarete (2021)

- In a period of 17 years, the area planted increased to about 835 thousand hectares, increasing by an average of 31.24% per year.
- A third of all corn farmers in the Philippines or about 460 thousand families are planting GM corn.
- Total factor productivity growth in the corn industry of the country was 11.45% higher due to GM corn adoption.
- All household income brackets gained from the technology.
Filipino Corn Farmers Speak

“The farmers in my small community enjoy the benefits from planting biotech crops. We get better yields and good buying price of our clean corn from feed millers. I get almost 100% profits with Bt corn... (I have) been able to increase my farm from 1.3ha to 10ha and send my children to school.”

Rosalie Ellasus, Corn Farmer – San Jacinto, Pangasinan, Luzon

“Since Bt corn reduces pesticide use, it has long term benefits to our health, our ground water and even the beneficial insects such as spiders that control the secondary pests. We have also more time with our family and other productive income generating opportunities.”

Roger Navarro and his wife Jasmine, Claveria, Misamis Oriental, Mindanao
Unauthorized GM Seeds: A Growing Menace

FAKE GM SEEDS/PIRATED TRAITS

• F1 yellow corn hybrid seeds bred and commercialized by local unauthorized companies containing BT and RR.
• Market share may be around 10% nationwide.
• Fake GM seeds are sold in the market place as conventional seeds
  • initially with verbal claims of outlets that they are glyphosate tolerant and insect resistant,
  • lately with ostentatious printed claims on seed bags labels
• Priced at 45-55% of Branded Companies selling stack products.