



# **GM Crops: Challenges and Learnings from Asia**

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# Current Challenges

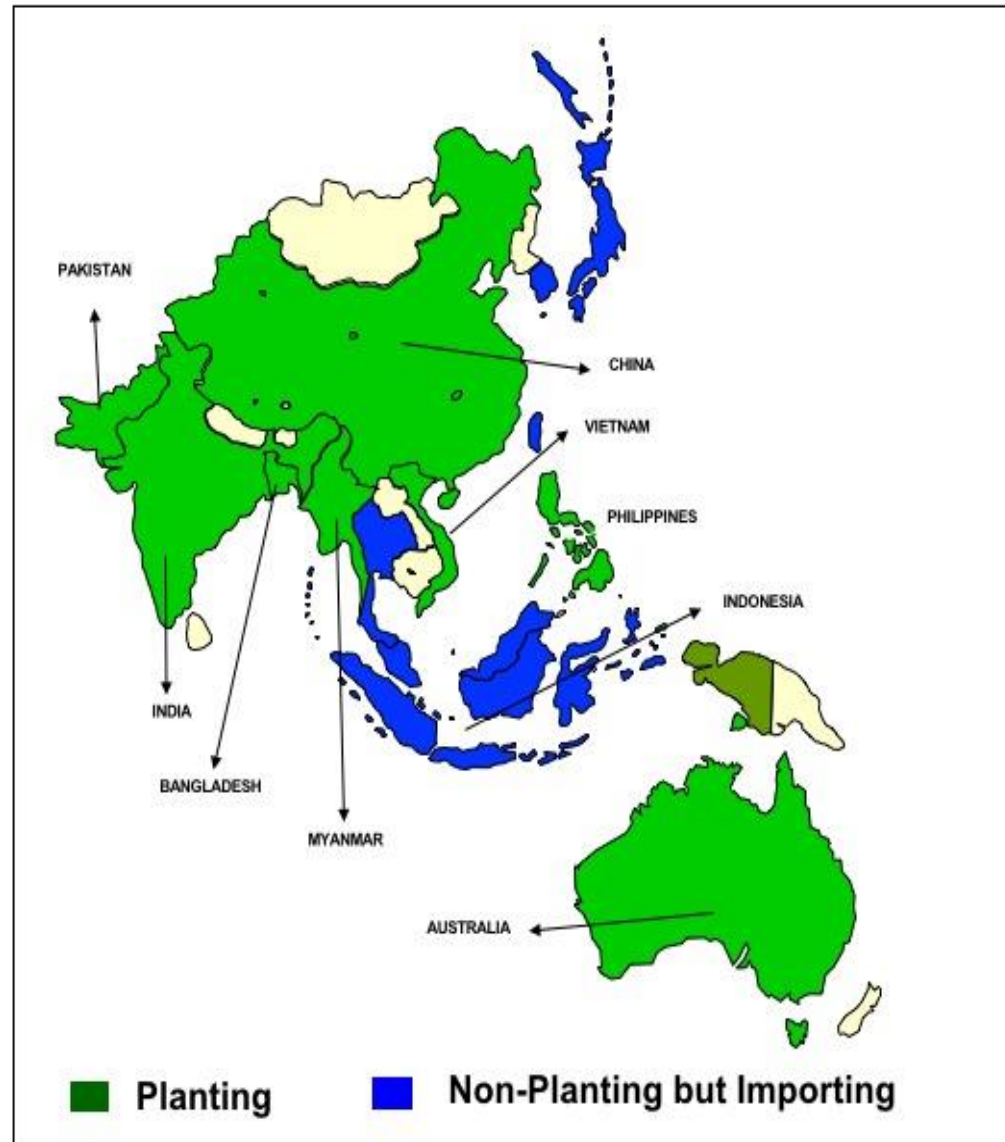
- \* Agriculture is the largest employer in most of Asia but not the largest GDP contributor (esp: South Asia)
- \* Ageing farming community
- \* Climate change (production of wheat and rice will lower by 14% and 11% respectively in 2050 compared to 2000)
- \* Rising population (60% of global population in 2015 is in Asia)
- \* Increase in import for grains (40% in China, Japan – 15.1 MT corn)
- \* Rising demand for meat

# Biotech Crops Adoption in Asia

Country	Crops	Hectares	Year of adoption
India	Cotton	11.6 M	2002
China	Cotton, Papaya, Poplar	3.7 M	1997 (cotton)
Pakistan	Cotton	2.9 M	2010
Philippines	Corn	0.7 M	2003
Australia	Cotton, Canola, Carnation	0.7 M	1996 (cotton)
Myanmar	Cotton	0.3 M	2006
Vietnam	Corn	3,500	2015
Bangladesh	Eggplant	25	2014

\* **11% of the global 179.7 mil hectares of biotech crops farms are in Asia**

# Countries that grow and import Biotech Crops



# Potential of Biotech Crops in Asia

- \* India – has more than a dozen biotech crops ready for field trial (mostly public sector products)
- \* Philippines (Bt eggplant / Golden rice)
- \* Pakistan - 900 pending applications for various stages of research (public research)
- \* China - corn (35 mil hectares)
- \* Vietnam – the next crop is cotton
- \* Indonesia – home-grown drought-tolerant sugar cane. Corn is expected next
- \* Malaysia – working on corn
- \* Bangladesh – cotton, Golden Rice, late blight potato

# The Challenges

- \* Political will – India, Pakistan, Thailand, Australia
- \* Capacity building – Myanmar (regulatory)
- \* Anti-GM Activism - India, Thailand, China, Philippines, Vietnam
- \* Public-private partnership – Malaysia

# Lessons learnt and successes

- \* Public engagement – Philippines (active participation of scientists to deal with activism and court cases)
- \* Political will – Bangladesh, Vietnam
- \* China – government taking charge (acquiring Syngenta and huge investments into the public sector)

# Message from Asia

- \* Asia needs innovation in agriculture. Set an example for us
- \* Organic food will not be able to feed all Asians due to the price, rising population, and because it cannot produce food sustainably
- \* Embrace the science in GM technology like what Europe has done in all other areas of S&T
- \* Stop idolising activists like Vandhana Shiva who is not a credible person in her own country and in Asia and has not contributed to food security