Fact Sheet

The Regulation of Biotech Crops

An Asian Perspective

Since 1996, when the first commercial biotech crops were planted, the technology has become the fastest ever adopted in agriculture. In 2008, the global area planted to biotech increased by almost 10 percent from 2007 to reach 125 million hectares.[i] This is a 74-fold-hectare increase since 1996.

In its annual study, the International Service for the Acquisition of Agri-Biotech Applications (ISAAA) found that in 2008, 13.3 million farmers in a record 25 countries planted biotech crops, an increase of 1.3 million from the year before. Some 90 percent were small and resource-poor farmers from developing countries. Indeed, biotech crops are helping farmers to be more productive and profitable. The crops also contribute to a greener environment.

The safety of biotech crops

When new foods (crop varieties, animal breeds or microorganisms) are developed by traditional breeding methods, they are usually not subject to specific risk or safety assessment by national authorities or through international standards. This is in contrast to requirements introduced for Genetically Modified Organisms (GMOs) and foods derived from biotech crops.[ii]

- Before any biotech crop is commercialized, it undergoes rigorous government-mandated safety testing and regulatory assessment, spanning multiple years and systematic testing.
- To provide international consistency, a number of global regulatory and standard-setting bodies have introduced uniform standards for both human health and environmental safety assessment.
- The Cartagena Protocol on Biosafety came into force in 2003 and covers the environmental safety of GMOs.
- Principles developed by the Codex Alimentarius Commission, a joint program on food safety of the World Health Organization and the Food and Agriculture Organization of the United Nations (FAO).

Scientific and regulatory authorities worldwide have clearly stated their views that foods from biotech crops are thoroughly evaluated through comprehensive testing for food, feed and environmental safety and are as safe as their conventional counterparts.

In addition, 25 Nobel Prize recipients and more than 3,400 prominent scientists have expressed their support for plant biotechnology as a "powerful and safe" way to improve agriculture and the environment.[iii]

Regulation in Asia

It is vital that functioning regulatory systems are in place across Asia. This will facilitate trade and ultimately promote food security in the region.

Major corn-importing countries in Asia

(countries in bold produce biotech corn)

Importing country	Vol(mMT)	Source (% share of imports)
Japan	15.55	**USA (94),** China (4), **Argentina(0.3), Brazil (0.2)**
South Korea	4.42	**USA (51),** China (37), **Brazil (9), Argentina (3)**
Taiwan	4.28	**USA (98), Argentina (1.4)**
Malaysia	0.96	**Argentina (40),** China (22), India (15), Thailand (10)
Indonesia	0.70	China (41), Thailand (19), **USA (16), Argentina (9)**
Thailand	0.17	Cambodia (49), Laos (40), Myanmar (8), **USA (1)**
Philippines	0.14	**Argentina (95),** Indonesia (3), **USA (2)**
Source : Global Trade Atlas (2007)		

Regulatory systems need to be "cost and time-effective, responsible, rigorous and yet not onerous, requiring only modest resources that are within the means of most developing countries", according to Clive James, Chairman of ISAAA. They also need to be harmonized and provide science-based and transparent safety assessments:

- Differing regulatory regimes create disruptions in regional and global trade in food and seeds
- Harmonized regulations facilitate regional adoption of important technologies
- Harmonized regulations strengthen agricultural capacity and economic strength

Status of Regulatory Approvals

The following table shows the status of regulatory approvals across Asia. Further information on the specific biotech traits and events can be found in *Appendix 1, Global Status of Commercialized Biotech/GM Crops 2008, ISAAA.*

	Australia	China	India	Indonesia	Japan	Malaysia	New Zealand	Philippines	Singapore	South Korea	Taiwan	Thailand
Alfalfa	•				•*		•	•				
Argentine Canola	•*	•			•*		•	•		•		
Carnation	•*				•*							
Cotton	•*	•*	•*	•*	•*		•	•	•	•		
Maize	•	•			•*		•	•*	•	•	•	•
Papaya		•*										
Petunia		•*										
Poplar		•*			•*							
Potato	•				•		•	•		•		
Rice					•*							
Rose					•*							
Soybean	•	•			•*	•	•	•		•	•	•
Sugar Beet	•				•*		•	•	•	•		
Sweet Pepper		•*										
Tomato		•*			•							

Source: Appendix 1, Global Status of Commercialized Biotech/GM Crops 2008, ISAAA

• Crop has been genetically modified and a specific trait has been given an environmental and/or food and/or feed approval

* Has been approved for cultivation but is not necessarily in commercial production at present

Harmonized, effective regulatory systems will lead to an exciting future:

- More healthy crops (e.g. high-lysine corn, healthier oils)
- Bio-ethanol production (e.g. corn amylase)
- Allergen-free products
- Stress-tolerant crops (drought, salinity, cold)
- Pest-resistant crops (insects, disease, herbicide)
- Biopharma (plant-made pharmaceuticals)
- Biodegradable plastics (environment-friendly products)

REFERENCES

[i] Global Status of Commercialized Biotech/GM Crops 2008, ISAAA

[ii] Modern food biotechnology, human health and development: an evidence-based study. WHO, 2005

[iii] www.agbioworld.org/declaration

About CropLife Asia:

CropLife Asia promotes the benefits and responsible use of crop protection and plant biotechnology products, as well as sound regulatory frameworks in support of sustainable agriculture in the Asia Pacific region. As a regional unit of CropLife International – a global federation of the plant science industry in 91 countries – CropLife Asia supports the work of 15 member associations and is led by member companies at the forefront of crop production research and development.

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