

USDA Foreign Agricultural Service

GAIN Report

Global Agricultural Information Network

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Burma - Union of

Post: Rangoon

Agricultural Biotechnology Annual

Report Categories:

Biotechnology - GE Plants and Animals

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Report Highlights:

Myanmar does not have a biosafety framework to track genetically engineered food or animal products. While there are no biotech regulatory controls, Myanmar does produce Bt cotton and is conducting plant marker-related research activities.

General Information:

SECTION I: EXECUTIVE SUMMARY

Myanmar is in the process of formulating a national agricultural development policy, which incorporates biotechnology. While there are existing laws such as the Pesticide Law, the Plant Pest Quarantine Law, and the Animal Health and Development Law that tacitly deal with biosafety issues, there are no comprehensive guidelines or regulations that govern plant or animal genetic engineering (GE).

Myanmar does not have regulatory controls on the imports of GE food or animal products and lacks the capacity to track these goods. Thus, it is possible that GE derived food and animal feed are being imported into the country.

There is no official information available on the planting of GE crops in Myanmar except for cotton. It is possible that other GE seeds are obtained from neighboring countries such as China.

There have been previous attempts to develop a national biosafety framework, but no law has been passed. The current government has not generated any legislative biosafety proposals.

SECTION II: Plant and Animal Biotechnology

CHAPTER 1: PLANT BIOTECHNOLOGY

PART A: Production and Trade

- a) **PRODUCT DEVELOPMENT:** Myanmar produces the long staple bollworm resistant Bt cotton variety “Ngwe Chi 6” (Silver-6). The average yield for Ngwe Chi 6 cotton is about two metric tons per hectare (MT/Ha). An estimated 95 percent of Myanmar’s cotton farmers plant the Ngwe Chi 6 cotton variety, however, newly developed Bt cotton varieties such as Ngwe Chi 9 and Shwe Taung 8 are likely to replace the local long staple cotton varieties.
- b) **COMMERCIAL PRODUCTION:** Myanmar commercially produces Bt cotton lint consisting of Ngwe Chi 6, Ngwe Chi 9 and Shwe Taung 8. Production is estimated at 500,000 metric tons (MT) in 2015/16.
- c) **EXPORTS:** Myanmar does not export commodities derived from agricultural biotechnology. All of the cotton grown in Myanmar is consumed domestically.
- d) **IMPORTS:** There is no official data on the import of agricultural biotech products.
- e) **FOOD AID:** Myanmar receives food aid from the World Food Program (WFP) primarily for internally displaced persons (IDP) in the form of rice, pulses, oil, and salt. It also distributes high energy biscuits for its school feeding programs. There are no issues related to biotechnology that impede the importation of these products. It is the WFP’s policy that all donated food meets the food safety standards of the donor and recipient countries and all applicable international standards, guidelines and recommendations.
- f) **TRADE BARRIERS:** Lack of awareness and knowledge hampers the adoption and use of biotechnology in Myanmar. Trade sources indicate that Myanmar consumers may be receiving negative information from anti-biotech groups.

PART B: POLICY

- a) **REGULATORY FRAMEWORK:** There have been previous attempts to develop a national biosafety framework, but no law has been approved. The current government has not developed any biosafety proposal and it is unclear if it is a priority for the government. The primary ministry responsible for agricultural biosafety policy is the Ministry of Agriculture, Livestock and Irrigation (MoALI). Other ministries involved in the development of biosafety policies are:
- (1) Ministry of Education
 - (2) Ministry of Natural Resources and Environmental Conservation
 - (3) Ministry of Commerce
 - (4) Ministry of Planning and Finance
 - (5) The Attorney-General’s Office
 - (6) Ministry of Health and Sport
- b) **APPROVAL:** Myanmar does not have a biosafety law and no approval mechanism is in place.
- c) **STACKED EVENT APPROVAL:** Not applicable

d) **FIELD TESTING:** Myanmar does not have a biosafety law governing the field testing of GE plants, but it does commercially cultivate Bt cotton.

e) **INNOVATIVE BIOTECHNOLOGIES:** Although Myanmar does not have a biosafety law, the MOALI has numerous ongoing biotech-related activities including: 1) plant micro-propagation; 2) application of anther culture in rice breeding; 3) molecular breeding; 4) genetic identification and DNA fingerprinting; 5) GE detection for biosafety purposes; and 6) grain quality analysis. The plant biotechnology laboratories under MOALI are facilitating micro propagation with tissue culture involving banana, orchids, potato and strawberry. MOALI is also conducting vital identification and fingerprinting research and core collection of rice germ plasm.

f) **COEXISTENCE:** Myanmar has no policy on coexistence.

g) **LABELLING:** Myanmar follows Codex standards for labeling pre-packaged foods and does not have any requirements for labeling GE products.

h) **MONITORING AND TESTING:** There is no active test for imported or exported GE products.

i) **LOW LEVEL PRESENCE (LLP) POLICY:** There is no LLP policy.

j) **ADDITIONAL REGULATORY REQUIREMENTS:** Not applicable.

k) **INTELLECTUAL PROPERTY RIGHTS (IPR):** A new Plant Varieties Protection Law was approved in January 2016 and is expected to go into effect in January 2017. Myanmar is not a member of the International Union for the Protection of New Varieties of Plants (UPOV).

l) **CARTAGENA PROTOCOL RATIFICATION:** Myanmar recognizes the ASEAN Guidelines on Risk Assessment of Agriculture-Related GMOs and the Myanmar Ambassador to the United Nations signed the Cartagena Protocol on Biosafety (CPB) on May 2001.

m) **INTERNATIONAL TREATIES/FORA:** Myanmar signed the NEP-GEF Agreement to facilitate the development of a national biosafety framework in July 2003. They have also participated as official observers at the last four APEC High Level Policy Dialogues on Agricultural Biotechnology.

n) **RELATED ISSUES:** None

PART C: MARKETING

a) **PUBLIC/PRIVATE OPINIONS:** Knowledge about GE products in Myanmar is low, thus, there is an opportunity to persuade farmers, consumers and the general public about the benefits of agricultural biotechnology.

b) **MARKET ACCEPTANCE/STUDIES:** The World Initiative for Soy in Human Health (WISHH) conducted market assessments utilizing USDA's Emerging Market Program to determine the viability of

soybeans in Myanmar. WISHH's assessments concluded that the Myanmar biotech import law is unclear and the government is concerned that soybeans could be planted and harvested without proper oversight. In another study, the International Service for the Acquisition of Agri-biotech Applications (ISAAA) released the 20th Anniversary of the Global Commercialization of Biotech Crops (1996-2015) and Biotech Crop Highlights in 2015.

CHAPTER 2: ANIMAL BIOTECHNOLOGY

PART D: PRODUCTION AND TRADE:

- a) **PRODUCT DEVELOPMENT:** No GE animals have been developed in Myanmar. There have been reports of improved breeding strains in poultry and pigs being imported into Myanmar, along with animal pharmaceuticals (i.e., vaccines and medicines), however, it is not possible to ascertain whether any of these products were produced through GE.
- b) **COMMERCIAL PRODUCTION:** Myanmar does not produce any livestock clones, GE animals, or products derived from animal biotechnology.
- c) **EXPORTS:** Not applicable. There are no GE animals and animal products in the market.
- d) **IMPORTS:** Myanmar does not import GE animals.
- e) **TRADE BARRIERS:** There are currently no trade barriers for the import of GE-derived animals.

PART E: POLICY

- a) **REGULATORY FRAME WORK:** There is no regulatory framework governing the production of GE animals.
- b) **INNOVATIVE BIOTECHNOLOGIES:** Not applicable.
- c) **LABELLING TRACEBILITY:** Not applicable.
- d) **INTELLECTUAL PROPERTY RIGHTS (IPR):** Myanmar follows World Organization for Animal Health (OIE) guidelines for GE produced animals.
- e) **INTERNATIONAL TREATIES/FORA:** Myanmar has been a member of the OIE since August 1989.
- f) **RELATED ISSUES:** None

PART F: MARKETING

- a) **PUBLIC/PRIVATE OPINIONS:** Knowledge about genetic engineering in Myanmar is low, thus, there is an opportunity to persuade farmers, consumers and the general public about the benefits this

technology.

b) MARKET ACCEPTANCE/STUDIES: None.