



Why taxonomy matters

A series of case studies highlighting Taxonomy's Value to Society

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CASE STUDY 33

Keeping the weevils from Bangladesh's cotton

*Implementing the
Global Taxonomy
Initiative of the
CBD*

Sectors: Agriculture; trade; pests; invasive alien species.

Location: Bangladesh.

Problem Statement: Cotton Boll Weevil, *Anthonomus grandis*, is a notorious pest of cotton in the USA where it persists despite an intensive, 20-year eradication programme. It is not known to occur in Bangladesh, a country that imports cotton from a number of countries, including the USA, to meet demand from its economically important textile industry. Standard phytosanitary procedure requires imported cotton to be fumigated for 72 hours on board ships at the port of entry to protect Bangladesh's cotton production from alien pest species, especially Cotton Boll Weevil. In a recent incident, Bangladesh Textile Mills Association (cotton importers) and the US Ambassador argued that this fumigation treatment is unnecessary. Bangladesh government authorities had to decide whether to contest the US position.

Methods: The Ministry of Agriculture, Bangladesh, invited several expert entomologists (taxonomists) to advise on the appropriate response to US government assertions that: (a) fumigation requirements are unnecessary from a scientific perspective, extremely costly and not required; (b) prior to shipment, cotton fibre is inspected by the U.S. Department of Agriculture and certified as being free of Boll Weevil; and (c) fumigation only serves to increase the price of U.S. cotton, thereby damaging the competitiveness of garment and textile exports from Bangladesh.

The taxonomists confirmed that the Cotton Boll Weevil is not found in Bangladesh. Importantly, they advised that Boll Weevils can enter a dormant state for 10-11 months (an overwintering survival strategy). It is also possible that their eggs could survive in a consignment of cotton in dormant adult weevils.

Outcome: The taxonomists recommended that:

- (a) Fumigation at the port of entry must be continued to prevent invasion of any unknown pest including Cotton Boll Weevil.
- (b) Experts from member countries of the IPPC and APPPC should make a definitive ruling (fumigation is mandatory in other cotton importing countries of the region).

Lessons: The involvement of scientists (taxonomists) is vital for phytosanitary and quarantine services, prevention of invasions by alien pest species and protecting a country from accusations of unfair practice by a trading partner. Without locally available taxonomic expertise, cotton production in Bangladesh would have been put at risk from cotton imports containing Cotton Boll Weevil in dormant or egg form. Lost cotton production and pest eradication costs would have had significant economic and social consequences, as in other countries that are highly dependent on agriculture. Maintaining locally accessible taxonomic expertise is a highly cost-effective approach to protecting agricultural and trade interests.

References: 1. Bangladesh Gazette, 1989. Destructive insects and pests rules, 1966 (Plant Quarantine) amended up to July 1989. 2. Pierce, J B, 1998. Cotton Boll Weevil Biology, Guide A-232, Agricultural Science Center at Artesia, New Mexico State University.

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