Public Perception on the Prevalence of Bt brinjal: an Indicator of the Future of Genetically Modified Crops in Bangladesh

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Abstract

Genetic modification (GM) has become fast-spreading and controversial globally at the same time which has resulted in bans on the sale of many GM crops in several countries. Bangladesh has currently commercialized Bt brinjal since 2014 that brings high revenue through higher yield and low costs of pesticides since it is an insect resistant crop. Several other GM crops are in trials which might bring economic benefits in the near future. However, the availability of Bt brinjal comes at the cost of unaware consumers that may have a negative stance towards GM as seen in global public perception. There is a significant lack of knowledge within regular consumers about genetic modification and more fear is instigated due to this gap. The public sentiment as seen within the survey respondents, when informed about the GM Bt brinjal (which is now a highly common household vegetable) was investigated. Respondents were open to progressive inventions in the agricultural sector due to the notable benefits but it does not go without skepticism of whether it is safe for human health and the environment. Scientists also evaluate these common issues that admittedly come with modifying the genome of an organism, attempting to bring the possibility of unknown risks to a negligible height. For successful large-scale implementation with content consumers, there must be a stronger flow of knowledge between scientists and the population.

Introduction

Genetic modification (GM) is the process in genetic engineering where the genome of an organism is edited by inserting, deleting or replacing pieces of DNA; changes in genes cause desired characteristics to be shown. Since its first execution in 1973 by Herbert Boyer and Stanley Cohen, the discovery has been pioneering in the medicine and food industry alike. For plants, such desired characteristics include augmented nutrition and yield, disease resistance, herbicide and pesticide resistance among others.

Thus, within a considerably short amount of time since the discovery, FDA first approved a food crop (GM tomato) in the US market for consumption in 1994 [1].

It is evident that the use of GM crops is becoming widespread across the globe at a fast rate. According to the GM Approval Database (GMAD) prepared by