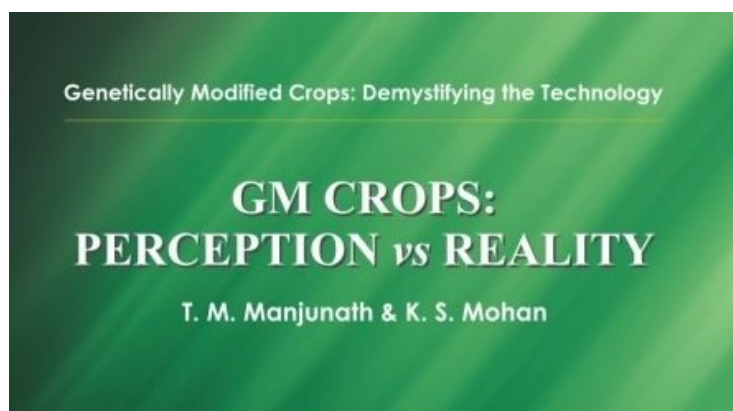


Book on GM Crops: Perception versus Reality released in India

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GM crops has proved to be one of the most contentious public issues in Indian society. Some of the perceptions includes: risk to human health, environmental impact, increase in economic power of multinational corporations and so on. These attitudes are shifting, but are still strongly hostile to GM technology.

In order to provide correct information on GM crops and technology and to bust the myth surrounding it, the Forum of Former Vice Chancellors of Karnataka State Universities (FVCK) and the Association of Biotechnology Led Enterprises Agricultural Group (ABLE-AG) released a new book titled GM Crops: Perception vs Reality written by Dr. T. M. Manjunath and Dr. K. S. Mohan. The authors have more than 40 years of research experience in plant protection and biotechnology. The book was released recently in Bangalore India Bio 2015.

The book discusses commercial cultivation of GM crops and stresses their importance in effective pest control and better weed management in selected crops, resulting in increased crop production and significant reduction in the use of pesticides. The book addresses common public perceptions around biotechnology by presenting scientific facts and data from authentic and credible sources.

Agri-biotech, by increasing income of small and resource-poor farmers, contributes directly to the poverty alleviation of a large majority of the world's poorest people. Until now biotech cotton in India has already made a significant contribution to the income of poor farmers. It is high time now to apply such technologies for production of food crops.

The book discusses how Agri-biotechnology is safe, scientifically based, farmer friendly and is a most important tool to ensure food security under most circumstances.

Every country which has permitted or in the process of permitting commercialization of GM crops, has formed stringent biosafety protocols and made it mandatory for every GM crop to pass through all the prescribed tests. The results obtained from such trials are scrutinized by a series of expert committees and it is only on being satisfied with the scientific data that they are safe to humans, animals and the environment, permissions are accorded for their commercialization. Every GM crop approved so far in every country has gone through this process.

For example, in India, Bt-cotton is the only GM crop approved since 2002. Prior to its approval, it has undergone about 500 agronomic trials and a large number of biosafety tests for 7-8 years. These trials were supervised by about 150 scientists belonging to 13 agricultural universities and 9 national research institutes spread across 9 states! The safety data pertaining to these studies were submitted to the regulatory authorities. On the strength of such scientific data, Bt-cotton was considered as safe and approved for commercial cultivation by the Genetic Engineering Appraisal Committee (GEAC) of Government of India in March 2002.

Several other crops, including Bt-brinjal, incorporated with various beneficial traits, have been under regulatory trials for 5-8 years, but they are yet to receive regulatory approvals.

Such inordinate delays have frustrated the biotech scientists, students and companies and affected the progress of biotechnology. Being so, the opponents of this technology have been vociferously alleging that the GM crops are dangerous, not subjected to adequate tests, approvals are given in a haste, etc.! This is not true..

Ever since their approval in 1996 in the USA and other countries, the GM crops have recorded an unprecedented adoption - 1.7 million hectares in six countries in 1996 to over 175 m ha in 27 (19 developing, 8 industrial) countries by 18 m farmers in 2013, which is about a 100-fold increase in area in 18 years!

The USA, Argentina, Brazil, India, Canada, China, Paraguay, South Africa and Pakistan are the major countries cultivating GM crops.

The technology has been introduced mainly in soybean, corn, cotton, canola and papaya. Owing to effective control of target pests and good weed management in these crops, the yields have significantly increased. Use of chemical pesticides has declined, leading to economic and social benefits to millions of farmers across the world in addition to environmental benefits due to reduction in pesticide use. Similar benefits have accrued to the Indian cotton farmers with the introduction of Bt-cotton in 2002.

The area under Bt-cotton as of 2013 was about 11 million hectares that comprised 95% of the total cotton acreage in our country, being adopted by over 7 million (70 lakh) farmers.

Book says that as a result of effective control of bollworms due to Bt-cotton, coupled with other factors, the yield of cotton has doubled, contributing to economic and social prosperity of the farmers. Besides, it turned India from an importer of cotton to an exporter.