Awareness Capsule

GM Crops

Need for Scientific Consensus

The world community is still to reach a consensus on GM crops. Confusion continues among the scientific community and this percolates further down to the government, CSOs, media and the public at large. The adoption of this potential source of food security – field evidence indicates definite productivity gains – should not be railroaded because of mere confusion. Consensus must, therefore, emerge among the scientific community, the opinion makers in this regard.

The world agricultural economy is at the crossroads and in a state of confusion. Confusion persists regarding the correctness of adopting genetically modified (GM) crops which constitute a probable solution to present and future food scarcity issues caused by increasing populations, declining area under cultivation and static or declining crop yields. Such scarcity in turn might manifest itself in poverty, hunger and malnutrition.

GM crops, argue their supporters, would help increase yields and reduce average costs of production. Thus, the supply of food would be enhanced. Detractors discount these positives and claim that adoption should be avoided due to potential adverse impacts on human beings, animals, bio-diversity, and the environment.

This is probably one of the few occasions in modern human history that the trinity of agricultural science, agricultural economics, and agricultural philosophy, whose synergy has resulted in solutions to past problems of food scarcity through the stimulation of appropriate agricultural developments, have themselves come to loggerheads. The morality and ethics of man's drive to satisfy his needs through innovation has been questioned.

The history and evolution of GM crops, since the mid-nineties, has been marred by controversy. Between 1997 and 2005, growth was rapid area cultivated with GMOs increased 52 fold from a mere 1.7 million to about 90 million hectares. In the last five years, adoption has decelerated and only another 44 million hectares has been added. The latest estimate by the Food and Agricultural Organisation (FAO) indicates that 134 million hectares out of a total cultivable area of 4.9 billion hectares, or a mere 2.7 percent, were sowed with GM crops in 2009.

While 25 countries use GMOs at the present, bulk of the use is restricted to six countries – US, Brazil, Argentina, India, Canada and China which account for 95 percent of area cultivated under GM crops. A crop wise decomposition of the total acreage under GM crops reveals that 99 percent of the acreage is accounted for by GM varieties of soybeans, maize, cotton and canola. Examination of history demonstrates that the range of crop species cultivated commercially has not grown. Moreover, 7 out of 25 countries actually cut down their cultivation in 2009 while in another there was no change.

There exists considerable empirical validation of the mentioned pros of GM crops data from field trials have demonstrated that GM yield exceeds non GM yield by 8-30 percent and the associated cost of production is lower.

The question therefore arises as to why GM crops, with proven ability to solve problems relating to food scarcity, have fared so poorly in terms of commercial adoption. The answer definitely lies in the lack of consensus among scientists and therefore among farmers, governments, civil society organisations, and various other stakeholder groups about the possible adverse impacts of GMOs on human life. Such consensus, non-existent at the present, has to necessarily emerge first among the scientific community the opinion makers in this regard.

Information exchanges and dialogue among scientists of diverse nationalities and schools to foster consensus is thus the need of the hour. The adoption of this potential source of food security should not be railroaded because of mere confusion. Rather decisions to adopt should be based on clear headed scrutiny of evidence by the scientific community.

This article is part of a series of one pagers recently launched by CUTS with the objective of generating economic literacy and enhancing awareness about key socio-economic issues relating to the Indian as well as global economy.

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