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Sustainability of genetically modified (GM) crops

Abdul Hakeem
Institute of Business Administration

Wajid Ali Shah
Institute of Business Administration

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GM Crops

Crops which have been developed by introducing a new gene from any other source, e.g., bacteria or any other organism to obtain the desired character are called GM crops.

Abstract

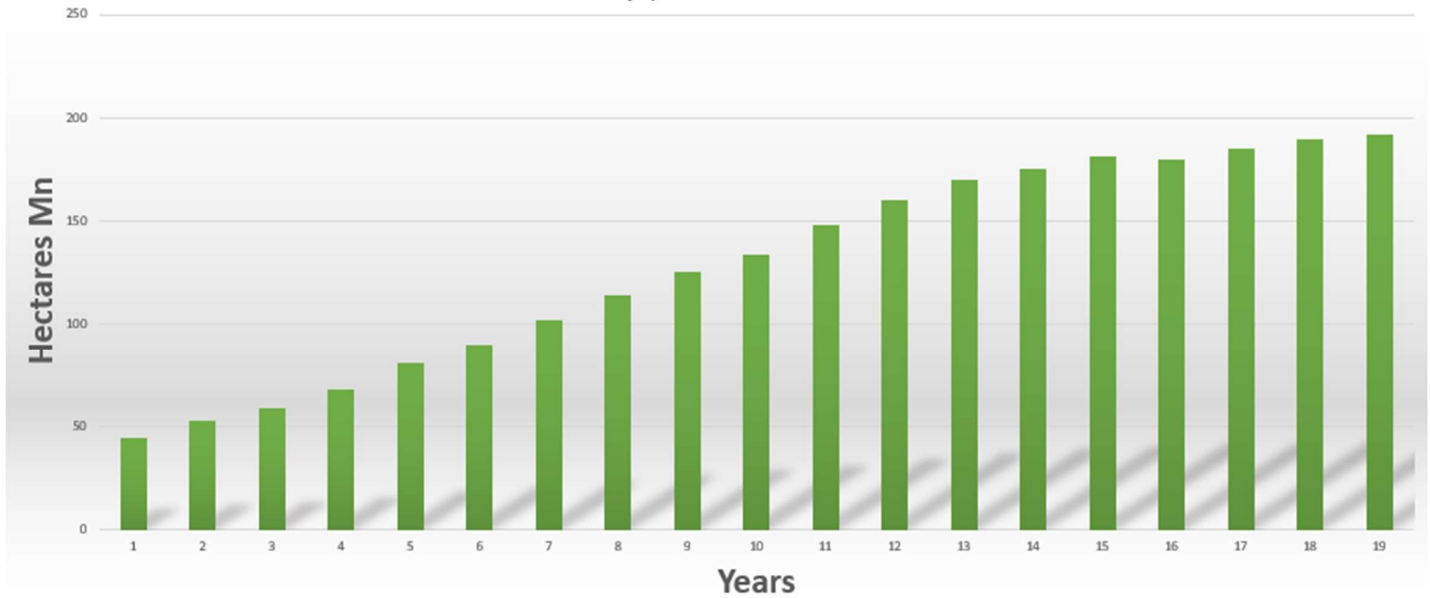
This proposal identifies the methods used in the modification of crops, their production, modification, expansion, benefits, and carbon emission. Moreover, the special focus of this proposal is to explain the need for GM crops for developing nations which are witnessing exponential growth of their populations. Additionally, it pursues to determine how in the environmental and economic context, the significance of GM crops is overwhelming and cannot be overlooked. The greenhouse effect reduction is the other essential output of the GM crops as shown through the illustrations.

Results

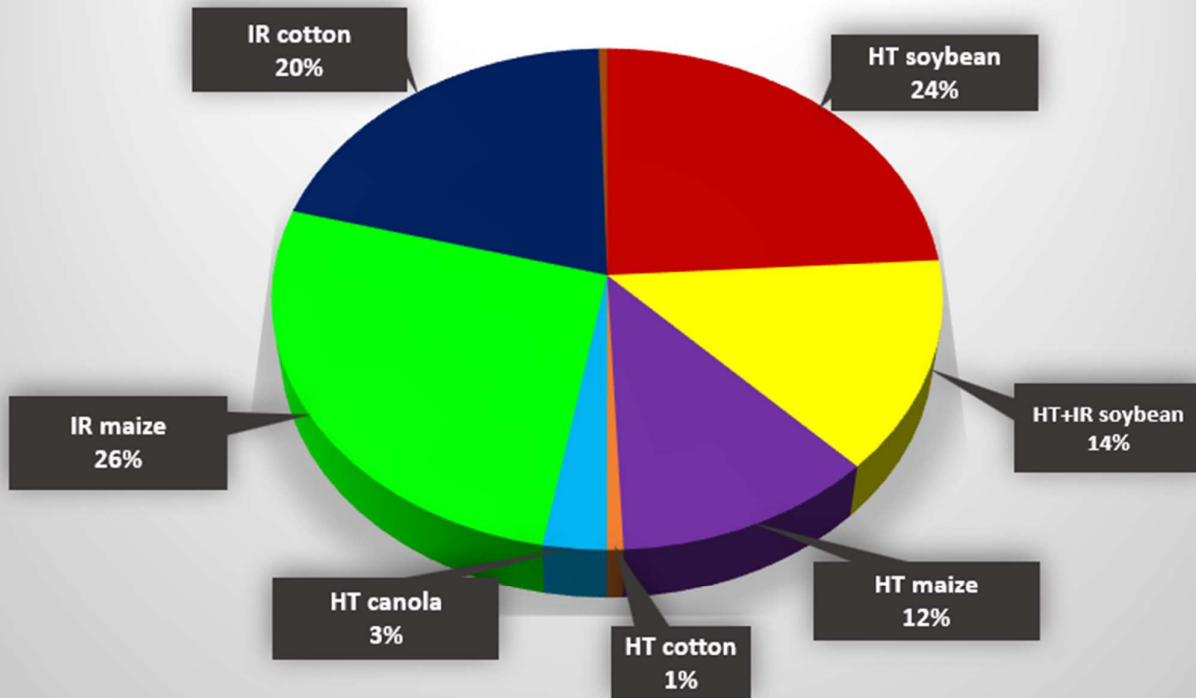
Based on the review of the literature on GM crops, the analysis showed that the GM crops are game-changers and key factors for the economy of the developing nations besides the developed ones as depicted by the following graphical illustrations.

Global Area and Market Structure of GM Crops

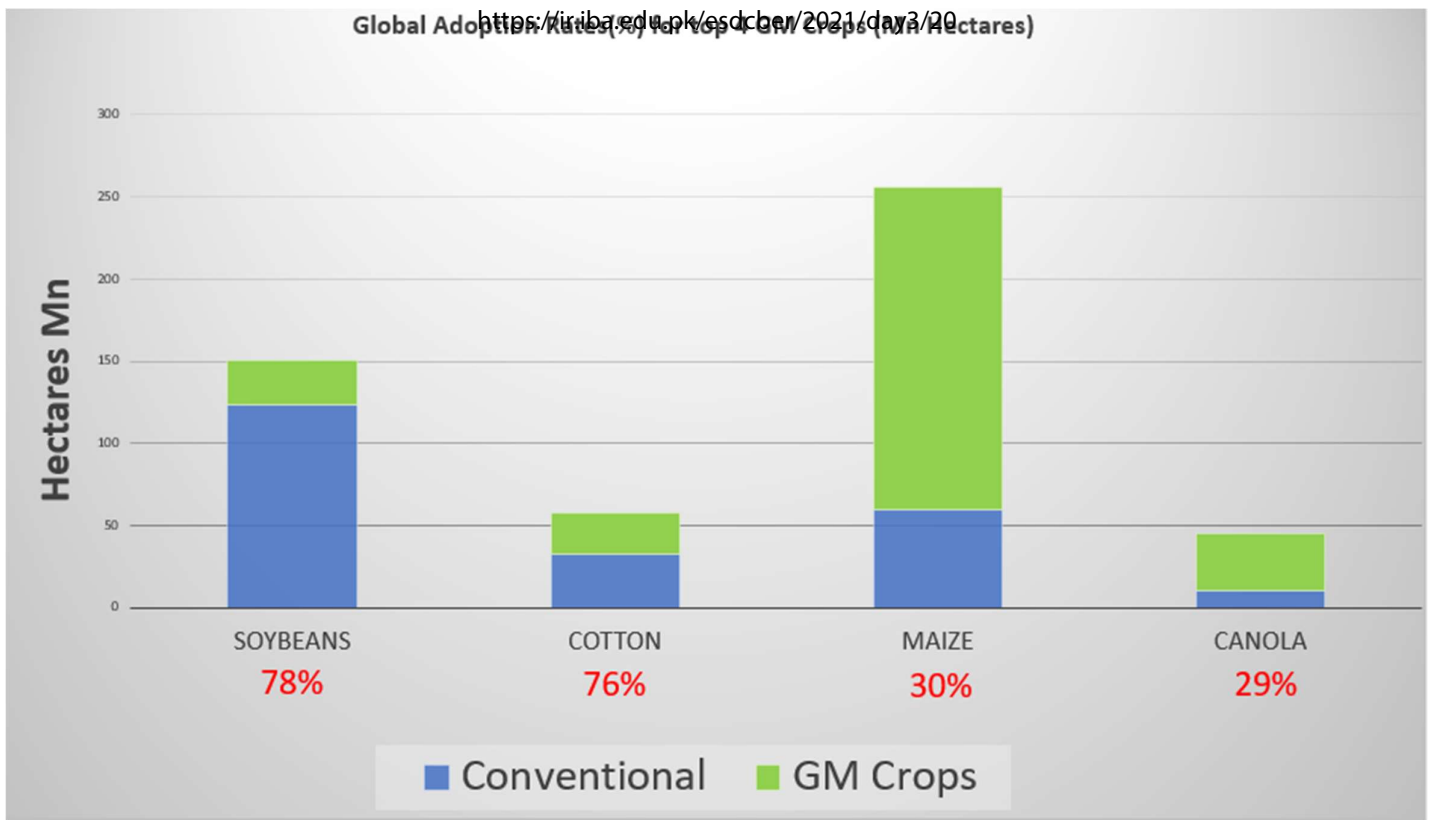
Global area of GM Crops, 2000-18



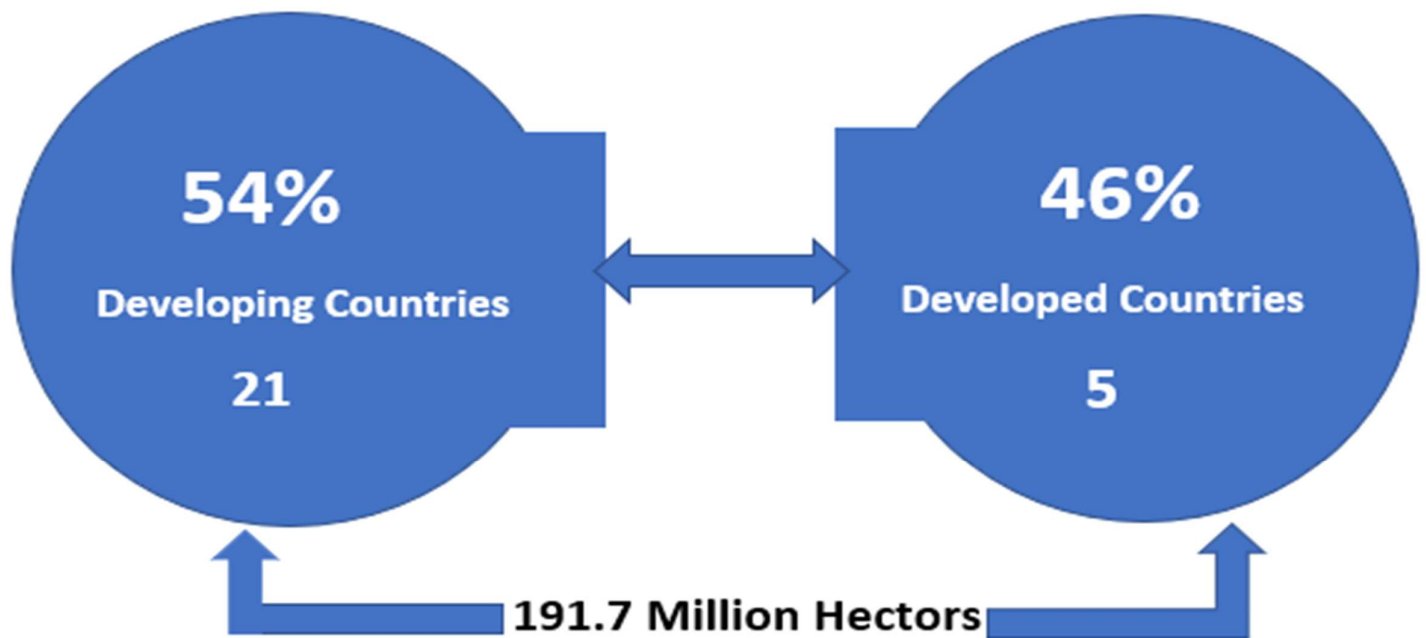
Global farm income benefits from growing GM crops, 1996-2016 (US\$ Mn)



HT = Herbicides Tolerant, IR = Insect Resistant, Others = other viruses tolerant



Distribution of GM crops



Advantages of GM crops

- **Higher productivity**
- **Higher Employment**
- **Nutritious & Tastier Food**
- **Reduction in Carbon Emission**
- **Reduction in Pesticides Poisoning**
- **Disease- and Drought-Resistant Plants**
- **Reduction in Suicide Rate**
- **Welfare Gains**

Conclusion

In this ever-changing, overpopulated, and climate-change-facing world, it is crucial to look for new and unconventional methods of farming and growing. Given the explosive growth of populations in the developing world, there is a high demand for genetically modified crops that are not only more efficient, more nutritious, and more accessible but they also use the least amount of resources. Moreover, the biggest challenges of the century which the world leaders are obsessed with is the consistent increase in carbon emission. However, the production of GM crops can significantly reduce this threat by using a lesser amount of fossil fuels. It can also reduce greenhouse gas emissions by allowing farmers not to till the land after harvest and cultivate GM crops after one another.

References

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