

Risks and benefits of transgenic plants for the environment

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Abstract

Various transgenic plants using different techniques have been developed. Such plants communicate with other agro-environmental species. Cultivating these plants, however, is a matter of controversy. Many authors have raised numerous concerns about risk factors, such as problems related to the effects of gene escape, adverse effects on biodiversity, natural enemies, pollinators, soil species, decomposers, and numerous non-target organisms. Different proponents, on the other hand, stress the advantages of transgenic plants, such as decreased environmental damage from pesticides and insecticides, improved yield, soil conservation, phytoremediation, etc. The key concern of this current mini study is critical examination of this dispute. An attempt to explain the potential effect of transgenic plants in developing countries has also been made.

Keywords

Transgenic, genetically modified organisms, risks, benefits, developing countries

Introduction

Transgenic organisms, also referred to as genetically modified organisms (GMO), are commonly developed by applying genetic engineering techniques or altering crop genetic materials (Kumar et al. 2020). The modification can most easily be defined as the transfer into the target plant of genetic material from another species (plant, bacterial or animal) or from a chemically synthesised gene. Up to the late 1980's. Reliable barley and wheat production only started in the mid-1990s (Skerritt 2000). We currently know that the process