Corn, soy yields gain little from genetic engineering: study

April 14 2009

A farmer harvests his soybean crop near Ottawa, Illinois in 2007. The use of genetically engineered corn and soybeans in the United States for more than a decade has had little impact on crop yields despite claims that they could ease looming food shortages, a study released on Tuesday concluded.

The use of genetically engineered corn and soybeans in the United States for more than a decade has had little impact on crop yields despite claims that they could ease looming food shortages, a study released on Tuesday concluded.

"A hard-nosed assessment of this expensive technology's achievements to date gives little confidence that it will play a major role in helping the world feed itself in the forseeable future," said the report by the Union of Concerned Scientists.

The study evaluated the effect on corn and soybean crop yields of

genetically engineered varieties commercialized in the United States over the past 13 years, examining peer-reviewed academic studies that date back to the early 1990s.

"Based on that record, we conclude that GE (genetic engineering) has done little to increase overall crop yields," it said.

The report said genetically engineered soybeans account for 90 percent of soybeans grown in the United States, while genetically engineered corn accounts for 63 percent of the US corn crop.

"Overall, corn and soybean yields have risen substantially over the last 15 years, but largely not as a result of the GE traits," the report said. "Most of the gains are due to traditional breeding or improvement of other agricultural practices."

It found that corn and soybeans that were genetically modified to increase their tolerance to herbicides "have not increased operational yields, whether on a per acre or national basis, compared to conventional methods that rely on other available herbicides."

Corn modified with genes from Bt, or Bacillus thuringienisis, bacteria for resistance to several kinds of insects did provide higher yields, but the study estimated the increase at between 0.2 and 0.3 percent a year on average over the past 13 years.

Overall corn yields in the United States have increased an average of about one percent a year, it said.

"More specifically, US Department of Agriculture data indicate that the average corn production per acre nationwide over the past five years (2004-2008) was about 28 percent higher than for the five-year period 1991-1995," it said.

"But our analysis of specific yield studies concludes that only 4-5 percent of that increase is attributable to Bt, meaning an increase of about 24-25 percent must be due to other factors such as conventional breeding," it said.

(c) 2009 AFP

Citation: Corn, soy yields gain little from genetic engineering: study (2009, April 14) retrieved 23 April 2024 from https://phys.org/news/2009-04-corn-soy-yields-gain-genetic.html

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.