

Genetically Engineered Crops and Pesticide Use in the United States: The First Nine Years

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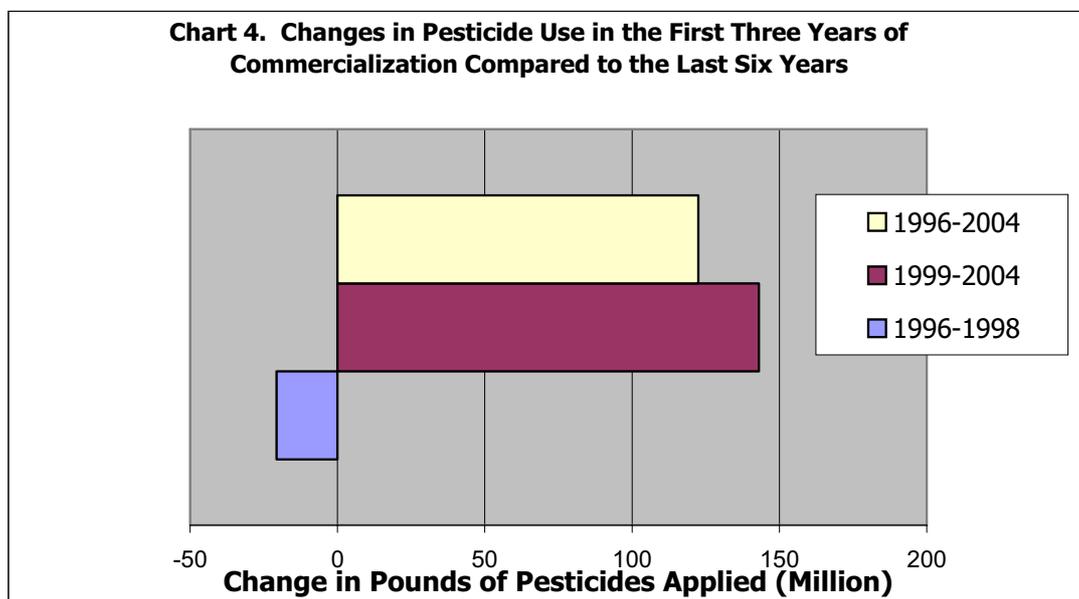


33. The First Nine Years - Impacts of GE Crop Technology on Pesticide Use

Major Findings Across Three Significant Crops

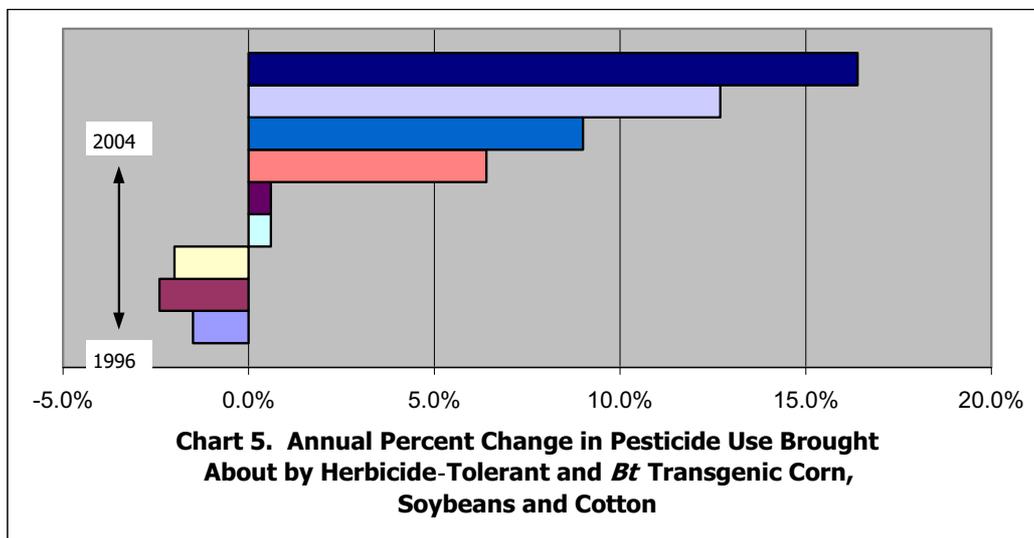
Table 7 integrates all the estimates of average pesticide use rates per acre on GE-planted acres in contrast to acres planted to conventional varieties. For each crop and GE trait, the rates of pesticide use and the average differences per acre in pounds applied between GE and conventional acres are shown for 1996-2004.

The impact of GE crops on total pounds of pesticides applied across the three crops and for both HT and *Bt* traits are reported in Appendix Table 11. The numbers in Appendix Table 11 are calculated by multiplying the average difference in pesticide use per acre of crop planted to a GE trait by the acres planted to that GE trait each year. The last four rows of the table add together the impacts of GE technology on total herbicide, insecticide, and herbicide plus insecticide use across the three crops.



36. The First Nine Years - Impacts of GE Crop Technology on Pesticide Use

Across the three crops, HT varieties increased herbicide use by 138 million pounds over the nine-year period, or by about 5 percent. The two *Bt* transgenic crops reduced insecticide use by 15.6 million pounds, or by about 4.7 percent. All GE crops planted since 1996 have increased corn, soybean, and cotton pesticide use by 122.4 million pounds, or about 4 percent. Chart 5 places these findings into perspective. It shows by year the percentage change in total pesticide use on corn, soybeans, and cotton brought about by the adoption of HT and *Bt* crops.



Conclusions and Future Prospects

While the discovery and adoption of GE crop technology has changed American agriculture in many ways, reducing overall pesticide use is not among them. *Bt* transgenic crops have reduced overall insecticide use, but HT crops have increased it by a far greater margin.

Moreover, the performance of HT crops appears to be slipping. The average acre planted to glyphosate-tolerant crops is requiring more and more help from other herbicides, a trend with serious environmental and economic implications.