

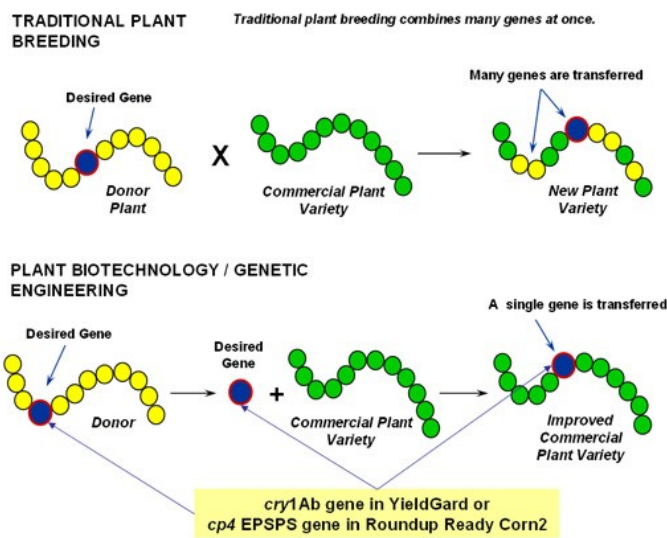
# Biotechnology: Plant Biotechnology Basic

For centuries, humankind has made improvements to crop plants through selective breeding and hybridization — the controlled pollination of plants.

Plant biotechnology is an extension of this traditional plant breeding with one very important difference — plant biotechnology allows for the transfer of a greater variety of genetic information in a more precise, controlled manner.

Traditional plant breeding involves the crossing of hundreds or thousands of genes, whereas plant biotechnology allows for the transfer of only one or a few desirable genes. This more precise science allows plant breeders to develop crops with specific beneficial traits and without undesirable traits.

## Breeding vs Biotechnology



Many of these beneficial traits in new plant varieties fight plant pests — insects, weeds and diseases — that can be devastating to crops. Others provide quality improvements, such as tastier fruits and vegetables; processing advantages, such as tomatoes with higher solids content; and nutrition enhancements, such as oil seeds that produce oils with lower saturated fat content.

Crop improvements like these can help provide an abundant, healthful food supply and protect our environment for future generations.

*"Modern techniques of genetic engineering are essentially a refinement of the kinds of genetic modification that have long been used to enhance plants, micro-organisms, and animals for food. The products of the newer techniques are even more predictable and safer than the genetically engineered foods that have long enriched our diet."*

Henry Miller, M.D., Fellow at Stanford University's Hoover Institution; June 17, 1999



## Sources and Links

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