

Design Yer Genes

Where Do Genes Come From?

| Crop | Source of Genes | Name of Gene | New Trait |
|-----------------------------------|---------------------|---|--|
| Canola | Various plants | Enzymes for oil (lipid) synthesis | Lower saturated oils |
| | Various plants | Synthesis | Special oil compositions like building blocks for shampoo, synthetic lubricants, shortenings |
| Chrysanthemum | Bacteria | Antisense pigment genes | Pure white petal color |
| Cotton | Soil microbe | Enzymes that degrade herbicides | Provides resistance to herbicides |
| | Bacteria | Bt | Insect control |
| | Bacteria and plants | Pigment genes | Genetically colored fiber |
| Papaya | Plants | Ripening genes | Increased flavor and firmness |
| | Virus | Viral coat protein | Viral resistance |
| Potato | Bacteria | Starch | Increased starch content |
| Rice | Bacteria | Enzymes involved in pathway to make β -carotene | Rice rich in Vitamin A known as "Golden Rice" |
| Soybean, Sunflower, Canola | Legumes and nuts | Storage proteins | Makes the plant by-products have more protein so it can be used for nutritious animal feed |
| Squash, Cantaloupe | Virus | Viral coat protein | Viral resistance |
| Strawberry, Raspberry | Plants | Ripening genes | Increase firmness and size |
| Tomato | Tomato | Antisense enzyme(s) | To soften more slowly; allows tomato to remain on the vine longer |
| | Virus | Viral coat protein | Viral resistance |
| | Bacteria | Enzyme to make sugar | Extra sweet |
| | Bacteria | Enzymes involved in pathway to make β -carotene | Increase in Vitamin A content |