

G.E. examples

→ changing genetic material of organism by removing, changing, or inserting individual genes from another organism.

- organism then = genetically modified / transgenic organism

- examples:

→ medication for diabetics → gene for human insulin

↳ into bacteria

= bacteria producing insulin medication

→ Crop plants (wheat/maize) → modified to become insect resistant

↳ additional vitamins

→ herbicide resistant

↳ eg (golden rice)

Advantages/Disadvantages of GM crops

Advantages

- reduced use of chemicals (herbicides/pesticides)

↳ better for enviro

- Cheaper / less time consuming for farmers

- ↑ yields (not competing with weeds for resources + no pest damage)

Disadvantages

- ↑ seed costs (↑ for development of seeds)

↳ smaller farmers can't compete

- ↑ dependency on chemicals eg. herbicides

crops = resistant to

- risk of inserted gene transferred to weeds by pollination

- reduced biodiversity (herbicides)

insects / insect eating birds impacted

- some GM plants don't grow as well as non-GM plants.

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