



GM crops

● Recognising GM crops

You cannot recognise GM (genetically modified) crops just by looking at them. GM mealies can look just as healthy and good for you as natural mealies grown using traditional methods.

● Created in a laboratory

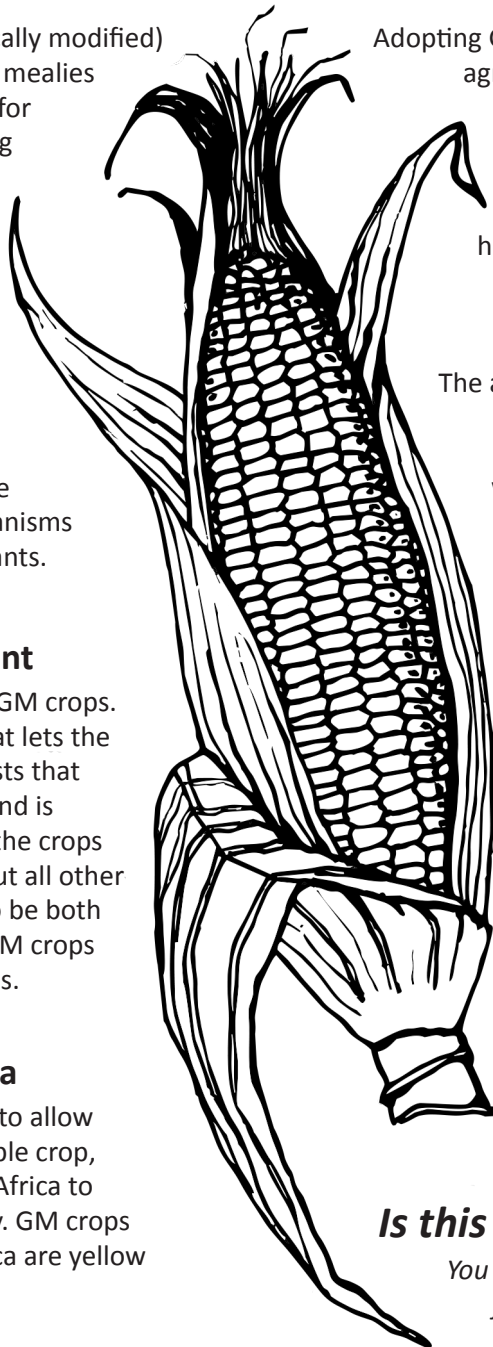
GM (genetically modified) crops are grown from the seeds of plants that were created in a laboratory by scientists. Scientists created these unnatural plants by mixing genes from a crop plant like maize, with genes from other organisms like bacteria, viruses and other plants.

● Herbicide & pest resistant

There are two main categories of GM crops. The first is created with a gene that lets the plant produce a toxin that kills pests that would usually feed on it. The second is created with a gene that enables the crops to tolerate herbicides that wipe out all other plants. Some plants are created to be both herbicide and pest resistant. No GM crops are engineered for increased yields.

● GM crops in South Africa

South Africa was the first country to allow the genetic modification of its staple crop, and has been the only country in Africa to grow GM food crops commercially. GM crops grown commercially in South Africa are yellow and white maize, soya and cotton.



● Farming methods

Adopting GM seeds means adopting a whole new agricultural system. Farmers often have to change from production methods they know and are in control of, to growing monocrops of patented seed with chemicals. This means that farmers have to rely on expensive outside inputs.

● Seed ownership

The altered genes of GM crops are patented (owned) by big seed companies like Monsanto. This means that farmers who buy or are given these seeds never actually own them. They only own a licence to use the seeds for one season. They cannot keep seeds from a harvest to plant next season unless they pay the company again. The pollen from GM maize planted by one farmer can contaminate and pass the patented genes to a neighbouring farmer's crop.

● Impacts & concerns

There are many reasons why you should be concerned about GM maize and other GM crops. See over the page for more information on health and environmental impacts as well as threats to farmer's livelihoods.

Is this a GM mealie?

You cannot recognise GM crops or GM foods just by looking at them!

There is growing resistance to GM crops from farmers and consumers around the world.

Why should you be concerned?

● Threatens livelihoods

GM crops threaten rural livelihoods, food security and local control over genetic resources. The patenting of seeds by big companies restricts the traditional right of farmers to select, save and exchange seeds from year to year.

Farmers are forced to buy herbicide from the same seed companies, and they have to use more and more herbicide as the crop develops resistance. Pests also adapt to pest resistant GMOs, and after a while the farmer must use pesticide sprays again.

Because GM crops can reproduce, patented (owned) genes from GM maize can be transferred to maize grown with traditional seeds. This contaminates other farmer crop varieties and threatens farming systems, developed over generations, that rely on the careful saving of seed. This contamination can never be reversed.

● Threaten health

The health impacts of GM crops include allergies, immune system problems, infertility, organ problems, cancer and antibiotic resistance. The herbicides used with GM crops disrupt the endocrine system and increases miscarriages and cancer.

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● Threatens environments

GM crops are GMOs (genetically modified organisms). They are living organisms and can therefore cause serious and irreversible damage to the environment including contamination of soil and water resources; creation of invasive species; harm to wildlife, beneficial insects and soil organisms; and loss of biodiversity.

Pest and herbicide resistant GM crops are creating “super-bugs” and “super-weeds” that need increasingly stronger chemicals to kill them.

When GM crops die and decompose, they leave behind engineered (created in a laboratory) genes in the soil and water supply, affecting important micro-organisms. Once in the environment it is impossible to know how the genes will spread and the impact this will have.

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This handout is part of a series developed and published by Biowatch South Africa as an information resource for local farmers and communities.

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