

What are the safety risks of GMOs and how are they managed?

Risk is intertwined with every aspect of our daily lives. We generally think and act as though life is largely free of risk and view “taking risks” as irresponsible and something that should be avoided. However, everything we do involves some level of risk and NO activity is absolutely safe. For example, millions of people get into their cars and drive on public roads every day without really contemplating the risks associated with it. We generally perceive the associated risks to be acceptable because we are familiar with them and the context in which they occur, realise from experience that we can manage them well and the risks are clearly outweighed by the benefits of high mobility.

When discussing risk one should therefore always remember that:

- (i) there is no such thing as zero risk or absolute safety,
- (ii) risk should be assessed in a relevant context,
- (iii) risks can be managed and
- (iv) potential benefits counterbalance potential risks.

Risk and safety of GMOs

GMOs potentially have novel genetic traits that may impact the way in which these organisms interact with their environments (also see “[why are GMOs regulated?](#)”). These potentially new interactions represent potentially new risks that have to be assessed and/or managed appropriately before a GMO is released into the environment.

The biosafety risks of GMOs relate to their possible effects on human/animal health and the environment and is a shared focus of all GM regulatory systems around the world. In some countries, including South Africa, additional socio-political and economic considerations are also taken into account before a GMO is approved for commercial use.

While confirmation of the health and environmental safety of a GMO will ensure its **(bio)safety**, confirmation of its socio-political and economic relevance will also ensure its **viability**. The South African regulatory system considers all these aspects to ensure the **sustainability** of GMOs within the South African context before they are released.

