# New Breeding Techniques (NBTs) Explained



New breeding techniques (NBTs) are new methods being used to change the genetic make-up of plants, animals and microbes (e.g. bacteria and yeast), which are then used for food.

## **Types of NBTs**

The most commonly known NBT is genome editing. Genome editing can make changes **more precisely** than older methods such as Genetic Modification (GM) or conventional breeding. Genome editing also takes **less time** to make new foods than conventional breeding.

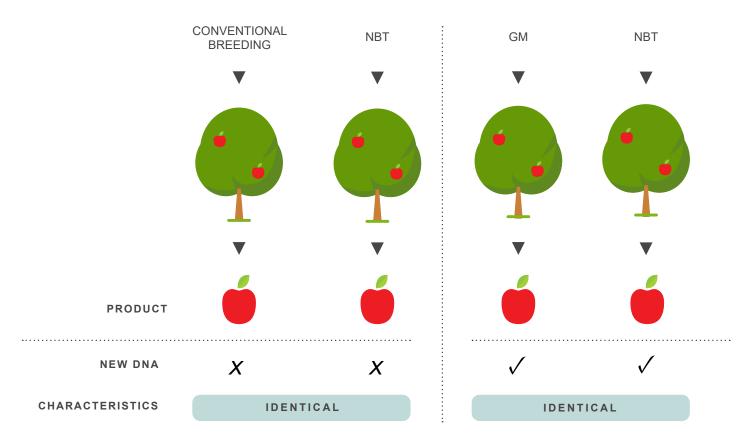
### Did you know?



There are lots of different tools available to edit the genes of plants, animals and microbes. CRISPR/Cas9 is an example of a genome editing tool.

#### GM vs NBTs - what's the difference?

Unlike GM methods, some NBTs can make changes without permanently introducing new DNA. This means some NBT foods will be more like conventional foods, whereas other NBT foods will be more like GM foods.



Note - there are currently no GM or NBT fresh foods such as fruits or vegetables available for sale in Australia or New Zealand.









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### **FSANZ** work on NBTs – preparing for the future

The Food Standards Code has definitions for GM food that determine which foods need to be assessed for safety and approved before they can be sold in Australia and New Zealand.

Because these definitions were set before NBTs were around, FSANZ has started work to update them. We also will consider what types of NBT foods need to be assessed for safety before going to market.

### Why it's important

We have seen an acceleration in the development and adoption of new technologies for genetic modification over the last 20 years.

These technologies may provide benefits for the food and agricultural sector, as well as consumers. For example, NBTs are being used to develop a type of wheat with reduced gluten content, that could become an ingredient in food products for people with gluten-intolerance.





It is important that food regulation keeps pace with change and is designed to serve us into the future. This will ensure we can continue to protect public health and safety as well as benefit from innovation.

In updating definitions, FSANZ will be looking at what type of regulation will serve our current and future needs while ensuring NBT foods are as safe as non-GM food.

#### Stay updated:

To stay updated on our progress, including when you can have your say, visit: www.foodstandards.gov.au/P1055

Background information about our work on NBTs can be found here: www.foodstandards.gov.au/nbts







