Explaining the science of cultivated meat

In one sentence:

Cultivated meat is exactly the same as the beef, pork, chicken and seafood people enjoy eating today – but grown directly from animal cells, instead of raising and slaughtering animals.

In more depth:

Cultivating meat is similar to growing plants from cuttings in a greenhouse, which provides warmth, fertile soil, water and nutrients. This new method of meat production enables the natural process of cell growth, but in a more efficient environment.

We take a small, harmless sample of cells from an animal and grow them in what is known as a cultivator. The cultivator facilitates the same process that happens inside an animal by providing the cells the warmth and nutrients needed to transform into meat: water, proteins, carbohydrates, fats, vitamins and minerals.

The result is real meat, made in a more sustainable way.

Learn more: gfieurope.org/cultivated

Contact: europe-media@gfi.org

Explaining the science of plant-based meat

In one sentence:

Food scientists have found plants containing the fats, proteins and minerals that make up meat, and combined them to deliver the taste, texture and experience of meat, without using animals.

In more depth:

At its simplest level, animal meat is made up of proteins, fats, vitamins, minerals and water – and we can find or replicate all of these elements from the plant kingdom to create plant-based meat.

The general method used to produce plant-based meat involves three main steps. First, we grow crops as a source of ingredients.

Second, we process these crops to get rid of the parts of the plants we don't want and select the proteins, fats and other ingredients that for our plant-based meat product.

Finally, we put together the desired mixture of ingredients. This mixture then goes through a manufacturing process to create the muscle-like texture needed for meat.

The result is the taste, texture and experience of meat, made entirely from plants.

Learn more: gfieurope.org/plant-based Contact: europe-media@gfi.org

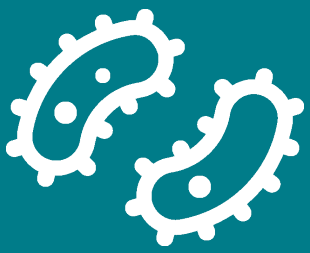
Explaining the science of fermentation

In one sentence:

Fermentation uses a process similar to making beer or yoghurt to create sustainable protein that looks, cooks and tastes like meat, or to produce real dairy or egg proteins without animals.

In more depth:

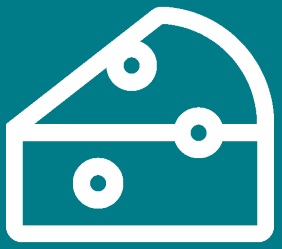
Fermentation companies that make meat use a method similar to beer and yoghurt production to grow protein – often naturally occurring mycoprotein sourced from earth – with a meaty texture.



Precision fermentation companies use organisms such as yeast to produce pure milk, egg or collagen proteins, or ingredients such as heme. This process has been used for decades to produce medicines like insulin and food enzymes like rennet (which is found in many cheese products).

Gene sequences for milk or egg (such as whey and casein) are introduced into the yeast, which then produces these proteins in the same way as animal cells.

The result is pure milk and egg protein without antibiotics, E. coli, salmonella, or faecal contamination. These can then be mixed with other ingredients like sugar and plant-based fats to create products like ice cream, cheese or whole milk.



Learn more: gfieurope.org/fermentation Contact: europe-media@gfi.org