

A close-up photograph of a white plate containing a skewer of grilled meat, sliced red onions, white radish, and cucumber. A spoon is pouring a dark, thick sauce over the meat. The background is a dark, reflective surface.

THE 4 MYTHS OF CULTIVATED FOODS

APAC-SCA (Student Chapter) is here with its first series of factsheets targeting common myths and misconceptions around cultivated meat & seafood.

APAC-SCA (Student Chapter) is proud to present you with a series of factsheets to help you and I understand the science of cultivated meat and seafood. This series of factsheets will be shared in three parts – this first series shall address common myths and misconceptions you might have on this new food production technology; part two and three shall cover the reasons why we need cultivated food, and behind the scenes of its production. Sit back, relax, as we bring you through this journey with us. For more information visit our website at www.cellagstudent.com.

MYTH 1

IS CULTIVATED MEAT LABORATORY-GROWN MEAT?

'Cultivated' is the preferred English-language descriptor for food products grown directly from animal cells. The term 'lab-grown' neither provides clarity nor conveys the nature of the product.

WHERE DOES CULTIVATED MEAT & SEAFOOD COME FROM?

Cultivated meat and seafood are made from real animal cells that are arranged in a way that replicates the sensory and nutritional profiles of its conventional counterparts. Unfortunately, the term 'lab-grown' often misleads people to think it is synthetic, which discourages interest.



(01) Production of cultivated meat and seafood is done in a clean facility



(02) Niya Gupta, Fork & Good Inc.

“CULTIVATED” IS THE PREFERRED TERMINOLOGY

Fork & Good Inc. CEO Niya Gupta prefers the term 'cultivated meat' for its natural, agriculture-related connotations and biological accuracy. Unlike 'lab-grown,' which can make people feel uneasy, 'cultivated meat' gives a sense of authentic, natural processes, avoiding the impression of eating a science project.

WHY DO PEOPLE STILL CHOOSE TRADITIONAL MEAT?

MYTH 2

CULTIVATED MEAT IS STILL MORE EXPENSIVE AT THE MOMENT

This is due to lower demand or a shortage of skilled scientist for scaling up the cultivation process. Although costs are high, they are expected to drop and reach a similar price to traditional meat by 2030.

Consumer neophobia is exacerbated by labels like 'lab-grown', which make cultivated meat and seafood appear unappealing and 'icky', causing consumers to avoid unfamiliar foods. Using the right term such as 'cultivated' can help consumers understand the science that goes behind making the next generation of protein sources.



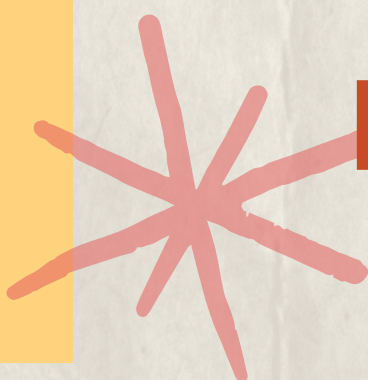
CONSUMER ACCEPTANCE & PREFERENCE ARE PARAMOUNT FOR THE SUCCESS OF THE INDUSTRY

There might still be differences in the texture and taste between cultivated meat and traditional meat that may result in fewer consumer adaption. It will be important for cultivated meat and seafood to work on its flavour and texture for consumers achieve achieve commercialisation success.



(03) Participants enjoying cultivated chicken satay at APAC-SCA (Student Chapter)'s 14 October 2024 inagural event.

You might come across arguments that protein from livestock are 'natural', and cultivated meat are "unnatural". Yet, most of the livestock we consume come from factory farms, where the animals live in tiny cages and are fed with antibiotics, hormones, and other additives.



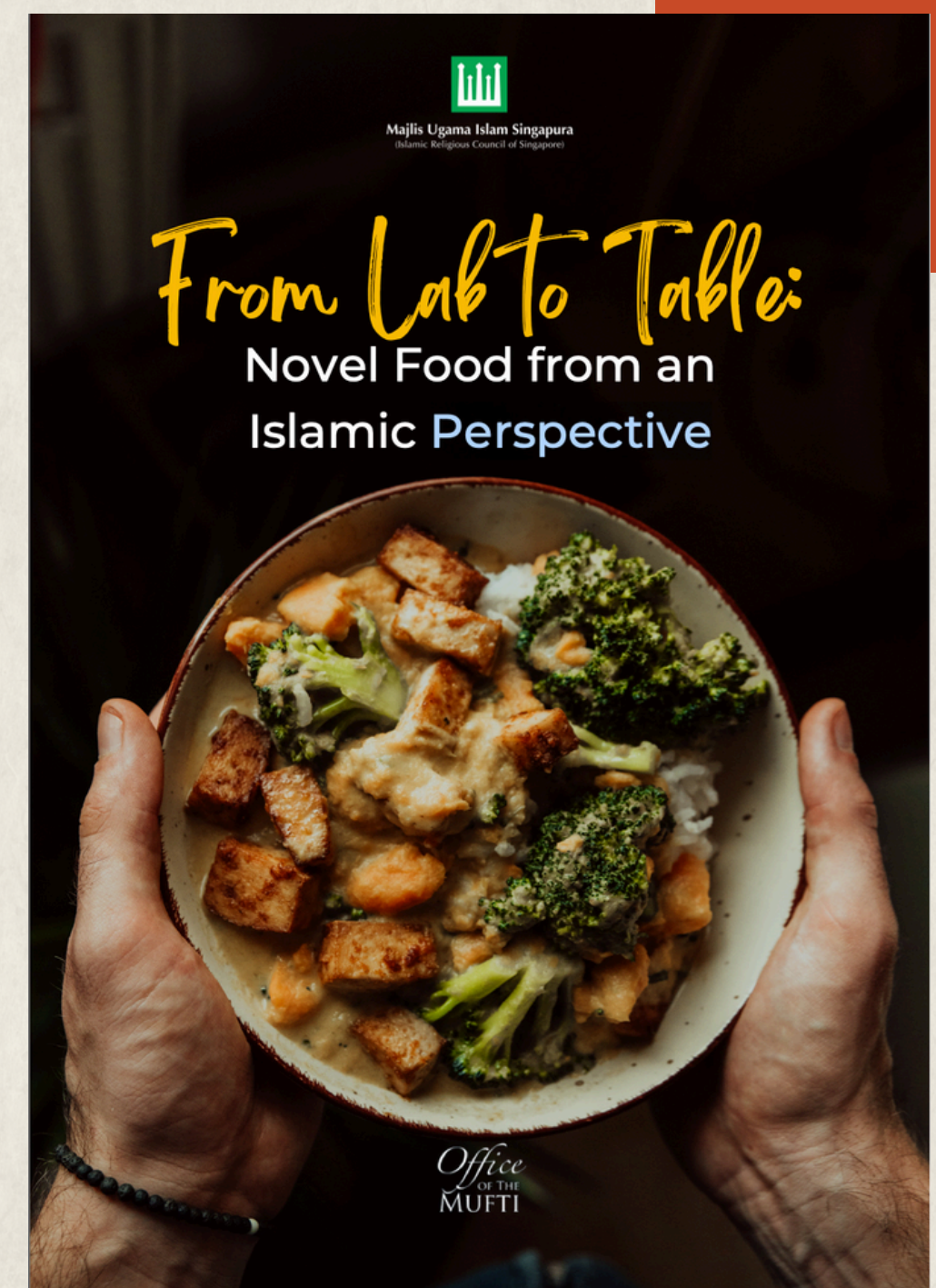
FACTORY FARMS ≠ NATURAL

MYTH 3

IS CULTIVATED MEAT HALAL?

In February 2024, the fatwa committee of MUIS issued a religious ruling noting that **cultivated meat is halal** provided the **cells are from animals that are halal or permissible in Islam**, and the final ingredients do not have any non-halal components.

The fatwa on cultivated meat is underpinned by the Islamic principles that it serves to (i) preserve human life; and (ii) protect the environment.



(04) MUIS Fatwa on Cultivated Meat

ACCORDING TO THE MAJLIS UGAMA ISLAM SINGAPURA (MUIS, OR THE ISLAMIC RELIGIOUS COUNCIL OF SINGAPORE)

Incorporating novel foods into our diets, especially those cultivated through environmentally sustainable methods, holds the potential to address critical global challenges

Cell source must be taken from animals that are halal to consume (i.e., cows and chicken, not pigs)

MUIS Criteria

(01)

Every ingredient that makes up texture and composition of cultivated meat must be halal

MUIS Criteria

(02)

Product is non-toxic and clean

MUIS Criteria

(03)

I AM VEGAN/VEGETARIAN, CAN I EAT CULTIVATED MEAT?

MYTH 4

Veganism is a philosophy and a way of life that seeks to eradicate all types of cruelty and exploitation while encouraging the adoption of animal-free substitutes.



(05) Grilling of cultivated chicken satay at APAC-SCA (Student Chapter)'s 14 October 2024 inaugural event.

NO ANIMAL CRUELTY IN ITS MAKING

Cultivated meat is not considered vegan as it contains cells, fat and muscle tissue derived from real animals.

However, some vegans are content to eat cultivated meat as there is no mass animal killing. Cultivated meat is also a great way for consumers who want to eat meat, but are seeking ways to reduce the negative effects of their lifestyle.

Why was fetal bovine serum (FBS) used in the early years of production



It is important to understand that FBS is a widely used growth supplement in the in vitro culturing of animal and human cells, tissues and organs, notably due to the occurrence of abundant micro- and macronutrients, along with growth factors.

Recognising that the use of FBS does not align with the industry's goals, cultivated meat companies have switched from using FBS to genetically modified recombinant proteins, otherwise known as growth factors. In early 2023, GOOD Meat secured the world's first regulatory approval for a serum-free media.