

# Future50

Food, Agriculture and  
Land Use (FALU)

Alternative Foods / Low-GHG Proteins



Below Farm



<https://www.belowfarm.ae>

#NatureBasedSolutions

## Impacts:

Below Farm has built a business model to reflect the **circular economy**. The company's localised approach aims to contribute to lower carbon emissions by avoiding food miles caused by importation. Below Farm states that its raw materials are locally sourced that helps improve local food security.

Below Farm states that its substrate, which allows mushroom mycelium to grow and establish itself, is made up of more than **70% upcycled waste biomass** from sources, such as date farms. It says its **used substrate can then be used as compost**. The company adds that its production is without pesticides or fertilisers and has a **low-water impact**. Lower water use has a positive impact due to the energy and financial cost to desalinate water, which is the primary water source for the region.<sup>166</sup>

Below Farm reports that its facility in Abu Dhabi has upcycled more than 250 tons of palm leaves, a byproduct of date farming, and converted them into an alternative source of non-animal-based protein, essential amino acids and vitamin D.

## Highlights:

Below Farm has participated in the **Circulars Accelerator**<sup>167</sup> and the **World Economic Forum programme** for circular economy start-ups.<sup>168</sup> It has also participated in the **Ma'an Social Incubator**,<sup>169</sup> a social impact incubator programme by the Abu Dhabi government.

## Headquarters and Middle East operational countries:

United Arab Emirates

## Summary:

Below Farm is an agritech company specialising in **end-to-end mushroom and mycelium cultivation solutions for arid climates**. It aims to harness the power of mycelium – the root system of fungi – to turn **agricultural waste into mushroom substrate**. This is used to produce fresh food and compostable materials.

Below Farm has designed what it says is a **fully automated climate control system** to optimise growth conditions for each variety of speciality mushrooms, which aims to contribute to sustainable agriculture.

## Strategic alliances:

- Research Institutes
- Universities
- Retailers
- Restaurants
- Food Production Companies
- Date Farms

## List impact technologies:

Alternative Foods, Low-GHG Proteins, Clean Tech, Sustainable Agriculture