

Challenges

The growth of the world population, expect to reach nearly 10 billion people in 2050 and 11 billion in 2100, creating extremely large water, food and energy challenges with major environmental (climate change) and social consequences.

Conventional food production practice has a linear relationship between resource use and production and hence more resources like water, nutrients, energy and land are required to produce more food to meet the increasing demand.

However, 25% of the food is wasted or thrown away, which is a significant amount of wasted resources in terms of land, energy, water, nutrients and capital, used from production to consumption.



Biopod container

The BioPod container solution is a food production system, where only electricity, water and nutrients are necessary resources to produce healthy herbs, lettuce, tomatoes, cucumbers and fish. BioPod is an energy and water efficient solution, that supports the principles of circular economy (recycling in all value streams). 23.000 lettuce can be produced per year.



Challenge

Increasing need of food

More resources needed to produce food

25% of the food is wasted or thrown away

BioPod container solution

28 time more effective compared to field and 80 pct saving in labor cost

95 pct circulation of water

100% renewable energy (PV, heat pump with ventilation or Biogas container)

Reduced carbon foot print (farm to table)

Biogas container transform food waste to energy and nutrient



BioPod container target group

Restaurants by recycling and reuse the organic waste and supply local produced vegetable all year to the restaurant and their customers.

Supermarket by recycling and reuse the organic waste in the supermarket and delivering local produced vegetable all year.

Eco village with the BioPod as a shared resource facility to be used by the residents. The Eco village can also sell the produced vegetables to surrounding cities, and thereby create a business for the community.

Developer/real estate, that plan green apartment projects in cities (food cities). The BioPod can be established on the roof as shared resource facility for the residents.

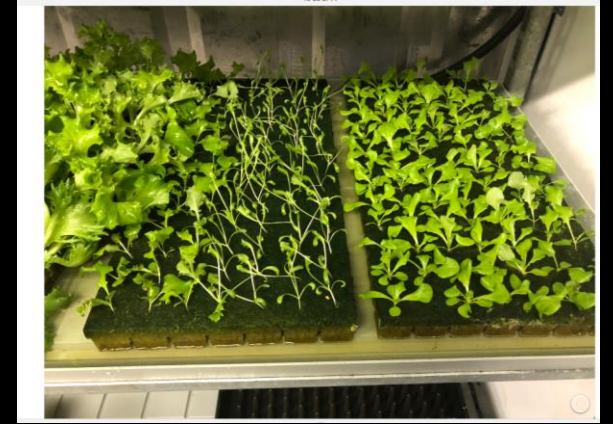




Automation of vegetable production using water instead of soil.



Automation of vegetable production, using water instead of soil and fish waste as fertilizer.



Automation of vegetable production using water instead of soil.

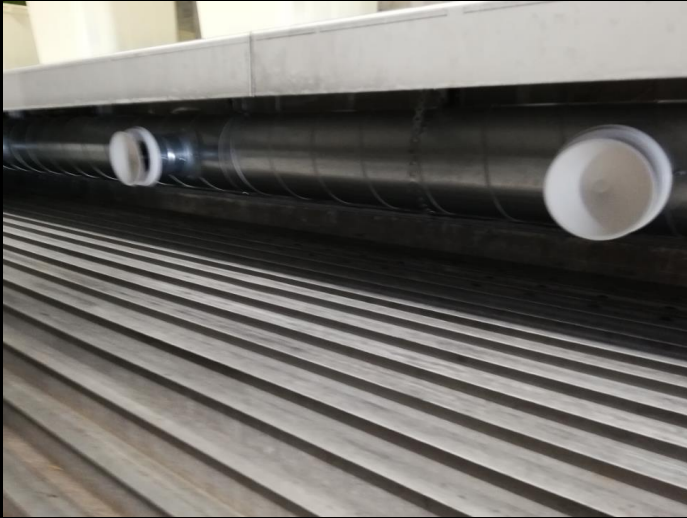




Automation of vegetable production using water instead of soil.

Water tank
with fertilizer
mixer and
water
purification
filter

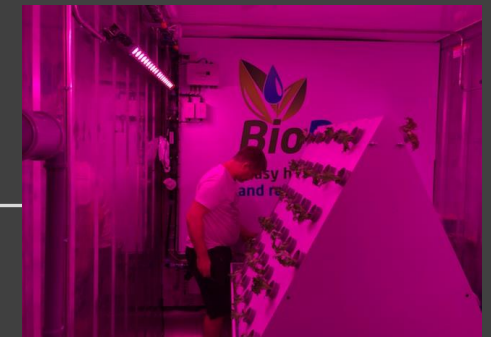


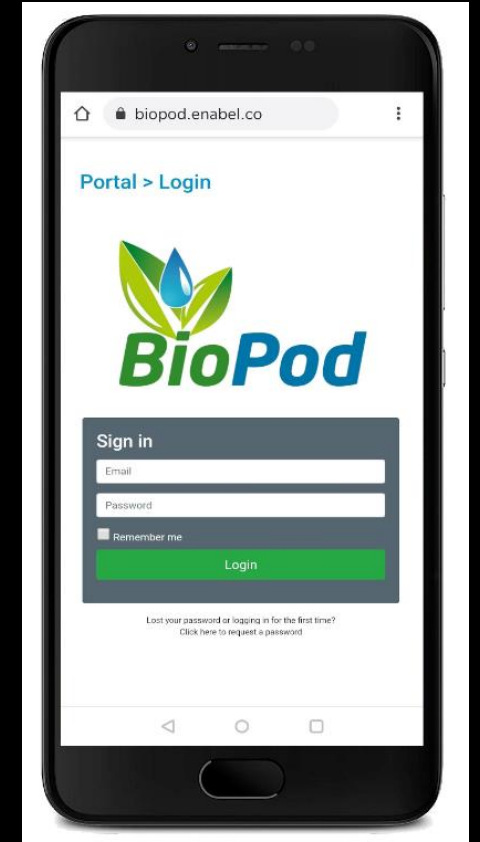
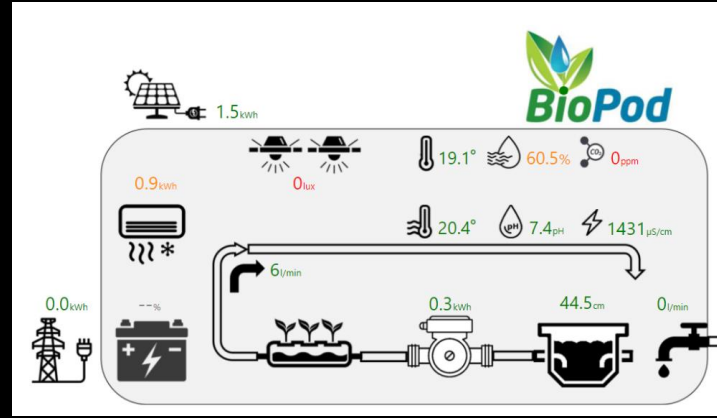


Heat pump with ventilation



LED light in BioPod container





Overview of temperature in the container and in the water + overview of a lot of data that is important for vegetable production (eg. humidity, CO2, etc.).



BioPod container business model

Return on investment
6 year

Service koncept
Maintenance, support

Leasing model with
payback in 5 or 10 years

Franchising model (license
production)

Reference cases:

Greenland supermarket and cities, Danish Michelin restaurants.

Sustainia award and selected to create a Coop crowd funding campaign.



BioPod container Partners



Milestone 2021:

Establish BioPod container company for selling, design, manufacturing and service.



www.biopodcontainer.dk



Circulation of water



Renewable energy
and circulation



Controllable climate
and irrigation



Growing Lettuce,
Microgreens,
Tomatoes, Chili, Bell
pepper



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