

Aquaponics / Hydroponics

Outline

With the majority of the world population moving into cities space is increasingly at a premium. By growing crops indoors and vertically it is possible to maximise output.

Combine this with highly efficient LEDs, genetic manipulation and self sustaining ecosystems (aquaponics) makes for highly efficient production.



This setup will be an aquarium with some fish provided by Aquacultuur Noord (Pierre) with crops growing in it (potential to discuss genetic technologies) and with LEDs hanging above.

Learning Objective / Relevance

Can be linked to Machteld Kamminga (LEDs) and Pierre Hakkersteegt (Aquacultuur Noord). Fitting with the factories of the future theme.

Additional Ideas

Status

Currently in the planning stages.

Vegua has been contacted, they only have one working prototype at the moment which makes it challenging to use for our expo as they need it for demo purposes. They are thinking about making another demo, with a contribution from us, he might make another prototype (cost around 5000 euro) which we can use during the expo.

Had a look at alternative suppliers:

[Aquafarm](#), €70, delivery from europe, small (11.38L) but stylish.



[Eco-Cycle Aquaponics Kit](#), \$250, delivery from US, large (75L). less stylish.



[Blue Green Box](#), ~\$75, delivery from US, medium (37.8L), not sure if he will ship anymore.



Blue green box has been contacted to see if they still ship.

Who?

- Winand Slingenbergh is coordinating.
- LEDs can be purchased.
- Aquacultuur Noord may supply the fish?

- Vegua may supply the setup sans LEDs?
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To Do:

- Talk to Pierre about fish.
- Talk to Vegua about loaning their model.
- Find LED suppliers, maybe PHILIPS?