

RAS

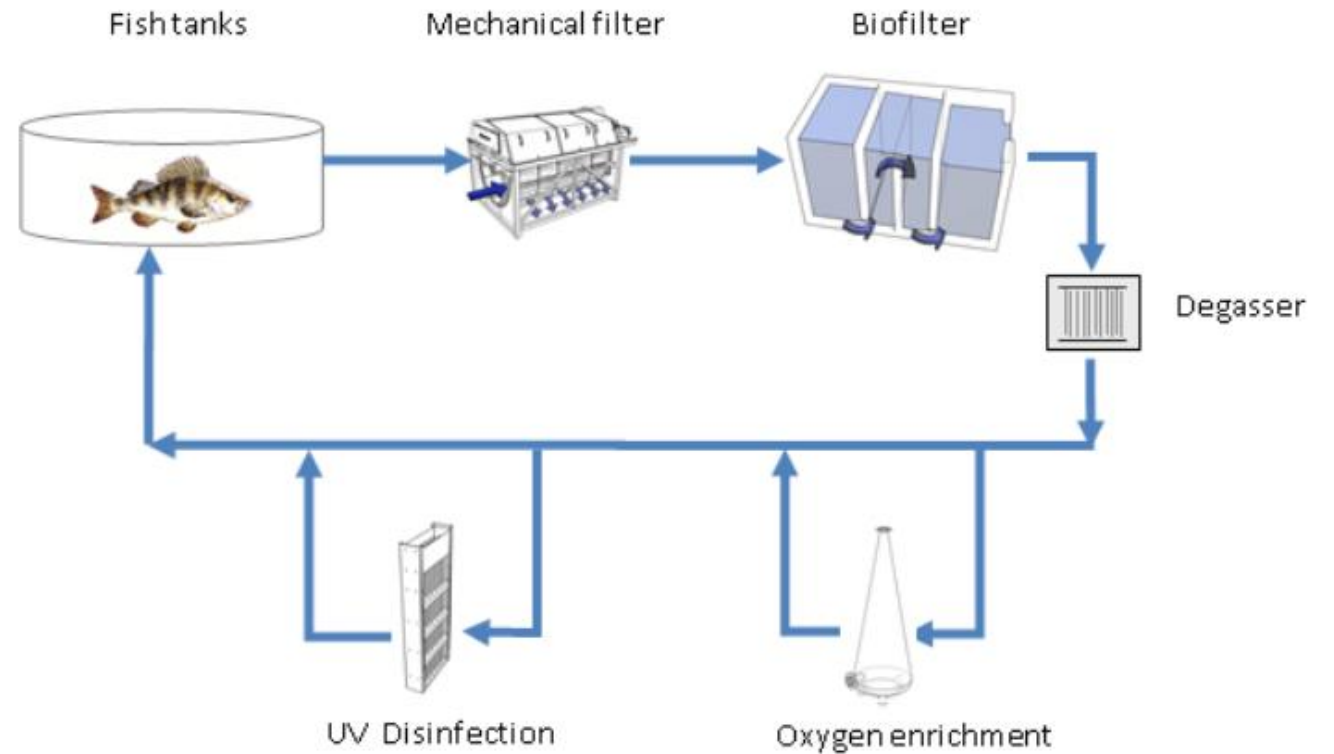
as an educational tool

Lisette Larsen, Teacher in Biology, Biotechnology and PLS
, CELF



RAS

Recirculation Aquaculture System
Fishfarming



Clarias gariepinus

- no scales but bone plates instead
- They have sensitive whiskers
- Analyses of the fish meat
 - Fatty acids and protein
 - Fish and health



Merkurs Plads

Technical High School

Business High School

EUX Business

EUX Technic

EUD

10.th grade



Biology C

- ☞ Investigation of *Clarias* anatomy and Life cyklus
- ☞ Growth experiments with Fish Water



Af ShanKamley - Eget arbejde, CC BY-SA 4.0,
<https://commons.wikimedia.org/w/index.php?curid=97856065>, gills from
Clarias



Biotechnology A

Water quality

☛ Phosphat and nitrat

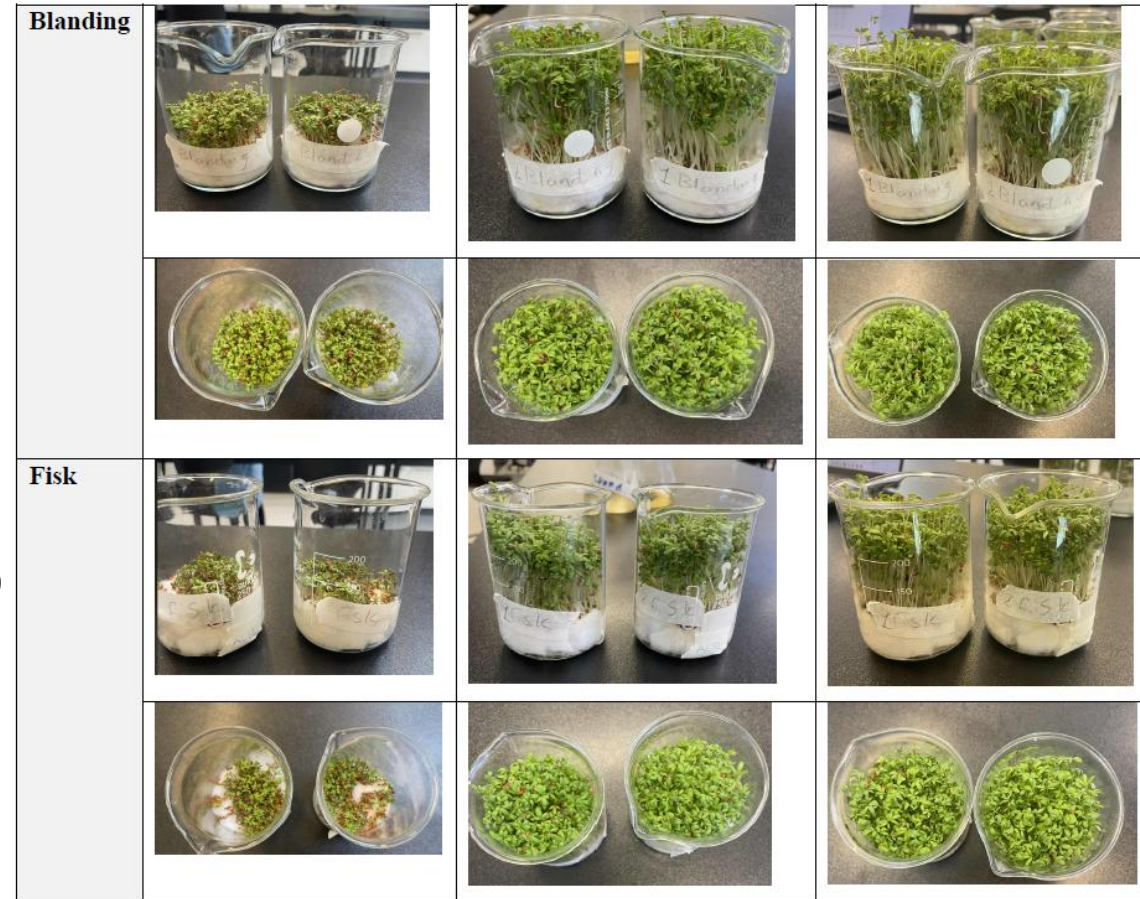
☛ pH, temperature

☛ visuel Measurements and mikroskop

The environmental impact

☛ Produktion of food in general

☛ Sustainability



PLS (Proces, food and Health)

Visit in Sweden
October 2024

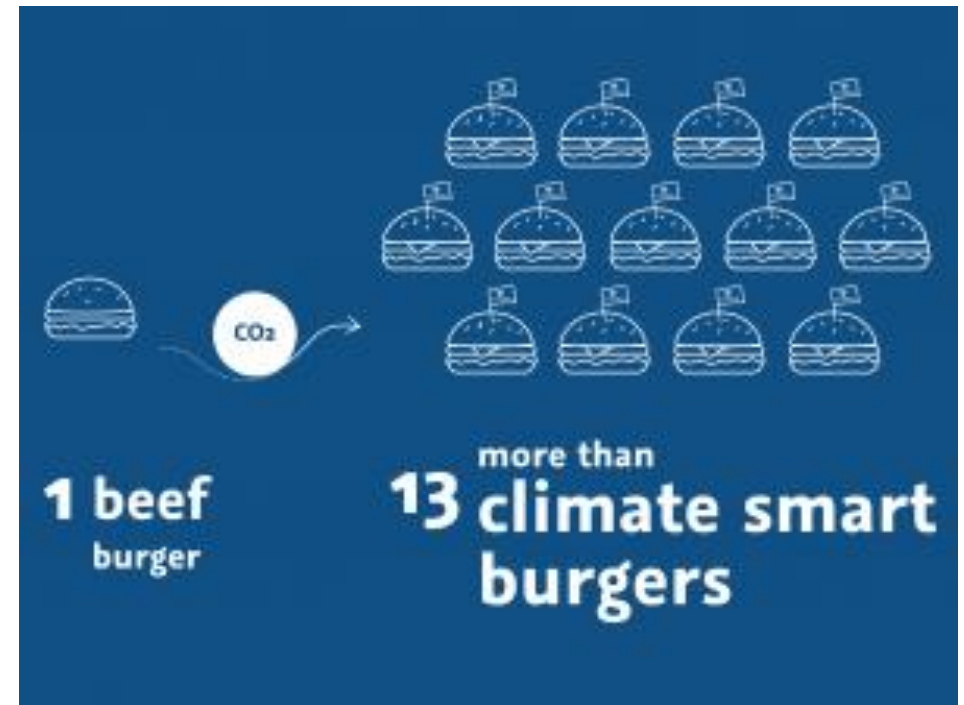


Gårdsfisk fish farming in sweden

PLS (Proces, food and Health)

From Clairas "Caviar" to the diner table.

- ☞ The Farming proces.
- ☞ Economic and sustainability
- ☞ Analyses of the fish meat
- ☞ Fatty acids and protein
- ☞ Gelatin and leather
- ☞ Fish and health



Communication and IT

Investigating target groups and how to market Clarias.

Develop PR materials

Working with logo, competition.



<https://www.gardsfisk.se/produkter/ryggbit-av-gardsclarias>



https://www.tripadvisor.com/Tourism-g3576942-Temanggung_Central_Java_Java-Vacations.html

Kringelborg

Vocational education and training

- ☞ Retail, trade and office
- ☞ Food and service
- ☞ Construction and plant
- ☞ Mechanics, engines, transport and storage
- ☞ Engineering and energy



Nutrition assistants and Chefs

This is not a Salmon, the meat is different

☞ Training of new fillet technics.

Table 1. Chemical composition of catfish meat (wet weight bases)

Parameters	Catfish
Moisture %	71.30 ± 0.15
Protein %	19.03 ± 0.46
Fat %	8.10 ± 0.09
Ash%	1.05 ± 0.14
Carbohydrate %	0.52±0.12
Caloric value (kcal/100 g)	151.1±0.08

Nutritional Value of African Catfish (*Clarias gariepinus*) Meat H. E. Abdel- Mobdy1*, H. A. Abdel-Aal2, S. L. Souza2 and A. G. Nassar1



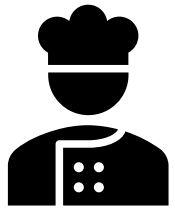
Nutrition assistants and Chefs

Experimenting with the Meat and creation of new dishes.



Educational ladder

Knowledge growth
Experience Sharing



From mammal farming to fish farming

From delicacy to everyday food

Thank you for your time

Questions ?