

WHAT IS AQUAPONICS

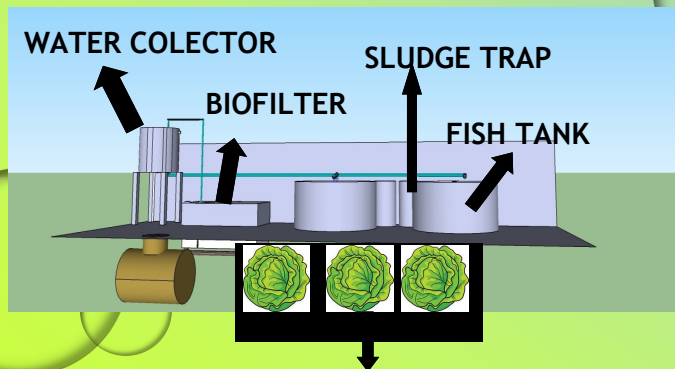
- Aquaponics is an innovative technology in urban farming that combines AQUAculture and production of vegetables in a floating medium without soil (hydroPONICS)
- SUSTAINABLE METHOD OF FOOD PRODUCTION (no plant protection products, removal of excess nutrients from the water, water recycling)
- Didactical tool for teaching biology, chemistry, physics, mathematics

AQUAVET

INTRODUCING AQUAPONIC IN VET:
TOOLS, TEACHING UNITS AND TEACHER TRAINING

INTRODUCING AQUAPONICS IN VET— DIDACTIC TOOLS, TEACHING UNITS AND TEACHER TRAINING

BC NAKLO EDUCATIONAL UNIT



PLANTS GROW ON STYROFOAM FLOATS INSIDE RAISED BEDS, FILLED WITH WATER



THE GREEN
PROFESSION OF
THE FUTURE

PROJECT PARTNERS:



Additional information:

<http://project.zhaw.ch/de/science/aqua-vet.html>



- meat, caviar.. **FISH**
- Fish excrete ammonia through gills (source of nitrogen)
- Source of other plant nutrients (phosphorous)

VEGETABLES

- Plants grow on styrofoam platforms, floating on water
- They absorb nitrogen and other plant nutrients through roots – extraction of excess nutrients from water
- We can grow vegetables and ornamental plants, except plants with tubers and rhizomes



NITRIFYING BACTERIA



- Nitrifying bacteria of chemoautotrophic genera *Pseudomonas* in *Pseudo-bacter* oxidise ammonia to nitrite and then to nitrate.

**CREATING A NEW PROFESSION:
AQUAPONIC URBAN FARMER**

Aquaponics as a didactic tool:

nitrogen cycle in ecosystems, fish and plant anatomy, interdependence of ecosystem parameters, pH, water quality analysis, chemical balance, volume, business plan, business communications