

Why Aquaponics Project?

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Aquaponics project

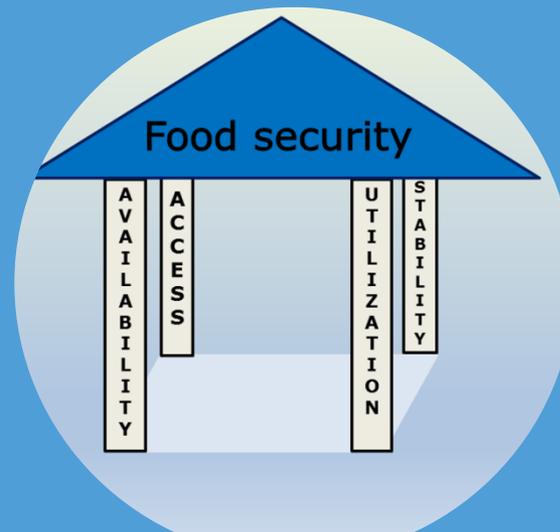
- Food & Business Global Challenges programme: **Inclusive Business Models for Food Security,**
- Funding: Dutch Science Foundation (NWO-WOTRO-NL)
- Partners:
 - Addis Ababe University:
 - Prof. Abebe Getahun (PhD)
 - Abebe Tadesse (PhD)
 - Tiruken Aziz (MSc)
 - TGS Business and Development Initiatives:
 - Bouke Kappers (MSc)
 - Wageningen University:
 - Maja Slingerland (Phd)



Food security

- **Food security** exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life

So there are 4 food security pillars



Food security in Ethiopia

1. Erratic rainfall, frequent droughts, soil fertility problems



- unstable and low production of food per ha
- need efficient use of water
- need to avoid pollution of soil and water

2. High poverty rate → lack of income

- to buy fertiliser to produce food
- to purchase nutritious food
- rural and urban



Food security in Ethiopia

3. Substantial part of population undernourished



- Need for nutritious foods
- Need for vegetables and animal products
- Both rural and urban

4. Fasting practices (no animal products in diet)

- Vegetables and fish important dietary components



5. Little entrepreneurial development in (peri)-urban and

Is aquaponics a solution?

- What is aquaponics?
- And why is it a solution?
 - This will be explained by Abebe Tadesse in a short movie
- Is aquaponics new technology, unique & fit to Ethiopia?
 - This will be explained by prof Abebe Getahun
- Is research needed on aquaponics?
 - See my next slide



Why research needed?

- Aquaponics is confirmed technology yet the following issues need investigation:
 - economic feasibility of systems in context
 - relevant combinations of fish and vegetables
 - affordable fish feed from local ingredients
 - business models that fit to context
 - organisation of the supply chain
 - entrepreneurial skills producers
 - effect of scale on efficiencies



Objectives of the project

1. Provide households with affordable and profitable aquaponics systems to improve their food security by generate protein and micronutrient rich foods and income.
2. To prepare the sustainability and dissemination of aquaponics systems through the development of a business models that can support establishment, technical assistance , input supply and marketing of products.



What is aquaponics and why is it solution?



Partnerships /opportunities

- AAU had already a history in aquaponics and just acquired IGAD funding for project in Metahare
- WOTRO project used the IGAD project in Metahare
 - for comparison of business models and effect of scale and participated in the monitoring after its establishment
- Prof Abebe Getahun will present history and details of IGAD in next presentation



Thank you for
your attention



What is Aquaponics and why does it fit?

- High production/m²
- Production of nutritious food
- Higher production/liter water than in field crops
- No discharge of aquaculture waste water to environment
- Higher production/manhour than in field crops
- No need for crop land
- In rural areas fish & vegetables are (seasonally) scarce
- There is a good market → income for producers
- No need for fertiliser, only fish feed
- More food/kg of nutrients

