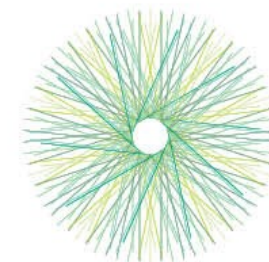


# EIP-AGRI Seminar

## Moving EIP-AGRI implementation forward

May 10 – 11, 2017 – Athens, Greece



eip-agri  
AGRICULTURE & INNOVATION



funded by





## EIP-AGRI Seminar 'Moving EIP-AGRI implementation forward' Wednesday 10 May 2017 – Athens, Greece

08:50 – 12:00 Social event: guided tour of the Acropolis Museum

12:00 – 13:00 Registration and buffet lunch

### Setting the scene – Why are we here in this seminar?

13:00 – 13:10 Welcome by the host and by DG AGRI, European Commission

*Charalambos Kasimis, Greek Secretary-General of Agricultural Policy and Management of European Funds*

*Alexander Bartovič, DG Agriculture and Rural Development*

13:10 – 13:25 The bigger picture of the EIP-AGRI

*Inge Van Oost, DG AGRI*

13:25 – 13:30 Warm-up

*Sebastian Elbe, EIP-AGRI Service Point*

### 13:30 – 14:00 What EIP-AGRI is about – examples of Operational Groups (OGs)

- **DE – Mecklenburg-Vorpommern, Ulrich Knaus – Aquaponics, combining plant and fish production**
- SE – Sweden, *Samo Grasic – Innovative planning in reindeer herding*
- FR – Midi-Pyrénées, *Christophe Durand – Triple performance for pig farming*
- IT – Emilia-Romagna, *Matteo Gatti – Competitive and sustainable viticulture*
- BE – Flanders, *Koen Mertens – Testing the potential of sensors for GPS technology on pilot farms*

14:00 – 14:20 1<sup>st</sup> breakout session – “Getting to know each other”

Introduction – *Sebastian Elbe, EIP-AGRI Service Point*



# Nutrition for human health: Aquaponic systems in Western-Pomerania

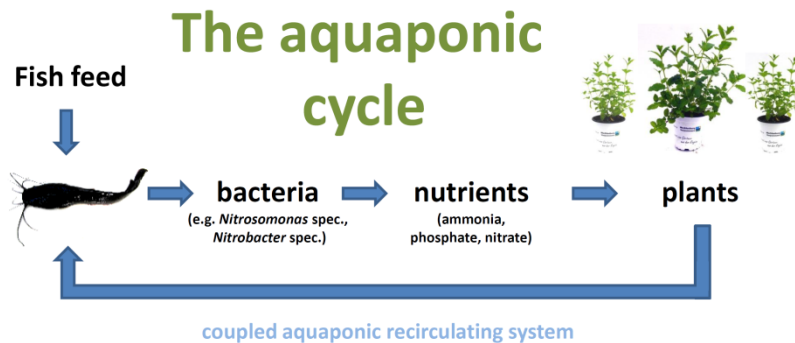
EIP Operational Group

**“Fischfuttermittelinduzierte Qualitätssteigerung von Fisch- und Pflanzenprodukten aus Aquaponiksystemen”**

*Harry W. Palm, Ulrich Knaus, Berit Wasenitz, Björn Baßmann*

## Our objectives:

1. A **resource-efficient synergetic production of plants** (herbs, vegetables, ornamental plants) **and fish** (African catfish: *Clarias gariepinus*) - saving resources (water) and money (no conventional fertilisation) in aquaponics



### Aquaponic facility



The FishGlassHouse (1.000 m<sup>2</sup>)



2. **increase the product quality** (fish and plants) **for human health** via manipulation of feed ingredients (essential fatty acids [EPA; DHA], minerals [potassium, iron ..])
3. **sustainable production line** for the regional farmers, gardeners and food processors (cost benefit / distribution of risk)

## Our partners:



- plant supply and selection, qualitative plant analysis, sale of plants



- fish supply, fish slaughtering / filleting / freezing



- fish / plant growth out, fish feed manipulation, qualitative optimization of fish and plant products, provision of the research facility (FishGlassHouse), fish welfare aspects



- sale of fish filets





## Nutrition for human health: Aquaponic systems in Western-Pomerania

The Operational Group, with the short title "Aquaponik systems in Western-Pomerania", is working to save costs in plant production (crops, herbs and ornamental plants) and to increase fish product quality of African catfish (*Clarias gariepinus*) via fish feed manipulation. A more special method is used – "aquaponics" (aquaculture + hydroponics), which cultivates both organisms together – the fish (aquaculture) and plants (hydroponics) in a coupled recirculation system. In this process the particularly efficient use of different resources can save up to 50% water and does not use conventional fertiliser.

By combining aquaculture and hydroponics in our experimental facility (The Fish-Glass-House), the water is used for both production units at the same time. The plants are nourished by end products of metabolic processes of the fish (fish feed = phosphates, nitrates, minerals), which are constantly present in the aquaponic system and circulate continuously.

The aim is to increase the quality of the plants (colour, nutrient content) in such a way that they achieve an equivalent and better quality compared to conventional cultivation at a relatively lower cost level. First results showed that the production of e.g. basil (*Ocimum basilicum*) and mint (*Mentha spicata* var. *Crispa*) is possible only from effluents of the African catfish. The quality of the plants of e.g. ivy (*Hedera helix*, light green variant) as an ornamental plant in a winter test showed a marketable quality of up to 50.3% (OG Partner Grönfingers). This quality will be increased in future trials only by the addition of special micro- and macronutrients.

The African catfish's fillets showed a high quality when using commercial feed (Skretting). When the fillets were sold on the local market (OG Partner F & F), the same numbers of our aquaponical produced fish were selected by the customers compared to fillets from international trade. At the moment the behaviour of the customers is questioned.

# **EIP-AGRI Seminar 'Moving EIP-AGRI implementation forward'**

**All seminar presentations and  
documents are available on  
[www.eip-agri.eu](http://www.eip-agri.eu)**

