

# „What we can learn from the chicken“

How will indoor fish farming in middle Europe influence future European white fish markets?

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# AWF Consulting: who we are and what we do....

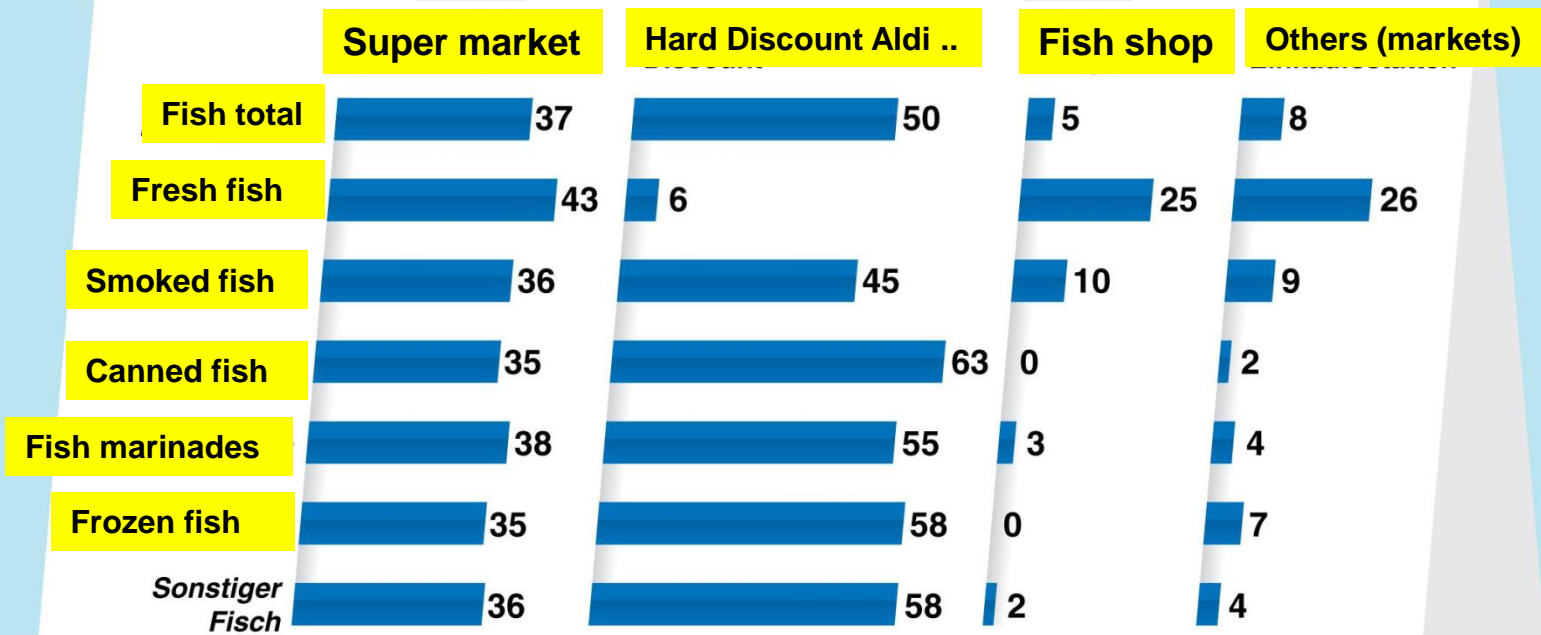
- **Seafood Business Consulting**
  - Neutral & independent
  - Founded in 2008
  - Specialized on German speaking seafood markets
  - Working over the whole value added chain of seafood
- **Main areas:**
  - Retail, wholesale & Import/Export consulting
  - Market research & market analysis, consumer behaviour
- **The person behind:** Alexander Wever: former head of seafood at Globus and Metro Germany

# Content

- Where do consumers buy seafood in Germany?
- The demand of discount and the food industry
- The „perfect product“
- Indoor recirc aquaculture – Pro´s & Con´s
- Forms of organization: lone fighter, producer groups & integrated production systems
- Current situation
- Lookout

# Where do German consumers buy seafood

Shares in % in 2008

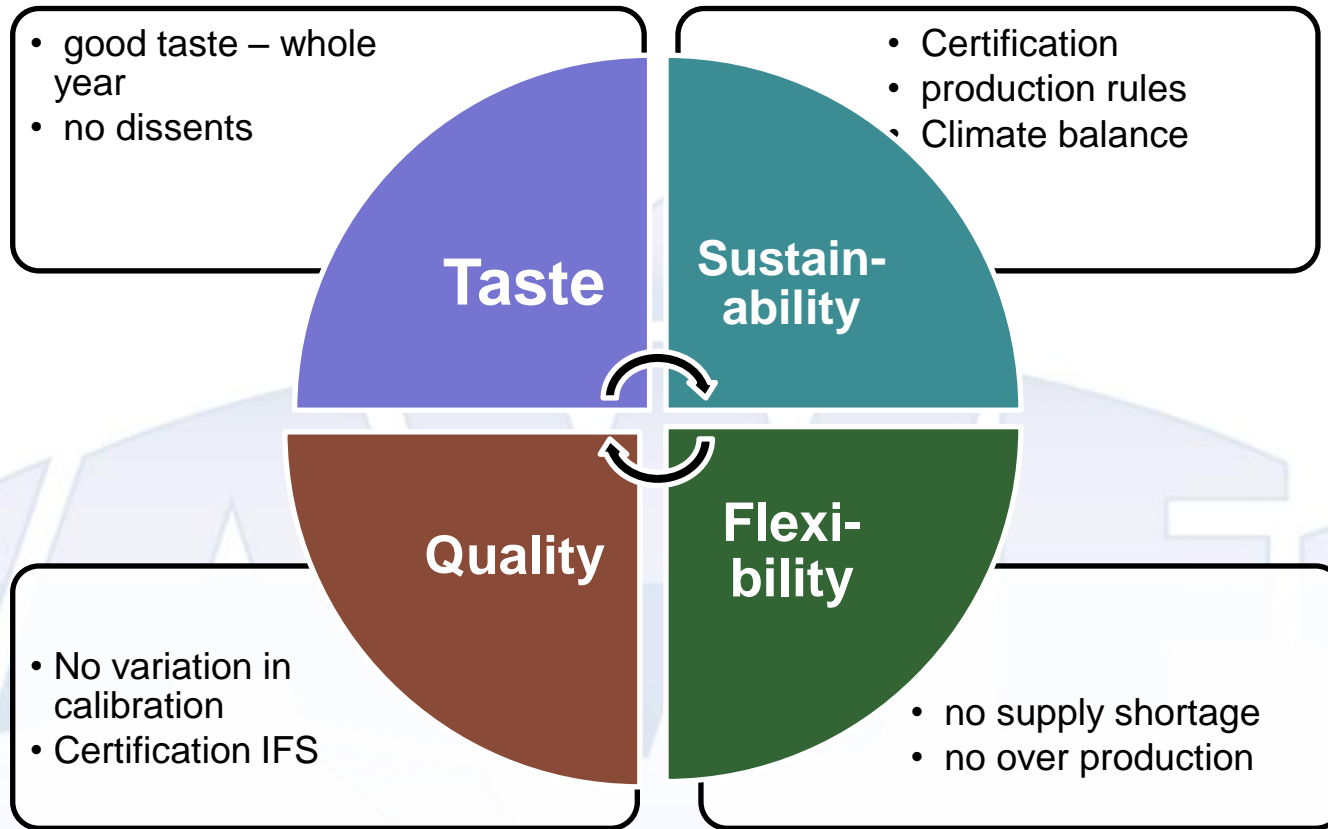


Quelle: GfK Panel Services, bearbeitet vom FIZ

# The demand: A simple „sample calculation“

- 3.000 Aldi-Outlets sell 10 packs of 300g prepacked fishfilet on 300 days p.a. in self service there is a
- Quantity demand of **2.700 to. filet => 5 – 6.000 tons fish** per year
- Remember: only 1 discounter, 1 product, one country
- Those quantities can be produced only with quasi industrial methods which are nearly unknown in middle European aquaculture
- But those methods are well known and established in poultry farming

# The perfect product – from the view of discount & industry



**=> A uniform product – like a raw material**

# Indoor Recirc Systems: Pro's & Con's

## PRO

- Independent from site & season
- High productivity
- Uniform products
- No escapes
- Low demand of water
- No transfer of diseases
- Low risk of pollution

## CON

- Higher Investment
- Needs high workload
- Needs cheap source of energy & waste heat (Biogas or CHP)
- Public feels less natural than outdoor farming

# Indoor Recirc Aquaculture

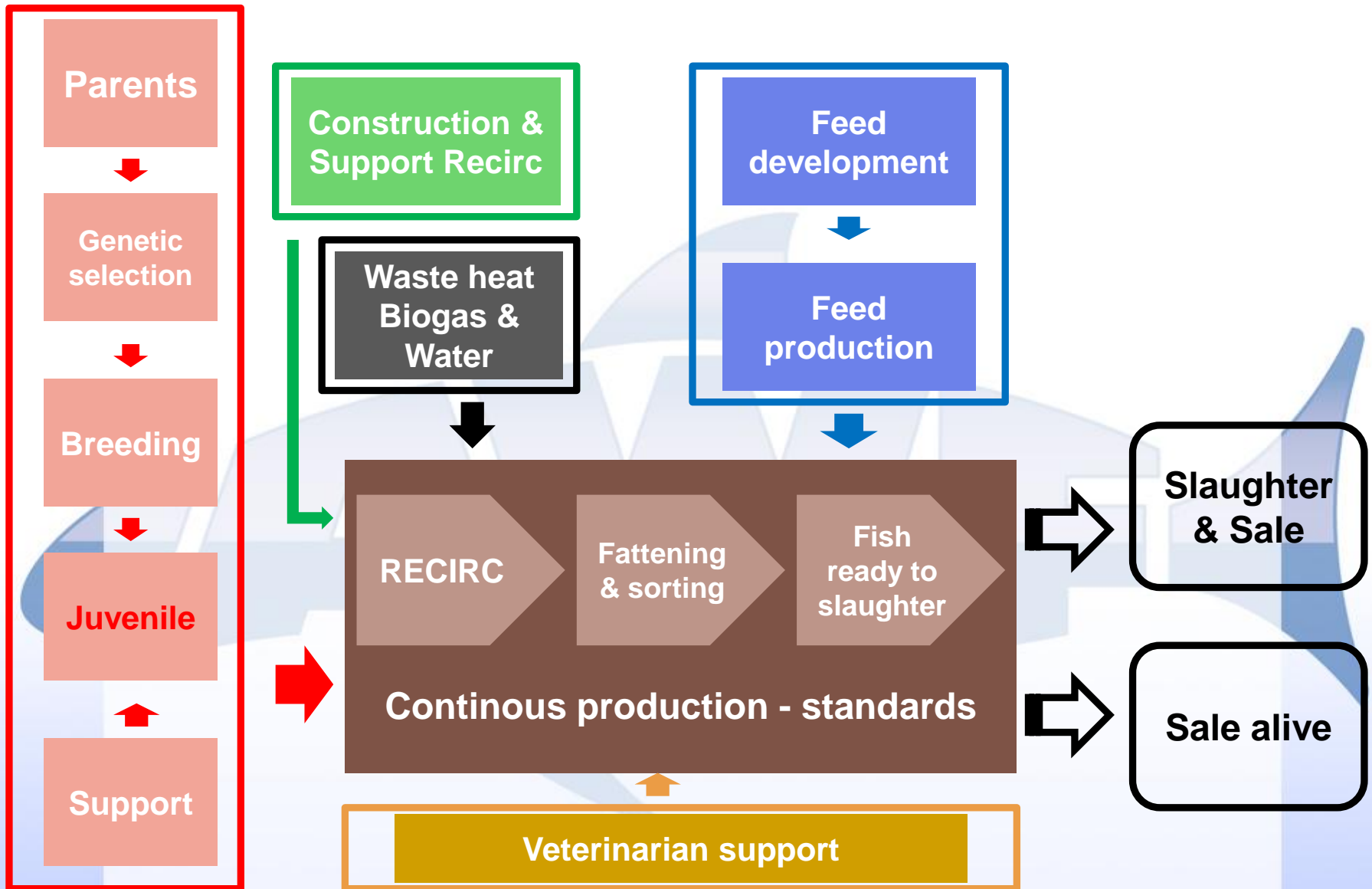


**It's not nice, it's not organic, it's not nature – but it is part of food industry !**

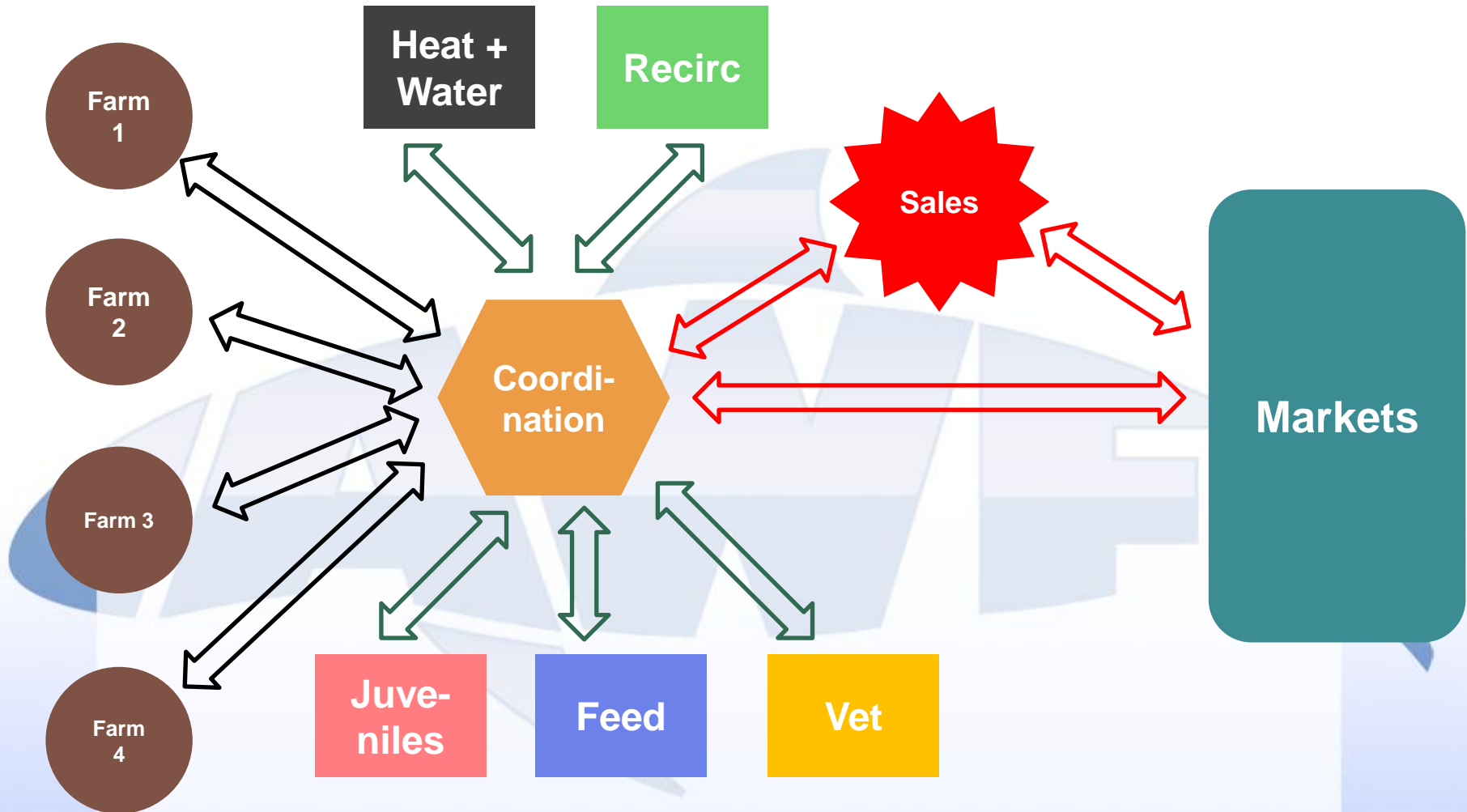
## **Forms of organization:**

Lone fighter, producer groups  
& integrated production systems

# Recirc system – diagram of input and output

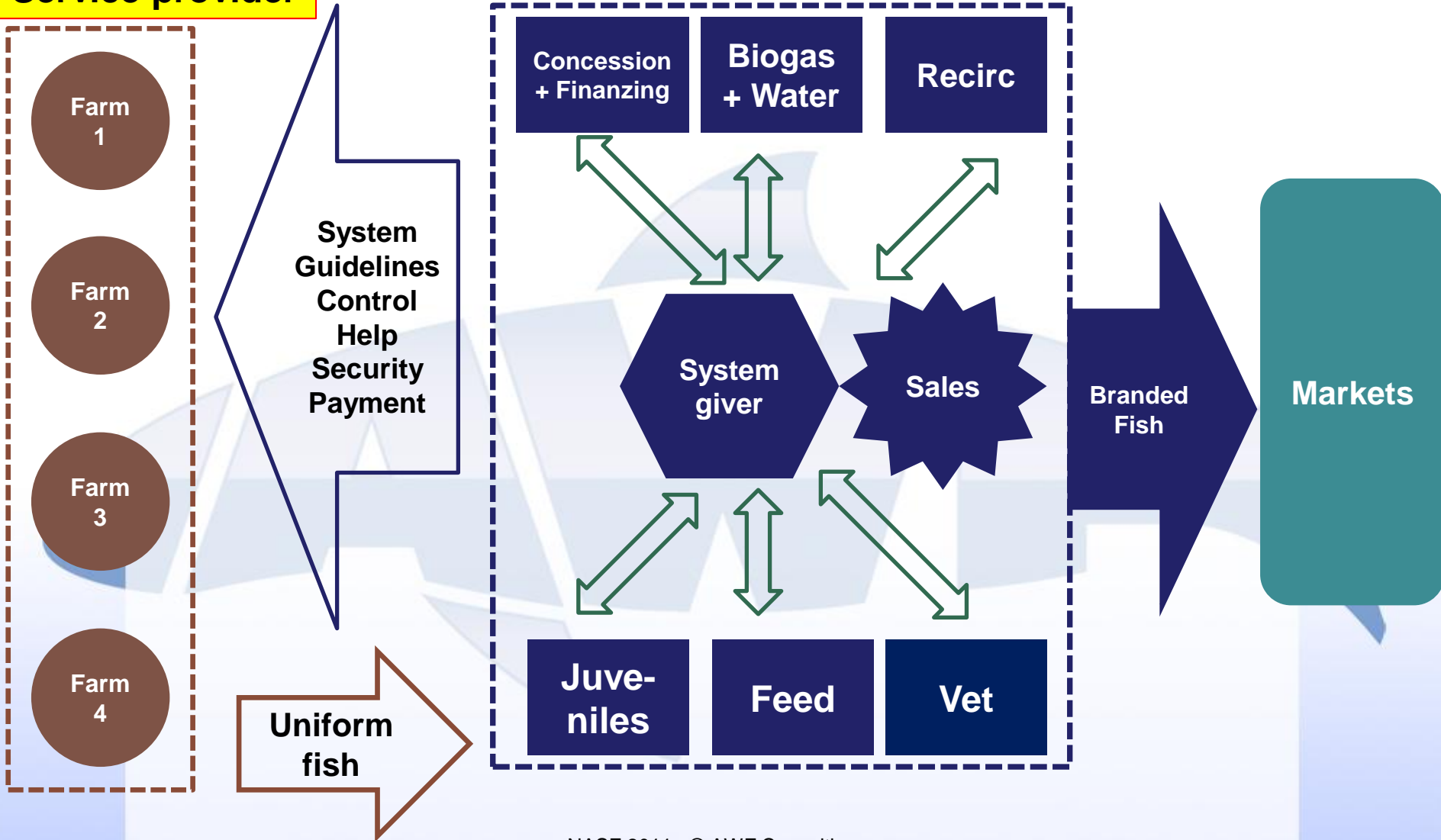


# Sample producer group for aquaculture in recirc systems



# Integrated production (like in poultry industry)

**Service provider**



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# Current situation

- Running systems with
  - African catfish (*Clarias* spp.)
  - European catfish (*Silurus glanis*)
  - Pike perch (*Stizostedion* spp.) – low supply of juveniles
  - Sturgeon (different species)
  - White tiger shrimps (niche market)
  - In Germany about 20 farms
- In preparation:
  - 10 – 15 farms (freshwater), 1 – 2 farms (seawater)
  - First poultry company begins in 2011

# Lookout

- still some beginners problems must be solved:
  - Secure supply with juveniles, better feeds
  - Cheaper production units, easier authorizations
- Then industrial structures will develop
- Those structures will use „integrated production“
- Capital will come from food industry outside seafood bus.
- Strong demand (retail & industry) will meet strong supply.
- Maybe retail and industry will even vertically integrate and become producers to secure quality and price.
- Remember Norway in the eighties.....



Thank you !