Aquaculture products: creating value and capturing value
What is added value?
• an increase in the value of a product, as the result of a particular process (work)

• an activity is considered value-added when customer is willing to pay more for the additional output
How much is the added value?
Value added is the difference between the selling price and the cost of material, energy and external services.

- **Raw material cost**: $1 \text{ kg} / 51\% \text{ (filleting yield)} = 1.96 \times 3.00 \text{ euro} = 5.88 \text{ euro}$
- **Energy cost, transport, external services**: e.g. 0.12 euro
- **Added value**: $7.50 - (5.88 + 0.12) = 1.50 \text{ euro in 1 kg of product}$

or **0.77 euro added to 1 kg of raw material (whole fish)**
Added value IS NOT a profit (!)

Added value includes:
- Wages (salaries)
- Depreciation
- Taxes
- Interes (profit)
Value added aquaculture products development in Poland (carp, trout)
Phase I: „unprocessed” products

live carp

*market share:*
1997: >90%
2018: ca. 45%

chilled whole trout

*market share:*
1997: 70%
2018: <5%

chilled whole
Phase II: added value through processing

1997-2012: constant increase in demand for more convenient products

- Gutted fish
- Fillets
- Fillets without fishbones

Market size - stable
Phase III: added value through processing & packaging

ca. 2012-2013: Introduction of MAP packaged products to supermarket chains:

• new sales locations (discount supermarkets: ca. 4000 locations)
• quality assurance for the consumer (best before date)

Trout: significant increase in domestic market size

Carp: changes in sale structure, market size - stable
Phase IV: added value through processing & packaging – next steps to convenient products

Trout with spices in alu form for grill
Phase V: added value through processing, packaging & adding „virtual values“ (e.g. identification, branding, origin certification)

- Carp „from Przyborów Fish Farm“
- Trout „from Parsęta River“ (fillet, fillet chunks with spices)
Phase V: added value through processing, packaging & adding „virtual values” (e.g. identification, branding, origin certification)

No organic carp or trout on the market. Why?
Notes to value added products development in Poland
• products with a higher Added Valued are **gradually** entering the market
  *(the barriers to implementation are: technology, awareness of market participants, consumer readiness)*

• the last decade(s) — this is a **significant acceleration** in the CEE countries in the demand for VAPs
  *(accelerated by consumer behaviour/lifestyle changes - less time for cooking, more money..., media etc.)*

• products with different Added Value **coexist** on the market
  *(different consumers - different needs)*

* Some 30% of carp consumer in Poland (2019) don’t want to buy carp in a different form than live carp.
  At the same time more than 40% Polish consumers recognise sales of live carp as immoral
Trout market in Poland (domestic consumption in live weight equivalent, tons)

Is the development of VAPs influenced any market growth in last years?

Data source: IERiGŻ
Fresh trout average prices: retail (fresh products) and ex-farm (whole fresh trout), PLN/kg

Increase in retail price reflects mostly product form change (processing) cost, and do not influence directly ex-farm (raw material) price

Data sources: IRS/IERiGŻ / Eumofa-Europanel
• meeting consumer expectation by introducing VAPs does not mean higher demand and market growth for specific fish species or fish at all (the barriers could be: increasing competition on the market, higher price of VAPs also compare other VAPs...)

• development of VAPs does not mean more income for producers (the most of extra money from adding value goes to: processors & technology/packaging suppliers)

• there is no proof that added value products generate more profits in processing industry... (profits level are driven by price increase to cost increase ration; not by the level of added value)
Development of VAPs together with growing market share of supermarket rewards big companies that are able to invest in very modern packaging system and logistics ....

regardless of how we evaluate the development of sales of fresh farmed fish in the form of products with higher value added - this is the trend and we will not change it
Why the development of VAPs does not result in fresh farmed fish market growth?

Possible answers:
- High price compared to similar meat (chicken, pork) and vegetable products
- Price perception (*carp* = cheap; *carp fillet* = expensive)
- Huge competition on the food market (*current products and new products*: salads, humus, Asian dishes, sous vide meat, *multi-ingredient dishes ready for the microwave*)
- Insufficient promotional support
- Negative communication (black PR) against carp...
The real challenge is how to „Capture Value”
• **vertical integration** from fish farm through processing to global marketing
(Goslavice Farm — Antonius Caviar)
• **vertical integration + diversification strategy:**
carp farm + trout farm + small-scale fish processing + fish shop + restaurant  (Pustelnia Fish Farm)
• science, innovation and production reorientation

• Portion trout market – stable, stable prices ex-farm
• Salmon market – big potential, high retail prices

• Production of large rainbow trout (1.5 kg+) in inland farms, as an alternative to portion trout production
  • the same technical resources, higher demand for operational capital
  • innovation/science: all female triploid
  • New markets, higher price per 1 kg, higher EBITDA per 1 kg
And what about „new species” in RAS systems?

I'm still looking for an example of a farm that really makes money on it… (in Poland)
• joint activities of producer organizations

rainbow trout campaign - November 2018 - Polish Trout Breeders Association + Biedronka supermarkets

TV + POS (3000 supermarkets)
Budget: ca. 1 million euro
(75% EFMF/Polish budget + 25% retailer)

Results:
1. Sales increase, new consumers
   (GfK/Europanel):
   Nov. 18/Nov.17: +33%
   Dec. 18/Dec.17: +21%

2. Better consumer perception on trout price
Final remarks:

- Added value products are important to meet new consumer expectation but they do not automatically generate higher profits.

- There are different strategies for value capturing, no one is universal.

- The choice of strategy depends on many factors: the size of the farm, location, resources (personal, capital, etc.), the specificity of the fish species produced.

- ...but one thing is certain: **doing nothing new is not a good long-term strategy**.
Thank you!

Tomasz Kulikowski
National Marine Fisheries Research Institute

tkulikowski@mir.gdynia.pl
mob. +48 501 623 816