

Fish RAS aquaculture

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Why RAS?

Evolution of fish production



Why RAS?

Development of aquaculture

**Social
factor**



**Environmental
protection**



**Economical
aspects**





Strengths:

- High-quality water
- Full control over the production process
- Relatively low water requirement
- No contact with the environment - no pathogens
- Low negative impact on the environment (zero discharge systems)
- High-quality product



Weaknesses:

- High capital at the start of the investment
- Credit problems
- Complicating legal procedures
- Lack of educated Staff
- The sensitivity of the system to errors made in the phase of assumptions and design
- High production cost





Opportunities:

- Product certification
- Marketing campaigns and consumer education
- Continuous technological development
- The possibility of expanding and adding additional elements (IMTA, aquaponics)





Treats:

- Competition from outside (e.g. Asia)
- Increase in energy and water costs
- Excessive proliferation of procedures and supervision
- Problems on the feed components market ???



How to start?

A good plan is the basis

We divide the investment into stages :



- Market research
- Team selection
- Fish species selection
- Choosing a place
- Choice of technology
- Obtaining legal permits
- Detailing the project
- Start of investment
- Farm starting

Good example



Jurassic Salmon is a modern RAS Salmon farm, first in the world using geothermal water which is 150 million years old and one of three facilities in the world producing salmon from egg to harvest size.

Origin of the name:

Jurassic – our geothermal water comes from Lower Jura period
Salmon – species of farmed fish

Production plan



Size of the production: **1000 tons of salmon per year**
Input of eggs: **4 batches of eggs every 3 months**
Amount of eggs: **80.000-90.000 eggs/batch**
Size of the fish at harvest: **4,5 – 5,0 kg**
Production cycle: **20-22 months**
Harvest plan: **one day of week, app. 22 tons of HOG**

Good example

Structure of Jurassic Salmon plant

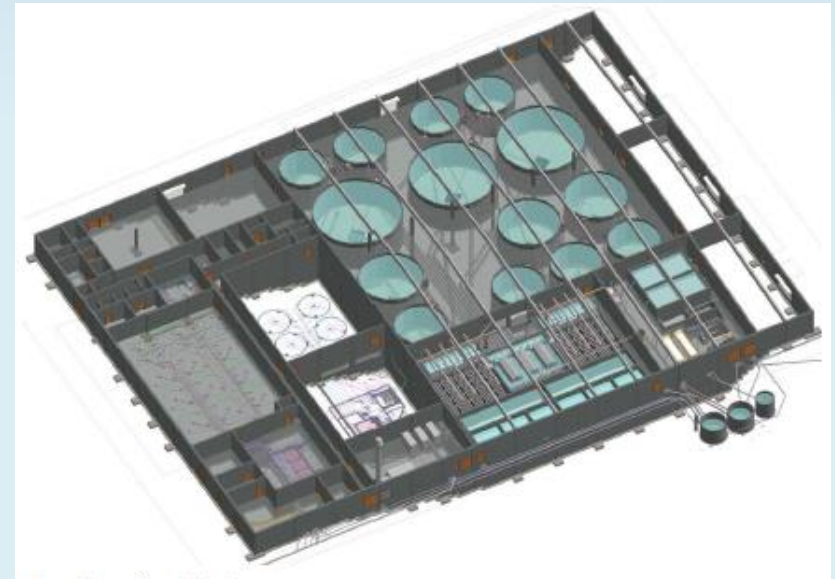
Hatcheries: **2 rooms**, 4 troughs, **28 trays**

Start Feeding: **3 tanks**, total volume **16m³**

Fry system: **19 tanks**, total volume **288m³**

Smolt system: **6 tanks**, total volume **400m³**

Ongrowing system: **14 tanks**, total volume **6600m³**



Good example

Construction of the Jurassic Salmon farm in figures

Building dimensions – **75 x 103 m**

Earthwork volume – **46.000 m³**

Volume of delivered sand – **40.000 m³**

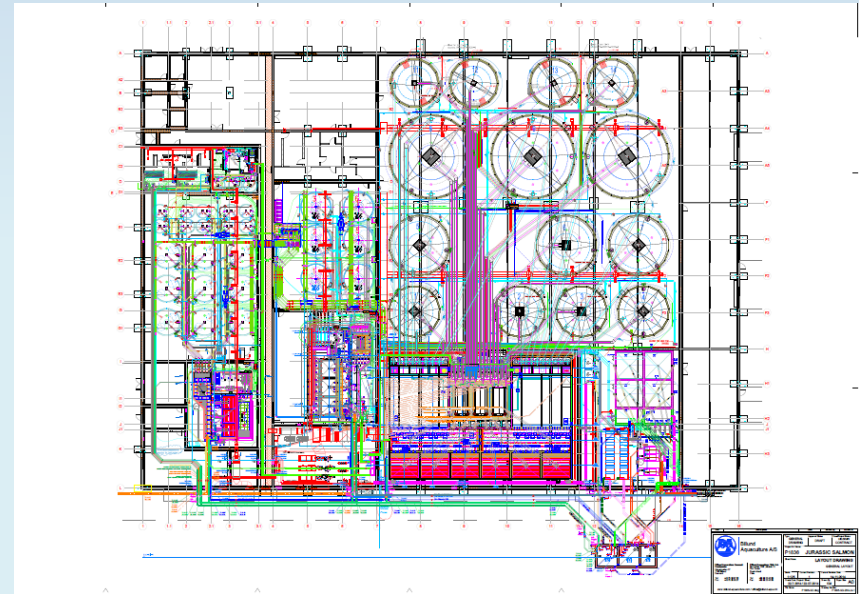
Volume of concrete used – **6.800 m³**

Amount of steel used – **340.000 kg**

Amount of blocks used – **31.200 pieces**

Length of power supply wiring – **25 km**

Length of technological wiring – **28 km**



Thank you for
your attention 😊

