

# AquaVIP Gdynia summer school

## IV – Facilities and farms virtual tours (part 1)



### *Virtual visit to the small-scale RAS laboratory*

Halina Kendzierska, University of Gdańsk  
15 min. virtual tour

**Aim:** To familiarize stakeholders with the technology of a small-scale laboratory RAS system and its applications.

The RAS-500 has been specifically designed and installed for the purpose of cultivating shrimps in closed recirculating aquaculture system and to carry out experiments which determine how different factors in various combinations effect survival, basic physiological processes, protein content and weight gain of the pacific white shrimp. Simultaneously data for the recommendation of the facility set up and shrimps' cultivation are collected and processed. RAS-500 consists of 3 separate tanks: water preparation tank, main unit (containing: electric cabinet, electronic cabinet, mechanical filtration, protein skimmer, UV and ozone sterilization, biological chamber, heating, filter sump, aeration) and a shrimp tank. There are two sets of the equipment specified and the sets differ in the biological filtration systems. Biological filtration in RAS 1 is typical wet/dry filtration (trickle filter). Biological filtration in RAS 2 is based on fluidized media fully submerged in the water column. Both systems are used simultaneously. The two sets work independently. It allows us check both filtration systems.



### *White Panther, shrimp hatchery – virtual tour*

Nicola Scalise , White Panther  
30 min. virtual tour

**Aim:** To familiarize stakeholders with the production of white shrimps in the recirculating aquaculture system

Surrounded by imposing mountain ranges and picturesque landscapes, the White Panther, Austria mountain shrimp enjoys its life deep down in the fresh water of the Almbach, in the heart of Austria. The shrimp farmed in the recirculating aquaculture system (RAS) gets species-appropriate husbandry without the slightest use of chemicals as well as varied, healthy feed that is perfectly matched to the various stages of development. Due to the extensive care and sustainable breeding, guarantee shrimp meat of the highest quality is guaranteed.

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## IV – Facilities and farms virtual tours (part 2)



### ***Dąbie Hatchery, salmonid eyed eggs farm – virtual tour***

Thibault Pasquier, Dąbie Hatchery  
30 min. virtual tour

**Aim:** To familiarize stakeholders with the production of salmonid eyed eggs by an innovative and sustainable method

Dąbie Hatchery is one of the world leading company in the production of salmonid eyed eggs. The company is successfully exporting 4 different species to almost 40 countries. In order to supply their clients all the year round, there is a production of eyed eggs every week which requires indoor and outdoor facilities. The conditions to produce eyed eggs differ from the standard growing farm where fish is grown for human consumption. Therefore, the Dąbie fish farms have been especially designed to meet their requirements. The farms are using the concept of RAS with a limited water inlet. The water treatment steps implemented in the farms are innovative and unique. Producing eyed eggs also requires a skilled team to control not only the process of growing fish but also the process of spawning, fertilization and incubation. The market requires the most resistant and fast-growing fish and to do so, Dąbie Hatchery is constantly investing on the genetic of its brood stock.



### ***K1 Trout Farm, semi RAS trout farm – virtual tour***

Marcin Juchniewicz, K1 Trout Farm  
30 min. virtual tour

**Aim:** To familiarize stakeholders with the production of trout in an innovative, semi RAS system

A lot of time and many ideas were so far invested into the planning and construction of the K1 Trout Farm, Poland, which is largely automated in order to reduce the ecological impact of the production and improve the fish welfare. The plant uses an air system, ensuring a vertical water circulation, a continuous current of stream water, aeration and separation of suspended solids from the fish water via a unique sediments collection system. Furthermore bioreactors are implemented for water biofiltration. The last step for water purification is an application of an integrated multi-trophic aquaculture system. As the result the bi-products are a biological fertilizer and filtered water is redirected into the stream. The farm is already a good example of a synergy between ecology and economy, still it has new investment plans ahead to improve both its productivity and sustainability.