

**International Olympiad “5R – Green Technolympics”
 8-9th JANUARY, 2020, Klaipeda, Lithuania**



COMPANY ANSWER

Short company description:

Klaipeda University is the only R&D and studies institution in western Lithuania, which consolidates its leadership in the fields of marine sciences and technology, fosters implementation of maritime policy and development of maritime economy and plays significant role in the development of Lithuanian coastal region. Sustainable and innovative aquaculture is one of Klaipeda University development fields. Based on collaboration agreement with Klaipeda Science and Technology Park, there was established KU Aquaculture Competence Center in which aquaculture surveys and technology development are implemented. Recently Aquaculture Competence Center is developing a saltwater recirculating aquaculture system (RAS) integrated with renewable energy sources for whiteleg shrimp production. The goal of the experiment is to acquire shrimp cultivation know-how and develop technology for optimized growth model for local conditions. A successful prototype will open up for new business opportunities and models for innovative and energy smart aquaculture in the region.

Question:

Recirculating aquaculture systems RAS are one of environment friendly future aquaculture solutions. Sea ranching is slowing down forcing business to rearrange to RAS. Please think and provide 5 benefits of RAS vs. open water aquaculture (sea cages, pond, flow-through). However, for different reasons sometimes the risks of RAS are forgotten. Please write down also 5 shortcomings or threats of recirculating aquaculture.

Answer:

Benefits: - needed 5

1. saves water what is very important in arid areas
2. no pollution of natural environment
3. lower risk of fish diseases
4. no predators (birds, minks, seals)
5. control of water parameters and fish status
6. no ectoparasites
7. intensive aquaculture

Threats: - needed 5

1. fish feed is threatening natural resources
2. relatively few aquacultured species (no seaweed, mussels and other groups)
3. high energy demands
4. skilled personnel
5. technology