## **Aquaponic Consultancy Services**

AquaBioTech Group is an international aquaculture fisheries consulting and company strategically located Mediterranean, the in on the island of Malta. It operates globally, with clients and projects in over fifty-five countries. Staff are recruited from across the globe, enabling communication with clients in thirteen languages.

AquaBioTech Group undertakes a variety of aquaculture, fisheries, marine surveying, aquatic environmental, financial, and technical projects, performed with its selected, worldwide partners.

AquaBioTech Group has an established, global reputation in designing and installing recirculation aquaculture systems (RAS).





Aquaponics is an integrated approach to efficient and sustainable intensive soil-less agriculture using aquaculture effluents. It uses the nutrients that are usually discarded as aquaculture waste water. At the same time it uses more than 90% less water than traditional agriculture.

As a company that develops highly efficient recirculation aquaculture systems, we are fully aware of the potential value of the effluents released as well as the impact they have on our environment. **AquaBioTech Group** has developed customised solutions by integrating innovative technologies into the proven horticultural concepts.

The aquaponic systems we design are:

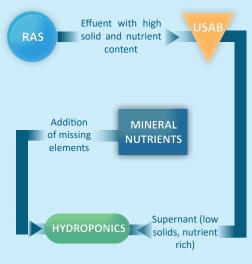
• **EFFICIENT:** using the latest plant cultivation, waste water treatment and aquaculture techniques

• **MODULAR:** can be adapted to existing hydroponic or aquaculture facilities, or designed as a complete system

• **ADAPTABLE:** different plant and fish species can be grown according to the local market demands

• **SUSTAINABLE**: conserving water, energy and nutrients

• **SUPPORTED**: our internal and external horticulture and aquaculture experts can provide professional support and traning



RAS: Recirculating Aquaculture System UASB: Upflow Anaerobic Sludge Bioreactor



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**AquaBioTech Group** has established a highly efficient recirculating aquaculture system (RAS) which can be connected to its own biological reactor and connected to a hydroponic system. Either component can be adapted and added on to existing fish or hydroponic farms to create a working "aquaponic" system or developed as an entirely new unit.

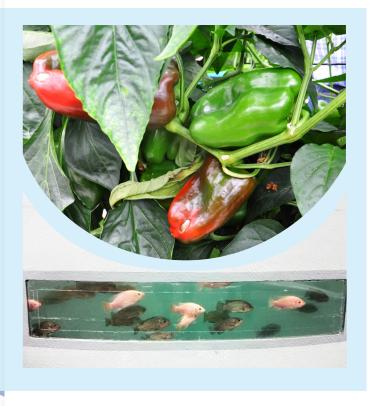
Our resident team of engineers and architects, along with external partners, can tailor projects according to the clients' requirements and provide support from start to finish on all technical, biological and production aspects including:



- Full aquaponic system design, including RAS and hydroponics
- Online and onsite technical and biological support
- Installation including third-party Quality Control
- Feasibility studies and project budgeting

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- Commissioning and technical training
- Consultancy on existing systems



### PLANT PRODUCTION TECHNOLOGY

Utilizing the most efficient technology in the market makes our systems competitive with traditional hydroponics. By implementing integrated pest management (IPM) we minimize the use of phytopharmaceuticals.

#### NUTRIENT MANAGEMENT

Running a low environmental impact farm while remaining competitive, demands integral understanding on how the plants utilise nutrients and methods of renewing the enriched RAS waste water to keep the nutrients in balance.

#### MINERALISATION

Effluent with a high solids concentration from the RAS filtration system is collected in a biological reactor. In the process the solids are transformed to a form that is easily absorbed by the plants in the hydroponic farm. This can cut the cost of fertilizers by 70% and reduce the environmental impact by 80%.

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