

Presentation at conference “Revolution in Food and Biomass Production” Author:

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Presentation Title: Is Aquaponics On or Gone? Choosing the Right Strategies to Develop Urban Aquaponics.

Abstract:

Aquaponics is the food production technique that combines RAS (Recirculating Aquaculture Systems) with hydroponics in the same closed water circuit. Fish produce nitrogen compounds that are converted by microorganisms into natural fertilizer for plants. Plants assimilate these nutrients and return cleaner water to fish tanks. It results from a symbiotic balance with a more natural production that takes advantage of biological processes, where all resources are reused and the waste of water is virtually non-existent.

This production technique received a special enthusiasm from entrepreneurs from the beginning of this millennium, reaching its peak in 2012, when many hundreds of aquaponics startups collapsed, mainly in the USA and Australia, markets that had shown an intense increase of this practice. These events present a very clear correlation with the initial phases of the Gartner Hype Cycle for Emerging Technologies. Evidence now shows that the vast majority of these startups and investments were motivated by emotional and irrational reasons, neglecting good business practices, such as having a solid business plan, conducting consumer market and price surveys and having prior guarantees for the sale of goods produced. All focus was on beauty, ease and sustainability of the production method and of its outputs. Moreover, most of the aquaponic techniques used were inadequate or unproductive, lacking in deep technical knowledge.

Nowadays commercial aquaponics show signs of wanting to leave behind the third phase of the Gartner Hype Cycle (“Through of Disillusionment”). More solid and reasonable companies and business plans are being noticeable in this activity. Despite this, there are still a number of obstacles to the development of aquaponics in Europe, such as regulation restrictions and lack of legislative harmonization, resistance of environmental associations, inability to certify production as organic and lack of knowledge about aquaponics products and its features.

Some strategies can be taken by companies that invest in urban aquaponics in order to overcome or mitigate many of these obstacles. There are aspects related to the business, such as how to approach the market, associativism and cooperativism, ethical and sustainable certification, sustainability marketing, the relationship with the local community and the partnerships developed. There is also a more technical side, which involves the design and architecture of the productive system, which can and should be influenced by the location and region of installation, as well as the extreme importance of RAS technical knowledge being considered in the project, mainly with a solid practical basis and not merely a theoretical one.

Aquaponics should be regarded as a new discipline and not merely as the sum of aquaculture with hydroponics and this is where many projects fail.