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**AGRICULTURAL
BIOTECHNOLOGY**
EDITION



**TOP
AGRICULTURAL
BIOTECH
COMPANY
IN EUROPE
2023**

AWARDED BY
**Life Sciences
Review**



Life Sciences Review TOP 10
**AGRICULTURAL
BIOTECH**
COMPANIES IN EUROPE - 2023

AGRONA

Transforming Agriculture with Innovative Water Treatment Mechanisms

Traditional ways of stimulating agricultural growth were based on climate cycles and carbon dioxide control, but the focus today is shifting toward enriching water quality. However, most water disinfection methodologies eliminate all bacteria and fungi, including the ones good for soil health.

Agrona is shifting this paradigm with innovative solutions that enhance water quality and increase oxygen content, stimulating the growth of beneficial microbes and improving plant health and resilience. An essential element of its success is the seasoned and highly competent team that leverages its years of industry experience to help customers improve their water quality and crop yield.

Agrona's journey progressed in stages, inventing new products based on comprehensive research and development over many years. In 2014, it began innovations to improve water quality with a microbubble aeration technology that pre-treats water, preventing algae growth and organic pollution.

In 2017, Agrona launched a new aeration technology based on nanobubbles. This solution exclusively generates bubbles sized 75 nanometers, which increase fertilizer uptake, develop root systems, and enhance crop performance when suspended in water for long periods. Besides, it markedly improves water quality and reduces algae and organic matter.

The benefits of these innovations exponentially improved with the release of Agrona's bioreactor in 2018. The



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By combining our microbubble and nanobubble technologies with the bioreactor, producers can establish a greenhouse treatment that eliminates harmful fungi and bacteria and boosts crop resilience and yield

bioreactor enables clients to boost the oxygen in their water sources and activate 'good' bacteria. Typically, it is placed near water storage tanks to ensure that the oxygen gets used by helpful aerobic microorganisms while minimizing the proliferation of fungi and bacteria that attack the root environment.

“By combining our microbubble and nanobubble technologies with the bioreactor, producers can establish a greenhouse treatment that eliminates harmful fungi and bacteria and boosts crop resilience and yield,” says Nadir Laaguili, director of Agrona.

Along with these botanical advantages, Agrona strongly emphasizes building low-cost and low-maintenance systems, which is substantiated by the product subsidies it offers across many countries. These benefits make its products feasible outside the agriculture market, especially in the Netherlands, where Agrona's systems constitute 85 percent of the municipal water purification systems.

Agrona's numerous success stories prove the acceptance of these

benefits across multiple sectors. In one instance, a lagoon with 18,000 cubic meters of water used Agrona's system to increase its oxygen level. Initially, the water body only had 2 percent oxygen, which skyrocketed to 98 percent after its system was placed on one side of the lagoon. When Agrona's solution was implemented on both sides, oxygen levels grew to 120 percent. In another case, its portfolio's disinfection prowess effectively eliminated post-translational modification-driven fungal hosts that attack tomato plant roots to enhance production by 16 percent.

Laaguili notes that optimal water quality for plant growth is as important as light and fertilizers. Recognizing this, his team at Agrona leverages their comprehensive knowledge and high-quality solutions to support growers in boosting their crop health and yield.

Agrona plans to expand its service area by 2024 through its novel collaboration with Atrium Agri, an international conglomerate of leading horticulture companies. Moving forward, Agrona aims to create successful farmers, healthier plants, and sufficient crops. **LS**

AGRONA



The annual listing of 10 companies in Europe that are at the forefront of providing Agricultural Biotech solutions and impacting the industry in the region