



AQUACULTURE

Transforming aquaculture with BactiQuant

We spoke to Nordic Kingfish Hatchery about how they leveraged near real-time bacterial monitoring with BactiQuant to gain better system control, reduce mortality rates, and successfully expand production.

BactiQuant

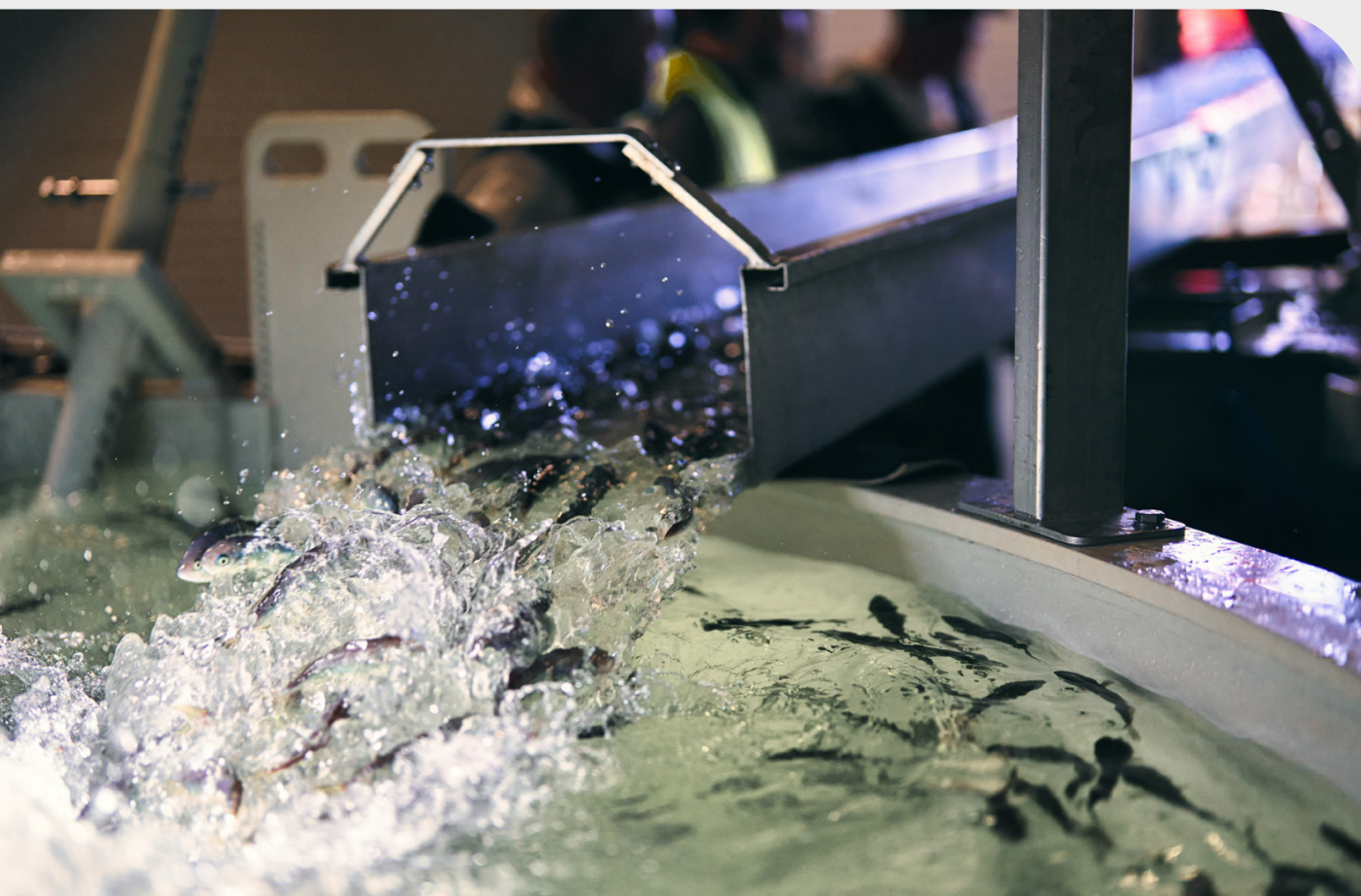
INTRODUCTION

Ensuring water quality and microbial stability is one of the biggest challenges in aquaculture, particularly for species like Yellowtail Kingfish.

Nordic Kingfish Hatchery, a leader in this field, has been on a journey to optimize their production while maintaining healthy fish stocks.

To gain insights into how they tackled these challenges, our Sales Engineer, Stavros Panoutsopoulos, sat down with Yaser Zahedi, the Hatchery Manager at Nordic Kingfish, to discuss their approach and the role BactiQuant has played in improving efficiency, reducing mortality, and scaling production.

Read the full interview on the following pages.



INTERVIEW

Can you tell us more about what you do in your fish hatchery operations?

Yaser Z.: We are a yellowtail kingfish hatchery, and we started the project because yellowtail kingfish is a young species in the aquaculture industry. You don't find as much information about the culture of this fish as you do for salmon or other well-established species.

Stavros: Yes, that is right. Salmon is a very well-documented species.

Yaser Z.: Exactly. You can find everything about salmon. For us, it took some time, involving trial and error and a research and development phase, to get things right. We started formal production in 2017, and by 2018 we were sending our first batches of fish to the grow-out facilities. Since then, we've been continuously producing fish.

Stavros: That's impressive! Have you scaled up since then?

Yaser Z.: Yes, over the last three years, our ambition has been to triple our production. So far, the fish we've delivered have proven that we can achieve this goal. Additionally, we have a new leadership team, including a CEO with a professional background in aquaculture. This expertise has been invaluable for identifying and addressing challenges.



INTERVIEW

What challenges do you face in maintaining efficient operations and water quality?

Yaser Z.: The main challenges are in the larval culture section. Preparing optimal and consistent conditions is difficult. Factors like temperature fluctuations, pH, salinity, and feed quality all play critical roles. For example, live feed such as rotifers, copepods, and artemia can introduce bacteria if not handled correctly, causing ripple effects throughout the system. My colleagues focus daily on ensuring high-quality feed and maintaining microbial stability.

Stavros: Do you remember how you first heard about BactiQuant?

Yaser Z.: Yes, it was about six years ago. A colleague introduced us to the device and helped us contact the BactiQuant team. They also showed us how to use it. There was a learning curve, and we had to correct some initial errors, but it's been very beneficial.

Stavros: What was it like before you started using BactiQuant?

Yaser Z.: Before BactiQuant, we struggled to control the microbiology of our system. We relied on petri dishes, which were time-consuming and less precise. We didn't have enough personnel, so it was challenging to focus on both production and microbiological monitoring. BactiQuant has given us a reliable tool to measure bacterial load, helping us quickly identify and address problems.



INTERVIEW

Could you share an example of how BactiQuant helped solve a specific issue?

Yaser Z.: Sure. At one point, our fish showed symptoms that we couldn't attribute to a specific cause. We weren't sure if it was bacteria, parasites, or chemical factors like high ammonia or nitrate. Using BactiQuant, we measured a high bacterial load and identified it as the root cause. By addressing this, we reduced bacterial levels and established a threshold to maintain stability in our larviculture unit.

Stavros: That's excellent. Have you noticed any unexpected benefits from using BactiQuant?

Yaser Z.: Yes, it's allowed us to scale up production more confidently. It's also reduced the need for external lab testing, saving time and resources. For example, sending samples to a lab can delay results by days, which is too late for larvae. BactiQuant gives us near real-time data, enabling immediate action.

Stavros: How do you respond to a critical situation?

Yaser Z.: Every time we have a problem or have to deal with a critical situation, the first thing we do is to take a BactiQuant test, refer to the database we have generated over the years and compare our current results with historical ones. This allows us to understand the extent of the problem, pinpoint its point of origin, but also eliminate assumptions (that might otherwise be costly and irrelevant). Once we have solved the potential challenge, we sample again to verify that our water quality is back to desired levels.



INTERVIEW

How has BactiQuant impacted your overall operation and efficiency?

Yaser Z.: It's been transformative. Without BactiQuant, we'd need to hire additional staff or rely heavily on external labs. It's helped us maintain system stability, which is critical for reducing mortality and improving overall efficiency.

Stavros: Would you recommend bacterial testing with BactiQuant to other hatcheries?

Yaser Z.: Absolutely. Stable microbiology and microflora are key to success in aquaculture. Whether through high water exchange or recirculation systems, having a reliable tool to measure and maintain bacterial levels is essential. BactiQuant has made our processes more scientific, combining experience with near real-time data.

Stavros: Is there anything else you would like to highlight about your experience using BactiQuant?

Yaser Z.: Just that I highly recommend BactiQuant to my colleagues in aquaculture. It's time-saving, precise, and easy to use. It gives us a sense of control and helps us make informed decisions. It's been a great tool for us.

Stavros: Thank you for your time and for sharing your experiences. This has been very insightful.

Yaser Z.: You're welcome. Thank you!



KEY TAKEAWAYS

This case story underscores the importance of proactive bacterial management in aquaculture

For Nordic Kingfish Hatchery, BactiQuant has been more than just a tool; it's been a trusted partner in their journey toward operational excellence. By combining experience with scientific precision, the hatchery has set a new standard in aquaculture and achieved:

Improved System Stability: BactiQuant enabled the hatchery to establish a bacterial threshold, ensuring stable conditions and reducing mortality rates.

Increased Efficiency: The tool eliminated the need for frequent external lab testing, saving time and resources. Near real-time data allowed for immediate action, greatly reducing the impact of bacterial issues.

Enhanced Production Capacity: Greater control over microbial stability allowed for scalability with reduced risks, with the hatchery doubling its production and planning to triple it in the coming years.



"By addressing bacterial load, we've reduced mortality and improved overall system stability. BactiQuant is one of the tools helping us achieve this success." – Yasar Zahedi

Want to learn more about how Bactiquant can help your business?

- Explore how our technology works
- Get in touch with our experts
- Stay in the loop with further insights

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