AQUA SIGHTLINE

USE CASE

Increasing Growth Rates in Your Sustainable Aquaculture Farm

Solution
Real-Time Data Analysis
Root Cause Analysis
Predictive Analytics

Industry
Aquaculture

Key Applications
Data Collection & Visualization
Parameter Improvements
Variance Detailing

KPIs
Increased Growth Rate
Larger Product Yield
Decreased Kill-Off

Overview

For the aquaculture industry, monitoring fish health is crucial to success. Aquaculture water monitoring systems, growth rate analysis, and fish health statistics come together to form a strategy for ideal production. That is, as long as you can utilize that data. Without predictive analytics, that data is simply there for manual review. Often without an all-encompassing visualization of data, it can be difficult to determine how the moving parts fit together. When left to manual collection, data can slip through the cracks or be improperly assessed.

Aquaculture farming facilities are looking for ways to accurately measure fish growth, and determine the best course of action to improve that growth over time. The aquaculture industry can benefit from in-depth data collection, analysis, visualization, and solution-based AI suggestions. By visualizing all data collection points at once, aquaculture facilities are able to identify where fish growth might be negatively impacted.

Improving data collection methods and implementing machine learning to develop solutions, a facility can eliminate wasteful products from fish that are unhealthy. In addition, those solutions are based on anomaly detection, where differences in mortality rate and growth speed are logged for predictive analysis. Fish hatcheries can accelerate their production by better knowing how to address problems in fish growth by referring to this in-depth data collection.

Challenge:

Sometimes, data can seem unpredictable. There can be differences in fish mortality rate and growth that seem to occur during identical scenarios each time. Aquaculture farms collect a lot of data at once, and sorting through it can be tedious. Determining what data is relevant, and how to use it to find solutions, wastes important time and labor.

In the aquaculture industry, positive fish growth and low mortality rates are crucial in maintaining production. When fish health is in jeopardy, sustainable aquaculture is difficult to meet. There's a lot of wasted product involved, and it can grow to harm an entire facility. Aquaculture businesses lose money when product is wasted.

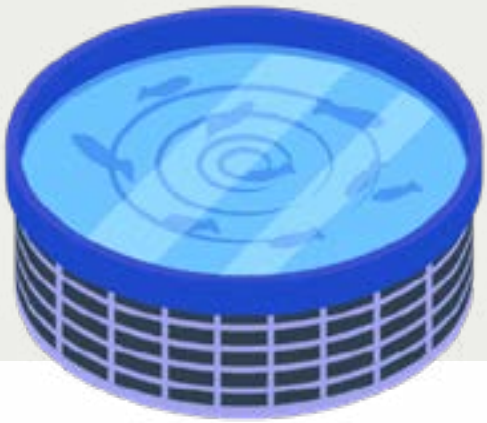
Solution:

Using Sightline EDM, aquaculture farming facilities can better determine solutions to problems like poor fish health. The first step is data collection and visualization. Our real-time data analysis synthesizes this data from different collection points and uses it to create an accurate visualization. When data is visualized, aquaculture farming facilities can better understand where problems are occurring.

There are four steps to implementing an effective, data-based strategy:

- **Data collection** - There is more to data collection than just aggregating it into a blank space. Predictive analytics identifies all data points and determines how relevant it is to the problem at hand.
- **Data visualization** - Seeing all data in one place thanks to Sightline's easy-to-use interface makes it easier to detect anomalies.
- **Improve parameters** - Using root cause analysis capabilities in the software, aquaculture farms can better identify where fish health is faltering and why.
- **Continuous data collection** - Sightline EDM does not stop at the first collection of data. Data is continuously assessed and used to improve solutions over time via machine learning.

Businesses can better implement the best aquaculture practices possible when they're able to visualize and utilize their data. Poor fish health, spreading disease or parasites, and low growth due to malnutrition or other causes can be quickly identified and responded to. Sightline EDM's machine learning continuously suggests improvement for processes to better care for the fish. This reduces downtime spent puzzling over the cause for poor fish health, and increases the overall product yield now that anomalies are properly taken care of before they can spread into larger issues.



Results:

Using Sightline to better visualize and address data is a valuable tool for aquaculture facilities. To maintain sustainable aquaculture metrics, causes for poor fish health and mortality need to be identified quickly. This eliminates wasted product and time spent trying to rectify the problem after it's already occurred. Sightline uses predictive analytics not only to interpret data, but to offer solutions.

Sightline can assess metrics such as feeding practices, information from aquaculture water monitoring systems, and disease management. This information is incredibly valuable for maintaining an ideal environment for the fish. When a product is managed in an efficient manner, costs are minimized and profits are increased. Less product is wasted, resulting in a better yield.

Sightline EDM has every tool necessary to assess and attack problems at the source, rather than waiting for them to become a much larger issue. Real-time data collection occurs in minutes and aquaculture facilities can get accurate results to inform their decisions. Predictive analytics and root cause analysis offer educated solutions that only get more accurate over time. This will help aquaculture facilities stay on top of their production.

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