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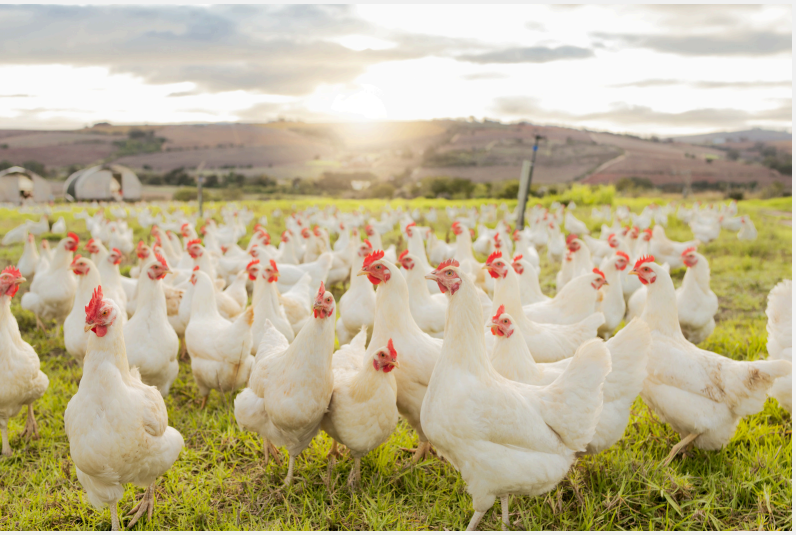
CASE STUDY

How Capestone Poultry Turned Peak Production Constraints into Dewatering Performance Gains



Background & Challenge

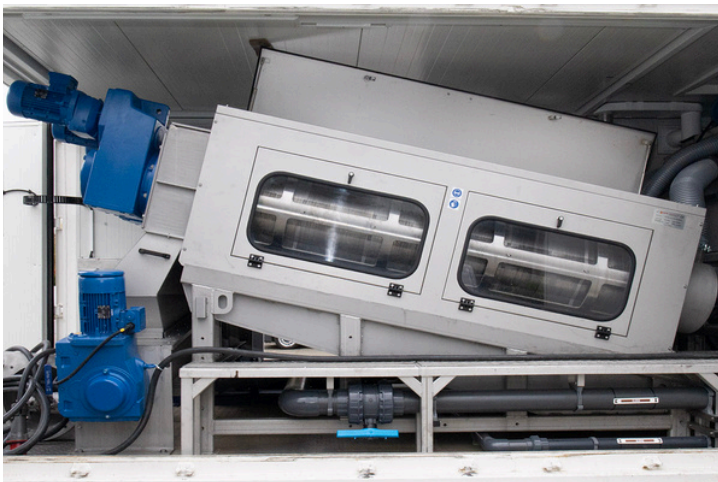
Capestone Organic Poultry faced increasing pressure on its wastewater treatment as production grew. During peak periods, the existing DAF system became **overloaded**, leading to **higher sludge disposal costs**, **increased chemical use**, and challenges in maintaining filtrate quality for irrigation.

At the same time, the site experienced significant **flow variability**, ranging from 10 m^3/h to peaks of 30 m^3/h.

The challenge was to implement a more **robust**, **flexible** solution to stabilize **performance**, reduce costs, and limit reliance on the existing DAF system.

Orege's Solution & Service

Orege deployed an SLG-MDSP solution combining **SLG conditioning** with a **multi-disc screw press** to relieve or partially replace the existing DAF system.



The trial evaluated key metrics, including sludge throughput, cake dryness, chemical use, and solids capture, to produce filtrate suitable for irrigation.

The demonstration also validated **performance** under **real conditions**, confirming the system's ability to handle variable loads and **seasonal peaks.**

By combining **process expertise** with a service-driven approach, Orege demonstrated its ability to improve both **compliance** and **operating costs.**

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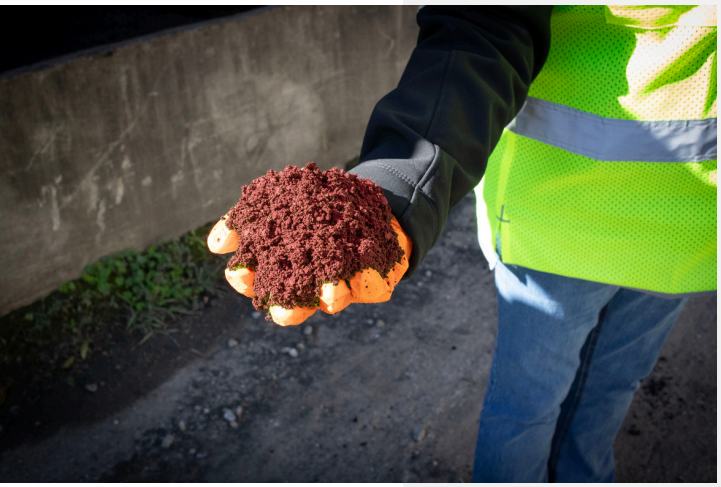

Results and Benefits

The trial demonstrated that the SLG-MDSP solution could consistently **dewater wastewater** sludge from a low concentration 0.1% dry solids into a cake averaging around 17–20% dry solids, with strong overall performance stability.

At the same time, **high solids capture** rates (about 94%) produced a clean filtrate suitable for irrigation while significantly **reducing the volume of sludge** requiring transport and disposal.

In parallel, the system delivered clear operational efficiencies. **Polymer consumption** was **reduced** by approximately **80%** compared to the existing DAF process, while maintaining reliable treatment performance.

The solution also demonstrated higher throughput capacity, improving the site's ability to handle variable flows and peak production periods without compromising efficiency.

Overall, these results translate into **lower operating costs**, **reduced sludge haulage** frequency, and **improved resilience** during high-load conditions. In addition, the higher cake dryness opens the door to potential value recovery options, shifting the approach from pure disposal toward more sustainable sludge management.

Orege demonstrated that a compact SLG-MDSP solution can outperform an overloaded DAF system, reducing costs and improving resilience.