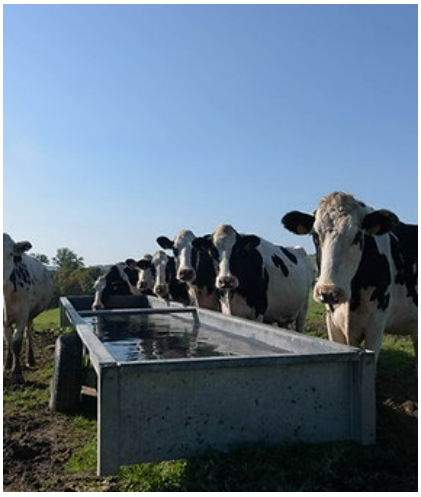
Feedlot Water Reuse Solution — OHX AOP Treatment

AusAOP Pty Ltd is a 100% Australian owned and operated company. Our products are manufactured by master boilermakers and electricians in Bundaberg, QLD using locally sourced products and strictly to Australian standards.



Overview

Feedlots generate large volumes of nutrient- and organic-rich wastewater. Most facilities rely on lagoon systems for treatment, which stabilize solids but do little to reduce dissolved organics, odour, colour, or microbial risks. Our OHX Advanced Oxidation Process (AOP) converts a determined portion of lagoon water into a high-quality, reliable reuse stream for daily operations.

One module of this modular system treats a 100 kL/day side-stream, allowing feedlots to **reclaim ~33 million Litres of high-quality water per year**—without disrupting existing lagoon infrastructure.

Key Benefits

1. Immediate Operational Value

- Converts lagoon water into a valuable resource
- Provides a dedicated high-quality supply for dust suppression, wash-down, cleaning, and controlled irrigation
- Reduces pumping distances and energy use
- Improves lagoon health by reducing organic loads

2. Estimated Financial Gains (33 ML/year Case)

- Treatment Capacity: 100 kL/day (33 ML/year)
- System CapEx: ~$150,000 (installed)
- Annual OpEx: ~$18,000/year

Annual Savings / Value:

- Fresh water replacement: $66,000
- Avoided long-distance pumping: $33,000
- Reduced lagoon desludging costs: $10,000

Total Annual Benefit: $109,000

Net Annual Benefit (after OpEx): $91,000

Payback Period: ~1.6 years

10-Year Net Benefit: Over $700,000

Why 33 ML/year?

This 100 kL/day module is intentionally sized as a first-step, low-risk add-on. It fits within existing lagoon systems, requires no redesign, and is not complicated to finance. It demonstrates value quickly and can be expanded by adding more modules.

Technology Summary

Our OHX AOP breaks down refractory COD and colour, eliminates blue-green algae, odours and microbial contaminants, and improves biodegradability of dissolved organics.

Stable microbial polishing further removes biodegradable byproducts and stabilises dissolved organic carbon (DOC), producing clear, low-odour water.

Drought-Period Wins (Resilience Benefits)

During drought, this system becomes a strategic asset:

- Guaranteed water availability
- Operational continuity for dust suppression and hygiene

- Improved animal health and welfare
- High drought-year ROI (up to $330,000/year in water value)
- Strong water security and ESG outcomes

Operational Fit

1. Pump from lagoon
2. Pre-filtration
3. OHX AOP oxidation
4. Microbial polishing
5. Reuse tank supply
6. Overflow (if any) returns to lagoon or irrigation

Modular Expansion

Start with 100 kL/day, then scale:

- 200 kL/day → 66 ML/year
- 300 kL/day → 100 ML/year
- 500 kL/day → 165 ML/year

Summary

- Generates valuable water from waste
- Reduces lagoon load
- Strong financial returns
- Boosts drought resilience
- Modular, scalable, and low-risk

Next Steps

We can prepare a site-specific ROI assessment using your water costs, pumping distances, lagoon data, and reuse priorities.

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