COST AND ROI COMPARISON FROM A HAPPY CLIENT

Testimonial:

First of all, I'd like to thank you, Lawrence,(US Supplier) for the warm welcome and the success of the Pulsars we have experienced in controlling our algae issues.

As part of the economic analysis recently conducted, here's a detailed breakdown of the cost comparison between ultrasound equipment and sulfate treatment for algae control in agricultural ponds.

Details

This below comparison and analysis was provided optionally by a client in Peru due to their findings on cost savings over against using chemical solutions they had used in the past. They have 5 irrigation ponds on their farm.

Please note I have added data – ALL IN RED - based on Australian pricing, feel free to rework your costs based on what you pay and add rates.

As part of the economic analysis recently conducted, here's a detailed breakdown of the cost comparison between ultrasound equipment and sulfate treatment for algae control in our irrigation ponds.

Note the AU$11,000 is an averaged value based on multiple dams, so a 2 dam unit sells for $20,625 excl gst , so this is actually $10,312.50 per dam, yet a single dam unit will be more than this and a larger dam unit will cost and average more but the savings will also be proportional.

Economic Analysis Variables

- **Ultrasound Equipment Cost per Pond (considering plug and cable):** $7,000 USD – AU$11,000.00
- **Water Volume per Pond:** 100,000 m^3 = 100 Megalitres
- **Sulfate Dosage Ratio:** 1 kg per 1,000 m^3 of water = 1kg per Meg.
- **Sulfate Price:** $4 USD per kg = $9.20 – 10.60 = prices I got – we'll work on AU$9.20/kg
- **Application Frequency:** Every 15 days (24 times per year)

- **Number of Ponds per Farm:** 5 ponds

Cost Calculation Breakdown

- **Sulfate Required per Pond:** 100,000 m^3 × (1 kg / 1,000 m^3) = **100 kg per application**
- **Annual Sulfate Cost per Pond:** 100 kg × $4 (AU$9.20) × 24 applications = **$9,600 USD per year** =AU$22,080.00
- **Annual Sulfate Cost for 5 Ponds:** $9,600 (22,080) × 5 = **$48,000 USD per year** =AU$110,400.00

Comparison Between Ultrasound Equipment and Sulfate

Single Pond Analysis

Concept	Ultrasound Equipment (USD)	Sulfate (USD)
Initial Investment	7,000 (11,000)	0
Annual Operating Cost	0	9,600(AU$22,080)*
Total Cost Over 2 Years	7,000 (11,000)	19,200(AU$44,160)
Total Cost Over 3 Years	7,000 (11,000)	28,800(AU$66,240)
Total Cost Over 5 Years	7,000 (11,000)	48,000(AU$110,400)

Analysis for 5 Ponds (Farm Scale)

Concept	Ultrasound Equipment (USD)	Sulfate (USD)
Initial Investment	35,000 (AU$55,000)	0
Annual Operating Cost	0	48,000(AU$110,400)*x5

Concept	Ultrasound Equipment (USD)	Sulfate (USD)
Total Cost Over 2 Years	35,000 (AU$55,000)	96,000(AU$220,800)
Total Cost Over 3 Years	35,000 (AU$55,000)	144,000(AU$331,200)
Total Cost Over 5 Years	35,000 (AU$55,000)	240,000(AU$552,000)

Key Takeaways

- The **annual cost of sulfate for one pond ($9,600)** **(AU$22,080 is double)** is higher than the **one-time investment in ultrasound equipment ($7,000 per pond)**. (AU$11,000)
- For a **5-pond farm**, the ultrasound investment is **fully recovered in less than a year** compared to the ongoing sulfate costs. So in Australia with higher CUSO4 costs, ROI is 6 months at these copper add rates.
- Over a **5-year period**, ultrasound represents a **cost savings of $205,000** for a farm with 5 ponds. In this same scenario in Australia **cost savings of AU$497,000.**
- The economic evaluation should also consider labor and maintenance, but in this vertical analysis, the most significant cost drivers are **sulfate consumption vs. ultrasound investment**.