Fodder System: Reservoir Odour & Algae (Bleach Reset, 2-Week Cycle, Aeration, 10-Volume Peroxide)

Abstract

We encountered a strong sewage-like smell and green/brown slime in the fodder reservoir. Water had sat too long with low air movement, so low-oxygen pockets and debris built up. This paper goes through what we found, why it happened, and how a bleach deep-clean, a strict ≤2-week harvest/replant cycle, better airflow/aeration, and a cautious 10-volume (3%) hydrogen peroxide assist after refills fixed it (CDC, 2024; Penn State Extension, 2024; UMN Extension, 2025; Hyjo, 2024; Corrêa et al., 2024; WRC, 2025).

Introduction

Our plan was to sanitize everything once with diluted bleach, then keep water fresh by harvesting and replanting every two weeks, adding airflow and water aeration, light-proofing the tank, and using a short-term 3% H_2O_2 assist after resets. (Corrêa et al., 2024).

Body

What happened (signs we saw):

- Rotten-egg odour on opening the reservoir.
- Green/brown films on walls, fittings and line entries.
- Worse after warm days and minimal airflow.

Why we encountered it (simple cause):

- Low oxygen + organic debris → H_2S. In still, oxygen-poor water, sulfur-reducing bacteria produce hydrogen sulfide (H_2S), which smells like sewage (Penn State Extension, 2024).
- Light + nutrients → algae. If light reaches nutrient solution, algae grow and add to biofilm and odour (UMN Extension, 2025).
- Long time between cleans allowed biofilm to thicken and oxygen to drop.

How we solved it (step-by-step):

1. Bleach reset: Drain, scrub all wet parts, disinfect with diluted household bleach, rinse thoroughly, and air-dry (CDC, 2024).
2. Two-week rhythm: Harvest and replant at ≤14 days to limit residence time and debris (WRC, 2025).
3. Airflow and aeration: Run extractor/fans for room air exchange and add tank aeration so water stays oxygenated (Penn State Extension, 2024).
4. 10-volume H_2O_2 assist after refills: Dose 3% hydrogen peroxide at conservative rates for short-term odour control post-clean; then stop and monitor plants (Hyjo, 2024).

Conclusion

We standardised a bleach sanitation, ≤2-week harvest/replant, aeration + airflow, opaque lids, and a short 3% H_2O_2 assist after resets. This removed odour and kept the reservoir stable.

References

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