



## DAIRY CASE STUDY City in Australia

### Project Summary

John Purcell (Western Victoria, Australia) recognized that there was probably “a bit much strain” on his dairy farm’s effluent pond.

Designed to handle the outflow from a 150-cow herd, John had increased his stock over the last 3 years by 100% to over 300 head.

### Situation

A thick, hard crust had formed on the pond and the wastewater had little retention time, short circuiting through the pond. The high sludge volume meant reduced water volume and less settling time. This is often the case with systems that are overloaded due to increased herd size. In addition, the pond was displaying almost no bacterial activity.

Retention time is a key requirement for effective biological treatment, as it allows the water to slow down, drop the bio-solids into the pond, and allow the bacteria in the pond time to digest the bio-solids. When fully digested, bio-solids break down into water, carbon dioxide, and humus.

### Solution

A program of LIQUIDATOR<sup>®</sup> application was planned to clean up the sludge already in the pond and then, secondly, to prevent further buildup regardless of the number of cows John was milking.

The initial product requirement was 11.2 liters, with a further 350 ml dose per day for approximately 17 weeks. Application of the product is by an automatic pump that dispenses the product onto the concrete washdown pad just before the usual afternoon washup. This ensures the product is thoroughly mixed as it flows into the pond.

After 10 weeks the pond was almost at full efficiency and easily handling the daily volume and solids loading in the influent.

The crust completely disappeared within 10 weeks, and the number of bubbles rising to the surface showed significantly increased biological activity. In addition, the increased retention time means a vastly improved digestion process is occurring.

John is pleased that he will no longer have to mechanically excavate the solids and that the quality of water he is using for irrigation has significantly improved.



Photo Taken Before the Application of LIQUIDATOR<sup>®</sup>



Photo Taken 4 Months Later After the Addition of LIQUIDATOR<sup>®</sup>

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## Product Info

LIQUIDATOR® is a broad-spectrum bio-activator containing over 30 essential microbial growth-promoting factors. By design, LIQUIDATOR® is a balanced formulation of vitamins, trace nutrients, enzymes, organic acids, and bio-stimulants that motivate the existing microbial community to greater metabolic capacity and efficiency. LIQUIDATOR® is not a bacterium nor an inoculum.

For many years, wastewater operators have continued to use LIQUIDATOR® to cut their sludge hauling costs.

### Operators Using LIQUIDATOR® Report:

- 1) The elimination of expensive dredging costs.** LIQUIDATOR® converts sludge into gases and water, reducing sludge accumulations. No draining, drying, excavating, or inconvenient down time.
- 2) The reduction of odors and aeration costs.** LIQUIDATOR® enhances aerobic and facultative biological eco-systems to reduce the production of objectionable and offensive odors. LIQUIDATOR® also increases the dissolved-oxygen levels, which decreases the need for aeration.
- 3) Increases in BOD removal efficiency.** LIQUIDATOR® improves treatment system removal efficiency to increase treatment capacity and more easily meet effluent requirements.

**LIQUIDATOR® enhances endogenous respiration for faster and more complete oxidation of sludge into carbon dioxide and water.**

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