Turning poo from problem to asset

Impact increases bacteria and fungus activity in effluent ponds.

GARETH GILLATT

A ONCE-PROBLEMATIC effluent pond has switched to yielding valuable nutrients on a King Country farm. The owners attribute the change to their use of Impact bacterial solution distributed by BioMagic, Auckland.

Grant and Christine Mitchell, Otorohanga, built a 1200m3 effluent pond in 2009 after making do with a sump emptied onto nearby paddocks through an irrigation cannon.

But Mitchell noticed the pond became anaerobic not long after he started using it, a thick crust forming on top. And production dropped on the 40ha irrigated part of the farm, which he attributed to a separation of the solids and liquids in the effluent.

BioMagic's Impact effluent treatment reduces crust and solid build-up.

"When the effluent was being irrigated onto the paddock it was the same color as the water and a thick crust had built up."

He also saw his cows delaying their move to paddocks for grazing. "You couldn't put cows onto an irrigated paddock until about three weeks after the cannon had been in the paddock."

After two years of thick crusts Mitchell started looking for solutions, including briefly considering buying a pond stirrer. Then he learned of Bacterial Impact, containing over 100 bacterial and fungal species, formulated to 'kick off' a pond's natural oxidation process, resulting in less sludge and a more valuable nutrient.

A heavy first dose and smaller monthly doses increase aerobic bacteria and fungus activity and improve the value of product pumped from the pond, the company says. The treatment is said to generate up to 300% more plant-available nitrogen.

Mitchell says he saw his pond come free of sludgy buildup within two years. "Now when the effluent comes out it's green, meaning its getting mixed."

Effluent going out to the paddock is also better mixed and brings better growth, he says. "The silage I get off the paddocks which have effluent on is rich, green and nutritious. And I have pumped it onto maize paddocks with good results."

Mitchell says the grass is more palatable after treatment. "Cows will eat the grass much sooner than usual after I've put effluent on the paddock."

While BioMagic recommends pouring the formula on the yard and hosing it off into the effluent pond Mitchell has got better results pouring the 5l top-up solution directly into the center of the pond. "It often works best if you leave the pond a week after putting the solution in before irrigating it."

Weekly use of the 20hp Reid & Harrison electric pump aerates the pond, ensuring the aerobic microbes keep working at their best. "It's still early days."

Mitchell has expanded the system each year since he started using the formula. "It's pretty much free fertiliser and I want to make better use of it."

Three seasons ago Mitchell started growing maize as a summer crop to get cows through the January-February feed pinches. Then last season he applied treated effluent to crop paddocks before sewing seed on them. "One of the yields of the irrigated paddocks was unbelievable; I couldn't get over how much maize I was able to harvest."

His 170 cows on the 75ha effective dairy platform last year produced 63,000kgMS.

Tel. 09 424 4476
www.biomagic.co.nz