

# Can effluent be turned into brilliant fertiliser?

## A leading soil scientist knows that it can.

His name is **Graham Shepherd**: soil specialist, agricultural researcher, and consultant. Here's what he knows...

### Most farmers treat their effluent like...shit

Graham has seen this pattern all over the country, an approach he thinks is understandable. *"Dealing with effluent is a pain for most farmers. It's an expensive process for what can be seen as a low-grade fertiliser. It's not surprising that most farmers simply dump it onto pasture without a lot of thought or strategic foresight."*

But can that untreated effluent be turned into a *high-grade fertiliser*? From a scientific point of view, absolutely.

### Turning your effluent into nutrient-rich fertiliser

The typical effluent pond is rich in nutrients – all the major elements and minerals required for plant growth. Unfortunately, nutrients such as nitrogen are in a *volatile form* that is easily leached and lost into the atmosphere.

*"Aerobic bacteria can change that,"* says Graham. *"They change it by digesting and breaking down the solids and fibre content of the effluent."*

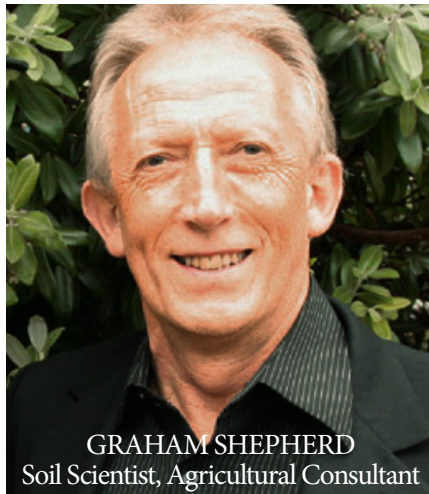
*In the process, these oxygen-loving bacteria retain the N in the effluent by capturing the ammonia within the urine. They convert the volatile N to a more stable, organically-bound N and in the process, also tie up the P and K."*

The converted nutrients are less leachable and more available to plants over time.

### Some compelling facts and figures

Treating dairy effluent with **Slurry Bugs** can increase N retention by 52–85%. The application of 50m<sup>3</sup>/ha of **Slurry Bug** treated effluent provides approx. 27 kg/ha of *total N* and 7.5 kg/ha of *mineral N*. That's a *threefold increase* compared with untreated effluent.

The application of 50m<sup>3</sup>/ha of **Slurry Bug**



GRAHAM SHEPHERD  
Soil Scientist, Agricultural Consultant

*To view Graham Shepherd's credentials, go to [www.BioAgriNomics.com/resume](http://www.BioAgriNomics.com/resume)*

treated effluent can provide 102 kg/ha of **phosphorus** (P<sub>2</sub>O<sub>5</sub>), 45 kg/ha of which is in *mineral form*. **Potassium** concentrations average about 160 mg L<sup>-1</sup>.

*"The scientific bottom line,"* says Graham, *"is that these bacteria greatly improve the fertiliser value of a farmer's effluent."*

### Big fertiliser savings

Think about the amount of NPK you buy in every year to spread on your pasture. It represents a significant *cost*.

Now imagine your effluent as an *easily spread* nutrient-rich source that your grass can readily absorb. That alone could greatly reduce your fertiliser bill.

### Big machine savings

The conventional way of managing effluent is to use *machines*: machines that *separate*

the solids; machines that *break up* the solids; machines that *stir* the solids.

Such equipment is very expensive. There's the initial cost of buying the gear. Then there's the ongoing cost of running it. And, of course, there are the costs of maintaining the machinery.

Imagine if you could turn effluent into effective liquid fertiliser *without* using machines. **Tens of thousands saved.**

### 67% less Greenhouse gases

Effluent ponds emit greenhouse gases: carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O).

*"In testing ponds treated with **Slurry Bugs**, trials have shown that CH<sub>4</sub> and CO<sub>2</sub> emissions were reduced by approximately 67%. In those same trials, emissions in untreated ponds had increased by 37%."*

### Start in the off-season

**Winter** is the perfect time to empty your pond and start afresh. If you start your pond with **Slurry Bugs** already in a *dominant position*, they will *prevent* crust and sludge from forming and will capture the nutrients your soil needs to produce grass.

### Before you buy machines:

Call 0800 4 SLURRYBUGS (0800 4 758779) or visit our website [www.slurrybugs.co.nz](http://www.slurrybugs.co.nz)



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