



Design for Life

Part 2 of 3

FLOWFORM™ ECO-TECHNOLOGY

**TRANSFORMING DAIRYSHED EFFLUENT
INTO LIQUID FERTILIZER**

PROJECTS NEW ZEALAND AND AUSTRALIA

Refer also to the Project Photographs section

This Report is provided as a practical basis to enter a research partnership.

New Zealand

1. Norman Baker, Morrinsville, Waikato
2. Kelvin Barkla Stratford, Taranaki
3. T and B Winiata, Rotorua
4. Hohepa Clive, Hawkes Bay
5. F. Fuglistaller, Taranaki
6. J. Pearce, Helensville, North Auckland
7. B.Schafer, Te Aroha, Waikato.

Australia

1. Tony Frankens Comboyne, NSW.
2. Ulli Spratz, of Paris Creek Dairy Farm. South Australia.

NEW ZEALAND

Flowform applications are relevant to many different areas of life and industry. We have not done any scientific testing in NZ on the effects of Flowform effluent treatment beyond some biological oxygen demand changes in Fred Fuglistaller's ponds. However, over the

years, good results have been positively reported by them. Their general response has been, "Mate, just tell them it works!"...

Each of the projects have been somewhat differently set up, some using the Flowform System on larger ponds and others creating their own in-ground tanks, using sludge pumps in both cases to turn over the volumes.

Commonly reported responses when we have visited them or had phone interviews:

- Works easily and well.
- You can work out how long to treat each pond by the smell and texture, and also the amount of time it takes to fill the adjacent pond.
- No rank growth of grass when transformed fertilizer sprayed onto paddocks.
- Cows can get back onto the paddock within a few days, much faster than when liquid is sprayed out from larger settlement ponds, which rely only on wind, sunshine and slow internal movement for transformative treatment.
- Some farmers have remarked on no mastitis even with cows eating the grass so quickly.
- There is no sludge for them to ingest or to affect the worms or microorganisms in the soil.
- Some farmers considered that trace elements that they previously had to apply on fields were not needed in the same quantities, or at all, any more.
- Saving of expense in fertilizing paddocks using this method.
- Help in the environmental management of the water run off on the property. Positive compliances with local environmental requirements.
- Some farmers have added Biodynamic catalytic compost preparations into the ponds as well, as this helps it go through its process faster.

AUSTRALIA

Phil Sedgman our colleague in Australia, who primarily uses Flowform designs made by John Wilkes and Iain Trousdell, has installed several effluent/biological waste treatment projects. This is his report on

1. Tony Franken's Dairy Farm. Comboyne, N.S.W

The contribution of Tony's dairy effluent treatment plant at Camboyne has made a large reduction in effluent turn around time and 1000ltrs per day is used to hose out the dairy after milking. Rank weed growth and smelly muck soaked areas at the back of his dairy was the norm. Not now though. Tony is able to use this valuable resource to irrigate his farm. Recycling the water and applying the manure waste to his irrigation equipment has many benefits. Traditional dairy effluent processing which relies on anaerobic decomposition can take up to four months, then the question arises, "What to do with the mess?"

Tony's plant relies on aerobic decomposition (Flowform and Bio Dynamic Manure Concentrate) and produces a ready to spray liquid in one week. By slightly opening the

sprinkler jets the whole liquid is sprayed onto the paddock. The cows then immediately graze on this grass. An unheard of scenario using traditional methods.

The plant comprises of 2 x 9000ltr concrete site cast tanks with 14 Jarna models and phi ratio spoon. The spoon enables the water to be directed to either left or right hand tanks. Between the tanks is a triangular pump chamber and by opening or closing the valves, either left or right tanks are aerated. Tony runs the 14 Jarna models at night which enables the introduction of more oxygen.

One of the tanks is filled from the shed via a sump and coarse strainer. When full, the 14 Jarnas are activated and left to run for 5-6 nights as the other tank fills. Once sufficiently processed the first tank is used for irrigation whilst the second one fills. The Bio Dynamic Manure Concentrate is used in the tank to expedite the aerobic decomposition and is available from the BDFGA Association for \$30 per kilogram or made very cheaply on the farm.

Tony is pleased with his plant and is enjoying the benefits brought to his herd of cows.

2. Ulli Spratz, Paris Creek Biodynamic Farm . South Australia.

Refer www.bdfarmpariscreek.com.au

This dairy farm also runs a cheese factory that supplies throughout Australia and exports into Asia. All the wastes from both the milking shed and the cheese processing run through the effluent ponds and are treated successfully by large Flowform VB500 vessels.

The system is effective passing all state requirements.

SUMMARY

Our aim through offering this effective technology to the dairy industry, is to enter a research and development and then commercial partnership enabling large numbers of farms to transform what is regarded as waste into a valuable resource, a liquid fertilizer gathered from the farm and applied back onto the farm, in an ecologically efficient cycle.

Compiled by Iain Trousdell.

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