Dairy Australia
Your Levy at Work

Fact Sheet 1:

Making the Most of Effluent

Key messages

- Effluent is a valuable farm product.
- Return on the investment to capture and re-use effluent is relatively quick given its fertiliser and soil conditioning properties.
- Advances in technology have made it easier to manage effluent, reducing the time and hassle involved, while minimising environmental risks and optimising agronomic benefits.
- Effluent management is a compliance issue, enforced by state Environmental Protection Agencies.
- Good environmental management is important to dairy consumers.

Good effluent utilisation means returning to the paddock, a large amount of nutrient that would be otherwise lost from the production system. It's a good business decision in its own right, but it's a win-win as it has good environmental outcomes too.

Benefits of good effluent management:

- Save money on bought in fertiliser.
- Soil conditioning properties from the organic matter.
- Improved soil moisture-holding-capacity.
- Improved nutrient-holding-capacity.
- Productivity gains from pasture responses.
- Minimised nutrient losses and environmental risks.
- Improved surface and ground water quality.
- Maintaining the environmental reputation of Australian Dairy Industry.

Compliance with Environmental Protection regulations

Each state has an Environmental Protection Agency that acts on behalf of the community, protecting their interests by working with industries to ensure positive environmental outcomes. Surface and groundwater quality are at risk if nutrients from farms are not well managed. Effluent discharges to waterways or groundwaters are illegal.

The EPA guidelines require that farmers:

- Contain all effluent within the farm boundaries
- Do not allow effluent to pollute surface or groundwater
- Do not contaminate land or cause a nutrient overload, and
- Do not cause nuisance odours beyond property boundaries

The Department of Environment and Primary Industry's – *Accounting for Nutrients* programme showed that a 250 cow herd produces about 32 tonnes of Nitrogen and 5 tonnes of Phosphorus in urine and manure. About 10 to 15% of this is collected at the dairy and stored in the pond. If a feedpad is added, the proportion collected can be significantly higher. If we are able to return these nutrients back to the paddocks, farmers can spend less on bought in fertiliser. Effluent is rich in organic matter, as well as fast and slow release minerals, which benefit pastures in the short and longer term.

Department of Environment and Primary Industries research has shown:

- The return on investment from a typical effluent reuse system including ponds, underground mains, hydrants and application systems is generally 4 to 5 years (Jacobs & Ward 2007).
- The return on investment period for reusing settled solids or sludge from effluent ponds is only 3 to 6 months. Therefore the money you spend on desludging your pond is a good investment that is repaid by increased production.

References:

Accounting for Nutrients on Australian Dairy Farms, final project report (June 2010)
www.accounting4nutrients.com.au/projectreports.aspx

Jacobs, J & G Ward, (2007). Sustainable and economic systems for the re-use of dairy effluent for forage production. Final report for Dairy Australia project DAV11073, DPI Victoria.

View Making the most of effluent on dairy farms video

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