



PROJECT OUTCOME

BONLAC FOODS FARM MANAGEMENT

In recognition of the importance of dairy industry to Victoria's economy and its environment, Bonlac Foods, in partnership with EPA, surveyed 104 farmers across the three major dairy regions in the State, in 2000.

The survey (available to view in PDF format) highlighted significant opportunities for improving the effectiveness of water and nutrients. EPA is making this information publicly available because it provides valuable information on how dairy farms can use inputs effectively and save on water and fertiliser costs, while reducing impacts on the environment. The survey provides useful efficiency benchmarks that farms can use to assess their own performance.



KEY FINDINGS

The survey findings suggest that those farmers who get it right, get it ALL right - they achieve efficient production, have the least wastage and are gentler on the environment. Effective nutrient, water and effluent management were found to be linked and a whole farm planning approach to solving the problem indicated.

Nutrients

Some farmers achieved more than twice as much production from the same nutrient inputs. The survey suggests that how nutrients are managed is as important as how much is applied.

Water

The amount of water used, for the same production, varied widely from farm to farm on pasture and in the dairy shed, showing that there is a tremendous opportunity to become more water efficient.

Dairy effluent

Effluent management was the most important environmental issue for the farmers surveyed. Many farmers experienced problems with effluent management, which is partly because of the overuse of water in the dairy shed, which in turn increased the quantity of wastewater that had to be disposed of. For information on how to put these into practice, contact EPA or the Department of Primary Industries (DPI) in your region.

NUTRIENT MANAGEMENT

Nutrient practice presents opportunities.

Nutrients are critical to pasture growth and farm productivity. They are also a major cost. On many farms there is an opportunity to get significantly more value from nutrients by avoiding losses through runoff, leaching to groundwater or storage in the soil.

Nutrients are a priority for EPA because nutrient loss to surface and groundwaters is one of the major causes of pollution in Victoria's waters. It leads to lower water quality in creeks, rivers and oceans, and can affect beneficial uses, such as recreation and farming downstream.

Of the farms surveyed the majority achieved less than 33 per cent efficiency. In other words, only one-third of the nutrients applied were returned as productive outputs. The other two-thirds, if it could be used effectively, represent an opportunity for profit.

The results showed that applying high levels of nutrients to the property does not guarantee more milk, and is more likely to result in large losses of nutrients. The findings suggest that how nutrients are managed is as important as the amount applied. Understanding nutrient efficiency is a key to identifying losses, saving money and protecting water quality.

The efficiency of nutrients can be worked out by comparing inputs and outputs. With best practice management more than 80 per cent of nutrients can be used productively and converted into milk, stock and crops.



Inputs – Nutrients are imported onto the farm as fertiliser and feed, which contain the major ingredients needed to grow pasture - phosphorus, nitrogen and potassium.

Outputs – These nutrients are exported from the farm in milk, crops and stock.

Losses - Nutrients can also be lost from the farm in water that runs off the surface or leaches through soil and Nitrogen can be lost to air. Farms should aim to lose less than 20 per cent of their nutrients. Survey results show that many farmers could tap into more value from the fertiliser they are already applying by cutting losses.

WATER MANAGEMENT

Water – A valuable resource that can go further

Water is a vital resource. It is also a major contributor to effluent management problems and nutrient loss. In the dairy shed, the overuse of water can result in problems with dairy effluent management. On pasture, water is a key factor in nutrient loss through runoff, which is a non-productive cost for the farmer. Efficient water use can help keep nutrients where they are needed - on paddocks.

Water use on pasture

There were big differences from farm to farm in the amount of water used on pasture to produce the same amount of milk. This highlights the opportunity on many farms to make water go further.

The results found that, in all Victorian dairy regions, some farmers used three times as much water on pasture as others to produce the same amount of milk. In the northern irrigation region water use ranged from as little as 0.43 ML to produce 1000L of milk to 1.15ML for 1000L of milk. This was adjusted for stocking rate and brought in feed.

Improving water efficiency is an opportunity to save on nutrient costs by reducing runoff from farm, as well as conserving water allocations.

Water use in the dairy shed

In the dairy shed the opportunity for improvement in water use was even greater compared to that used on pastures. The survey identified some very efficient water users, farms that used only one-fifth of the average for the region. One of the reasons was because they reused dairy water for yard wash. This

also helped them avoid the risk of overloading effluent ponds with extra water.

In the south-west the most efficient dairies used under 2000 litres per cow each year. At the other end of the scale, the most water used was 38,000 litres per cow each year - almost 20 times more than the best performers. The average for the region was 9600 litres per cow each year. In the northern irrigation region and Gippsland, the differences between highest and lowest water users were just as wide. Managing water use is a cost saving measure and a head start for effective effluent management.

EFFLUENT MANAGEMENT

While effluent management was the most important environmental issue for farmers surveyed, the survey found that management practices varied widely. The size of effluent management systems was not being increased to cope with larger herd sizes and this was a major source of difficulty for farmers.

Ponds were often too small because they were capturing not only dairy shed effluent but extra water from rainfall or from the dairy shed. Some farms had tackled this by cutting water use in the dairy shed and by using rainwater diverters.

A third of farmers reused effluent as a 'shandy' irrigation mix. This has the dual benefit of extending the reach of water resources and adding valuable nutrients to the pasture.

CONTACT DETAILS

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