2000

Improving productivity with dairy farm performance

David Windsor
david.windsor@agric.wa.gov.au

Ken Crawford

Stuart Gallagher

Vicki Staines

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How productive can a dairy farm be? What options are available to dairy farmers to increase their productivity and profitability? How can you reduce milk production costs effectively?

These are the kinds of questions that dairy farmers are, or should be, asking leading up to and immediately after deregulation. These questions, and many more, can be answered by participating in Agriculture Western Australia's (AGWEST) Dairy Farm Performance (DFP) Program. David Windsor, Ken Crawford, Stuart Gallagher and Vicki Staines report on DFP and the benefits being generated for dairy farmers in Western Australia.

Dairy Farm Performance (DFP) was developed by Agriculture Western Australia to help Western Australian dairy farmers make better business decisions by giving them more reliable information about the physical and financial performance of their farms.

DFP assists farmers to compare their own performance from year to year, and benchmarks developed from the information allow them to assess their performance against other dairy farms. The system has been operating since 1992-93, which has allowed benchmarks to be developed over seven consecutive years.

**Benchmarking with DFP**

Benchmarks are an important output from DFP, and when used appropriately are very useful for farmers. However, it is important to be clear about benchmarks, how they are derived, and how they are used. Benchmarking should be more about learning than comparison.

So what can farmers learn from the benchmarks that are derived from DFP?

- They can assess whether their farm performance is within the range achieved by the top 10 per cent of DFP farms for operating profit.
- They can see where individual aspects of their farm performance fit in relation to these farms.
- Benchmarks give some indication of the way the most profitable farms operate and the levels of some of their inputs.
- The figures can be used as guides to indicate areas where improvements might be made on their farm.
The DFP benchmarks are simply reference points, and they should not be regarded as targets or 'recipes for success'. In addition, they are not averages. They are, as stated, a range of figures for the top 10 per cent of farms with the highest operating profit in any year.

Using benchmarks is about understanding management processes, and learning to improve performance and avoid repeating the mistakes made by others. The three steps of the benchmarking process are:

1. Identify the performance of the top 10 per cent in the industry, area or defined section of the farm business through benchmarking.
2. Investigate and understand the management practices, including technology applied, on other farms. This may involve many different management systems and different technologies.
3. Adopt, and if necessary adapt, the management systems and technologies to better suit the farm, the farm goals and the lifestyle the farm family is aiming for.

Care must be taken as these benchmarks may not represent the industry leaders. Only those farmers who have chosen to complete the Dairy Farm Performance data input form for any year are included in any benchmarking assessment.

Having assessed a farm's performance against the benchmarks, a decision is made as to whether there are areas of the farm business that can be improved. Farmers then need to find out how it is possible to make these improvements. This can be done in consultation with farm advisers, the bank manager, milk company advisers or dairy development officers at Agriculture Western Australia. In addition, local discussion groups can assist with advice on management issues.

DFP benchmarks and findings

Examination of DFP data collected between 1992-93 and 1998-99 clearly shows that milk production per hectare has a major impact on dairy gross margin. (Above)

Another important factor is the amount of pasture used – either grazed by cows or conserved as hay or silage.

This is important for two reasons. Firstly, higher pasture use normally indicates a higher stocking rate and therefore higher production per hectare. Secondly, pasture is a much cheaper feed than grain or other concentrates. Maximising pasture-use helps reduce total feed costs.

The relationship between milk production per hectare and pasture harvested per hectare is shown in Figure 1. Milk production tends to increase as pasture-use increases. This suggests that the most productive farms are successfully using more pasture to make more milk, rather than relying on concentrates to increase production. It also demonstrates achievable levels of production performance.

As noted in Figure 1, the 40 highest gross margin herds almost all harvested more than four tonnes of pasture per hectare and produced more than 5,000 litres of milk per hectare. Only three of the 40 lowest gross margin herds harvested more than four tonnes of pasture per hectare, and none produced 5,000 litres per hectare.

The majority of dairy farmers participating in DFP have increased pasture-use and milk production per hectare, and now exceed both these levels of performance. Farmers whose pasture-use or production per hectare are
below these levels have an opportunity to increase their productivity, as industry experience indicates these benchmarks are meaningful and achievable.

Changing farm practices using DFP

Changing farm practices to reach production targets is desirable, but can it be done?

Cyril and Leslie Tucker of Tuttonup have increased their pasture-use and milk production since adopting the grazing management recommendations developed by Agriculture Western Australia's 'Profit from Pastures' project (see Figure 2). Although milk production per hectare almost doubled from 1993-94 to 1997-98, improved pasture-use resulted in concentrate feeding increasing by only some 25 per cent per cow. "We've learned a lot about how to manage pasture and grow grass in the last five years," says Cyril.

DFP shows that Cyril and Leslie are not the only farmers benefiting from 'Profit from Pastures'. Average pasture-use and milk production per hectare have both increased substantially since the project began in 1992-93 (see Figure 3). Average dairy operating profit (net earnings before interest and tax) for farmers completing DFP has also risen during this period.

Individual farmers are using physical and financial performance information from DFP to improve their business decision-making. Phil and Leanne Depiazzi farm the 80-hectare home block near Dardanup in partnership with Kevin and Belinda Depiazzi. Twenty-five hectares are irrigated, with the potential to irrigate another 16. They milk about 200 cows and produce 1.7 million litres a year. They use DFP to help find ways of improving their business performance. "DFP has given us a better understanding of our business and what costs are where," says Phil.

The Depiazzi's' main objective is for the farm to support a comfortable lifestyle for three families (Phil's father still contributes his labour to the farm) while being environmentally sustainable. Their focus used to be on production per cow. This has now shifted to production per hectare and returns per hectare. DFP played a major role in highlighting areas that needed attention.

*We were feeding lots of concentrates and heading down the path of high inputs. DFP
Grazing and conserving as much pasture as possible helps to minimise feed costs and maximise profit. (Above)

showed this was not the way for us to go. The main issue we are addressing now is to reduce inputs of concentrates and purchased fodder, and to feed more of what we are growing on our own place - lift our pasture-use." They are currently lasering and landforming part of the farm for irrigation so they can grow more grass.

Milk production has increased by more than 900 litres per hectare over the last four years, while the total quantity of milk produced increased by nearly 50 per cent. Jersey semen has been used to improve ease of calving in heifers, but is also having a positive influence on milk composition. To complement this, the Depiazzis have moved to a seasonal calving pattern, with 75 per cent of the herd calving in August/September and two smaller groups calving in summer and autumn.

"Batch calving is just easier to manage" says Phil. But all changes bring challenges. "DFP helps us measure our performance. When we started we didn't have much detail on our costs of production, either on the basis of cents per litre, dollars per calver or dollars per hectare. DFP gives us this detail. We use it to help us make our business more profitable."

Norena Manning and son Graham share responsibility for the family farm near Harvey. Norena does most of the paperwork and administration. Norena says they are looking for a quality lifestyle, as well as running the farm well (although getting Graham to take a holiday is not that easy). With deregulation around the corner, they are looking to milk more cows. Norena participates in DFP because "I like to know what is going on. It is
hard to know what is going on without something like Dairy Farm Performance".

Norena says that there are three types of farmers. The complete theorists sit inside all day reading and doing sums. They know how things should be, but don't actually do much farming. Other 'practical' farmers spend all their time doing things and don't take the time to look at their business and see what is going on.

A third group manages to balance the practical and theoretical sides of farming. Norena is striving to have this balance on the farm. She does tend to do most of the 'theoretical' stuff and Graham does most of the 'practical' stuff, but they regularly get together to compare notes.

When Norena gets the DFP report, she usually goes straight to the return on investment and then looks at operating profit. Once she has satisfied her curiosity, she goes through the report and compares the figures between years. She will usually go through the report with Graham, and they look where they can improve. "DFP is a good double check to see that the right things are really happening."

Graham and Jan Ravenhill of Narrikup, and sons Bevan and Ken have steadily increased their herd size from 80 cows in 1992-93 to almost 500 milkers in 2000. Collecting the necessary information for DFP has been an annual family event during this time. Like other participating farmers they use DFP to get an accurate picture of their business costs and the way in which the amount of money spent in specific areas changes from year to year.

The Ravenhills use information from DFP when preparing their annual budgets and for short- and long-term business planning. Grain consumption figures from DFP have played a key role in estimating each year's grain requirements when buying contract grain directly from local growers. Comparing the returns from their dairy and beef enterprises through DFP has influenced the rate at which their dairy herd has expanded and beef numbers have declined.

Lorelle and Don Fry farm 250 hectares near Benger. The Fry family faced significant challenges during the 1990s including the need for the farm to support two families and to plan for industry deregulation. They could see opportunities to increase their farm's productivity but weren't quite sure how to act on them. "Our stocking rate was very low, drainage was poor and there was a lot of waterlogging," says Lorelle. "The figures from DFP gave us the ability and confidence to act on our plans. We could see that the home block was under used and that a run-off block could be sold to fund our drainage program."

Don and Lorelle have since grown their herd by buying more dairying land and improving pasture management to increase stocking rate. They now employ a herd manager and seasonal workers to supplement family labour.

Lorelle is enthusiastic about the benefits of DFP. "It has shown us how to increase our farm's efficiency. It shows us where our major costs are and helps in our negotiations with the bank. It's become a reference point for all our farm decisions."

Conclusions

The Dairy Farm Performance Program provides Western Australian dairy farmers with the information they need to analyse the physical and financial performance of their businesses, and to compare their performance with their industry peers.

Information collected through DFP also plays an important policy role within Agriculture Western Australia. "DFP helps us measure the impact that our research and extension activities have on the dairy industry" says Agriculture Western Australia Dairy Program Manager Geoff de Chaneet. "It also lets us look at what is restricting productivity and profitability on-farm, and to use that information to target our efforts most effectively."

DFP is also helping farmers make better business decisions by identifying areas of the farm which are performing well, and highlighting opportunities for improvement.

DFP will be a valuable tool to increase farmer confidence in their business decisions as they respond to the challenges posed by industry deregulation.

Further reading