

# RESEARCH NOTE

## FARM BENCHMARKING – PITFALLS AND POWER

**A distinguishing characteristic of the top 10% of farm operators is management capability. Benchmarking, with physical production and financial performance dimensions, can be an effective tool to identify and compare consistent top-tier farm operators and improve farm performance.**

### WHAT IS FARM BENCHMARKING?

There are two intertwined pathways to profit for a farm enterprise – one that focuses on excellence in profitable commodity production and the other which focuses on the profitable deployment of human and capital resources into both farm and off-farm endeavours. Analysis of both pathways has a place in providing farmers and funds managers with information to improve decision making.

Farm benchmarking is a powerful management tool, with its roots in non-farm sectors. It compares farm managers' physical production and financial performance, as follows:

1. Physical performance indicators – relating to production outcomes or yields, physical inputs, productivity and production efficiency.
2. Financial performance indicators – relating to whole farm profitability, capacity to generate revenue, liquidity, solvency, cost efficiency and capacity to leverage and service debt.

Typically, benchmarks are used to compare a farm enterprise against its historical performance, a budget or plan, other similar enterprises in the same district, and the performance of many producers across an agricultural sector.

### WHY BENCHMARKING?

Benchmarking can be used to identify top-tier farm operators and to aid continuous improvement of farm performance. Importantly, benchmarking can bring objectivity and transparency to the process.

Moreover, a challenge for institutional investors is to assess aggregate performance from agricultural investments. This starts with an assessment of individual farm performance. Benchmarking provides one such comparative assessment tool.

### AVOIDING THE PITFALLS IN FARM BENCHMARKING

To extract maximum value from benchmarking it is necessary to avoid the pitfalls by understanding how to collate the data and interpret the results.

Some have criticised benchmarking as 'random numbers' and for providing ambiguous information. As well, a danger of borrowing the good ideas of others is that a strategy that worked well in one farm may fail in others. What *could* be achieved is not necessarily the same as what *should* be achieved.

Highlighted below are some of the issues of interpretation of farm benchmarking results and some solutions for dealing with each of them.

- 1. Small sets of potentially unreliable data:** Due to wide variations in Australia's land types and climate benchmarking groups are usually smaller than those in the US and Europe. Smaller datasets can lower confidence in results. It is also important to consider the extent to which any group is truly a representative sample. For example, the ABARES<sup>1</sup> data is collected randomly from census data, yet many farmers are non-reporting entities who only do tax accounting and tend not to pay a lot of tax. This can result in underestimation and inaccuracies in data. Confidence in results based on small populations increases in line with the number of years of data collection.
- 2. Scale:** There is often a very high positive correlation between top-decile operators and the size of farm enterprises. When assessing a small operator it pays to adjust for this if the plan is to operate on a greater scale with far larger sums of capital.
- 3. Selection bias:** Data collection methods may not be consistent or accurate. Voluntary benchmark studies are exposed to the risk that farmers will only participate in years when they do well which will distort results. At Laguna Bay, we seek potential partners who have consistently been in the top 10% over time.
- 4. Bias in sales price:** Sales price per tonne can be biased upwards by benchmark participants picking a market high when selling their output. Top-decile performing farmers are typically the lowest cost producers but as a group they do not typically outperform the market in selling. Unless a participant has a superior and repeatable market strategy or product quality their sales prices should be adjusted by the commodity's long-term average.
- 5. Aberration in costs:** It is important to differentiate between producers with a low total cost and those with a low cost of production. Reducing costs can be counterproductive particularly if it has an impact on production, for example reducing fertiliser inputs when fertiliser costs are high. A low cost of production is generally driven by a sensible, disciplined cost culture.
- 6. Crop rotation and the production system:** Benchmarking studies have shown that over the long term the most profitable producers benefit from rotating crops, especially via those with a high profit potential. Different crops prevent disease build-up between seasons thus preventing costly yield loss. For example, historically wheat has proven to be the most profitable winter crop, and thus, where practical, it is desirable to favour wheat as the winter crop. However, consistently growing wheat is not agronomically sustainable. Less profitable crops have to be sown in rotation with wheat to ensure wheat yields can be maintained in the long term. In practice, it is possible that a farm with 100% of the winter crop area sown to wheat may provide superior profitability in any one year (to a farm sown to a range of crops in rotation) but this out-performance cannot be maintained.
- 7. Sustainability:** Some unsustainable farm practices may increase benchmarking performance in the short term. Yet in the long term farm enterprises must also maintain their resource bases. Most sustainable practices are consistent with profitable practices over the long run. In the short run, good physical or financial performance may not reflect sustainable practices or the long-term viability of the agricultural systems. Thus in the long term high farm profitability is a quasi-sustainability measure. For instance, soil acidity is usually lower and soil phosphorus levels higher (indicative of sustainability) on highly profitable farms.

1. Australian Bureau of Agricultural and Resource Economics and Sciences

- 8. Non-reporting:** Because most farms are non-reporting entities inventory is booked when sold. Thus carryover stocks may distort data. Benchmarking must take into account changes in current assets such as stock numbers, grain inventories, wool in store, etc.
- 9. Short-term data:** Benchmarking on costs can be distorted if the data is for less than two to three years. Tax planning may involve a large pre-June order of inputs and carrying-over of seed and grain stocks from previous years. This may artificially reduce costs in a particular year. As well, standalone benchmark data (particularly over the short term) says very little about the subject enterprise's appetite for risk. Numbers mean little unless you truly understand them.
- 10. Geographic variations:** Different locations will affect results due to differing climatic conditions, soil types, regional assets and cost distortions. It pays to study these vagaries and adjust results accordingly if local benchmarking data is not available. An example of this standardisation is to calculate gross margins per unit of Plant Available Water.

## CONCLUSION

Benchmarking is a powerful tool for the identification of consistent top-tier farm operators and the improvement of farm performance. The informed collation and interpretation of farm benchmarking data is a part of Laguna Bay's edge.

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