# The importance of key performance indicators for profitability

Research and development into many areas of commercial pig production has fuelled improvements in productivity and output. Yet, it is still questionable if profitability on farm is increasing, or even being maintained, in-line with these advancements. Industry experts advise that remaining profitable is imperative, and the way to monitor this is through key performance indicators, which ensures a unit is reaching its full potential through maximum production efficiencies.

International Pig Topics investigates what farmers should be measuring to monitor performance and productivity.

## Importance of KPIs

More tonnes of pig meat are being produced per sow per year than ever before due to increased litter size and other improvements in output, but despite this progress and huge investments, profit is not in line, mainly due to an inadequate price per kg pig meat and inefficiencies.

"It is essential to sustain a profitable business and in doing so it is vital to measure profitability in order to allow businesses to grow. Nutrition has an important role to play," explains Primary Diets nutritionist, Ian Wellock.

However, the variable nature of inputs and the variation in farm management makes measurement a tough task. Ian advocates key performance indicators (KPIs) are a crucial way of monitoring overall performance and a key way of establishing the efficiency and ultimately the profitability of a unit, something that ABN nutritionist Steve Jagger agrees with, "Farmers should be measuring KPIs on a regular basis.

"If they do not, then there is no way of knowing exactly what is generating profit, and where improvements can be made."

Steve adds that KPIs allow for benchmarking, both within businesses and against industry standards, providing a measure of efficiency. "By using certain KPIs, farmers can be assured that they are turning a profit, and maintaining sustainable production."

## Feed conversion ratio

Feed conversion ratio (FCR) is the most important KPI to focus on explains Steve, but he indicates that measurements such as daily live weight gain (DLWG) and margin over feed (MOF) are also important to consider. "Factors affecting even simple KPI calculations, such as FCR, can be very complex," warns Steve. "By using a combination of KPIs it's possible to effectively analyse the advances being made in output and efficiency which can help improve profitability in the long term."

Stephen Hall of Agrosoft Ltd – a leading software provider for the UK pig industry – explains the importance of regularly measuring data on pig units. "Total herd FCR is the most important KPI in my view, as everything disseminates from that measurement. It accurately reflects the performance of a whole pig unit as it encompasses integral components of the production system and assesses the key relationship between feed input and weight gain."

Ian notes that a whole herd FCR of around 3.0 would be his target. "For a top performing unit I would expect a FCR of 2.8 to be achieved as a result of more efficient use of resources."

Ian goes on to detail the vital importance of being fully aware of feed efficiencies. "At 62.7% of total costs (InterPIG, 2011 report), feed accounts for over half the total input costs for a pig unit. Owing to feed being such a key resource, we must use it to its maximum efficiency.

"Food wastage due to poor or broken feeders can sometimes account for an increase in FCR of up to 0.2 or 0.3, which all affects the bottom line," warns Ian.

"It is vital farmers set achievable targets," adds Stephen Hall. "If farmers do not monitor KPIs they can not progress or know if they are achieving their targets or realising a level of efficiency.

"The areas I consider vital for consideration are service targets and maintaining a balanced parity distribution of one to five driving the culling strategy."

In a recent trial coordinated by Primary Diets and ABN it was demonstrated what

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sort of KPI results can be achieved through selecting the optimum feed programme. Ian Wellock details the trial results. "Across 49 days and over four diets, an average DLWG of 638g/d and a FCR of 1.31 was achieved. These excellent results show how implementing the correct rations and management practices can deliver efficiency. High value feed can often produce a bigger return on investment and can be better overall value, leading to increased bottom line returns," says Ian.

Steve Jagger details that the wider feed programme is also a critical factor. "The trial demonstrated that feeding the correct ration at the right stage of the growth cycle maximises efficiency and minimises wastage. Feeding a ration with a specification higher than necessary to optimise lean tissue development, leads to unnecessary waste that can affect margins," says Steve.

Ian outlines where other inefficiencies are often seen. "If nothing else, units should be focusing on measuring FCR in the last few weeks of rearing. This is a key area where many pig units are losing profit."

Selling pigs at the right stage is another major issue. "Most profit is lost by not selling pigs at the right time or the right weight. FCR deteriorates as pigs get older so it may be more efficient and profitable to sell pigs slightly lighter to avoid expensive weight gain in the last weeks that reduces margins," warns Ian. Other areas where efficiency savings can be made include choosing a range of diets designed to work together, based on performance and results, not purely cost per tonne, says Ian.

He explains that pigs' sensitivity to ration changes can reduce performance. "Over a feeding pigs' lifetime up to 10 days of growth can be lost – as every diet change can cost about two days in lost growth, due to the decrease in intake as pigs adapt to the new diet. This is a perfect example of why it is critical to choose rations that are formulated to follow one another with the aim to reduce any growth checks. Through regular measurement of KPIs it's possible to know how a change in ration has affected the Daily Live Weight Gain (DLWG)."

## Management factors

Management factors also have a tremendous effect on efficiency and ultimately the profit of the unit, explains Stephen Hall. "Some EU countries demonstrate the benefits that can be achieved from utilising resources to their full value.

Sows, buildings and labour can all be seen as key resources on a pig unit, and if we do not balance the pig flow to maximise all their individual outputs in an effective manner we can not expect a profitable, sustainable business."

There are other areas where performance can be improved. ABN and Primary Diets have jointly researched the effect of including additives in weaner pig diets. Steve Jagger explains the outcomes. "The research concluded super dosing phytase significantly improved live weight gain by 11%. Under the correct circumstances additives do definitely have a role in improving performance further without reducing profitability, despite the initial extra cost," concludes Steve.

Stephen Hall points out the ease of regularly measuring and using statistics to monitor progress once it becomes part of the routine. "If just a couple of hours a week are spent recording, then there is data to provide a benchmark against which targets can be set. This delivers more 'value' from the exercise of monitoring performance, and staff are able to relate to this and see benefit being derived from the data.

"With the right diets, regular monitoring and efficient management practices in place, pig units should realise their maximum potential, leading to a more profitable unit," concludes Steve. ■

**Panel of industry experts**

- **Dr Steve Jagger**
  ABN UK, Pig Nutritionist
- **Dr Ian Wellock**
  Primary Diets, Technical Manager
- **Stephen Hall**
  Agrosoft Ltd, Managing Director