

The ultimate toolkit in

PRECISION

by Dr Japie van der Westhuizen

Grain and other crop producers have popularised the phrase precision farming. One definition of the word precision refers to the closeness of two or more measurements to each other. It therefore relates to consistency when repeating the same observation, rather than to the accuracy of such an observation or measurement. Repeating the same mistake with high precision can have disastrous consequences.

Figure 1 clearly demonstrates the difference between precision and accuracy. One could speak of a (false) sense of accuracy with repeated precision, when measurements and observations are biased and therefore off the mark. Dairy farmers should guard against reliance on consistent and repeated information without any real proof of accuracy.

Information and management

Managing a dairy efficiently and effectively requires one specific skill, namely the ability to assess and then use the available sources of information that will make a difference to profitability. Living in an information era has many advantages, but the downside is that one can easily drown in the sea of

data. In this process, managers should strike a fine balance between spending time figuring out what to do with information and making use of the right advice given by a knowledgeable person. The factors that differentiate profitability among dairy units can be broadly divided into:

- minimising costs to increase profit;
- minimising assets per production unit to reduce fixed costs;
- marketing milk to receive the best milk price possible to increase revenue; and
- increasing production (within resource constraints) to maximise revenue.

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LEARNING FROM OTHERS

Numerous studies have shown that rankings in profitability in dairy units are mainly the result of being able to curb costs. In studies in the UK and USA, the consolidated results showed that the differences between more and less profitable dairy units were the result of:

- higher (pounds) milk solids per cow (within the specific type of production system) – 8% better;
- livestock income per livestock weight unit (cwt) on the farm – 36% better; 58% less interest costs, 49% less debt per cow and 18% less machinery costs per unit of land;
- animal husbandry costs (veterinary, supplies, breeding, production expenses, milk testing, bedding, hoof trimming and raising heifers) – 16% better;
- total labour costs – 10% better;
- effectiveness of production per worker (kg of milk per worker) – 26% better;
- total production costs per livestock weight unit (cwt) – 15% better; and
- converting feed to milk – 31% better, as measured by income over total feed costs per cow.

Fig 1 Precision versus accuracy

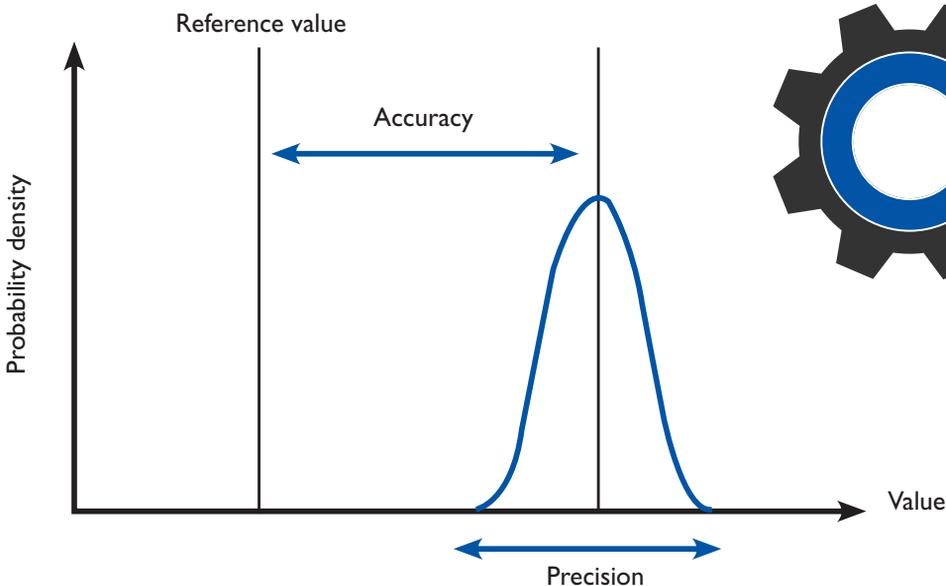


Table 1 Average proportional cost structure of producing 100 kg of milk (source: Logix Milk)

Contributing factor	Percentage of production costs
Feeding and nutrition	70%
Health management and veterinary costs	6%
Rent, interest and depreciation	5%
Labour	4,6%
Electricity and fuel	4,5%
Maintenance	3,3%
AI and breeding	2%
Other costs	4,6%

By using the right tool from the available toolkit through correct recording practices and accurate laboratory analyses, cost reductions can be achieved. A mere 5% reduction in feed costs per kilogram of milk produced can result in a 20% to 35% increase in the gross margin. This is made possible by using accurate and precise values and ratios obtained from production and laboratory test results for milk solids, milk urea levels, lactose and somatic cells.

Identifying the invisible cow

The so-called "invisible cow" is the one that makes the difference to profitability in the dairy herd. She



Accurate and consistent measurements will result in the correct identification of your "invisible cows".

is the one that delivers a healthy, viable calf every year, maintains an acceptably high and consistent production throughout her lactations, is healthy and will not cull herself. Accurate and consistent measurements result in the correct identification of these animals, as well as the management practices that help them optimise their production.

Accurate precision

Dairy farmers should rely on trustworthy sources of information and advice. No one is likely to put his own family's health care in the hands of someone not registered as a health professional, or rely on analyses from a non-accredited laboratory. This should be equally important for dairy producers. Milk laboratory results that are accredited by the South African National Accreditation System (Sanas) and interpretations and advice by professionally registered professionals, such as members of the South African Veterinary Council and the South African Council for Natural Scientific Professions (SACNASP) should always be a precondition when making those very important decisions for the well-being of your cows and, ultimately, your livelihood.

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