Cash cow sheds light on breeder management

It's time to turn traditional benchmarks for breeding cattle on their head says Geoff Fordyce, one of the lead researchers in the Cash Cow project, led by the University of Queensland.

Traditional performance benchmarks have been indicators like branding percentage, or weaning rate. The Cash Cow project sponsored by Meat & Livestock Australia indicates that changing our focus to kilograms of beef produced per cow, will create better outcomes, as that is where the money is in a beef business.

"We need to think in terms of the average annual liveweight production per cow. This is a shift away from traditional performance measures, such as pregnancy rate and average weaner weight, to production based criteria, such as the ability of a cow to survive, gain weight and wean a calf – production, not performance is a major determinant of the bottom line." Mr Fordyce says.

"Beef producers catch on to this quite quickly, as they understand where the margins in their business lay. Income to beef producers is directly related to production, whilst performance indicators have quite variable relationships with income."

"Even intercalving interval, is a performance measure riddled with conundrums, as it tells us little about the liveweight production of that cow – did she raise those calves? Her lifetime live weight production is a more significant indicator of her value in the herd."

The implications of this shift are much deeper than simply playing with semantics, Geoff explains.

The Cash Cow research has shown that achievable annual weaner production per cow is similar to achievable annual steer growth in the same environments and is a very useful guide in formulating management and analysing costs and benefits of options. In fact, running a representative group of steers in a paddock that represents the country type where you run your cows would be a useful calibration tool.

"The implications bring us back to having realistic expectations of our breeding herds. For example if a steer would put on 150 kilos per year and you are expecting a cow to raise a 190 kilo weaner in the same country, then she is going to have to supply that extra 40 kilos off her back. This could take her from a body condition score (BCS) of 5 to 4 (assuming she was fat to begin with). Repeat this for another year and she will slide from a 4 to a 3. Repeat the scenario again and she'll live off her back once more and by year four she will be below BCS 3 and unlikely to reconceive until she has a chance to rebuild her body condition, which is a bank for future calf rearing."

When there is drought and the environment's production is reduced by 30 percent, say to a 100 kilo per year liveweight gain, then it is realistic to expect a cow herd to produce a third less liveweight. This does not mean they are infertile, but they can only convert so much energy into liveweight or provide it off their own back.

Producers needs to look at the cost benefit of adding that energy back into the system to raise the energy back to produce 150 kilo per year, or accept the production loss in drought years – assuming herd survival, by destocking, selling or supplementing energy is a given.

“Cows are not magicians and simply do produce many more kilos than a steer under the same conditions.”

Geoffry, advocates that producers pay attention to their genetics and not use drought as an excuse for poor management, but be realistic about how much beef a cow can produce, and look at their management to determine how more cost effectively they can meet the cow’s needs.

Long-term selection for fertility has revealed some interesting insights, Mr Fordyce says. “The focus on selection for fertility under extensive northern environments that are nutritionally limited has created a highly efficient type of animal that achieves a higher liveweight production off the same country. It appears these more fertile animals have a nutritional advantage, which is related to nutritional efficiency, which in turn improves fertility and their ability to raise a calf.

Whether you call this constitution or nutritional efficiency, it is a complex combination of traits that gives one cow an advantage over another and the progeny of those cattle which also in their turn have higher production output than their peers.

“Cows are a truly amazing organism - converting pasture into liveweight,” Mr Fordyce says, “One area where things can go wrong is reproductive wastage, which is affected hugely by nutrition.”

Reproductive wastage is a huge loss to the industry and the biggest problem area seems to be calf mortality in the weeks after birth.

The biggest contributors to calf mortality may be calf vigour and the cows’ milk production. Cows need to make milk out of something. If condition or feed is a problem, then milk production will drop, and so may the calf. Selection for fertility and by default, nutritional efficiency (constitution?) has bred cows that are more moderate framed, and produce more weaner weight, while maintaining their own body condition - and the outcome is increased liveweight production per cow.

Mr Fordyce recommends beef producers use this knowledge to ask the right questions, and manage for production not performance indicators, which may or may not correlate to actual production.

“A herd management plan must be built around available nutrition and realistic expectations of the environment’s productive capacity. The task of a beef producer is to maximise availability of pasture and its quality, and then manage cattle to most efficiently transform available feed into high value saleable liveweight.”

The full article *Liveweight production in extensively managed beef breeding herds, Fordyce et al* can be downloaded at www.greenup.com.au