



# technical brief

## Don't Forget the Cow Herd

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Selection pressure within beef herds has always been subject to fashion and industry trends, with some fairly large “pendulum like” swings over the last few decades.

Hindsight has shown that selection for frame was largely counterproductive to the beef industry, just as was selection for small dumpy animals the previous few decades before. Don't select for traits indirectly, for example selecting for frame score as a means of increasing growth, when you can measure and select for the target trait directly. You will get a faster response and avoid some of the correlated nasties (like straight legs) that inevitably occur in an indirect selection regime.

Clearly, the beef breeding fraternity needs to avoid single trait selection. So will the current focus on carcass quality be the start of the latest crusade, and if so, what are the down-sides as well as the ups, particularly for the cow herd?

When talking about improving carcass performance, an old hand once said “ the last thing a steer does is die, he's got a lot of living to do before that happens”

That simple statement says it all from the cow-calf breeders perspective...live, unassisted calves that grow efficiently, generated from an easy care, sustainable cow herd in synchrony with the environment is the first priority.

### **The cow-calf/packer conflict.**

Aiming to breed high carcass performing sale progeny creates a problem for the cow-calf man. The cowman's cheque balance will benefit most from fertile, easy calving, low maintenance/drought resistant cows whilst the packer's reward is largely influenced by high yielding, well muscled, high weight for age carcasses.

Conflict ..... **selection for growth** leads to calves reaching a target slaughter weight at an earlier age...a plus for the packer. It also means heavier birth weights, a contributing factor to increased calving problems, a negative for the cowman.

Conflict ..... **selection for growth** leads to high mature weights...faster growing steers also have faster growing sisters who finish up being larger cows with higher maintenance requirements and become more drought susceptible.

Conflict ..... **selection for marbling** generally leads to lower yielding carcasses, a conflict for those breeders targeting the high quality grainfed markets in Japan.

These conflicts can be got around by selecting “curve bender” bulls that go against the biological norm and have, for example; low birth weight and fast growth rate, or have high growth and moderate mature weight profiles.

Unfortunately, such animals occur infrequently within the population so the commercial cowman needs to adopt a balanced approach to improving carcass traits.

Breedplan helps the cow-calf man by providing EBVs for Mature Cow Weight, fatness, Calving Ease, and Days to Calving so that threshold values can be applied for those traits to balanced against EBVs for Weight and Yield.

Profitable herd performance is all about keeping a balance between the traits that influence cow performance and the traits that influence carcass performance of the progeny. How does the cow-calf breeder know where the limits are, when he needs to back off selection pressure for growth or muscling, or when he is in danger of going too far with selection.

The answer is in the paddock all the time.

Because breeding is such a long term affair, and because the problems that might be introduced will stay in the herds for ten years or more, it becomes imperative for the cow-calf breeder to monitor the outcome of his selection strategies not just by collecting and analysing carcass feedback from the packer but by collecting and analysing cow-calf feedback from the paddock as well.

A herd monitor needs to be set up to record some basic performance details of each age group of breeding females in the herd. A simple table (table 1) that lists a few basic traits across the top, such as average weaning weight, average sale weight, average fatness at sale, average calving problems and average weaning % will suffice for most herds.

A row is then allocated for each year so that performance of an age group can be monitored over successive years. The most sensitive age group to monitor is the cows calving for the second time, however a separate table can be kept for each age group of producing female, for example, two year olds, 3 year olds, 4 year olds and 5 years plus.

Even better, is to graph this information on a trait by age by year category.

If you find that as growth/carcass performance is increasing, weaning % is decreasing, particularly in the younger age group cows over consecutive years, the alarm bells are ringing.

Nature is a great balancer and the first sign of cow performance getting out of synchrony with the environment is a drop off in weaning %, an extended calving interval and/or leaner cows at weaning – a lesson that dairy farmers know only too well.

Why the concern with the younger age groups... the younger age groups reflect the new generation genetics in your herd. If the aged cows are holding steady whilst the young cows are dropping off, then your new generation genetics are pushing your breeding cows outside their environmental threshold, and you need to back off.

You will also need to keep note of the season. If droughts are a big part of your life, then you might need to back-off selection for milk, as the high milking cows will be the first to go in a drought.

A good management practice in droughts is to early wean the calves – calves older than 4 months of age can get along fine if given high quality feed, shelter and clean water.

It is much cheaper to feed a calf than a cow, and with the pressure of lactation removed, high performing cows can carry on for quite a few months before feeding becomes necessary.

Table 1 – Herd Performance Monitor – females calving a three years of age

	Cow condition score at weaning	Av. Wean wt. Of calves	% cows calved in first 6 weeks	% calves weaned per cow joined	% assisted births	season
2004						
2005						
2006						
2007						
2008						
2009						

Selecting commercial herd sires using Shorthorn Selection Indexes is an effective means of balanced selection across the range of growth, fertility and carcass traits. For further information about selection indexes, see *Breedplan and the Bull Buyer*, *Key Points about Selection Indexes*, or *Understanding Selection Indexes on the Shorthorn Beef website*.