



**Making the Most of  
your Suckler Cows**

## **Introduction**

Hybu Cig Cymru/Meat Promotion Wales (HCC) was established in April 2003 and is the strategic body for the promotion and development of the Welsh red meat industry. Its mission is to develop profitable and sustainable markets for the benefit of all stakeholders in the supply chain.

It brought together the red meat activities of three organisations, namely the Meat and Livestock Commission in Wales (MLC Cymru), Welsh Development Agency and Welsh Lamb and Beef Promotions Ltd. Each organisation was responsible for different aspects of red meat activity, which have now been integrated into HCC's work.

HCC is now the sole body for the promotion and development of red meat in Wales.

This booklet forms part of a series of publications produced by HCC's Industry Development Team.

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## Measuring performance

What measure of suckler cow performance truly reflects the technical efficiency of a suckler cow enterprise? Is it the number of calves weaned per cow served, the average weight of weaned calves, the amount or cost of feed used, or the price achieved per calf? All of these things matter and need to be taken into account. A single figure that captures all the technical elements of suckler beef production is **the cost to produce a kg of weaned calf per cow served**. This figure takes account of fertility, calf losses, feeding costs and growth potential to weaning.

## Suckler herd performance

Average variable costs and performance of a 50-cow spring calving herd are shown below:

### Performance in a 50 cow Spring calving herd

Calves reared	45
Weaning weight	285 kg
Weaning age	225 days
Calving period	15 weeks
Variable costs per cow (including creep & replacement costs)	£172

So the cost to produce a kg of weaned calf with these costs and performance is:

$$\text{£}172 / (285 \times 45 / 50) = 67\text{p/kg weaned calf}$$

Using this as a baseline the effects of a number of management changes can be seen.



## Increase number of weaned calves

There are several approaches to increasing the number of calves weaned per cow served. Leaving aside disease issues perhaps the most critical is cow feeding and target condition score. If cows are over fat or too thin then fertility declines. Accurate winter feeding of suckler cows relative to their body condition score is the key. This means that cows need to be grouped according to body condition and fed appropriately.

Purebred cows under the same standard of management as crossbred cows tend to have lower fertility and higher calf mortality. So unless there are strong commercial reasons for keeping pure bred cows, like a premium market or for pedigree sale, then crossbred cows should be the best option.

There are many husbandry aspects to ensuring a high number of calves reach weaning, including bull choice (to protect against dystocia) and a veterinary programme (to protect against preventable diseases).

The effect of an increase in weaned calves from 90 to 95% would be to reduce the cost per kg of weaned calf from 67 to 64 p/kg weaned calf/ cow served. A saving of 3 p/kg

$$\pounds 172 / (285 \times 47.5 / 50) = 64 \text{ p/kg weaned calf}$$

## Reduce calving period

A simple move like reducing the calving period can have considerable benefits to production costs and ease of management. At the same level of calf performance reducing the calving period from 15 to 12 weeks increases average sale weight by 10 kg and increases average sale age by 9 days, assuming the same sale date. Further benefits are that routine husbandry tasks and feeding regimes are simpler because batches of calves are of a similar age. Benefits accrue to de-horning, vaccination, creep feeding and re-breeding.

The effect of a decrease in calving period from 15 to 12 weeks would be an increase in weaning weight from 285 to 295 kg. This would reduce the cost per kg of weaned calf from 67 to 65 p/kg weaned calf/ cow served. A saving of 2 p/kg

$$\pounds 172 / (295 \times 45 / 50) = 65 \text{ p/kg weaned calf}$$

## Reduce variable costs

Variable costs per cow inevitably vary from farm to farm but top producers can have variable costs that are £20 per cow less than average producers. The main difference is the feed and forage costs for both cows and calves. Making the most of forage through a well-managed plan of forage conservation and grazing can be highly cost effective. In general costs are lowest when grazing takes priority over conservation. Sward height is a very useful guide to grazing. Silage making should not rule grass use.

Using cheap by-product feeds can offer considerable savings provided rations are formulated correctly. Knowing the feed value of any feed is essential for accurate feeding. Silage, straw, straights, cereals and mixes should all be analysed to ensure they are fed at the optimum rate and in the optimum combination. Body condition scoring of cows can reduce winter feed costs because cows are fed more accurately. Feeding one rate to ensure thin cows are adequately fed means average condition, and fat cows, are overfed. Accurate feeding means fat cows get less feed and thin cows get more leading to an overall feed saving.



Creep feed can easily cost more than necessary either through using it for too long or making it too high in protein. Four to six weeks prior to weaning is usually plenty long enough for creep feeding (unless conditions are extreme). Calves approaching weaning usually need extra energy not protein. Milk and grass supplies the protein needed but not the energy. A simple creep of rolled barley will work effectively changing to the finishing ration of 14% CP only in the final week or two before weaning.

The effect of a 10% saving in feed costs would reduce variable costs\* from £172 to £158 would be to reduce the cost per kg of weaned calf from 67 to 62p/kg weaned calf/ cow served. A saving of 5 p/kg.

**£158/ (285 x 45/50) = 62p/kg weaned calf**

\* Assuming feed account for 80% of variable costs (including creep & replacement costs)

## Use a terminal sire of high Beef Value

An animal in a field, finishing yard, sale ring or show ring is showing the combination of two effects, the way it has been reared and the genes it's parents gave it. When looking for a sire to breed high quality progeny, the genes are the key to success. Breeders of beef cattle have at their disposal a statistical programme called the Best Linear Unbiased Prediction (BLUP) system, a powerful tool that allows breeders to make better choices about which bulls to use.

The BLUP method uses all available information on all recorded relatives from an animal's parents and progeny to cousins, aunts, brothers and sisters. This includes pedigree information, how animals are related to each other, and the performance records (weights and measurements) that have been recorded for all those animals. The analysis calculates Estimated Breeding Values (EBVs) for economically important traits to provide an assessment of the genetic merit of the animal.

Two economic assessments are calculated, using the EBVs namely the Beef Value and the Calving Value. The Beef Value and Calving Value are the overall balanced assessment of the economic value of an animal. They both use the information from the individual EBVs to show the animals overall ability to produce high yields of saleable meat efficiently with a separate assessment of the likelihood of calving difficulty. The EBVs are weighted for economic importance and then combined into the indexes. High positive values indicate the sire that is more valuable commercially for both Beef Value and Calving Value.

The effect of using a sire a higher Beef Value that can produce calves 10 kg heavier at weaning would be reduce the cost per kg of weaned calf from 67 to 65 p/kg weaned calf/ cow served. A saving of 2 p/kg.kg

**£172/ (295 x 45/50) = 65p/kg weaned calf**

## Increase cow longevity

Many suckled calf producers are breeding their own herd replacements because they are dissatisfied with the quality and availability of replacements from the dairy herd. This often manifests itself as an



increased replacement rate. By breeding their own replacements in a closed herd suckled calf producers gain control over the quantity, quality and traceability of their cows. But there are some potential problems.

The most serious potential problem for suckled calf producers is that they produce the wrong sort of heifers to retain as a replacement. There are two aspects to this that must be carefully considered and they are, **mature body size** and **breed composition**. These will both have a major effect on herd fertility, which is the cornerstone of a successful suckler herd.

**Mature body size** must be matched to feed resources, or the ability to manage body condition within appropriate limits will be lost. Very large cows can be difficult to keep in good body condition because of their higher feed demand, and this will reduce fertility. At the lower feed input larger cows are less productive than smaller cows.

**Breed composition** must be managed to maximise hybrid vigour. Depending on the cross-breeding system hybrid vigour can be worth up to 23% more weight of weaned calf per cow put to the bull, compared with pure breeding.

There are a number of crossbreeding systems that have been applied to beef breeding. The objective of all crossbreeding systems is to optimise the use of hybrid vigour and breed differences. Hybrid vigour tends to affect reproduction, longevity and disease resistance. Breed differences control growth rate, mature size and milk production. In practical farming, the value of the hybrid vigour created by different systems needs to be weighed against the management effort required to maintain the system.

### **Predicted improvements in calf weaning weight per cow served for different crossbreeding systems (assuming equal performance)**

#### **Relative weight of calf Mating system weaned per cow served**

Pure bred	100.0
Two breed rotation	115.5
Four breed composite	117.5
Half bred dam+terminal sire	123.3

The effect of reducing replacement rate from 20 to 10% would be reduce the cost per kg of weaned calf from 67 to 63p/kg weaned calf/ cow served. A saving of 4p/kg

**Difference between replacement and cull costs £100**

**Difference between 20 and 10% replacement 5 x £100 = £500**

**Cost per cow 500/50 = £10**

**Cost per kg weaned calf per cow served £10/ (285 x 45/50) = 4p**

## Conclusion

The savings outlined above are additive. This means an average producer could make a saving of 16 p/kg on production costs.

Management Changes	Cost per kg weaned calf per cow served (p/kg)
<b>Average variable costs</b>	<b>67</b>
Increase calf survival to 95%	-3
Reduce calving period	-2
Reduce feed costs by 10%	-5
Use a terminal sire of high EBV	-2
Increase cow longevity	-4
<b>Possible production costs</b>	<b>51</b>

For a 250kg weaned calf a reduction of 16p/kg in variable costs is equivalent to £40 per calf.

## Further information

Please contact HCC's Industry Development Team

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