

## FROM 'COULD DO BETTER' TO TOP OF THE HEIFER REARING CLASS

Despite two-year age at first calving (AFC) being "where the money is", vet Jimmy More from the Galloway practice in SW Scotland is alarmed that only 6.9% of heifers have been found to have calved at that age in a new analysis of the national cattle database<sup>1</sup>. Speaking at a heifer rearing open day staged by the Solway Vets 'collective' of seven practices covering SW Scotland and Cumbria, he urged farmers to give higher priority to heifer calves, "so they stop costing you money sooner, and start earning it instead.

"The day a heifer calf is born, you can write on a calendar when it should calve," he said. "By making this 24 months of age, you minimise your non-productive head-count, which the past year of tight feed supplies has taught us is so important."

From 40kg birth-weight, he set out some easy-to-follow targets en route. For bulling at 13 months of age, 360kg live-weight and 1.25m (48-50") shoulder height, calves need to put on 320kg in 400 days, or 0.8kg/day. Conveniently, he said research at Penn State University in USA had found compelling evidence that exactly this grow rate correlated with maximum milk yields in adulthood.

"In such times of milk price austerity and high feed costs, it's a mystery why more farmers aren't making this happen," he added.

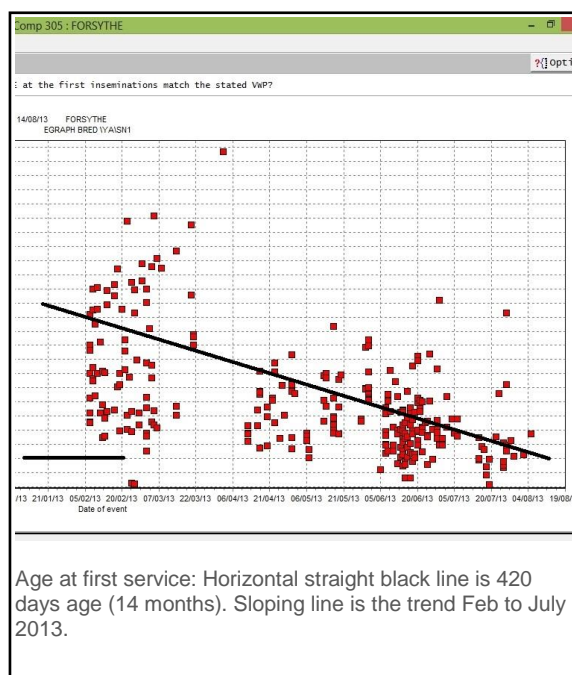
An example of the kind of turnaround that is possible can be seen at the open day's host, a specialist calf rearing unit established last year at High Bishopton near Whithorn on the Solway coast. It serves owner Mr Kevan Forsyth's three local dairy herds, where a lack of suitable facilities was taking a serious toll on calf health and performance.

On the average GB dairy herd, some 14-15% of heifer calves never even reach a first calving, according to Graham Baird, a vet from the open day's sponsor Zoetis<sup>2</sup>. "Here only two years ago, things were rather worse than this," he said. "The main problem was pneumonia before weaning. Now, as a result of a few key changes, pre-weaning mortality is down to 2% and only 5% of live-born heifers fail to reach first calving."

Those changes revolve around unit manager Andrew Taylor, a BSc Honours graduate in plant genetics at Edinburgh University with no farming experience until he started work for Mr Forsyth in 2009 as a weekend milker and general assistant. In addition to his boss and colleagues, Andrew credits a book on cattle husbandry by Garnsworthy, the Penn State University website and Priory Vets in Newton Stewart for pulling him up the "steep learning curve in calf rearing." Overall, he says the most important rule is that "the few weeks from birth to weaning dictate the rest of the animal's life. So we'd better get it right."

He reckons the most important thing they put right was consistent colostrum management for new born calves on the three dairy units. Regardless of which staff are on duty, every calf should receive three litres of fresh colostrum within six hours of birth, and six within 12. If colostrum is not used immediately after milking, it is refrigerated. Any spare is frozen. On days two to four or five, calves undergo a gradual transition from colostrum onto calf milk replacer, fed through a computer-controlled machine building up to two, three-litre feeds a day by 17 days of age.

Weaning takes place over 12 days as soon as a group of calves, all within about two weeks of each other in age, are consuming 1.5kg/head/day of dry calf mix, which is available with water from day one. Typically this is at eight to nine weeks of age. Andrew says feeding from weaning to about nine months is still an area for improvement, these pre-pubescent calves having been judged "a little bit chubby" recently by no less an expert visitor than Prof Judd Heinrichs from Penn State University. By controlling growth rate during this period at 0.8kg/day, Andrew aims to reduce the likelihood of 'fatty udders' developing.



1 MC Gates\*, 7 August 2013. [Evaluating the reproductive performance of British beef and dairy herds using national cattle movement records](#). University of Edinburgh.

2 JS Brickell et al, 2009. *Animal* 3:8 p1175-1182.

Meanwhile, to address the main pneumonia problem, he says colostrum was stage one; well ventilated draught-free housing, stage two; and intranasal vaccination at nine days of age against the two viruses most commonly implicated in baby calf pneumonia, BRSv and Pi3v, stage three. Otherwise, Graham Baird says lung tissue damaged by pneumonia may not regenerate and the resulting reduction in lung function can impair growth and then milking performance for life.

In addition to pneumonia protection pre-weaning, calves also get a two-stage, eight-component vaccine for clostridial diseases. Post-weaning, there follows vaccination against IBR using a live marker vaccine at six month intervals until confirmed pregnant, then an inactivated IBR marker vaccine licensed for 12 month duration of action and annual boosters.

To help other farmers striving for "gold standard rearing", Jimmy More has developed the Solway Vets' Calf Start programme, of which all components without exception are being applied by the High Bishopton team: Hygienic calving pens that are cleaned at least weekly; calf navels dressed with iodine solution; three litres colostrum within six hours of birth; remove calf from dam as soon as possible into individual pens, then group by age on teat rather than bucket feeding; dry feed, straw and water from day one; all in, all out group management; one person responsible for calf rearing, with well trained assistants or deputies; isolation pens available and used promptly for poorly calves; and all treatments recorded, and analysed regularly for trends and problems.

To aid transition of heifers into the milking herd on farms with digital dermatitis, now in the majority, and stem the rise in non-healing foot lesions, Peter Hastings from the Nithsdale practice urged the open day's farmer visitors to introduce daily foot-bath treatment for in-calf heifers along with dry cows. "While the use of a foot bath is increasing to control DD, not enough farmers are doing so often enough," he said. "Twice daily for milkers and once-a-day for dry cows and heifers needs to become the norm in herds with DD."

At the 1,700-head capacity High Bishopton youngstock unit, it just so happens that the housing is new and purpose-designed, with open ridges and adjustable air inlets along the full length of both sides of all four sheds. However, open day chairman David Campion from Priory Vets said the shiny new sheds were a distraction from the genuine reason for exceptionally high standards of calf health, welfare and performance now being achieved. "People are the most important factor," he said. "With clear goals, sound knowledge, high motivation and effective systems, good people can hit two-year age at first calving with no more than minimal, unavoidable casualties along the way, resulting in productive and profitable adult performance."