

Condition Management - Can it help fertility?

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For a long time the world has watched as statistics of reproductive performance have declined. This is a worldwide observation covering many breeds, farming systems and geographies. It has been suggested that the decline in fertility is inversely related to increasing animal production.

There are many aspects of a successful pregnancy, and there are many more aspects influencing the outcomes of a mating programme. Nutrition is only one aspect of fertility and successful pregnancy. This presentation focuses even more narrowly, on the impact of negative energy balance and using condition scoring to measure the success of a nutritional programme.

Mossman analysed variance in fertility as part of a PhD thesis and concluded that excessive weight loss accounted for the largest source of variation on successful pregnancies (43%). Although genetics will determine the capacity for a cow to mobilise liveweight in support of milk production, genetics, as a direct effect, was barely noticeable (3%).

Similarly, nutrition has a large impact on the mobilisation of body reserves post calving. Body Condition scoring (BCS) is an effective way of monitoring this mobilisation.

During the period post calving, the energy demands to produce milk outstrip the energy intake from the diet, and in this period, the animal loses weight. This period is termed negative energy balance, and during this time, many of the reproductive hormones are suppressed as a result of the negative energy balance. This coincides with the formation of the ovum in the cow that begins with the recruitment of follicles over 60 days before ovulation. This makes nutrition in the transition period extremely important.

Being in the right condition at calving means more milk production, which becomes a cashflow advantage. In practice, the more severe the body condition loss post calving, the worse are the reproductive indices. Nutrition post calving should focus on strategies to maximise fibre digestion and maximise voluntary feed intake.

It is suggested that a condition score of 5.0 is the target for calving (5.5 for heifers). BCS should ideally not drop more than 0.5 between calving and mating, and cows should be dried off at 5.0. Excessive weight change in the dry period should be avoided, as it is metabolically expensive. Condition scoring should incorporate over 60 animals at a time, and having a neighbour score the cows as well can be helpful as well.

Many herds in New Zealand have shown that with the right management, high reproductive performance and high productivity can be achieved together.