

The economics of raising dairy heifers

On Wednesday 7th September Dr John House from the University of Sydney Veterinary School delivered a talk on Raising Dairy Heifers to a group of 28 Camden and district farmers in a dairy discussion group.

Dr House concentrated on the economics rather than the usual pathogens and medications. The cost of rearing a heifer is estimated at \$1500 to \$2000 and 20% of heifers' first lactation production is determined by what happens in the first eight-weeks of life. So it is important to do calf rearing well.

Heifer rearing is a major cost to dairy farmers representing 25% of the dairy expenses. It is important to begin with a vision of the end product.

John explained the number of heifers required will depend on:

1. calving interval
2. cull rate
3. losses during calf rearing.

With a good heifer rearing program farms have the potential to generate additional income selling excess heifers.

Rearing your heifers well pays off with less trouble calving, higher milk production in the first lactation, less still births and better reproduction in subsequent years.

It also must be remembered that the heifers often represent the best genetics in the herd and their future calves could represent even better genetics.

The production advantage was shown by figures from Holstein heifers. In studies, Holstein heifers weighing only 400kg at first calving averaged 3000litres while those weighing 800kg gave 8000litres.

The reproductive efficiency can be seen from the following table

| Weights | In-calf rates at 100days | In-calf rates at 200days |
|---------|--------------------------|--------------------------|
| <400kg | 38% | 75% |
| 400-440 | 46% | 80% |
| 440-470 | 53% | 82% |
| 470-510 | 52 | 79 |
| 511-540 | 61 | 81 |
| >540 | 61 | 77 |

Note: The better grown heifers went in-calf earlier.

It is important to set targets for growth of heifers; aim to double their birth weight by 56 days, achieve 55% of mature body weight by 15months and 96% mature body weight prior to 1st calving. Following calving they will lose weight and should be 85% of mature body weight.

Nutrient requirements for dairy cattle can be calculated using [National Research Council's nutritional requirements of dairy cattle](#) and the use of [Dairy Australia's Diet Calculator](#).

Looking at each stage of rearing:

1. Preparation- cattle at drying off should be vaccinated for salmonella, rotavirus, coronavirus, Ecoli K99.
2. Calving- cattle should calf in a clean environment with easy access for assistance if required. The rule is to engage in a recurrent cycle of lubrication/traction/and relaxation. Progress of the calf should be made with each cycle.
3. Colostrum- the calf needs clean milk with 50gprotein /litre and a total of 150gm protein (3 litres). It is important to avoid adding anything including probiotics to the colostrum as this interfere with IgG absorption.
4. First month- calves need a clean environment, when feeding start with the youngest group or individual first and clean equipment between batches. This may pose a problem with automatic feeders where the teat is not cleaned between calves. Scours occur in the time 4-28days (80% due to rotavirus) and management should involve hydration, electrolytes. Holstein heifers should gain 800gm of weight a day.
5. Weaning- it is important that recently weaned heifers have access to quality feed or pasture

The cost of rearing a heifer is estimated at \$1500 to \$2000 so it is important to do it well.