



Young stock: The future of the dairy farm

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The rearing of young stock covers the entire period between the birth of the calf and the time when it first calves as a heifer and begins to produce milk. During a 24-month period when it produces no income but only expenditure, the new-born 40 kg calf develops into a 575 kg heifer. From the moment of birth all elements of the rearing of the young stock must be optimally implemented and harmonised, but all too often in practice the housing, feeding and care of the calves is given far too low a priority.

The economics of rearing young stock

By the time it comes to calving a home-reared heifer will have cost around €1300 without producing any income. With a life performance of 25,000 kg this amounts to 5.2 cents in rearing costs per kg of milk. With a life performance of 30,000 kg the rearing costs fall to 4.3 cents per kg of milk. On many farms the loss rate among calves rises above 10 %, while with correct nutrition and good housing this figure can be brought below 5%. The number of young stock kept per 10 dairy cows is a significant factor in the economics of the dairy business. All young stock reared which are not intended as replacements for dairy cows must be sold as heifers in calf if they are not to contribute, unnoticed, to an excessively high replacement percentage.

Target figures for sound rearing of young stock

Max. age at first calving = 24 months

Body weight after calving = 570 kg

Lactation value of heifer > 105

Calf losses (1st 24 hours) < 5 %

Losses in total rearing period < 10 %

Ideal housing

Where housing for young calves is concerned we must distinguish between various age categories: 0 to 10 days, 10 days to 8 weeks, 2 to 7 months, 7 to 15 months and 15 months to calving.

For the first 10 days the calves will be individually housed in clean and dry single calf pens, allowing good individual monitoring of colostrum intake and health.

Early separation of cow and calf: a healthy start in a single calf pen

Calves should preferably be separated from the cow immediately after birth, to:

- Reduce risk of cow/calf contamination
- Reduce stress on cow and calf

- Promote DM intake by the cow
- Achieve quicker intake of 1st colostrum

Tip!

Provide 25 % more single pens than required in the peak period. This is the only way you can clean, dry and disinfect the pens after each calf.

Group housing

Partly depending on the feeding method and the provision of milk, group housing is recommended for the succeeding period (10 days to 8 weeks). Climate (temperature, air humidity) and good ventilation are very important in all cases. Good housing for young stock will meet the following requirements:

- Clean and dry bedding
- A clean pen
- No draughts
- Ambient temperature 10 - 15°C

Group housing on straw continues up to around 4 months, by which time the calf should have attained a weight of



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145-160 kg. Wherever possible animals should be kept in uniform groups of 4 to 6 calves, with a maximum age variation of 7 days within the group. Young calves of this age should preferably not be kept on a slatted floor. Housing on a slatted floor leads to an increase in problems with respiratory and digestive tract infections, partly due to pit ventilation, and the small hooves of the young calves are also less suitable for a concrete floor.

Infection pressure and hygiene

Up to the age of 6-7 months a calf has little resistance and is highly susceptible to infections and disease organisms. Calves up to 7 months should preferably not be housed together with older animals. Provide for good ventilation, where the air supply is not fed in from the housing for older animals.

Tip!

Closed partitions between the group pens clearly reduce the risk of respiratory tract infections.

Nutrition

Colostrum is vitally important for calves, as they are born without any protection against disease. The provision of 2 to 2.5 litres of colostrum immediately after birth is crucial. A similar quantity of colostrum should also be provided within 12 hours of birth. Colostrum should be provided a total of six times during the first two days, with a minimum of 5 litres of colostrum per day. From day 3 unrestricted fresh water and calf pellets must be provided as well as milk.

Although not further discussed in this paper, feeding of the dry cow, concerning right crude protein and energy content, is of great importance for vitality of the calf and colostrum quality.

Roughage

Sound and rapid uptake of roughage is important for the development of the young calf. The leavings of the cows must not be reused as rations for young stock. Up to the time of the first insemination (13-14 months) the young stock must receive exclusively top quality roughage with crude protein and a good structure.

DM intake and crude protein content

Age in months	DM intake in kg per day	Crude protein content
<6	3.2 - 4.1	18%
6 - 10	4.5 - 6.4	17%
10 - 14	6.8 - 8.2	17%
14 - 18	8.6 - 11	16%
18 - 24	11.4 - 15.9	14%

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Sources: Information provided by *Gerrit Hegen*, veterinarian and advisor at *De Boerenveeart* has been used to prepare this article. For more information please see: www.deboerenveearts.nl