

Assessing current calf- and heifer-rearing practices

This chapter discusses a process to assess current practices and grade farmer skills in young stock management.

The main points in this chapter

- The first step in improving the on-farm management of calf and heifer rearing is to audit the current system (only then will it be possible to develop a modified program to overcome any observed deficiencies).
- The audit can be separated into:
 - Peri-natal (pre-calving and first 24 hr)
 - Pre-weaning feeding management
 - Pre-weaning herd and health management
 - Weaning process
 - Weaning to first calving.
- The farmer's skills can also be graded using both objective and subjective criteria.
- A short list of high-priority management skills distils this assessment down to the 10 most important practices in young stock management.

The first step in improving the on-farm management of calf and heifer rearing is to audit the current system (see Figure 16.1). Only then will it be possible to develop a modified program to overcome any observed deficiencies. The following provides a series of checklists to allow current management practices to be assessed. In addition to the complete list containing 50 series of observations, a 'high priority list' of just 10 observations has been developed.

16.1 Checklists for assessing the system

16.1.1 Peri-natal (pre-calving and first 24 hr)

- pre-calving facilities and hygiene
- separation of calf from dam

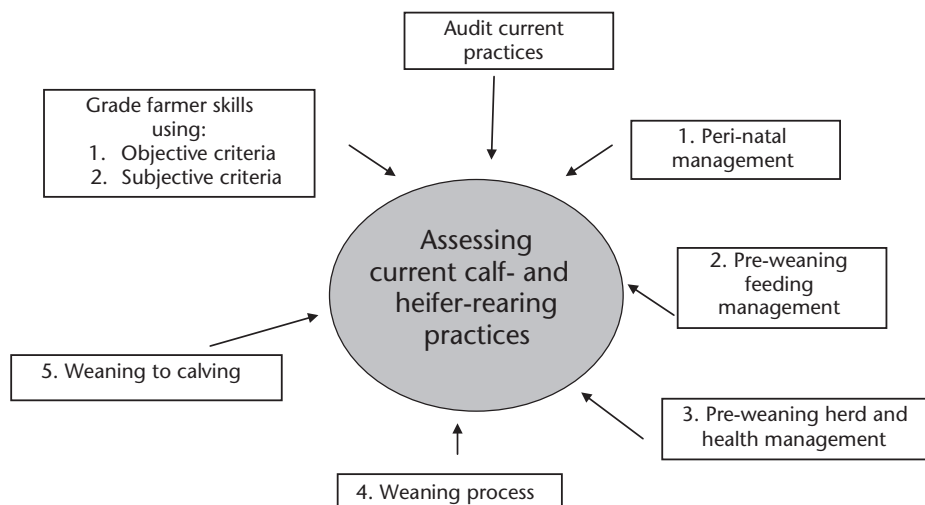


Figure 16.1. The key processes to consider when assessing current young stock management

- age of calf when drinking first colostrum
- colostrum feeding (awareness of how best to obtain benefits from colostrum, putting theory into practice)



Workshop participants assessing a farmer's facilities for milk rearing his dairy heifer replacements.

- calf identification
- housing of pre-weaned calves (stalls, bedding, separation from adult stock, cleanliness).

16.1.2 Pre-weaning feeding management

- development of feeding programs to promote rumen development
- continual access to clean water
- type and method of liquid feed (feeding frequency, method of feeding, daily feeding rate)
- type of concentrate (age when commence feeding, quantity fed, formulation)
- type of forage (age when commence feeding, fresh versus hay, forage quality).

16.1.3 Pre-weaning herd and health management

- development of animal health program
- pre-weaning calf mortality
- condition of the milk-fed calves (body condition, signs of ill-thrift)
- prevention and treatment of scours (electrolytes, identification of causative agent, effective use of antibiotics)
- prevention and treatment of pneumonia
- prevention and treatment of other animal health issues (such as lameness or climatic stress)
- skills with identifying and nursing sick calves
- routine husbandry practices (debudding, vaccinations, drenching, ectoparasite treatment, castration)
- drug storage
- hospital pens
- veterinarian support (when sought, quality of support)
- document pre-weaning morbidities (sickness) and mortalities (deaths)
- fate of bull calves
- sources of labour (owner, family, employed and their efficient usage)
- shed environment (effluent management, ventilation, coping with heat stress)
- general stock welfare and handling facilities/skills
- record keeping (system, feed inputs, animal health, labour)
- calculate total pre-weaning costs
- general hygiene (cleaning of feeding equipment, calf pen and shed hygiene).

16.1.4 Weaning process

- basis of weaning (age, weight, concentrate intake)
- movement to weaner pens.

16.1.5 Weaning to first calving

- continual access to drinking water
- shed environment (effluent management, ventilation, coping with heat and cold stress)

- feeding management (forages and concentrates)
- chopping forages
- feed storage facilities
- monitoring feed intakes, weight, body condition, heat stress (stock and shed)
- post-weaning heifer mortality
- condition of stock (body condition, signs of ill-thrift)
- age of first oestrus
- criteria for mating (age, weight)
- mating program (bull versus AI)
- routine pregnancy testing
- preparation for calving (pre-calving facilities and hygiene)
- calculating total rearing costs
- fate of weaned bulls
- age at first calving
- wastage rate from birth to second calving
- subjective assessment of overall farm management skills.

16.2 Grading farmer skills in young stock management

A structured approach can be used as a framework to assess young stock management more objectively and also to provide a focus for group discussions. For example, the



Advisers from Indonesia interviewing a farmer about his herd management.

following set of criteria can be developed using a grade of good, average or poor, with some objective and others subjective.

16.2.1 Objective criteria for grading skills

- pre-weaning morbidity (requiring drugs and/or veterinary assistance (%))
- pre-weaning calf mortality (%)
- daily milk feeding rate (L/calf/day)
- weaning age (days)
- age at first mating (weeks/months)
- age at first calving (weeks/months)
- wastage rate (from birth to second calving) (%)
- record keeping
 - if the farmer writes the details down and remembers, good
 - if he remembers but does not write them down, average
 - if he does not know or remember, poor.
- productivity of first-calf heifers (in L milk over first lactation).

16.2.2 Subjective criteria for grading skills

- condition of milk-fed and weaned stock
- condition of calf-rearing pens and facilities.

16.3 A shortlist of high-priority calf and heifer practices

If an adviser visited a small holder farmer with the above series of 50 observations to be made on his farm, the farmer could find such an exercise intimidating and too intrusive and the adviser may have difficulty completing the task. The following shortlist of high-priority management skills distils this down to the 10 most important practices in young stock management.

1. colostrum feeding management
2. type and method of liquid feed
3. continual access to clean water
4. type of concentrate
5. basis of weaning
6. development of animal health program
7. pre-weaning calf mortality
8. shed environment
9. post-weaning heifer mortality
10. age at first calving.

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