Heifer mastitis is a disease that threatens production and udder health in the first and subsequent lactations. An integrated strategy to prevent and control heifer mastitis should include goal setting, assessment of the current farm systems, application of appropriate farm-specific interventions, and monitoring of outcomes.

A heifer mastitis problem is considered to exist in a dairy herd if greater than 15% of heifers have clinical mastitis around calving and/or if greater than 15% of all heifers have a first test-day somatic cell count (SCC) [measured between 10 and 35 days in milk] greater than 150,000 cells/ml. Herds exceeding these thresholds should be investigated and prevention and control measures optimized. A herd-level surveillance program using culture of milk samples should be put in place.

Target prevalence and incidence rates vary across farm systems, but farm-specific goals should be applied on every farm. Heifer mastitis is a multifactorial disease meaning that all aspects related to this disease should be optimized. Control strategies are aimed at reducing the incidence of heifer mastitis. The specific set of control and treatment practices should be customized to each farm. If necessary, eliminating existing infections could be achieved using prepartum antibiotic treatment on a tactical basis.

10-Point Program to Prevent and Control Heifer Mastitis

Farm-specific interventions that should be in place on any farm are:

1. Improve general udder health management at the farm level to decrease the pressure of infection with udder pathogens from older cows to heifers.
2. Control for cross-suckling in calves and young stock.
3. Implement an effective and efficient fly control system.
4. Keep young and primigravid heifers in a clean and hygienic environment and separate from multiparous animals – provide as much attention to this group of animals related to hygiene and cleanliness as spent on lactating animals.
5. Avoid any nutritional deficiency – monitor vitamin E and selenium levels when any doubt exists, especially in relation to clinical mastitis. Zinc, copper and vitamin A play a role as well and could be checked if there is doubt.
6. Minimize the risk of negative energy balance before and after calving through appropriate transition feeding systems.
7. Reduce the incidence of udder edema through optimized peripartum management.
8. Minimize stress around calving (e.g. by not moving heifers to the calving pen when already in labor) and minimize incidence of dystocia and peripartum disease.
9. Consider use of internal teat sealants prepartum where there is a high risk of environmental mastitis in the peripartum period.

10. Use prepartum antibiotic treatment in heifers under certain conditions only:
   a. under the supervision of the herd veterinarian, within the context of a valid veterinary/client/patient relationship;
   b. after quantification of the problem and identification of major pathogens (not coagulase-negative staphylococci) as the cause through culturing;
   c. choice of the antibiotics should be based on antimicrobial susceptibility testing;
   d. test for residues before every milk delivery;
   e. upgrading of management at the same time – discontinue treatment as soon as new management strategies become effective.

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The National Mastitis Council is a not-for-profit professional organization devoted to reducing mastitis and enhancing milk quality. The NMC promotes research and provides information to the dairy industry on udder health, milking management, milk quality, and milk safety. For additional information contact:

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