

Eradication guidelines for *Streptococcus agalactiae* (group B Streptococcus, GBS)

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Before implementation of the eradication program.

Reduce the risk of new intramammary infections in the herd and optimize milking hygiene, milking routines and milking equipment. Milk with gloves in conventional farms. Implement extended routines for hygiene and teat preparation systems in Automatic milking systems.

Implement all actions in the 5 point plan.

1. Good milking and maintained equipment. Prepare cows 60 – 90 sec. before attaching the teat-cups in all systems. Select the optimal liner to cows in herd. Use take off level 300 ml/min in AMS and 400 ml/min in conventional farms. With 3 X milking at least 5-600ml/min. Perform a Dynamic Vacuum Test of the system.
2. Use a teat-dip with high content of iodine and documented effect against SRA.
3. Implement blanket dry cow therapy for 12-18 months.
4. Treat cows with clinical mastitis.
5. Segregate and cull high cell count cows and cows with clinical udder and teat changes.

Make a rough cost-benefit analysis of the program.

If more than 10% of the cows are infected, a reduction in somatic cell count between 100.000 – 150.000 cells/ml can be expected. The bulk milk somatic cell count and the total bacterial count will become more stable. A significant reduction of cases of acute mastitis can be expected. Evaluate the cost for extra labor time spent on suggested actions. Cows with *Streptococcus agalactiae* produce 4 liter less pr. day.

Evaluate the chances of success in the herd

The eradication will fail without a safe and functional segregation. Discuss a consequent strategy within the herd regarding hygiene and biosecurity efforts.

Is it possible to have healthy, treated and infected lactating cows totally separated? In the calving pen, during the transition period 3 weeks before and after calving, in cubicles or laying areas, in feeding and watering areas, in the milking parlor, at pasture, in the drying off and dry period.

Continuous segregation of treated SRA positive cows are recommended.

Eradication Survey

Identify the best period to start the eradication program. The possibilities of culling as many carriers as possible should be considered, look into the calving-list for an overview, and preferably launch the program when many cows are close to drying off or pasture, and describe start, management efforts, follow ups and goals in time and money.

Eradication actions

Identification of carriers.

Sample all lactating cows. Use composite milk samples and PCR.

Always use bronopol additive when the analysis are performed with PCR.

DHI sampling is time effective and recommended, especially in AMS herds.

Upon arrival of results immediate segregation of cows with cycle threshold value (Ct) <40.

All cows with Ct < 40 for *Streptococcus agalactiae* is examined clinically for teat and udder changes and cow cell count is evaluated. All cows with clinical changes or chronic high SCC are culled.

Confirm all other DHI PCR results with manual aseptic composite sampling.

All cows in the segregated group - also test negative in manual sampling - is kept in segregation at least ½-1 year best until culling.

Sample all cows after calving for the coming 2-3 months.

ONLY Clinical healthy cows should be considered for antibiotic treatment.

Antibiotic treatment.

Treat only the manually composite sample confirmed PCR positive cows with penicillin 3-4 days intramammary in all 4 quarters. Systemic treatment is a possible additional choice. Cows in early lactation with no previous history of mastitis or SRA may have an expected cure rate up to 80 %.

SRA positive cows in late lactation could be dried off and treated with DCT in all four quarters.

Follow-up

2-3 weeks after the withdrawal period for antibiotic the treated cows are tested again manually composite samples. All treated cows that are still infected must be culled after antibiotic withdrawal period is over.

Cows with a successful treatment story and the only DHI positive cows should continuously be kept separated from those who were classified as healthy at first testing.

Monitoring of herd after eradication.

Bulk tank samples is tested with PCR every 1-2 week for 2months thereafter every month. Free herd if 4 bulk tank samples directly from the tank more than 30 days apart and all test negative.

Partly based on the Nordic NMSM guide lines for *Streptococcus agalactiae* eradication

Landin, H et al. 2012. Nordic guide lines for SRA-eradication. Proc. 27th World Buiatrics Congress Lisbon, June 3rd -8th