

Monitoring of selective dry cow treatment on four German dairy farms

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Short title: Monitoring of selective dry cow treatment

Summary

The aim of the present study was to investigate the use of somatic cell count (SCC) and aerobic bacterial counts as possible tools to choose cows for selective DCT. Blanket antibiotic dry cow treatment (DCT) is an approved and common method in Germany aimed at increasing the cure rate of existing intra-mammary infections (IMI) at the time of drying off and decreasing the risk of new infections during the dry period. However, not all animals benefit equally from an antibiotic DCT. Moreover, dairy factories, consumers and politicians demand a reduction in the use of antibiotics in farm animals. Several criteria for identifying animals which would benefit from antibiotic DCT have been described in the literature. Animals chosen for the investigations were divided up into three study groups and all quarters were treated with an internal teat sealant (ITS) no matter which group they belonged to. This study revealed that control group C, in which all cows received an antibiotic DCT, achieved the best results regarding udder health. However, the results of the two study groups A (Aerobic Count Petrifilm® group) and S (SCC group), in which the animals were dried off selectively, were only marginally worse. Furthermore, it could be shown that the lactation number as well as the microorganisms present at the time of drying off influence udder health. Selective DCT is an alternative method to the widespread blanket antibiotic DCT. Nevertheless, farmers have to make their own decision as to whether they want to accept the described marginal decline in udder health and the additional amount of time, which might arise from the procedure of choosing the right animals and performing the applied rapid test methods.