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A randomized controlled trial to compare the use of homeopathy and internal Teat Sealers for the prevention of mastitis in organically farmed dairy cows during the dry period and 100 days post-calving

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INTRODUCTION: Routine use of antibiotics to prevent mastitis in dairy cows is prohibited by organic farming regulations. Internal Teat Sealers have been proposed as an alternative. We compared two drying-off (DO) supporting measures (Internal Teat Sealer and Homeopathy) to an untreated control group to assess their protective effects against clinical mastitis and intra-mammary infections during dry period of dairy cows.

METHODS: A field trial with 102 dairy cows from 13 Swiss organic dairy farms was conducted. Cows were randomly assigned to one of three groups within a herd. In the Internal Teat Sealer group (ITS; 36 cows) cows were treated with the commercial

ORBESEAL (Pfizer) in all four quarters immediately after the last milking. In the Homeopathy group (HDT; 32 cows) the cows were treated per-orally by a herd-specific homeopathic formulation consisting of two remedies in 1:10(6) dilution over 5 days before and after DO. The untreated group received no therapy (U; 34 cows).

RESULTS: For ITS, HDT and U the clinical mastitis incidence rates for the first 100 days post-calving were 11%, 9% and 3%, respectively, and the proportion of normally secreting quarters was (quarter somatic cell count (SCC) [QSCC]<100,000/ml) 70%, 68%, and 65%, respectively. Power analysis indicates that a proportion of 75% would support the rejection of null hypothesis in the HDT, and 74% in the ITS group against untreated control. Quarters of cows with SCC<200,000/ml at DO showed significantly higher normal secretion in HDT group (odds ratio [OR] 9.69) compared to untreated control, whereas Teat Sealing lead to an OR of 3.09 (not significant, post hoc power 31.3%).

CONCLUSIONS: Under the studied conditions herd-specific homeopathic dry cow therapy was effective in increasing the number of animals with normal milk secretion after subsequent parturition, compared to untreated control. It may be an effective alternative to Teat Sealing, particularly in animals with relatively low SCCs. Further research is required to confirm these results, and under different environmental conditions.