EFFICACY OF A BOTANICAL PREPARATION FOR THE INTRAMAMMARY TREATMENT OF CLINICAL MASTITIS ON AN ORGANIC DAIRY FARM

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Organic dairy farms face restrictions in the availability of therapies for treatment of clinical MASTITIS. The objective of this study was to evaluate the efficacy of a botanical product (PHYTO-MAST®) in the treatment of clinical MASTITIS in dairy cows. The study was conducted in a 1200 cows organic dairy farm located in Colorado (USA). The study included 194 naturally occurring cases of clinical MASTITIS from February to September, 2009 in 163 cows. Cows from 1st to 6th lactation were randomly assigned into treatment (PHYTO-MAST®; n=88) and control (n=75) groups, resulting in 101 quarters allocated for treatment and 93 quarters allocated for control. At enrollment cases were classified according to a 3 points severity score. The treatment was applied for 3 days and cows were evaluated for clinical cure on day 4. Cows that continued to have MASTITIS on day 4 were evaluated daily until the resolution of the clinical condition and eventual return to the milking herd. Quarters that were therapeutically dried and cows that were culled before a clinical cure were censored at that point when considered in the time to event analyses. Outcomes of interest consisted of MASTITIS resolution at day 4, time to resolution, somatic cell score (SCS) posterior to recovery, and bacteriological cure at 14 and 28 d after treatment. Categorical outcomes were analyzed by Chi square test (PROC FREQ, SAS) and logistic regression (PROC GLIMMIX, SAS). Time analyses were performed using the PROC LIFETEST and PROC PHREG procedures (SAS). Reduction in SCS was tested by analysis of variance (PROC GLM, SAS). No significant effect on clinical MASTITIS resolution at day 4 was found for treatment when compared to control group. The time analyses indicated a tendency for a faster recovery in the treatment group (P=0.06). A significant effect for treatment was found for the difference between SCS before and after clinical MASTITIS treatment (P=0.04), however, there was no effect on the SCS after recovery or in the probability of a SCC less than 200,000 somatic cells/ml after treatment. A tendency for a higher rate of bacteriological cure in the treatment group (P=0.052) at day 14 was indicated by the chi square test. It is concluded that the botanic treatment had a positive effect in time to recovery and the reduction of SCC post treatment. Further research is needed to identify optimum therapeutic protocols with PHYTO-MAST® to obtain maximum efficacy for the treatment of clinical MASTITIS.