OMICS International
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Rabie Lotfy Abdel Aziz Ramadan et al., J Prob Health 2015, 3:3
http://dx.doi.org/10.4172/2329-8901.C1.021

4th International Conference and Exhibition on

Probiotics, Functional and Baby Foods

November 03-05, 2015 Valencia, Spain

Peripartum supplementation of *Saccharomyces cerevisiae* improved rumen environment, attenuated condition score loss, improved fertility and altered milk composition in high producing Holstein cows

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Probiotics have been well-known for their beneficial effects on performance of animals and humans. The current study aimed to evaluate effects of supplementing one probiotic (*Saccharomyces cerevisiae*) to the diet of high yielding Holstein cows on their performance. 26 cows were used (12 cows as control and 14 supplemented the probiotic daily from 21 days prepartum to 150 days postpartum). Body condition score (BCS) was measured weekly for each cow on a scale of 1 "Very Thin" to 5 "Obese". Biweekly serum and rumen samples were obtained from each cow individually. Moreover, biweekly milk samples were obtained from each cow after calving. Rumen samples were analyzed for PH, rumen protozoa, rumen volatile fatty acids and rumen ammonia. Serum samples were assayed for glucose, total protein, blood urea nitrogen, A/G ratio, LDL, HDL, total cholesterol and triglycerides. While milk samples were analyzed for different milk components in addition to somatic cell counts. The obtained results cleared that probiotic-supplemented group maintained higher BCS all over the trial and BCS loss from calving to 30 DPP was high in control cows, compared to treated cows. Additionally, treated cows maintained higher numbers of rumen protozoa, higher amounts of rumen VFAs, higher serum glucose and globulin, lower A/G ratio, rumen ammonia, serum albumen, cholesterol, HDL, LDL and serum urea and milk urea nitrogen. Moreover, all milk components were significantly increased in treated cows except for milk protein which was decreased in addition to lower milk SCC. As expected, days to first estrus and days to conception were significantly decreased together with number of inseminations per conception in treated cows, compared to control cows.

Biography

Rabie Lotfy Abdel Aziz Ramadan has completed his PhD from Beni-Suef University, Egypt. He is a Lecturer of Theriogenology at Department of Theriogenology, Beni-Suef University. He has published one paper related to super ovulation research in addition to another one under publication. His PhD thesis included an experimental trial considering effects of using the probiotic Levucell (S. Cerevisiae) to enhance peripartum productivity and reproductivity of high producing Holstein cows.

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