

THE EFFECT OF IMPROVED COMPOSITION OF BEDDING USED IN DAIRY FARM CONDITIONS ON LEVEL OF INDICATOR MICROORGANISMS

Zigo František¹, Farkašová Zuzana¹, Ondrašovičová Silvia², Pecka-Kielb Ewa³, Bursová Šárka⁴, Kiss David Sandor⁵

¹Department of Nutrition and Animal Husbandry, University of Veterinary Medicine and Pharmacy, Košice, Komenského 73, 04181, Slovakia, frantisek.zigo@uvlf.sk

²Department of Biology and Physiology, University of Veterinary Medicine and Pharmacy Košice, Komenského 73, 04181, Slovakia

³Department of Animal Physiology and Biostructure Wrocław University of Environmental and Life Sciences, Norwida 31, 50-375 Wrocław, Poland

⁴University of Veterinary Sciences Brno, Faculty of Veterinary Hygiene and Ecology, Palackého tř. 1946/1, Brno, 612 42, Czech Republic

⁵Department of Physiology and Biochemistry, University of Veterinary Medicine Budapest, H-1078 Budapest, István utca 2., Hungary

Bedding provides comfort to dairy cows spending most of their time in stables. A variety of materials are used to ensure their welfare and create a suitable environment in the bedded cubicles. The aim of the study was to compare improved bedding composition with conventional straw bedding under farm conditions, regarding its effects on the indicator microorganisms influencing hygiene levels. Dairy cows were housed in newly-built stall divided into two parts each with four sections and bedded cubicles arranged in two rows opposite each other. In the first part, the bedded cubicle floors were layered with straw up to a height of 20 cm. In the second part, the cubicles were layered to a height of 20 cm with improved bedding composition consisting of recycled manure solids (RMS; 15 kg), ground limestone (100 kg), water (80 l) and straw (25 kg). After laying, the litter was treated with a concrete selector to provide strength and sufficient resistance. Samples for microbiological examination were taken from four sections according to the time interval of production and littering. Litter samples were taken from three sections according to the improved recipe of bedding with an interval of 1-3 months. A control sample of litter consisting of straw was taken from the last, fourth section. Comparing classical straw bedding with the improved recipe bedding, the total viable count (TVC) and coliforms (CB) in freshly-laid bedding as well as a month after laying were found to be reduced. In addition to TVC and CB, decreased numbers of faecal coliforms (FC) and faecal streptococci (FS) were observed in the freshly-laid bedding as well as in the first, second and third months after laying.

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