



SZTE SZEGEDI TUDOMÁNYEGYETEM
UNIVERSITY OF SZEGED



110 ÉVE AZ OKTATÁS ÉS A TUDOMÁNY SZOLGÁLATÁBAN, 100 ÉVE SZEGED ÉS A RÉGIÓ FEJLŐDÉSÉÉRT.

19th WELLMANN INTERNATIONAL SCIENTIFIC CONFERENCE

BOOK OF ABSTRACTS



28th April 2022
Hódmezővásárhely

University of Szeged Faculty of Agriculture Hódmezővásárhely (Hungary)
Banat's University of Agricultural Sciences and Veterinary Medicine "King Michael I of
Romania" from Timisoara
Faculty of Management and Rural Turism (Romania)
Hungarian Academy of Sciences Regional Committee in Szeged (Hungary)
Foundation for Agricultural Modernization and Rural Development, Hódmezővásárhely
(Hungary)

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Published by: University of Szeged Faculty of Agriculture Andrassy út 15, 6800 Hódmezővásárhely, Hungary

Responsible publisher: Edit Mikó dean

Ábri

Executive editor: Orsoly Kiss

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ISBN 2978-963-306-860-1

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

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Abstract

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.

Funding

The study was supported by a project **Visegrad Fund no. 22010056**: Factors determining the occurrence of bovine mastitis in dairy herds situated in marginal regions. The project is co-financed by the Governments of Czechia, Hungary, Poland and Slovakia through Visegrad Grants from International Visegrad Fund. The mission of the fund is to advance ideas for sustainable regional cooperation in Central Europe. Additional financial support for the

implementation of the study was used from Slovak grant KEGA no. 009UVLF-4/2021: Innovation and implementation of new knowledge of scientific research and breeding practice to improve the teaching of foreign students in the subject of Animal husbandry.