Cairo University
Faculty of Veterinary Medicine
Department of Microbiology

Probiotics and Bacteriological aspect of bovine genital tract

A Thesis Presented by

Seham Zaher Bottros Bebawi

M.V. Sci., Fac. Vet. Med. Beni-suef University (2008)

For the Degree of Ph. D. in Vet. Med. Sciences

Microbiology (Bacteriology-Mycology and Immunology)

Under the supervision of

Prof. Dr. WAGIH A. GAD EL-SAID

Professor of Microbiology

Faculty of Veterinary Medicine

Cairo University

Prof. Dr. SABRY D. MORGAN

Prof. of Milk Hygiene and Control

Faculty of Veterinary Medicine

Cairo University

Prof. Dr. MOHAMED M. MOHAMED EL-GARHY

Prof. Chief Researcher

Animal Reproduction Research Institute

(2017)

Abstract

Cairo University
Faculty of Veterinary Medicine
Department of Microbiology
Bacteriology, Mycology and Immunology

Name: Seham Zaher Bottros

Nationality: Egyptian
B. V. Sc., Fac. Vet. Medicine Assiut University (1993)
M. V. Sc., Fac. Vet. Medicine Beni-suef University (2008)
For the Degree of Ph. D. in Veterinary Medical Sciences
Specialty: Microbiology (Bacteriology – Immunology - Mycology)

Under the supervision of

Prof. Dr. Wagih A. Gad El-Said

Professor of Microbiology
Fac. Vet. Med., Cairo University (Supervisor)

Prof. Dr. Sabry D. Morgan
Prof. of Milk Hygiene and Control
Faculty of Veterinary Medicine
Cairo University

Prof. Dr. Mohamed M. Mohamed El-Garhy
Prof. Chief Researcher
Animal Reproduction Research Institute

(2017)

Title of thesis:

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The recent increase in the number and severity of cases of bovine genital disorders has prompted in the use of probiotics for the prevention and control of this disease. A systemic review was performed to assess the effectiveness of probiotic therapy.

Data was extracted on the number of cases in 2 farms to receive probiotic. The study was applied on two groups, treated group (no.=103) and control group (no.=10). A total of one hundred and three cows and buffaloes with endometritis or cervicitis or vaginitis were supplied with antibiotic-free ration before the beginning of the experiment.

Out of 103 examined female animals “cows and buffaloes”, 173 bacterial isolates were secured include (103/173) Gram-positive micro-organisms [68 isolates *Staphylococcus* spp. and 35 isolates *Streptococcus* spp.] in addition to 70 isolates were Gram-negative bacilli identified as *Escherichia coli*.

Isolates were characterized and identified using the most important conventional biochemical tests as catalase test, coagulase test, nitrate reduction

test, urea hydrolysis, oxidase test, gelatin liquefaction test, sugar fermentation test in addition to IMVIC test and Triple sugar iron.

Experimental oral administration of probiotic bacteria *Lactobacillus acidophilus* to the treated group were performed after the first day of genital swabbing, in a dose of 20g before meal per day per animal divided on two meals while the control group was fed their diet only.

Oral administration of a probiotic preparation was shown to be effective in improving bovine endometritis; cervicitis and vaginitis in addition to enhance reproductive performance and fertility.

The choice of probiotic bacteria; optimal dose and timing of administration have yet to be determined.

Key words: genital disorders, Probiotics, *Staphylococcus aureus*, *Streptococcus* spp., *E. coli*, *Lactobacillus acidophilus*

Dedication


To My family

Acknowledgment

Acknowledgment

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Appendices

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