



UNIVERSITY OF SWAZILAND

2ND SEM.2013/2014

SUPPLEMENTARY EXAMINATION PAPER

**PROGRAMME: B.SC. AGRICULTURAL EDUCATION YEAR 4,
ANIMAL SCIENCE YEAR 4**

COURSE CODE: AS 403

TITLE OF PAPER: DAIRY PRODUCTION AND TECHNOLOGY

TIME ALLOWED: TWO (2) HOURS

INSTRUCTION: ANSWER ANY FOUR QUESTIONS

**THIS PAPER SHOULD NOT BE OPENED UNTIL THE CHIEF
INVIGILATOR HAS GRANTED PERMISSION.**

QUESTION 1

- a) Discuss the contribution of the different milk producing species for the world milk production and consumption. (15 Marks)
- b) Identify the most preferred exotic dairy cattle breed by traditional (small scale) farmers in Swaziland and outline the reasons. (10 Marks)

QUESTION 2

- a) List out 5 characteristics of the Toggenburg and Saanen dairy goat breeds. (10 Marks)
- b) Identify and explain three important manipulations of lactation. (15 Marks)

QUESTION 3

- a) Briefly explain the following processes: (3×3=9 Marks)
- I. Centrifugation
 - II. Sterilization
 - III. Curing
- b) Discuss the use of casein and whey protein preparations in foods. (16 Marks)

QUESTION 4

- a) Outline the biosynthesis of milk fat and lactose. (15 Marks)
- b) With the help of a sketch, show the process steps of yoghurt drinks. (10 Marks)

QUESTION 5

Identify and describe three potential sources of environmental pollution from dairy farms and outline their management. (25 Marks)