



MASENO UNIVERSITY
UNIVERSITY EXAMINATIONS 2013/2014

**FIRST YEAR SECOND SEMESTER EXAMINATIONS FOR
THE DEGREE OF MASTER OF SCIENCE IN GENETICS
AND PLANT BREEDING
(MAIN CAMPUS)**

AAG 831: BREEDING EAST AFRICAN CROPS

Date: 13th August, 2014

Time: 9.00 – 12.00 noon

INSTRUCTIONS:

- Answer ALL questions in Section A and ANY THREE questions in Section B.



AAG 831: BREEDING EAST AFRICAN CROPS
TIME 3 HOURS

INSTRUCTIONS: Answer ALL questions in section A and ANY THREE (3) in section B.

SECTION A: Answer ALL questions:

1. Why is it always necessary to maintain large populations in population improvement (2 marks)
2. Explain the purpose of progeny testing (2 marks)
3. Differentiate between synthetic and open pollinated varieties (2 marks).
4. What are the major seed classes available in Kenya? (3 marks).
5. Differentiate between a top cross and double cross hybrids (2 marks).
6. Explain how you would develop a new cassava variety resistant to African Cassava Mosaic Disease while maximizing heterosis (4 marks).

SECTION B: Answer any Three (3) questions.

7. Discuss backcross breeding including its applications (15 MARKS).
8. Discuss the objectives of plant breeding (15 Marks)
9. Discuss a breeding procedure for developing a new variety of wheat (15 marks).
10. Describe how you can use cytoplasmic-nuclear male sterility to develop new hybrid sorghum parents (15 marks).