



THE UNIVERSITY OF ZAMBIA
SCHOOL OF AGRICULTURAL SCIENCES
DEPARTMENT OF PLANT SCIENCE

AGC 3121- CROP PRODUCTION TEST 2 - 2023

Duration: 2 hours

NAME: GIVEN SOKO

Instructions: Answer all questions.

COMP #: 2020018471

Marks are as indicated.

1 mark each

20

Indicate True or False

1. In Finger Millet, plants are thinned leaving 100 seedlings in a metre. False ✓
2. Production of Cotton is recommended at altitudes below 1200 metres above sea level. True ✓
3. Cotton is planted from the middle of December to the end of December. False ✓
4. Cotton seed hulls are used as bedding materials in livestock. True ✓
5. Pearl Millet is the staple food in the northern part of Zambia. False ✓
6. Pink Borer is a pest that Sorghum is susceptible to. True ✓
7. Bulrush millet is the most drought tolerant crop among cereals. True ✓
8. The recommended seed rate for fuzz Cotton is 20 kg/ha. True ✓
9. The recommended seed rate for Finger millet is 5kg/ha to 10kg/ha. True ✓
10. The recommended seed rate for Pearl millet is 3 kg/ha to 9 kg/ha. True ✓
11. The recommended seed rate for Sorghum is 7 kg/ha to 10 kg/ha. True ✓
12. The recommended spacing for Pearl Millet is 50 cm x 15 cm. True ✓
13. The expected yield for Sorghum is 5 tonnes/ha to 7 tonnes/ha. True ✓
14. The expected yield for Pearl Millet is 250 kg/ha to 750 kg/ha. True ✓
15. Bulrush Millet requires 900 mm of rainfall annually to reach maturity. False ✓
16. The legislation in Cotton production is effected on 1st October of every year. True ✓
17. The low-grade oil extracted from Cotton seed is used in the manufacture of margarine. False ✓
18. Sima is a Sorghum variety used for malting. False ✓
19. The critical period of weed competition in Cotton is 2 to 7 weeks after planting. True ✓
20. In organic farming, hybrids are grown by farmers. False ✓

21. In organic pest management, the ideal system is to have a natural balance between pests and 'farmers friends.' True ✓
22. In organic farming, basins are dug at a width of 30 cm. False ✓ ~~20 cm~~ Lxbxh

1 mark each

23. What is the seed rate used when planting de-linted seed in Cotton? 15 kg/ha ✓
24. What is the intra-row spacing in a Cotton field? 90 cm ✓ 8
25. How many seeds of Cotton are planted per station? 4 seeds ✓
26. After thinning, how many seedlings remain per station, in a Cotton field? 2 seedlings ✓
27. How many bolls per station should burst open before the Cotton lint is harvested? 3 to 4 bolls ✓
28. Name one (1) product manufactured from high grade oil extracted from Cotton seed. Margarine ✓
29. What is the optimum temperature for growing Sorghum? 30°C ✓
30. In Sorghum, what is the recommended inter-row spacing? 75 cm ✓
31. When planting Finger Millet using the drilling method, how many seeds are planted in a metre length of row? 100 seeds ✓

2 marks each

32. Name the product that remains after slashing grass and burning trees in the Chitemene system. Ash ✓ 31/2
33. The biofertilizer produced from locally available materials through fermentation is called Compost ✓
34. Name a variety of Maize being grown by organic farmers which is resistant to pests and diseases. gankata ✓
35. How much rainfall does Finger Millet require during the growing period? 900mm to 1250mm ✓
36. When Finger millet is grown under the Chitemene System, which method of planting is used? Broadening ✓
37. Why is Finger millet grown using the "Slash and Burn" method of cultivation? For calcium and potassium ✓
provision and because ~~it~~ in order to regulate soil acidity ✓
38. In Cotton, which is the most important fibre? Cotton lint ✓
39. How is the third (3rd) weeding in the Cotton crop done? Hand pulling ✓
40. Why is the third (3rd) weeding necessary in the Cotton crop? to avoid contamination of cotton lint ✓
41. When growing Cotton, what else is applied with D Compound in case of Boron deficiency? Solubor ✓
42. Name one (1) product manufactured from high grade oil extracted from Cotton seed.

- 55
43. Give the common name of the pest that Cotton is susceptible to that sucks sap resulting in curling of leaves. Shoot fly Aphids ✓
 44. In which country was Sorghum domesticated? Ethiopia ✓
 45. Name a variety of Sorghum, whose grain is white in colour. WST 287 Sima ✓
 46. Pearl millet is the most drought tolerant crop among cereals. ✓
 47. Name a cereal crop whose grain is used as famine/relief food. Millet ✓
 48. When is Sorghum that is intended for broom making harvested? immediately after flowering ✓
 49. What is the most susceptible stage of attack by birds in a Sorghum crop? milk stage ✓
 50. Indigenous varieties are those that have been pollinated naturally by birds, insects, wind or other natural mechanisms.
 51. Give the recommended rate for applying compost in the field. ✓
 52. In organic farming, furrows are spaced at 25 cm between rows and dug at a depth of 5 cm ✓
 53. In potholing, what are the spacings used when digging basins? 30 cm x 20 cm x 15 cm (8)
- 4 marks each**
54. Give the scientific name of a parasitic weed that attacks Sorghum. witch weed (Striga) 2
 55. Cotton stainers are vectors of a fungi called dyer dydercus
 56. Give the scientific name of the major weed that Finger Millet is susceptible to. Eleusine African ✓
 57. Name two (2) microbes that are important in organic agriculture (OA). For the named microbes, what role does each one play in OA? Rhizobium for fixing nitrogen ✓ 2

Marks are as indicated

58. (4)
- a. When some crops inhibit the growth of other plants, what is this referred to as? Allelopathy 2 marks
 - b. What substances do the crops in a. produce? phytoxin 2 marks
 - c. From the answer in b., when are these substances produced? 2 marks
 - d. What role do the named substances in b. play in organic farming? 2 marks
 - e. Give 2 examples of crops used for this purpose. Sun flower
Sun hemp 2 marks

End of Test