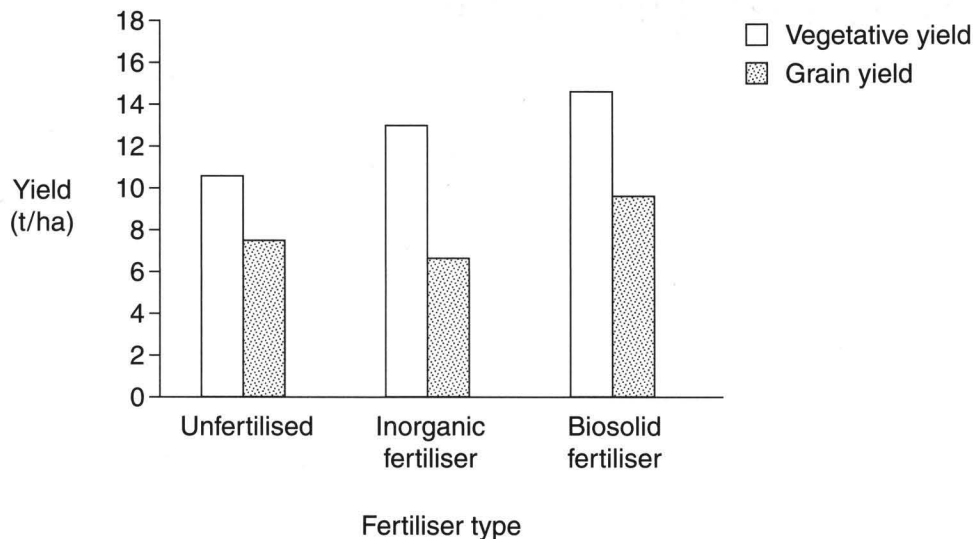


**Question 25** (7 marks)

Digested 'biosolid' (the solid residue produced from effluent) is being applied as a fertiliser as an alternative to inorganic fertilisers.

A study was carried out to investigate the effects of biosolid fertiliser on the growth and grain yield of maize. The level of vegetative yield (t/ha) and grain yield (t/ha) are shown.



- (a) Explain why the grain yield from the application of inorganic fertiliser differed from that of the control. 3

The history of the field is UNKNOWN therefore it could be possible the field had a rotation of legumes before the trial which had done better in that area of the field. The difference in yield could also be the timing of the application of the fertiliser; ~~with~~ as if it was applied during the tillering stage, which from the graph is probable, then the fertiliser would increase the vegetative yield and not the grain yield.

Question 25 continues on page 18

Question 25 (continued)

(b) Explain why a maize producer may decide NOT to use biosolid fertiliser. 4

Consumers are notoriously picky; the idea of eating a product fertilized with effluent is not conventionally a great one that is openly embraced. Therefore demand for the product may be low. So, as such it would be more profitable for the producer not to use the biosolid fertiliser. The biosolid may also be more expensive than the usual alternative making it an unfeasible practice.

End of Question 25