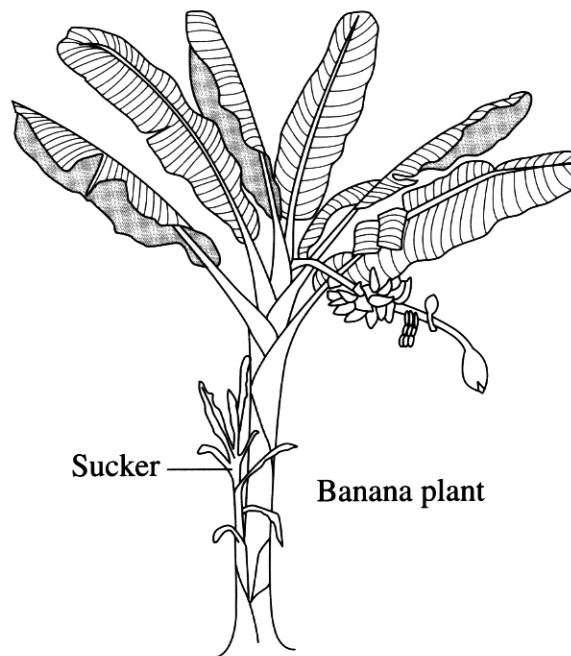


Marks

Question 24 (4 marks)

Traditionally, banana plants in Australia have been propagated asexually by cutting out and planting suckers from the adult plant.

4



There is a growing trend to produce disease-free plants in laboratories through a process of cloning from disease-free tissues from existing plants.

Assess the potential impact of this cloning process on the genetic diversity of banana plants in Australia.

Although cloning would mean an initial increase in the production of bananas due to the increased health of the plants the impact on the genetic diversity of banana plants in Australia could be potentially disastrous. If all banana plants became cloned from a disease-free plant it would mean less variation within the species and if a particular disease developed that could not be detected by the plants then ~~therefore~~ all the plants face developing the disease.