

A Level Biology B

H422/02 Scientific literacy in biology

Question Set 12

1. (a) (i) Fig. 5.1 shows the changes in population, annual birth rate and annual death rate in Europe and Africa since 1950 and projected beyond 2080.

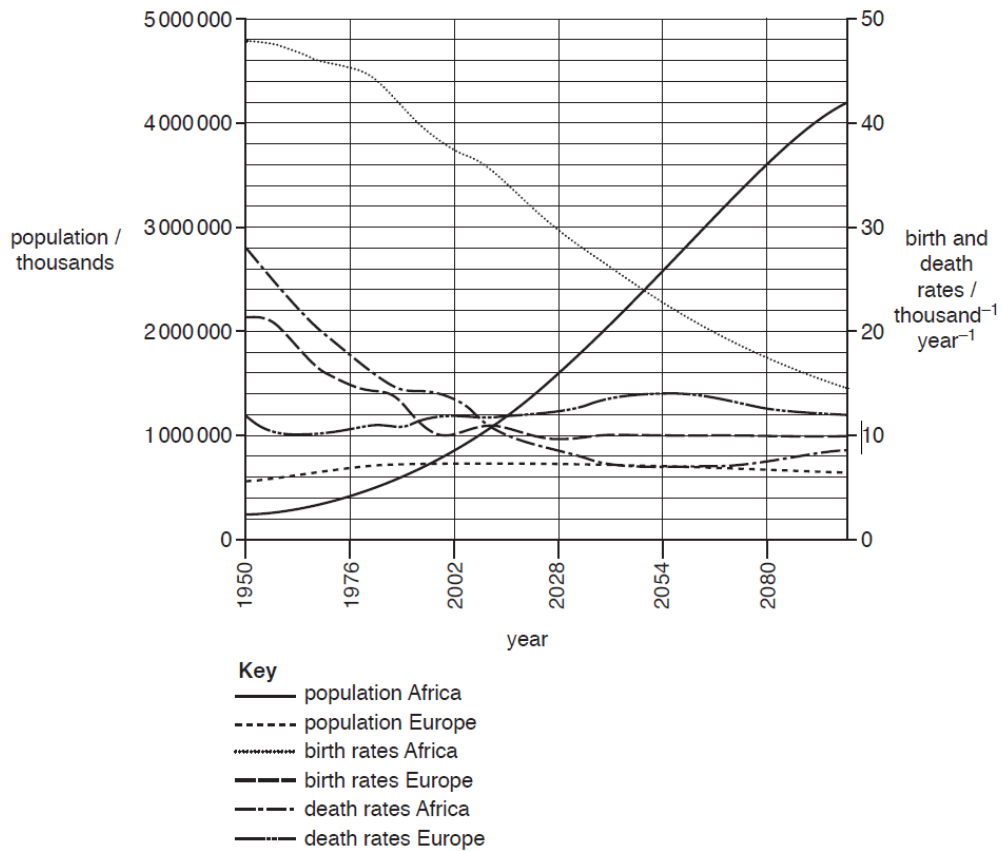


Fig. 5.1

Explain why birth rates and death rates are shown in Fig. 5.1 as 'number per thousand per year'.

[1]

- (ii) Use the data in Fig. 5.1 to calculate the projected rate of increase in the population of Africa between 2028 and 2080.

Show your working. Give your answer in standard form to **one** decimal place (in thousands per year).

[3]

- (iii) Use the birth rate and death rate data in Fig. 5.1 to explain the different trends in population for Africa and Europe.

[3]

- (b) (i) Fig. 5.2 shows the total cereal production in Africa and cereal imports into Africa in the period 1960–2010.

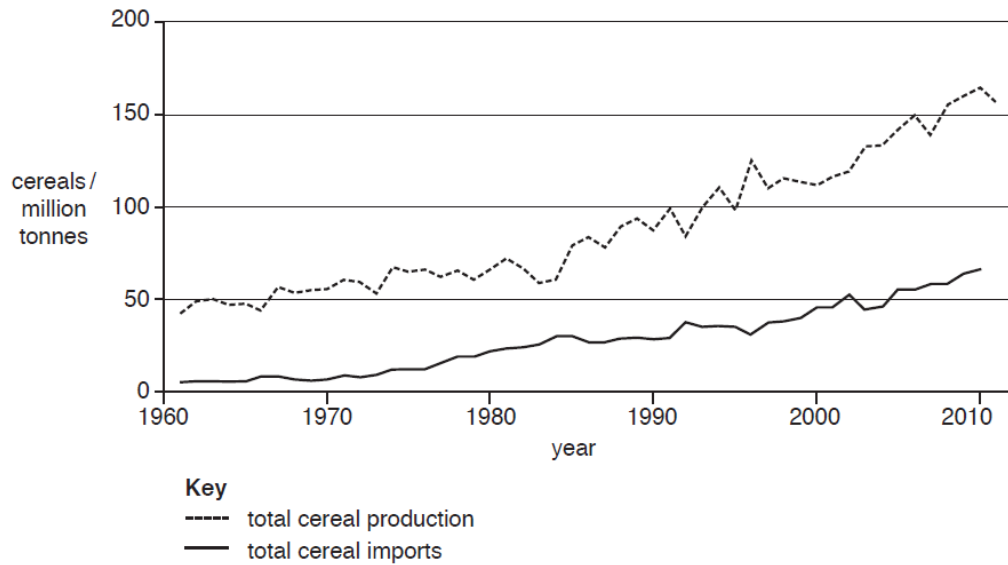


Fig. 5.2

Explain why cereals are staple foods in many African countries.

[2]

- (ii) Discuss to what extent the data in Fig. 5.2 explain the changes in death rates in Africa shown in Fig. 5.1.

[2]

- (c) Using Fig. 5.1 and Fig. 5.2, as well as your own knowledge, what can you conclude about the potential risks to food security and sustainability in Africa?

[5]

Total Marks for Question Set 12: 16

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