

1 Rice, *Oryza sativa*, is a crop plant that has adapted to grow in flooded fields.

Fig. 1.1 outlines the effects on rice plants of growing in flooded fields.

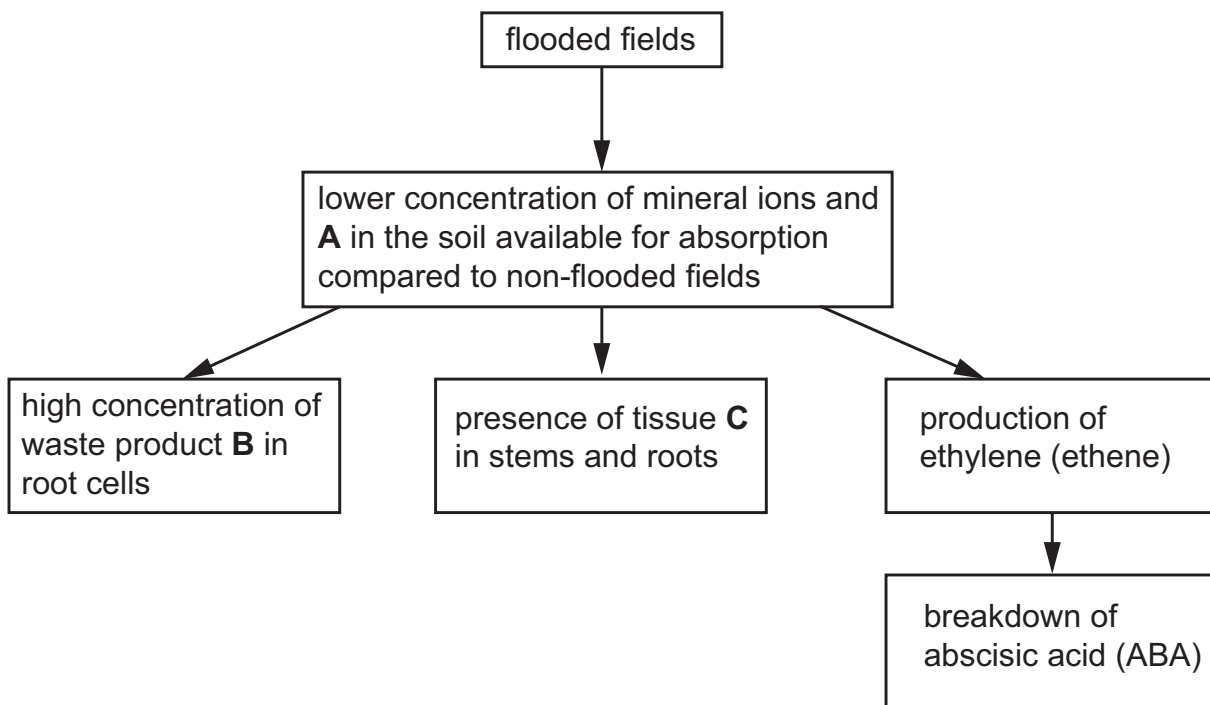


Fig. 1.1

(a) With reference to Fig. 1.1, name:

substance **A**

substance **B**

tissue **C**

[3]

(b) Describe how root cells respond to a high concentration of substance **B**.

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[1]

(c) Gibberellin is involved in the growth of stems in rice plants.

Fig. 1.2 shows the effect of gibberellin concentration on the length of stems in rice plants.

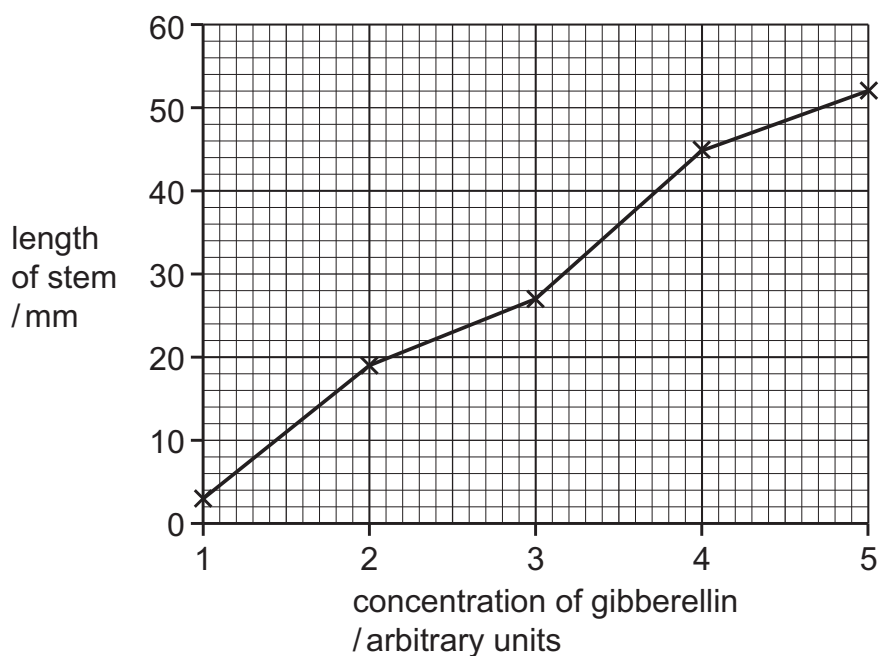


Fig. 1.2

(i) Describe the relationship shown in Fig. 1.2.

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[2]

(ii) ABA in rice plant cells inhibits the action of gibberellin.

With reference to Fig. 1.1 and Fig. 1.2, explain the importance of ethylene production for the growth of rice plants in flooded fields.

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[3]