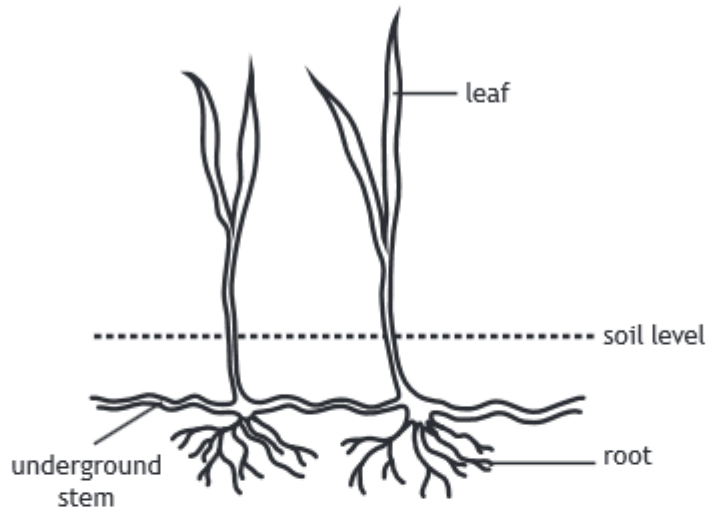


# Crop Protection

13. African couch grass is a weed which spreads rapidly from branching underground stems as shown in the diagram. If the plant's leaves are damaged, new leaves can grow from the underground stems.



- (a) State if this is a perennial or an annual weed and give a reason for your answer. 1

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- (b) (i) Explain why herbicide used in the control of this weed should be systemic. 1

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- (ii) Give one disadvantage of using chemical herbicide. 1

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- (c) Explain why weeds are regarded as pests when they grow among crop plants.

2

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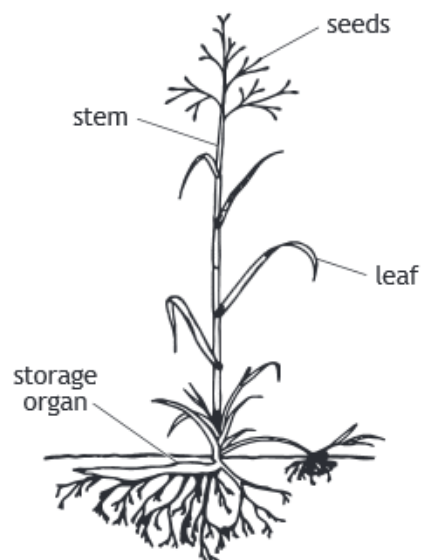
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- (d) Herbicides are sometimes used along with ploughing to control weeds. What name is given to this type of combined weed control?

1

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10. The diagram shows a perennial weed found in agricultural land in Scotland.



Which feature of this weed indicates that it should be controlled by a systemic herbicide?

- A Seeds
- B Stem
- C Storage organ
- D Leaf

- Potato plants are attacked by leaf eating caterpillars. *Bacillus thuringiensis* is a bacterium which can be used to control these pests. The bacteria produce a protein (Bt toxin) which kills these caterpillars.

- (ii) State an advantage of using this type of biological control rather than using chemicals. 1

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- A** Write notes on crop protection under the following headings:
- (i) weeds, pests and diseases; 4
  - (ii) methods of control. 4