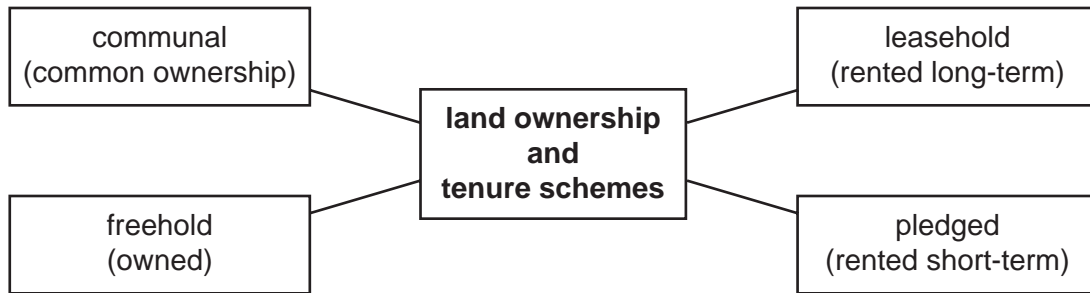




1 What results from high humidity?

- A a high transpiration rate
- B physical damage to plants
- C reduced root growth
- D the spread of fungal diseases

2 The diagram shows types of land ownership and tenure systems.



Which system can be used as security for a loan?

- A communal
- B freehold
- C leasehold
- D pledged

3 In a vegetable plot, legumes have dark green leaves while other crop plants have pale leaves and poor growth.

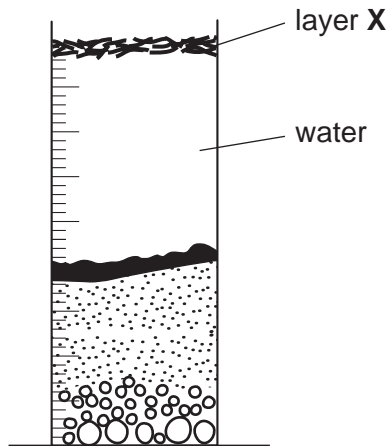
What is likely to be deficient in the soil?

- A nitrate
- B phosphate
- C potash
- D sulphur

4 What reduces the risk of soil erosion?

- A cover cropping
- B deforestation
- C overgrazing
- D ploughing uphill

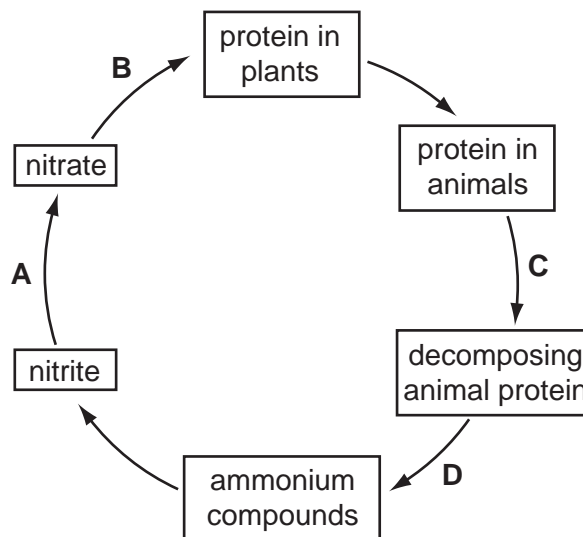
- 5 Some soil is shaken with water in a jar.



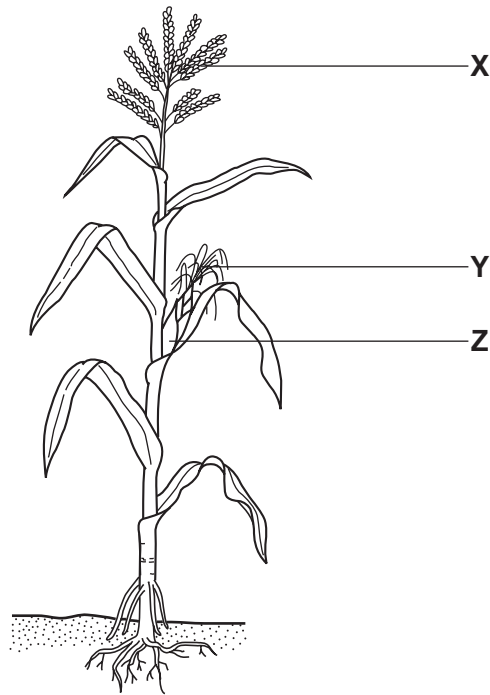
Which particles form layer X?

- A clay
  - B gravel
  - C humus
  - D silt
- 6 The diagram shows part of the nitrogen cycle.

Which arrow represents nitrifying bacteria?



7 The diagram shows a maize plant.



What are the correct labels for X, Y and Z?

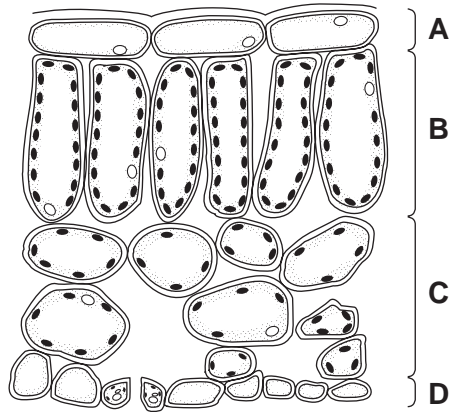
	X	Y	Z
A	silk	cob	tassel
B	silk	tassel	cob
C	tassel	cob	silk
D	tassel	silk	cob

8 What gives the energy for photosynthesis?

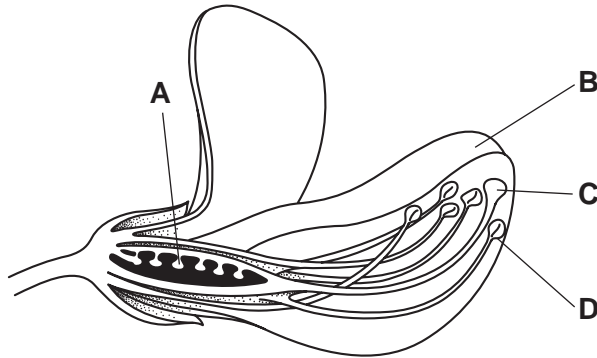
- A chlorophyll
- B oxygen
- C sugar
- D sunlight

9 The diagram shows the internal structure of a leaf.

Where will most photosynthesis take place?

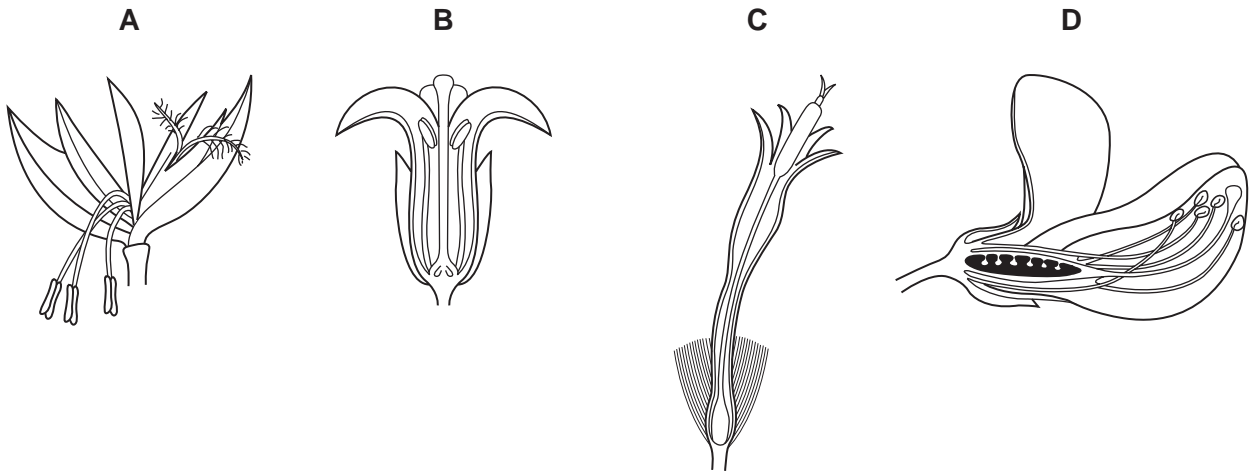


10 Which part of the flower produces pollen?



11 The diagrams show the structure of four flowers.

Which flower is pollinated by wind?



12 What is meant by *seed rate*?

- A the amount of seed that germinates
- B the depth at which seed is sown
- C the quantity of seed sown over a given area
- D the time taken for the seed to germinate

13 Which land could be reclaimed for crop production by ploughing only?

- A bush
- B desert
- C pasture
- D swamp

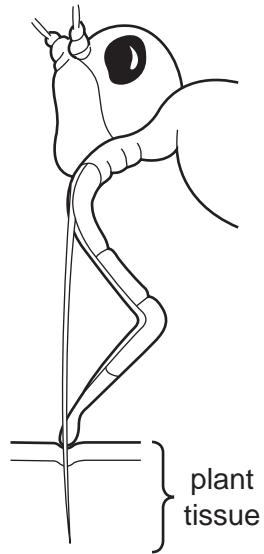
14 The table shows the recommended amounts of fertiliser application for different soil types.

soil type	nitrogen/kg per hectare	phosphate/kg per hectare
clay	70	50
sand	80	60

How much phosphate should be applied to a 3 hectare field on sandy soil?

- A 180 kg
- B 210 kg
- C 240 kg
- D 420 kg

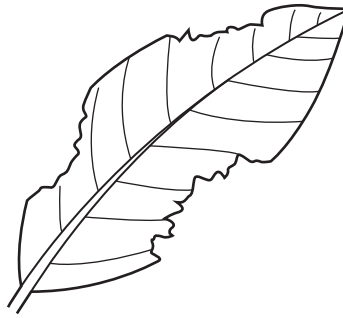
15 The diagram shows the mouthparts of an insect pest.



Which crop condition may be controlled by killing these insects?

- A fungal infection
  - B nutrient deficiency
  - C viral infection
  - D weed competition
- 16 Which statement is correct for **all** weeds in a crop?
- A They compete for moisture.
  - B They contaminate seed samples.
  - C They make the crop poisonous.
  - D They slow the rate of harvesting.

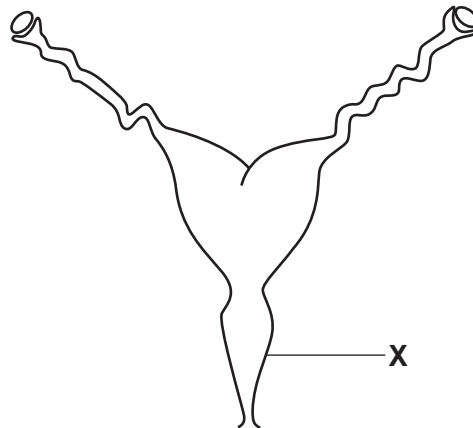
17 The diagram shows a damaged leaf.



What is likely to have caused this damage?

- A a biting and chewing pest
- B a fungal disease
- C a nematode (eelworm)
- D a piercing and sucking pest

18 The diagram shows the reproductive system of a female farm animal.



What is structure X?

- A cervix
- B uterus
- C vagina
- D vulva

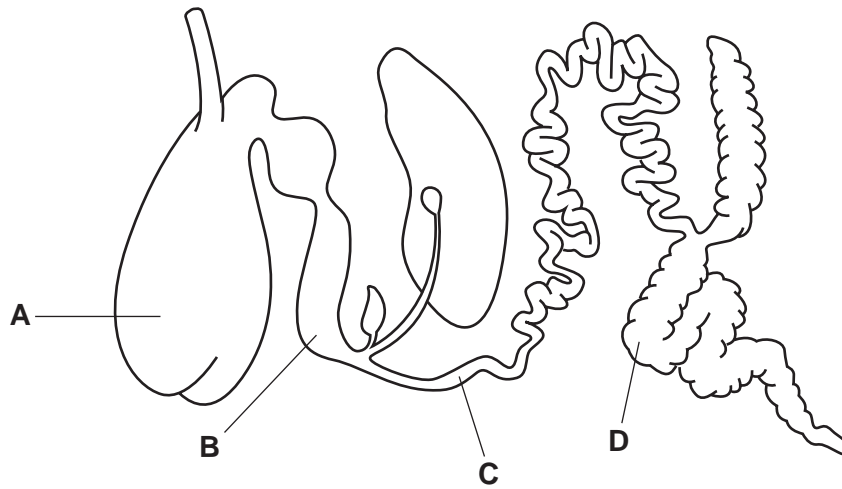
19 In what order does food pass through these four chambers of a ruminant?

- A reticulum, rumen, abomasum, omasum
- B reticulum, rumen, omasum, abomasum
- C rumen, reticulum, abomasum, omasum
- D rumen, reticulum, omasum, abomasum



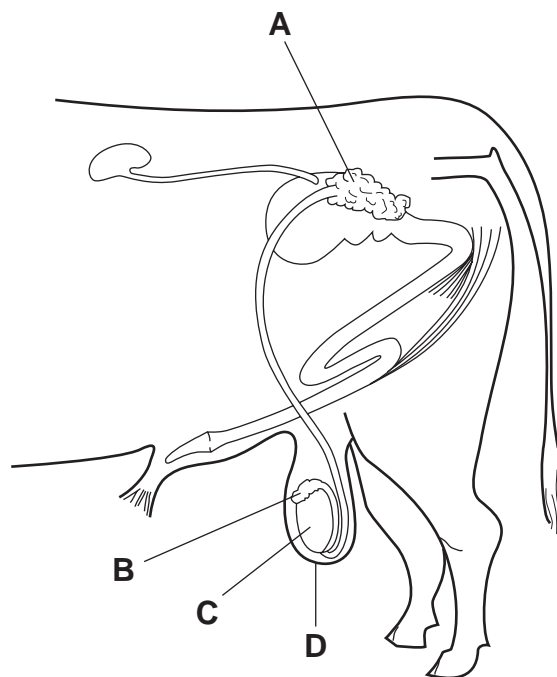
20 The diagram shows a ruminant digestive system.

Which organ produces hydrochloric acid?



21 The diagram shows the reproductive system of a male farm animal.

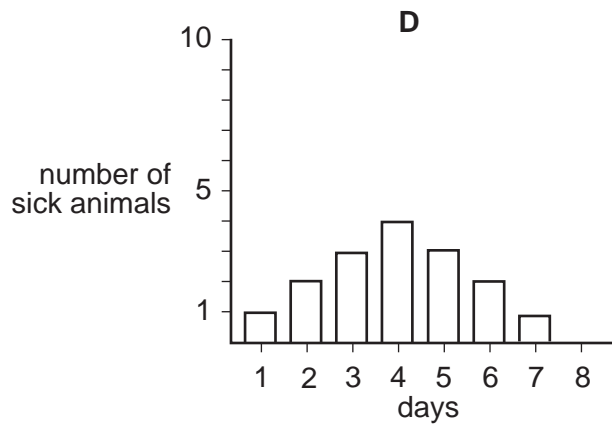
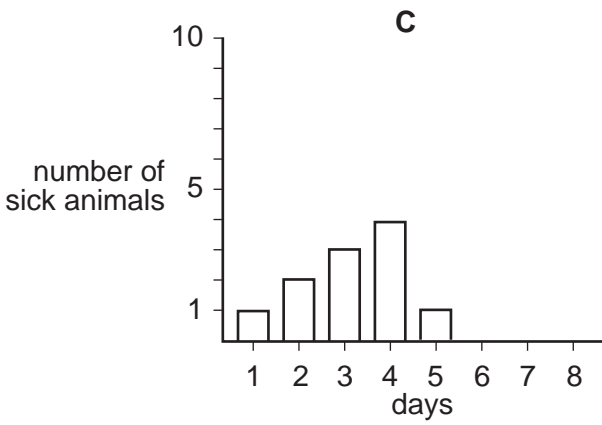
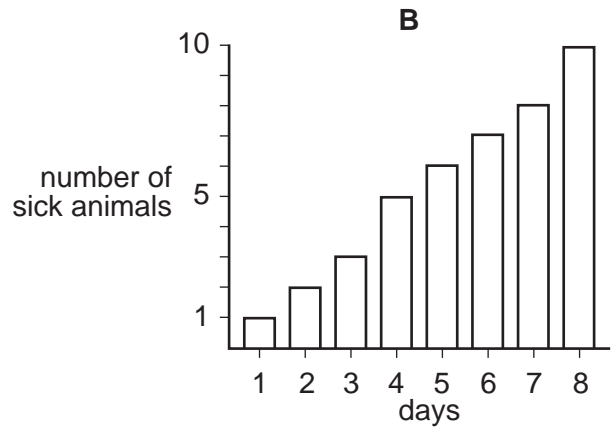
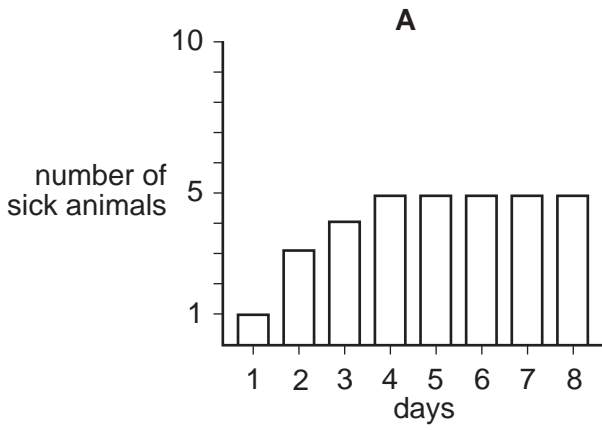
In which structure are sperm stored?



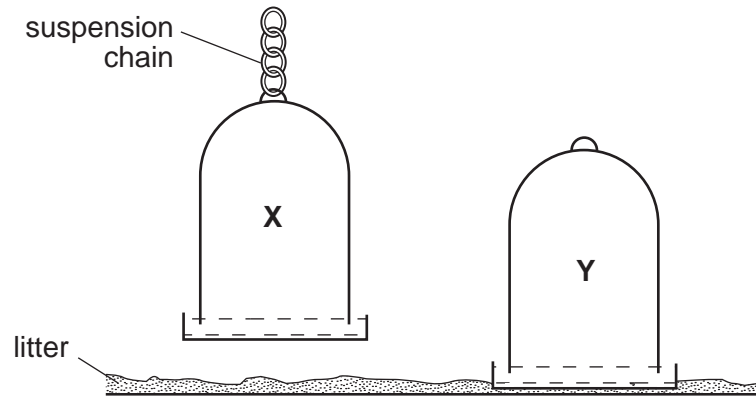
22 In a group of imported animals one animal falls sick on day 1.

The sick animal is isolated. Any future sick animals are also isolated.

Which graph predicts the outcome of this isolation policy?



23 The diagram shows two water drinkers, **X** and **Y**, in a poultry deep litter house.



Why is **X** in a better position than **Y**?

- A Chickens cannot perch on **X**.
- B It is easier for chickens to drink.
- C Litter is less likely to enter the water.
- D The drinker is easier to fill.

24 What do laying hens need for the production of strong egg shells?

- A calcium
- B fibre
- C iron
- D protein

25 The table shows the analysis of four foodstuffs.

Which foodstuff would be most suitable for a young, growing animal?

	percentage of dry matter			
	protein	carbohydrate	calcium	phosphate
<b>A</b>	19	58	0.31	1.13
<b>B</b>	22	54	0.30	2.10
<b>C</b>	45	33	0.32	2.12
<b>D</b>	47	30	0.02	1.07

26 How is the production ration given to a dairy animal calculated?

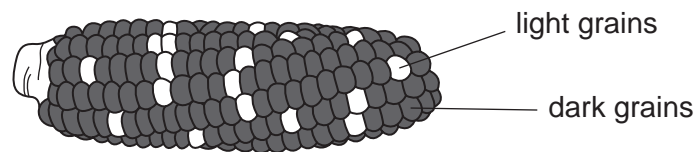
- A by her age
- B by her body weight
- C by her breed
- D by her milk yield

27 In cattle, the allele for a white face, W, is dominant over the allele for a brown face, w.

Which pair of alleles represents a brown-faced cow?

- A WW
- B Ww
- C wW
- D ww

28 The diagram shows a maize cob produced by two heterozygous plants. Dark grain is dominant. The cob has 750 dark grains.



How many light grains would be expected to be present?

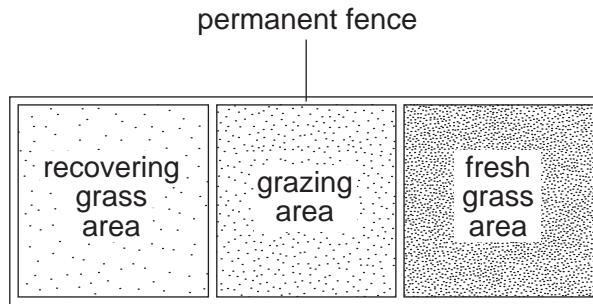
- A 250
- B 750
- C 1000
- D 1500

29 Why are grasses valuable pasture plants?

- A They are resistant to over-grazing.
- B They are suitable for browsing.
- C They have a low growing point.
- D They improve soil fertility.

30 The diagram shows a method of grazing livestock.

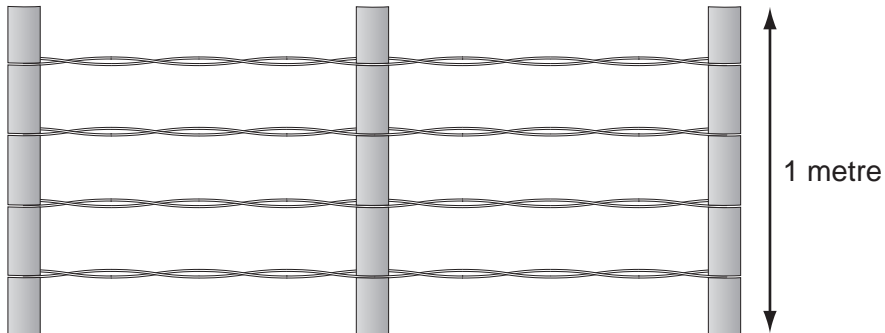
The livestock are moved weekly from one area to another.



Which type of grazing best describes this method?

- A free range
- B paddock
- C rotational
- D zero

31 The diagram shows a wire fence.



Which animals can be confined by this fence?

- A cows, ducks, pigs
- B cows, horses, donkeys
- C donkeys, ducks, rabbits
- D horses, pigs, rabbits

32 Why are iron fencing posts treated before use?

- A to protect against fungi
- B to protect against insects
- C to protect against rats
- D to protect against rust

33 Soil and cement can be mixed to make blocks for building.

Which type of soil makes the strongest blocks when mixed with cement?

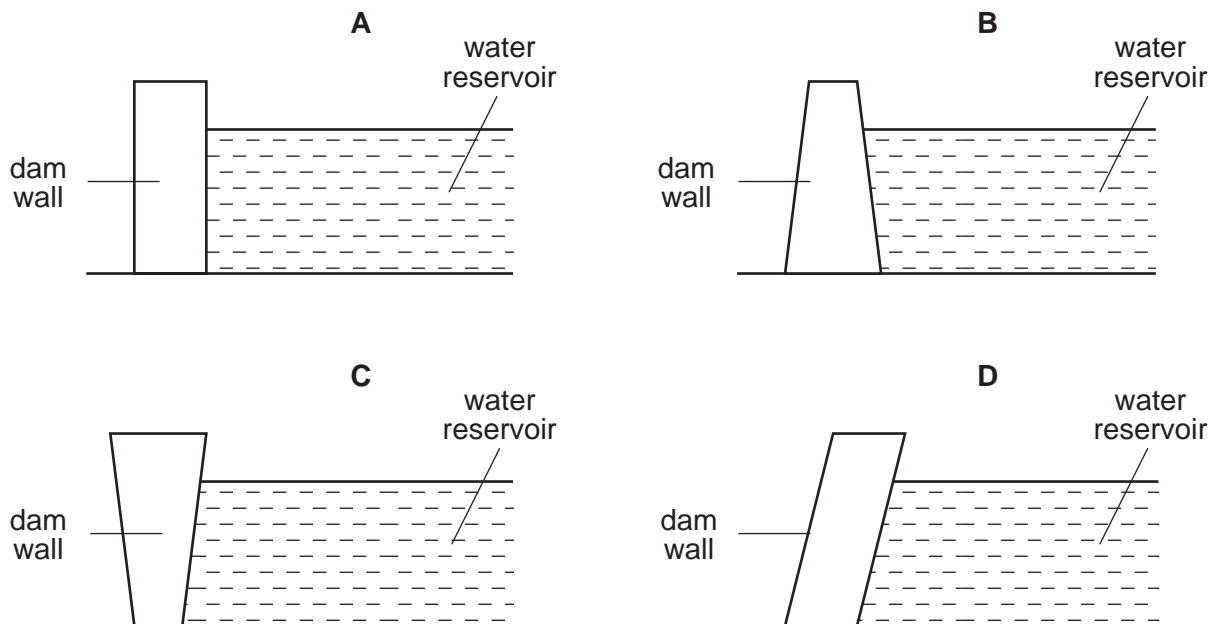
- A clay
- B coarse sand
- C humus-rich
- D silt

34 When comparing concrete and earth floors, which statement is correct?

- A Concrete floors absorb more water than earth floors.
- B Concrete floors are cheaper to construct than earth floors.
- C Concrete floors are easier to clean than earth floors.
- D Concrete floors support less weight than earth floors.

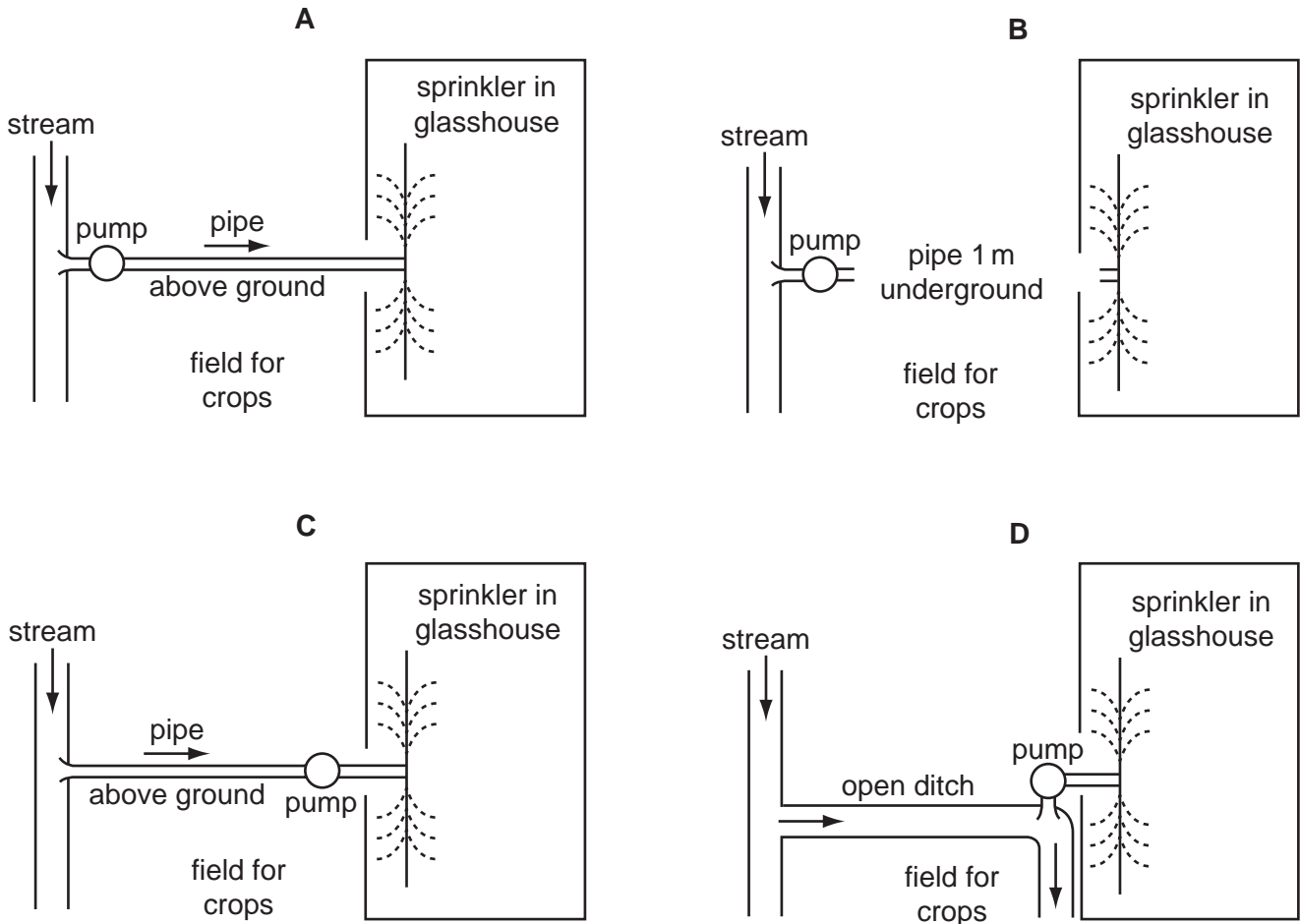
35 The diagram shows four different shapes of dam wall.

Which dam wall will best withstand water pressure?

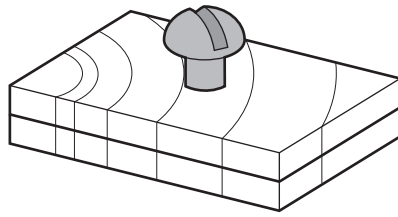


36 The diagrams show methods of supplying water from a stream to a sprinkler system in a glasshouse. The glasshouse is 50 m from the stream, on the other side of a field used for growing crops.

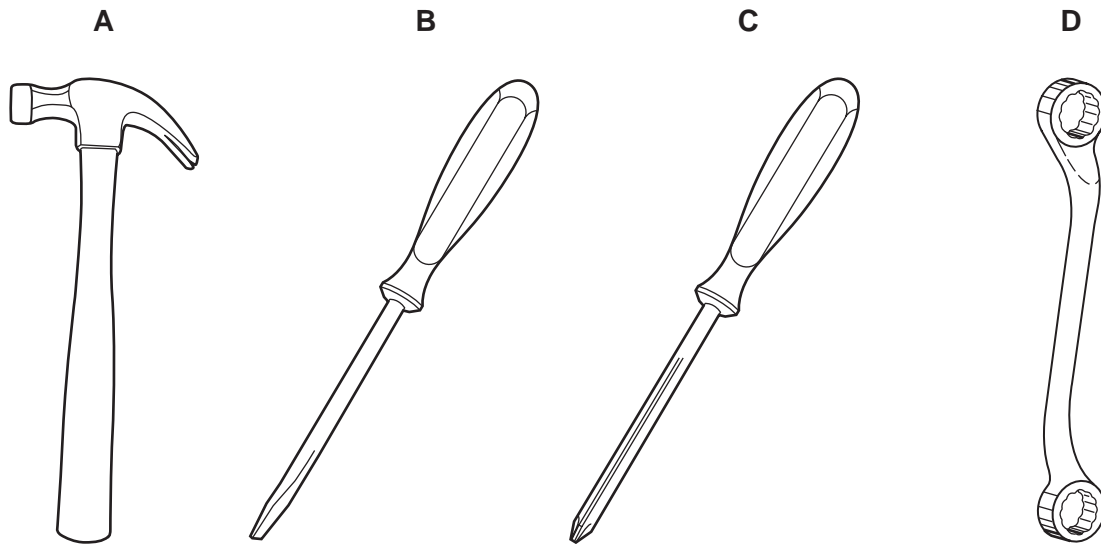
Which method provides for efficient water supply and use of land?



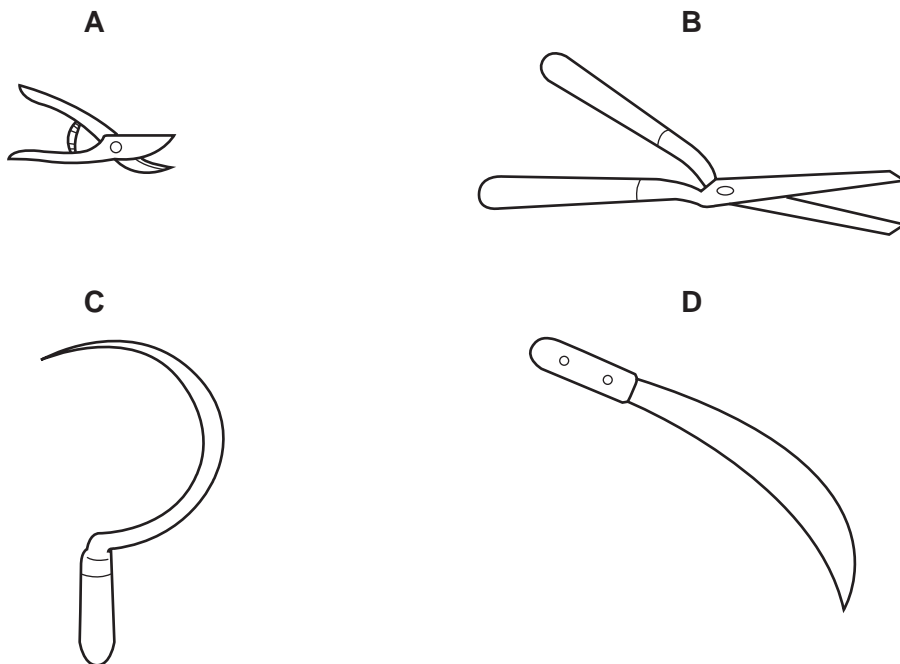
37 The diagram shows a screw fixing two pieces of wood together.



Which tool should be used to remove this screw?

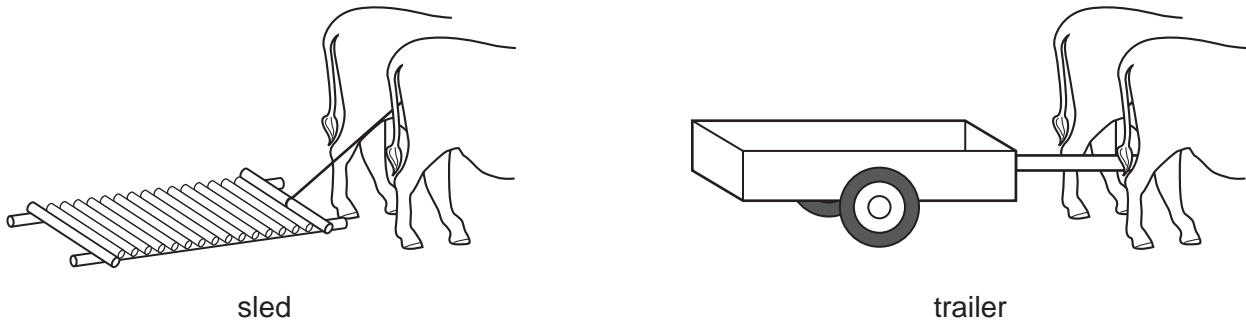


38 Which tool is used for clearing thick woody undergrowth (bush)?





39 The diagram shows two ways of moving a load.

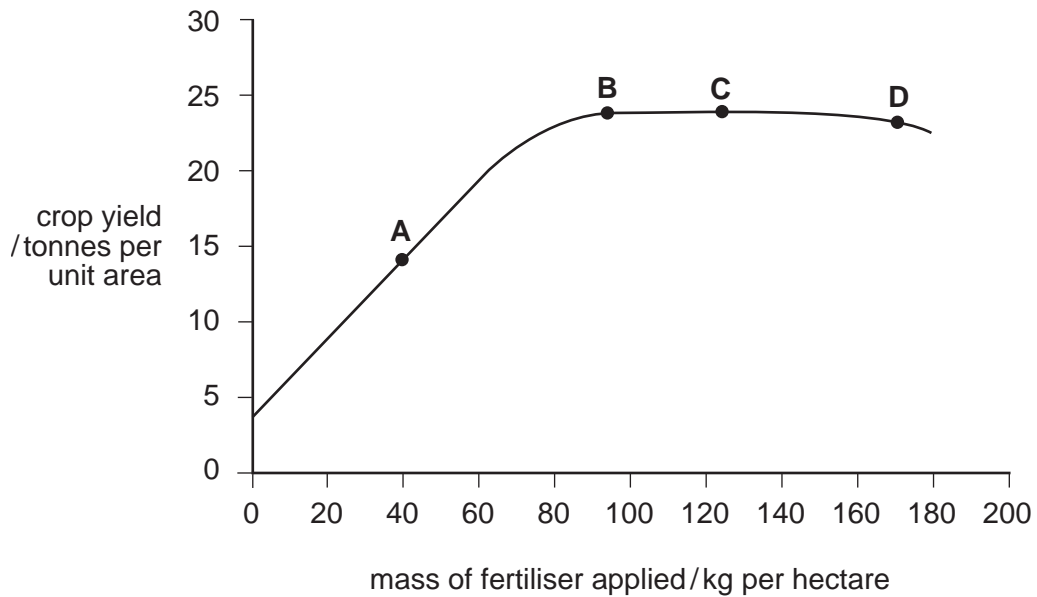


Which statement is true?

- A The trailer moves heavier loads than the sled and is easier to pull.
- B The trailer moves heavier loads than the sled but is harder to pull.
- C The trailer moves lighter loads than the sled but is easier to pull.
- D The trailer moves lighter loads than the sled and is harder to pull.

40 The graph shows crop yields for different application rates of fertiliser.

Which application rate is most cost effective?







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