



Are seeds produced during sexual reproduction or through asexual reproduction?



Only sexual reproduction produces seeds.



What term is synonymous with Asexual Reproduction?



Vegetative Reproduction



Name 3 types of asexual reproduction.



Cuttings Layering Grafting

These stems grow sideways and are commonly found in strawberry and raspberry plants.

Answer

Runners



Seeds can travel by air, water, and animals. This is known as _____.



Seed dispersal

Do fruits form from sexual reproduction Or do they form through asexual Reproduction? How do you know?



Fruits form from flowers. Flowers Use male and female parts. This is A form of sexual reproduction.



The most nutritious part Of a seed is the _____



Cotyledon.

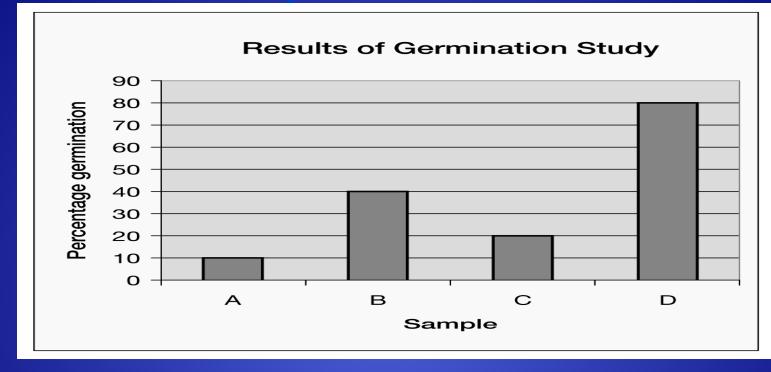
What 3 factors do seeds require to germinate?



Oxygen Proper Temperature Water



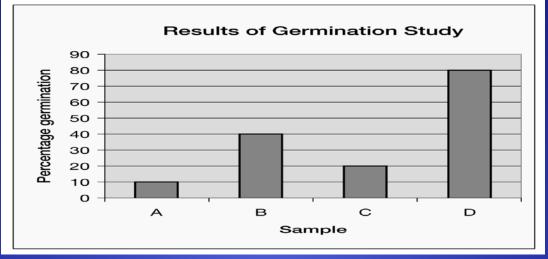




Answer

The conditions in 'D' were most likely ...

- A) warm, dry and dark
- B) warm, moist and dark
- C) warm, dry and sunny
- D) cold, moist and sunny



The conditions in 'D' were **most** likely ...

A) warm, dry and dark
B) warm, moist and dark***
C) warm, dry and sunny
D) cold, moist and sunny

For seeds to germinate, they need warmth, moisture(water), and oxygen. Sunny vs dark makes no difference.

When does fertilization occur in a flower?



When Pollen meets Ovule (eggs).

Bacteria, Worms, Air pockets, and Fungi....which of these does healthy soil contain?



Healthy soil contains all of them.

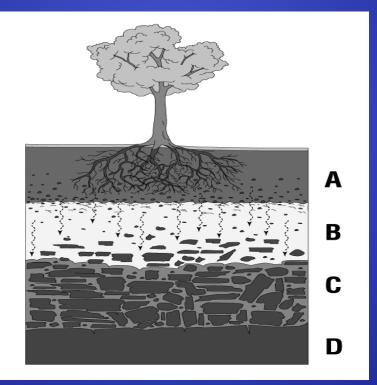
This is the name of a special bacteria that helps produce humus by decomposing dead organic matter.



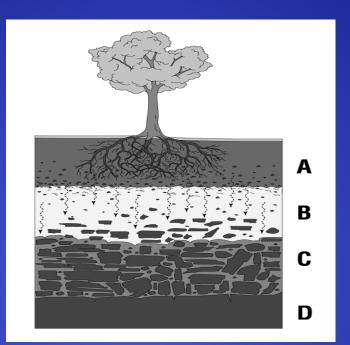
Actinomycetes



Which layer of soil contains rich organic matter and lots of humus?



Answer



LAYER A CONTAINS THE RICHEST ORGANIC MATTER

Three of the following technologies help to reduce soil erosion. Which one does not belong? A) Remove all of the dead plants **B**) shelter belts C) leaving dead plants on the soil **D) add manure**



Three of the following technologies help to reduce soil erosion. Which one does not belong?

A) Remove all of the dead plants (If you do that, the wind will blow away the soil).
B) shelter belts (Blocks the wind to prevent soil from blowing away)
C) leaving dead plants on the soil (this covers up the soil and prevents it from blowing away)
D) add manure (Manure adds a covering on top of the soil to prevent it from blowing away.

Describe 1 clue that would indicate that you do not have enough earth worms in your soil.





Worms create slime which rubs off onto the soil allowing it to clump nicely together. Not enough worms means the soil does not stick well.

Worms burrow tunnels into the soil to allow air to enter deep inside. This helps fluff out the soil. Not enough worms means your soil is packed together with no air pockets.



Topic 4: \$100

What is a pest?

Answer

Topic 4: \$100

• A pest is anything that annoys us or destroys our crops.



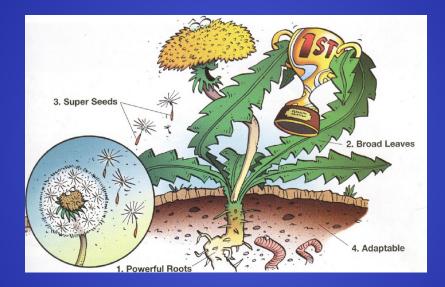
Topic 4: \$200

What causes pests to resist pesticides over time?



Insects will often have a few survivors who are naturally immune to insecticide sprays. **Those survivors will reproduce** and produce offspring who are also immune. Eventually your insecticide becomes useless.

Topic 4: \$300 Describe 3 characteristics that make dandelions excellent pests.





Deep roots that anchor well.

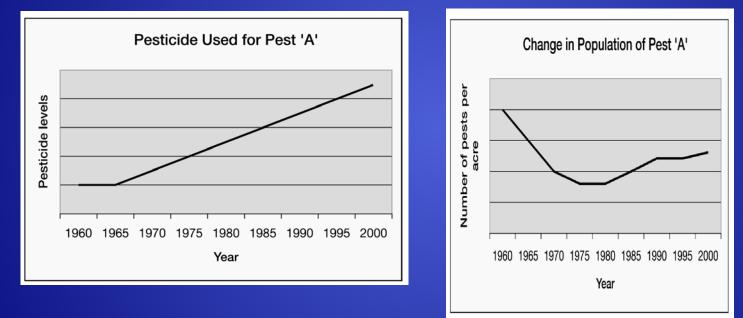
Roots release toxins into the soil that kills nearby plants.

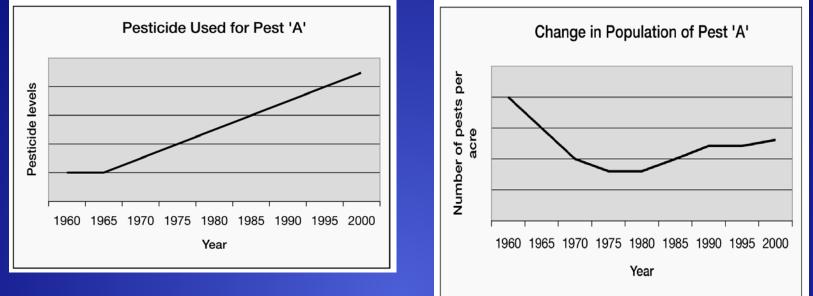
Broad leaves steal sunlight from nearby plants.

Roots store nutrients and survive throughout the winter so that they have a head start next spring.

Super seeds blow super far to spread the new dandi-babies all over.

Explain how this farmer feels in 1990. Explain your answer.





He probably feels helpless. In 1990, he is spraying more pesticide than ever, but the bugs are increasing in amount. This is due to pesticide resistance. Refer to the \$200 question in this category for an explanation on how pesticide resistance works.

Which country uses the most pesticides? How do you know?

Country	Number of Resistant Species
Canada	35
Chile	7
Japan	14
China	5
Fiji	1
United States	84

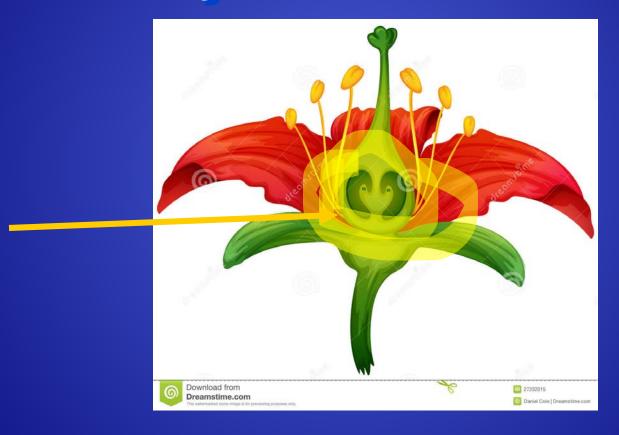
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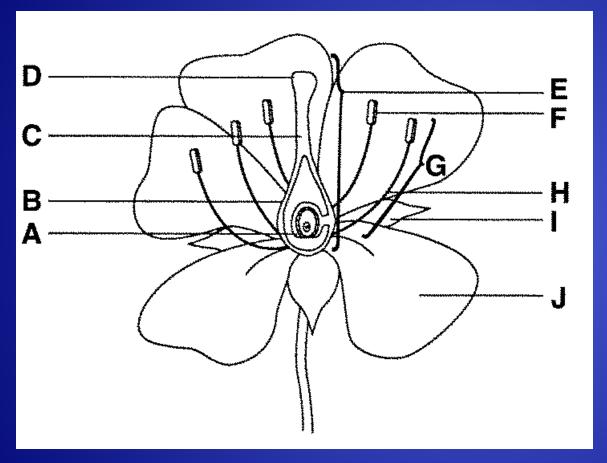
The United States uses the most pesticides because they have the most resistant species. The more pesticides that you use, the more species will become immune to them.

This part of the flower becomes the fruit?



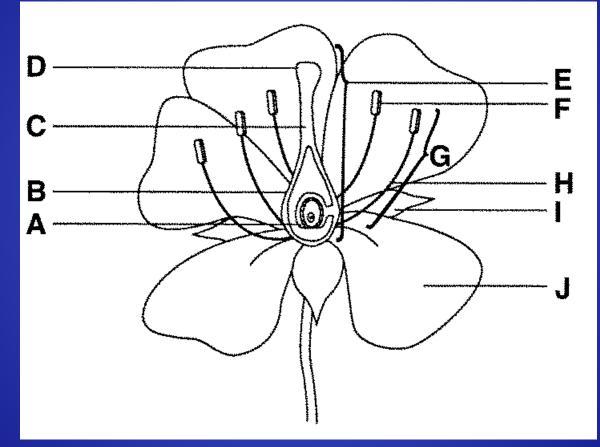
The ovary becomes the fruit.



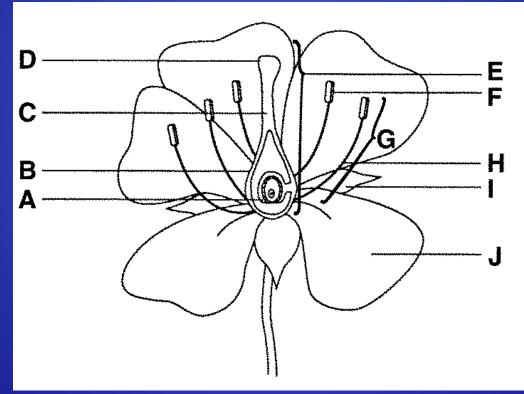


The Stamen is letter

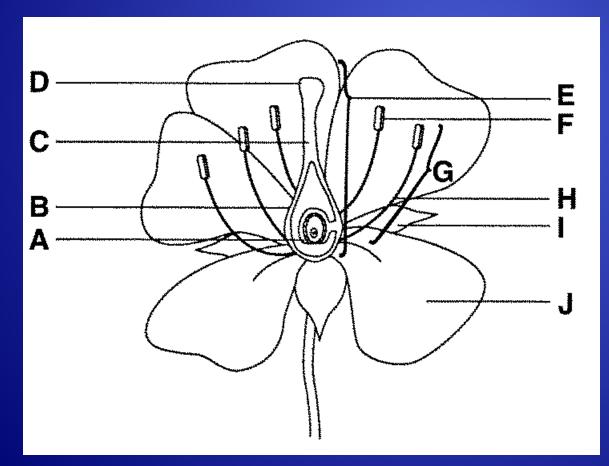
Topic 5: \$200 The stamen is letter G.



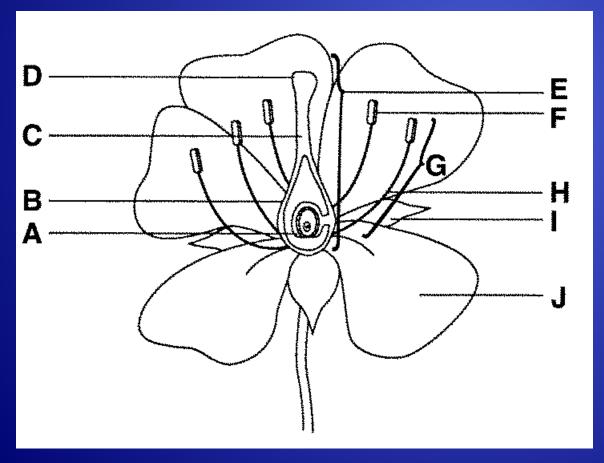
Topic 5: \$300 This is the exact spot where fertilization occurs



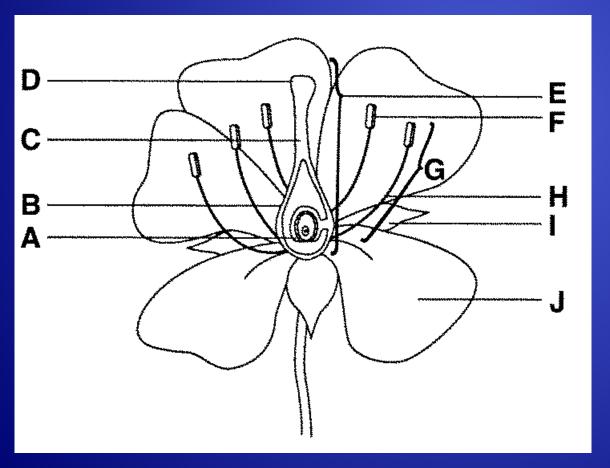
Topic 5: \$300 Fertilization is when the pollen and ovules fuse. This exact spot that this occurs is location A.



Topic 5: \$400 Pollen is created here and then deposited there. (Letters and proper names must be provided)

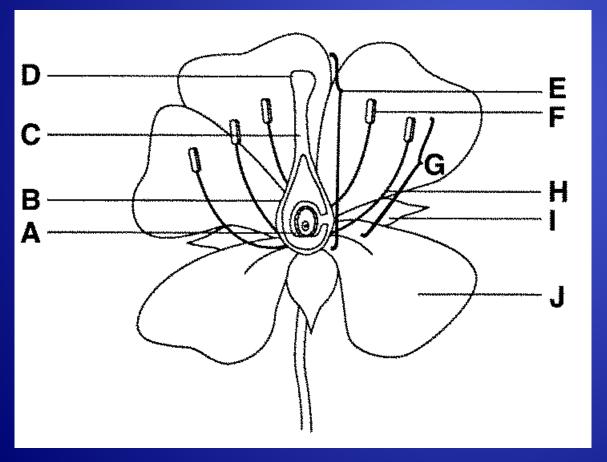


Topic 5: \$400 Pollen is created at the anther (F) and deposited at the stigma (D).



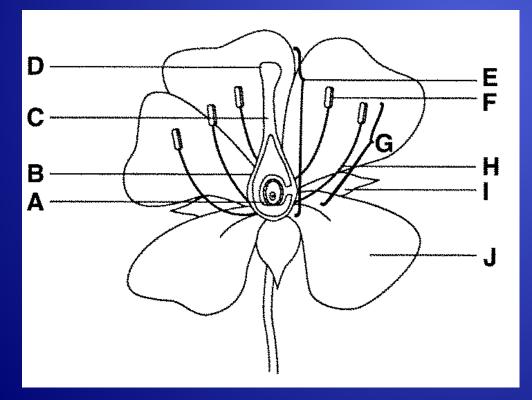
Topic 5: \$500 What is E called?

What are the names of the 4 different parts that comprise it?



E is called the Pistil.

It is made up of 4 parts. Stigma(D), Style (C) Ovary(B) and the ovules(eggs) (A)



What is a monoculture and a polyculture?

Monoculture: 1 type of plant is grown.

Polyculture: A variety of plants are grown.

Name an advantage and a disadvantage of growing a monoculture.



An advantage of having a monoculture is that it is easy to grow because all of the plants have the same needs.

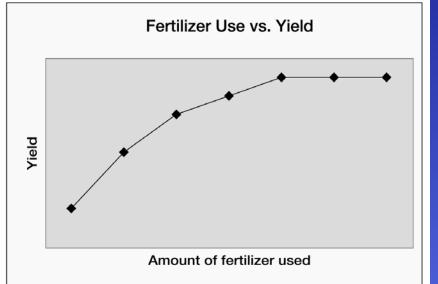
A disadvantage is that if a pest comes, it will wipe them all out and you will have nothing left. You need an aggressive pest management system to avoid that from happening.

Describe an advantage and a disadvantage of growing a polyculture.



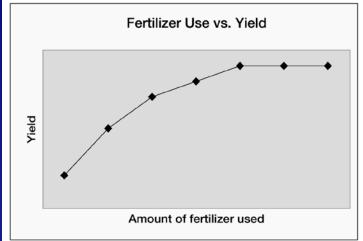
Polycultures allow you to manage your risk against pests better. For ex. If a potato beetle eats all of your potato plants, you still have other plants that will survive.

The downside of polycultures is that they take more effort to grow because all of your plant varieties have different water and nutrient needs.



According to the graph, what is the relationship between fertilizer amount and yield?

- A) More fertilizer means better yields.
- B) Less fertilizer means better yields.
- C) There is no relationship between fertilizer use and crop yields
- D) Fertilizer can increase yields but only up to a certain point.



A) More fertilizer means better yields. (Not always.)
B) Less fertilizer means better yields. (Definitely Not)
C) There is no relationship between fertilizer use and crop yields (Ummm....yes there is)
D) Fertilizer can increase yields but only up to a certain point. (True indeed. After a certain point, the graph flattens out even though we are adding more fertilizer.)

Epic Guild Challenge!



Proceed





Insert FINAL question here





Insert FINAL answer here