

Test Your Permagarden Knowledge!



Soil Health Questions

QUESTION 1

Which of the following are steps we can take to build the health of our soil?

- A. Deep soil preparation
- B. Mulching
- C. Amend soil with a variety of organic materials
- D. Add legumes to our crop rotation
- E. **All of the above**

QUESTION 2

What are some steps we can take to protect our soil from external influences, like sun, wind, and rain?

Some of the steps to protect soil include:

- **Keep soil covered with mulches or live plants**
- **Plant shade trees**
- **Slow, spread, and sink water using water harvesting structure**

Water Questions

QUESTION 3

What does it mean to “slow, spread, and sink” water?

Draw a diagram in your notebook depicting the process and describe it in your own words.

If rainwater is allowed to flow downhill uninterrupted, the water collects, slowly picks up speed, and carries away any topsoil that is not anchored by plant roots. This can strip our fields of a vital resource we need to grow healthy plants. However, if we locate the contours of our landscape and carefully dig a ditch along the contours, known as a swale, with a mound, known as a berm, then we can collect this water, slow it down and allow it to spread throughout the ditch. If the bottom of the ditch is perfectly level, meaning every point is at the same elevation along the contour, then the water will not flow away but rather sink into the ground, creating a reservoir of water within the soil that can be used by our plants. Other water harvesting structures, such as a half-moon berm, function the same way.

QUESTION 4

In what way can water harvesting structures turn common problems, such as soil erosion or damage to structures, into a benefit for the garden?

When properly placed in the landscape, water harvesting structures like swales and half-moon berms can help protect the garden, the household, and the soil by harnessing running water that is causing damage to the land and structures and redirect it to a place where it is needed (e.g., a garden, plantation, or field).

QUESTION 5

What are the three thieves of water?

Sun

Wind

Slope

Biodiversity Questions

QUESTION 6

Are the following statements true or false?

FALSE Adding biodiversity in our gardens is labor intensive and best left to skilled farmers.

Biodiversity can be built at low cost to the household through saved and collected seeds and cuttings from neighbors and wild areas using techniques most farmers know well.

FALSE We should prioritize planting the best new crop varieties in our garden.

Locally available species and traditional varieties are usually well adapted to the local climate.

TRUE Biodiversity in our gardens can help us produce more on the same plot of land.

The Permagarden Approach encourages us to use every available opportunity to create plant 'layers' that utilize all available growing spaces, and thus produce more on the same plot.

TRUE Households can add biodiversity to their gardens to help them meet their goals by, for example, diversifying diets, extending their harvest season, or growing fodder for their animals.

Biodiversity can be added by increasing the number of different crops grown, thus increasing variety, as well as through rotation of crops, thus extending the harvest season. Careful planning of what to plant and at what time can help extend the growing season.

QUESTION 7

Which of the following are ways we can increase biodiversity in our gardens and throughout our compound? (select all that apply)

- A. Add a fruit tree to the corner of a field**
- B. Extend our maize fields
- C. Intercrop our maize fields with legumes, pumpkins, and sunflower**
- D. Plant some quick growing amaranth in between our kale plants with the intention of harvesting the young amaranth before the kale is mature**
- E. Exchange with a neighbor a banana sucker for a yam corm**

Biodiversity means increasing the number of species present on the land. Therefore, extending a maize field with more maize would not increase biodiversity. Intercropping the maize field with legumes and pumpkins would add several new species to the field, as would adding some amaranth between the kale plants, exchanging a banana sucker for a yam corm, and adding a new fruit or nut tree. Households can be encouraged to think of species they would like to add that they don't already have growing around their compound.

Observation Question

QUESTION 8

What do we hope to learn by observing our landscape?

By observing our landscape, we hope to:

- **See the opportunities and challenges for production at the site**
- **Use locally available resources efficiently**
- **Build a garden that works with the hosting household's agro-ecological context and overall goals**

Design Questions

QUESTION 9

What basic features are included in most permagarden design maps?

Basic features in most permagarden design maps:

- **Water harvesting structures**
- **Garden beds**
- **Fences and other forms of protection**
- **Greywater systems**
- **A biodiverse planting plan for the beds, berms, spillways, edges, and fences**
- **Any additional items, like mulch basins, compost piles, animal pens, or new trees/perennials to be planted**

QUESTION 10

How can creating a design map help a gardener have a more productive garden?

A design map ensures that:

- **A garden is well situated within the landscape and works with the existing structures and external influences on the site.**
- **Locally available resources are used efficiently.**
- **A household can minimize the labor needed to maintain the garden.**
- **A household can maximize the amount and diversity of crops that can be grown in their compound.**

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