

Plant Roots

Root perform three functions for most of the plants :

- Roots anchor the plant in the ground.
- Roots absorb water and dissolved minerals from the soil.
- Roots store food.

Root Systems:

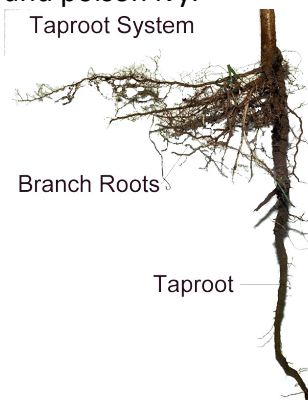
The root is the part of a plant that is usually found underground but can also be above ground.

There are two kinds of root systems. One is the tap root system. In this system there is a main root larger than the other branching roots. The other is the fibrous root system.

Tap roots are found in most trees and the carrot, parsnip, radish, beet, and dandelion. The grasses such as corn and rye have fibrous roots.

Taproot System:

Characterized by having one main root (the taproot) from which smaller branch roots emerge. When a seed germinates, the first root to emerge is the radicle, or primary root. In conifers and most dicots, this radicle develops into the taproot. Taproots can be modified for use in storage (usually carbohydrates) such as those found in sugar beet or carrot. Taproots are also important adaptations for searching for water, as those long taproots found in mesquite and poison ivy.



Fibrous Root System:

Characterized by having a mass of similarly sized roots. In this case the radicle from a germinating seed is short lived and is replaced by adventitious roots. Adventitious roots are roots that form on plant organs other than roots. Most monocots have fibrous root

systems. Some fibrous roots are used as storage; for example sweet potatoes form on fibrous roots. Plants with fibrous roots systems are excellent for erosion control, because the mass of roots cling to soil particles.

Circle the right answer

1. Which of these is not a job of the root of the plant?

To make food To hold the plant in place To take in water and minerals from the soil.

2. In this system there is a main primary root larger than the other branching roots.

tap root diffuse root edible root

3. In this system there are many thin roots with smaller root branching out..

tap root diffuse root edible root

4. Roots tend to grow in length rather than width.

True False

5. The root system of a plant or tree can be large underground than the plant itself above ground.

True False