



Check the Roots First

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Roots are the first place to look when diagnosing a plant or tree problem.

Roots are very important to plants. They uptake nutrients, oxygen and water and transport those to the rest of the plant. They produce essential compounds and store food. Roots support the structure, so give them plenty of room to develop and spread.

It is important that the roots be able to go deep and wide enough to support the above-ground growth and size. Root hairs increase absorptive surface area. Healthy roots are soft and fibrous. They have mycorrhizae, beneficial fungi, which are root tips where the plant absorbs nutrients and water. Mycorrhizae help increase growth rates and drought tolerance.

The number one cause of problems with roots is the soil being compacted or water logged. If too compacted, neither sufficient air nor water is able to pass through to the roots and if the compaction persists over a prolonged period, the roots could die. Roots must be able to breathe and if they are waterlogged, the roots can drown.

Moisture imbalance is a key environmental factor in damaging roots and weakening plants making them susceptible to certain pathogens. Common fungal diseases of roots thrive in moist soil, and the fungus can survive for years.

Additional problems with roots pertain to soil type alkaline or acid that is inconsistent with what the plant needs. Additionally, roots are detrimentally affected if the soil is over-fertilized or there has been a mistaken application of herbicide.

Pests of roots include mice, gophers, ground squirrels and moles; all of these can sever and/or eat roots.

When considering what to plant, do not forget the roots and how they will thrive in the soil. As for a plant or tree, do not buy roots that are kinked or circling the container. Loosen the bound roots with fingers, water or carefully with a knife. It is best to stay away from roots that are wounded, rotted or smell like mushrooms. Also do not buy a plant or tree with insects in the roots or if the main roots circle the trunk.

Unhealthy roots lead to diseases and insects. Diseases of the roots are first evident in the plant or trees by leaf wilt and discoloration in broadleaf trees and chlorotic or faded green in conifers. Advanced indications are leaf and branch death.

Join UCCE Master Gardeners for a free class on Asexual Plant Propagation, held at the Veterans Memorial Building, 130 Placerville Drive, Placerville on Saturday, October 4th, 2014 from 9:00 am to noon. Techniques to grow new plants from your existing garden and landscape will be presented in detail; learn ways to share your favorite plants with friends and family.

UCCE Master Gardeners seek your opinion on where, when, and what subjects should be taught at their free public education gardening classes. Help them understand how to best serve our community by filling out a brief online survey at <http://bit.ly/1qCsRIId>. Paper copies of the survey are also available at the UCCE Master Gardener office.

UCCE Master Gardeners are available to answer home gardening questions Tuesday through Friday, 9 a.m. to noon, by calling (530) 621-5512. Walk-ins are welcome. The office is located at 311 Fair Lane in Placerville. For more information about our public education classes and activities, go to our UCCE Master Gardener website at http://cecentralsierra.ucanr.org/Master_Gardeners/ and <http://www.facebook.com/pages/El-Dorado-County-Master-Gardeners/164653119129>.