



RASPBERRY AND STRAWBERRY ROOT ROTTS IN HOME GARDENS

Root rot of raspberry and strawberry is common in home gardens. General root rot of these plants is caused mostly by wet soil, but fungi may also be involved. Strawberry red stele root rot is caused by a fungus favored by wet soil. These root rotts are usually avoided by initially planting healthy plants in well-drained soil.

SYMPTOMS

Foliage symptoms of root rotts. Root rot is usually noticed when leaves begin to wilt, turn yellow or brown, and die. Symptoms commonly occur during warm spring or summer weather and may develop in a few days or take longer. If longer, leaves are generally yellowish and stunted before they die.

Root symptoms of general root rot. Root systems are small, dark brown or black, and rotted. Since healthy roots may or may not have dark surfaces, determine root condition by cutting or scraping them. All of the inside of a healthy root is whitish, but the inside of a rotted root is partly or entirely brownish or blackish. Wash the cutting tool in soapy water and swab in rubbing alcohol after cutting.

Root symptoms of strawberry red stele root rot. Cutting diseased roots before harvest reveals a reddish brown

CAUSES

Root rotts can be caused by poor soil drainage and/or fungi. Determining the exact cause is often difficult even for professionals.

Poor soil drainage. Often, poor drainage leads to general root rot and contributes to red stele root rot. These plants need well-drained soil and will not do well in other soils. Poor drainage stresses plants, and roots die from insufficient oxygen. Poor drainage may result from heavy (clay-like) soil, high water table, etc. It is usually a winter problem and not noticed at the time. Such soil may appear well-drained in summer. To check soil drainage, dig a hole 2-3 feet deep. Check it often during the rainy season. If the water level in the hole is within 14 inches of the soil surface for any extended period, root problems should be expected.

Fungi. Some fungi attack roots that

core surrounded by whitish tissue. Root tips are usually dead and there are few side roots. Core color is most obvious in spring near dead root tips, and becomes faint or disappears after harvest. Wash and sterilize the cutting tool as described above.

are stressed because of wet soil conditions and cause further root damage. They may be involved in general root rot. Red stele disease is caused by a fungus favored by wet soil.

CONTROLS

No available chemicals are effective. Since it is difficult to specifically identify root rot causes, these control procedures assume that both poor drainage and fungi are responsible.

Properly remove and dispose of affected plants. Completely remove dead or severely affected plants, including root systems. Destroy by burning, placing in the garbage, or taking to the dump. Wash tools used in cutting and removal in soapy water and sterilize in rubbing alcohol. Do not move soil or plants from affected to unaffected areas. If a fungus is involved, soil or plant movement can spread it. Watch for soil on boots. Plant new, healthy plants in a different, well-drained area.

Improve soil drainage. Install drain tile or plant on raised beds. Working organic matter (manure, compost, etc.) into the soil may help somewhat. Give plants good care.

Plant tolerant varieties. Some raspberry varieties, such as Sumner and Newburgh, are tolerant of wet soil and root rots. Strawberry varieties are not tolerant of general root rot, but some are usually resistant to red stele disease. Such varieties are Rainier, Shuksan, Olympus, Totem, and Hood. However, even these can be infected under certain conditions.

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