

Radish

Cultivars

Cultivars or strains with globe-shaped roots, entirely red skins and leaves that are short-to-medium in length are the most popular. Contact Manitoba Agriculture and Food's Vegetable Specialist for variety information.

Climate and Soil Requirements

Radish, a cool-season crop, is adversely affected by hot, dry weather and remains in prime condition for only a few days. To be mild, tender and attractive, it must be grown rapidly with ample moisture. If growth is reduced, the roots become hot, tough and pithy.

Radishes are grown successfully on muck soils throughout the growing season, because such soils are usually well supplied with moisture and provide a cool growing medium. Radishes are successfully grown on mineral soils, however heat and drought stresses may be more severe, causing misshapen radishes and excessive top growth in some varieties.

Seeding and Spacing

Rate: Plant 10-15 lb/ac

For machine harvesting, use 20-30 lb/ac

Depth: 0.5 inch (1.3 cm) deep

Spacing: Plant radish in rows 8-12 inch (20-30 cm) apart, with 12 to 15 plants/ft (40-50 plants/m) of row. For machine harvesting, space rows 4-6 inch (10-15 cm) apart.

Fertility

Refer to Tables 1 through 9 for this crop. For general recommendations in the absence of a soil test, refer to Table 10 in the fertility section.

Pest Management

Diseases

Damping-Off

Use seed treated with a recommended seed treatment fungicide. Do not plant seed too deeply and avoid excessive irrigation

Rhizoctonia Root Rot

Rhizoctonia on radish can cause severe losses. This fungus attacks the feeder roots and storage root. Loss of yield can occur as a result of interference with nutritional uptake or more likely as a result of deformed and blemished storage roots. Stems and cotyledons can also be damaged. This disease may also take the form of "scurf" on the storage root. This appears as black netting and can be washed off in water.

Rhizoctonia prefers cool, wet soils in the spring and fall. Cultural practices that increase soil temperature and decrease excessive soil moisture may provide some relief if the soil inoculum level is not too high. Rotating out of crucifers for two to three years should reduce the incidence of this disease.

Fusarium Wilt (Yellows)

Fusarium yellows or wilt of radish is a soil-borne disease that can seriously affect radishes, especially during warm periods. If the disease attacks the plants when they are small, the leaves will turn yellow and then rapidly turn brown. When the disease attacks more mature radish roots, the plants will appear severely weakened, and the root may become spongy. When cut open, the vascular tissue will be yellowish-brown and sometimes the centre is hollow.

Some varieties of radish have resistance to the disease, which is the only control strategy currently available.

Downy Mildew

Downy mildew causes damage to radishes

especially during cool, damp weather. Symptoms appear as yellow spots on the upper surfaces and greyish-white growth on the undersides of leaves. The disease can also attack the root, causing dark discoloured areas extending down the root from the crown. Infected roots may split or be invaded by secondary rot organisms.

Scab

This soil-borne bacterial pathogen causes scale-like spots that may enlarge to 0.4 – 0.8 inch (1-2 cm). Edges of spots are usually raised, and lesions may become infected with secondary rots. Rotations with grains is partially effective. Avoid planting radish the year after a potato crop. Use of green manure crops such as hay, prior to radishes will benefit microorganisms harmful to the bacteria. The disease is more severe in lighter, dry soils, maintain adequate moisture levels.

Other Diseases

Radishes may also be infected by other diseases such as clubroot, alternaria spot, white rust and viruses, however these disease are generally of low incidence in Manitoba.

Insects

Cabbage Maggot

Refer to the Insecticide Section of the *Guide to Vegetable Crop Protection 2003* for recommended control products.

Flea Beetles

To limit the development of resistance alternate between different classes of insecticide products and apply only when monitoring indicates a need. Refer to the Insecticide Section of the *Guide to Vegetable Crop Protection 2003* for recommended control products.

Aphids

If monitoring indicates a need, refer to Insecticide Section of the *Guide to Vegetable Crop Protection 2003* for recommended products.

Weeds

Competition from weeds can reduce yield and also make harvesting more difficult. For recommended herbicides refer to the *Guide to Vegetable Crop Protection 2003*.