1. PaDIL Species Factsheet

Scientific Name:
*Alternaria radicina* (Meier) Drechsler & E.D. Eddy
(Deuteromycotina: Hyphomycetales: Dematiaceae)

Common Name
Carrot black rot
Live link: http://www.padil.gov.au:80/pests-and-diseases/Pest/Main/136597

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CRC National Plant Biosecurity

Plant Health Australia

Department of Agriculture, Fisheries and Forestry

Department of Agriculture and Food, Western Australia
2. Species Information

2.1. Details

**Specimen Contact:** Robin Coles - coles.robin@saugov.sa.gov.au  
**Author:** Coles, R.  
**Image Use:** Free for use under the Creative Commons Attribution 3.0 Australia licence

2.2. URL


2.3. Facets

**Status:** Exotic Species Occurrence in Australia  
**Group:** Fungi  
**Commodity Overview:** Horticulture  
**Commodity Type:** Fresh Roots, Fresh Stems, Fresh Vegetables, Leaves  
**Distribution:** Cosmopolitan

2.4. Other Names

*Stemphylium radicinum* (Meier, Drechsler & E.D. Eddy) Neerg. (1939)

2.5. Diagnostic Notes

*Alternaria radicina* is a seed-borne pathogen and causes carrot losses due to poor seedling establishment and damping-off. This disorder occurs unpredictably, usually during periods of warm humid weather and has not been controlled successfully by fungicides such as thiram and iprodione applied as a seed coating. The fungus can also be soil-borne and can infect carrots at any stage of growth.

Carrots that survive early infection by *A. radicina* frequently develop a black ring of decay around the top of the stem and this reduces carrot quality. Older plants are particularly susceptible. Senecing leaves are often infected first, followed by infection of the crowns, that may lead to necrosis of the upper portion of the storage root. Late in the growing season the base of the petioles turn dark brown to black and eventually the leaves are killed. This causes the stem tissue to breaks during mechanical harvesting.

The disease can cause significant losses in seed crops where both roots and umbels might be infected. Untreated imported carrot seed has been found to have *A. radicina* infestations of up to 35%.

The high incidence of *A. radicina* on imported carrot seed shows that the pathogen is common in many of the carrot seed-producing areas of the world.

2.6. References


Knudson M.B, and B. Jensen (2003) Biological control of seed-borne Alternaria spp. To enable the production of safe organic carrots. In 8th International Congress of Plant Pathology,
2.7. Web Links


3. Diagnostic Images

Petiole infection of carrots

**Alternaria radicina infection of carrot**: Robin Coles Rural Solution South Australia

Alternaria radicina lesions on carrot leaves

**Host Symptoms**: Robin Coles Rural Solutions South Australia

Alternaria radicina collar infection of 6-8 week old carrot seedlings

**Host Symptoms**: Robin Coles Rural Solutions South Australia

Alternaria radicina infection on coldstore carrots

**Host Symptoms**: Robin Coles Rural Solutions South Australia

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Sunday, September 29, 2019