

Necrotic ringspot

Tobacco ringspot virus

Necrotic ringspot occurs sporadically in the northern United States and Canada.

Symptoms. Leaves are misshapen and crumpled with small necrotic spots (2 to 3 mm in diameter) that may cause small holes. Leaves may be dark green and have blunt or lobed tips. Some cultivars show rosetting of leaves or stem dieback. A slow, steady decline in growth and productivity occurs in all cultivars.

Several declining bushes may occur in a row or in a roughly circular pattern in the field. Plants eventually die.



Disease cycle. The virus is vectored by the dagger nematode (*Xiphinema americanum*) and may be introduced by infected planting stock. The disease spreads about

1 m per year. Weeds (dandelion, narrow-leaved plantain, and common chickweed) may serve as a reservoir for the virus.

Management. Do not plant in virus-infested sites without soil fumigation or several years of crop rotation; plant virus-tested planting stock; remove infected plants including crown and major roots; apply nematicides.