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## VINCA DISEASES

Factsheet | HGIC 2108 | **Updated:** Feb 1, 2019

Annual vinca (*Catharanthus roseus*) is commonly used for summer color in landscapes. It thrives in sunny areas and is fairly drought tolerant. It is also called Madagascar periwinkle or just vinca. This can be confusing because there are other plants in the genus *Vinca* that are perennial vines, which are also called vinca or periwinkle. These perform best in shady areas. Although annual and perennial vincas have some diseases in common, this fact sheet applies mainly to annual vinca. Neither plant has any significant insect pests.

### Phytophthora Stem Blight & Root Rot

Aerial stem blight and root rot are caused by *Phytophthora nicotianae* and occasionally other species. Stem and branch blight frequently occurs without root rot, but root rot is involved in some cases. Dark brown to black lesions form on stems and branches, causing the portions above to wilt and die back. Symptoms of root rot include yellowing and scorching of leaves, poor growth and stunting of plants, wilting and death. Plants with root rot have reduced root systems and individual roots tend to slough off the outer tissue, leaving the inner core behind.

**Prevention & Treatment:** Water management is the main preventative measure. Frequent watering, even in moderate to dry sites, can make conditions favorable for development of branch blight and root rot. Annual vinca and *Vinca* species are fairly drought tolerant, so water only as needed. When rainfall is insufficient to supply an inch of water per week, apply deep supplemental irrigation once, or possibly twice per week, depending on soil type, exposure and weather conditions. Avoid excessive amounts of fertilizer as well. To help prevent root rot, it is also important to provide excellent drainage. When preparing a plant bed, thoroughly dig up the whole area. Adding organic materials, such as composted pine bark, to the soil will help increase drainage due to improved soil structure.



Annual vinca with *Phytophthora* stem blight and root rot.  
Department of Plant Pathology Archive, North Carolina State University, [www.forestryimages.org](http://www.forestryimages.org)

Remove and destroy infected plants. The remaining plants can be treated with a fungicide if cultural practices fail to prevent new infections from occurring. For root rot, use phosphorous acid (Monterey Garden PHOS ) as a soil drench. For aerial blight, use the product above, copper sulfate products (such

as Bonide Copper Fungicide), copper ammonium complex products (such as Monterey Liqui-Cop Fungicide Concentrate or Southern Ag Liquid Copper Fungicide), copper soap (Bonide Liquid Copper Fungicide, Camelot Fungicide/Bactericide Concentrate, or Natural Guard Copper Soap Liquid Fungicide Concentrate), or chlorothalonil products (such as Ferti-lome Broad Spectrum Landscape & Garden Fungicide, GardenTech Daconil Fungicide, Ortho Garden Disease Control, Bonide Fung-onil Concentrate, Hi-Yield Vegetable Flower Fruit & Ornamental Fungicide, Southern Ag Liquid Ornamental & Vegetable Fungicide, or Tiger Brand Daconil). Read the label completely and apply all chemicals according to directions on the label.

## Pythium Root Rot

The pathogen that causes this disease is closely related to *Phytophthora* species so root rot symptoms are similar. This pathogen doesn't cause branch blight, only root rot and damping off of seedlings.

**Prevention & Treatment:** See root rot management information under *Phytophthora* Stem Blight and Root Rot.

## Leaf Spot Diseases

The fungi *Alternaria alternata* and *Ulocladium* sp. occasionally cause spots on foliage, stems and petioles. Symptoms first appear on lower leaves and stems, and if left unchecked, move upward. Spots caused by both fungi are small, ranging from the size of a pin head to 1/8 inch in diameter. As they enlarge, light and dark bands may alternate within the lesion, giving it a target spot appearance. As the spots increase in number, leaves turn yellow and drop from the plants.

**Prevention & Treatment:** Cultural practices that reduce the amount of moisture on the foliage and/or the length of time leaves remain wet will suppress this disease. Therefore, avoid overhead irrigation whenever possible or water during pre-dawn hours so the plants have plenty of time to dry before evening. Strive to maintain optimum soil pH and nutrient levels, as low fertility increases disease severity. Remove heavily infected plants immediately to minimize disease spread. To reduce the overwintering population of the pathogen, remove dead plants from the garden after they are killed by hard frost. Fungicides may be necessary for management of serious infections of leaf spot.

Chlorothalonil products (such as Ferti-lome Broad Spectrum Landscape & Garden Fungicide, Garden Tech Daconil Fungicide, Ortho Garden Disease Control, Tiger Brand Daconil, Hi-Yield Vegetable Flower Fruit & ornamental Fungicide, Southern Ag Liquid Ornamental & Vegetable Fungicide, or Bonide Fung-onil Concentrate), and iprodione products (Rovral or Rovral 4F) are recommended. Apply according to label directions.

## Rhizoctonia Stem & Root Rot

*Rhizoctonia* species sometimes cause stem rots of vinca plants and seedlings. Root rots also occur, but are less commonly encountered. Plants affected by stem rot turn yellow, wilt and collapse. Death by root rot is generally slower and more subtle. Affected plants are stunted, their roots have brown lesions, leaves turn yellow and plants wilt even when soil moisture is sufficient.

**Prevention & Treatment:** Purchase only healthy, green plants. Inspect the roots if there are any doubts. Make sure plants aren't installed too deeply. Apply supplemental water only as needed and water thoroughly when an application is made. Light, frequent waterings encourage the growth of stem rot pathogens because of increased humidity levels near the stem. Frequent watering can also exclude oxygen from the root zone, which encourages root rot pathogens. Remove and destroy plants that are clearly diseased, making an effort to remove all roots when root disease is present. Fungicides can be applied to the remaining plants if necessary. Products containing thiophanate methyl (such as,

Cleary's 3336-WP Turf & Ornamental Fungicide or Southern Ag Thiomyl Systemic Fungicide), chlorothalonil (such as Ferti-lome Broad Spectrum Landscape & Garden Fungicide, Garden Tech Daconil Fungicide, Ortho Garden Disease Control, Tiger Brand Daconil, Hi-Yield Vegetable Flower Fruit & ornamental Fungicide, Southern Ag Liquid Ornamental & Vegetable Fungicide, or Bonide Fung-onil Concentrate), and iprodione (Rovral or Rovral 4F) can be used. Apply according to label directions.

## Gray Mold (Botrytis Blight)

This disease, caused by *Botrytis cinerea* is seen occasionally during cool, moist spring weather, especially in heavily fertilized landscape plantings. The pathogen usually builds up on dead plant parts and disease develops when these come into contact with living tissue. Symptoms progress rapidly and can include leaf spots and blights, stem cankers, stem rots and damping-off of seedlings. Stem cankers are similar to those produced by *Phytophthora* spp. Profuse gray fungal growth is produced on dead plant parts; this tell-tale sign gives the disease its common name, gray mold.

**Prevention & Treatment:** Wait until warm weather persists to plant vinca. Handle plants carefully during planting to avoid wounding. Remove and destroy declining (senescing) leaves and flowers on a continual basis. Remove severely diseased plants from the planting. Water only as needed and fertilize according to soil test recommendations. Avoid overhead irrigation, if possible, or water early in the morning so that foliage dries before nightfall. Space plants well to improve air circulation within the plant canopy. Fungicides are rarely needed to control Botrytis blight on vinca in a landscape setting if cultural practices are followed and weather follows normal patterns. If disease becomes severe and weather conditions are favorable for disease development, thiophanate methyl (such as Cleary's 3336-WP Turf & Ornamental Fungicide or Southern Ag Thiomyl Systemic Fungicide), and iprodione (Rovral or Rovral 4F) products can be used.



Rhizoctonia stem and root rot on perennial groundcover vinca.  
R.K. Jones, North Carolina State University,  
[www.forestryimages.org](http://www.forestryimages.org)



Botrytis blight stem canker on annual vinca.  
Department of Plant Pathology Archive, North Carolina State  
University, [www.forestryimages.org](http://www.forestryimages.org)

## Black Root Rot

Black root rot is caused by the fungus *Thielaviopsis basicola*. The disease isn't common on vinca in landscapes, but can be introduced by planting infected material or planting in areas where other, more susceptible hosts, such as pansies, have succumbed. As with all root rot diseases, infected plants are stunted and turn yellow. Washing and inspecting the root systems can point towards a black root rot diagnosis. Diseased plants have small root systems with a "salt-and-pepper" appearance. The root color results from the presence of dark fungal growth and black resting spores growing within the

roots. As the disease becomes more severe, roots turn black and soft.

**Prevention & Treatment:** Avoid planting vinca in areas where pansies have performed poorly or where Japanese hollies have died. Select plants with a healthy green appearance and uniform height. Fertilize according to soil test results, avoiding fertilizers with high ammonium content, such as ammonium nitrate or ammonium sulfate. High pH soils can lead to increased disease severity so apply lime only if needed. Remove and destroy all infected plants, including the entire root system. Thiophanate methyl (such as Cleary's 3336-WP Turf & Ornamental Fungicide or Southern Ag Thiomyl Systemic Fungicide) can be applied to protect remaining plants.

## Tomato Spotted Wilt Virus (TSWV)

This virus disease shows up occasionally in landscape plantings of vinca and many other herbaceous plants. TSWV is spread by tiny insects called thrips. Symptoms vary from host to host. On vinca, symptoms include black concentric ring spots or line patterns, yellowing, stunting and distortion.

**Prevention & Treatment:** Inspect plants for virus symptoms prior to purchase. Remove all diseased plants from flower beds, as infected plants cannot be cured and can support spread of the disease. Thrips management hasn't been shown to significantly slow the spread of TSWV. In addition, thrips are difficult to control because they often feed deep within flowers or flower buds, and two life stages, the eggs and the pupae, are unaffected by insecticides. Avoid planting vinca near vegetable gardens, as many vegetables are also susceptible. Controlling weeds is also essential because many weeds can harbor both thrips and the virus.



Tomato spotted wilt virus symptoms on annual vinca.  
Division of Plant Industry Archive, Florida Department of  
Agriculture and Consumer Services, [www.forestryimages.org](http://www.forestryimages.org)

If this document didn't answer your questions, please contact HGIC at [hgic@clemson.edu](mailto:hgic@clemson.edu) or 1-888-656-9988.

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