

Spinach

Anthracnose

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Identification and Life Cycle

Anthracnose of spinach is caused by the fungus *Colletotrichum spinaciae*. The disease cycle is initiated by spores disseminated by wind and splashing irrigation and rainwater. The disease is most destructive at temperatures between 79 to 86° F, with abundant moisture. The fungus overwinters in seed and infested crop debris.

Plant Response and Damage

Anthracnose symptoms initially appear as small, dark olive-colored water-soaked spots. As the spots enlarge, they become tan in color. Under disease favorable conditions, lesions become larger and more numerous, eventually coalescing and killing entire leaves and petioles. If weather conditions become less favorable for disease, severely infected leaves will drop from the plant and new foliage will appear relatively free from infection.

The disease reduces both spinach yield and quality.

Management Approaches

Biological Control

No biological control practices have been developed for anthracnose.

Cultural Control

Plant high quality spinach seed free from the anthracnose pathogen. Practice a three-year or longer rotation to nonhosts, such as small grains or corn. Avoid overhead irrigation, especially during humid, cloudy weather. Deeply bury crop residues soon after harvest to reduce pathogen survival and overwintering. Eliminate volunteer spinach.

Chemical Control

Chemical controls are most effective when integrated with sound cultural control practices.

Product List for Anthracnose:

Pesticide	Product per Acre	Application Frequency (days)	Remarks
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Copper Fungicides—<i>not all formulations available are listed</i>			
Champ DP	1.33-2.66 lb	7-10 days	Can cause leaf flecking
Copper-Count-N	3 pt	7-10 days	Can cause leaf flecking
Cuprofix Disperss	2.5-4 lb	7-10 days	Can cause leaf flecking
Kocide 2000	1.5-2.25 lb	7-10 days	Can cause leaf flecking
Kocide 3000	0.75-1.25 lb	7-10 days	Can cause leaf flecking
Nordox	2-3 lb	7-10 days	Can cause leaf flecking
Nu-Cop 3L	1.33-2.66 pt	7-10 days	Can cause leaf flecking
Tri-Basic Copper	4 pt	7-10 days	1 day PHI
Neem			
Trilogy	2 pt	7-14 days	Maximum of 2 gallons per season; 0 day PHI
Potassium Bicarbonate			
Armicarb 100	2.5-5 lb	5-14 days	Apply in at least 20 gallons per acre; 0 day PHI
Strobilurin			
Amistar	2-5 oz	5-14 days	Maximum of 4 applications; rotate with a fungicide with a different mode of action; 0 day PHI
Quadris	6.2-15.4 fl oz	5-14 days	Maximum of 4 applications; rotate with a fungicide with a different mode of action; 0 day PHI
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agencies. State rules and regulations and special pesticide use allowances may vary from state to state: contact your State Department of Agriculture for the rules, regulations and allowances applicable in your state and locality.

Categories: Spinach, Diseases, Anthracnose

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