TENNESSEE STATE UNIVERSITY

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Cercospora Leaf Spot on Crapemyrtle

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Cercospora leaf spot, caused by the fungal pathogen *Pseudocercospora lythracearum* (Capnodiales: Mycosphaerellaceae), is a widespread disease affecting crapemyrtle in warm, humid regions. The pathogen causes dark brown to yellow spots ranging from 1/8 to 1/4 inch in diameter on the upper surface of the leaves, while the underside may exhibit white-gray sporulation of the fungus. The most noticeable symptoms are small, circular to irregular spots on the leaves (Fig.1). These spots first appear in mid-to-late summer on mature leaves in the lower canopy and spread upwards. As the leaf spots enlarge, they appear on both sides of the leaf, turn yellow, and drop prematurely. While Cercospora leaf spot primarily affects the foliage, severe infections leading to

Figure 1. *Cercospora leaf spot on a crapemyrtle. Photo credit: Madhav Parajuli, USDA (top), Allen Owings, Louisiana State University (bottom).*

defoliation and reduced flowering, which diminishes the aesthetic quality and overall health of crapemyrtles. In susceptible cultivars, this disease can lead to nearly complete defoliation by late summer or early fall.

Life cycle

Cercospora produces conidia (asexual spores) on infected plant debris and dormant leaf buds that are dispersed by wind, rain, and irrigation. These spores are the primary means of infection and can spread the disease rapidly under favorable conditions. When the spores land on the surface of a susceptible leaf, they germinate in moist conditions. Warm and humid conditions are particularly favorable for spore germination. The germinated spores penetrate the leaf tissue through natural openings such as stomata or directly through the leaf surface. The fungus then begins to grow within the leaf, leading to lesions.

As the disease progresses, these spots may merge, resulting in larger areas of necrosis. The fungus survives the winter on fallen leaves and dormant leaf buds. In the spring, asexual spores from these overwintering sites infect new growth, continuing the disease cycle. In container-grown crapemyrtles, Cercospora leaf spot primarily originates from diseased cuttings. In landscape settings, the main source of the disease is fallen leaves from the previous year.

Management

Managing Cercospora leaf spot in crapemyrtle involves a combination of cultural practices, chemical treatments, and the use of resistant cultivars. Ensure good air circulation around the plants by spacing them appropriately and pruning to reduce overcrowding. This helps decrease humidity and leaf wetness, which can slow the spread of the disease. Remove and destroy fallen leaves and other plant debris that may harbor the fungus to reduce the source of overwintering spores. Additionally, proper fertilizer management is also important to maintain the pathogen at a lower level.

The use of disease-resistant cultivars (Table 1) is the most effective, sustainable, and cost-effective method for establishing and maintaining healthy plants without the use of fungicides. Cultivars resistant to Cercospora leaf spot reduce the need for chemical control measures while enhancing the plant’s performance in disease-prone areas.

Fungicides are most effective when applied preventatively or at the first sign of disease. Control strategies for Cercospora leaf spot typically rely on repeated fungicide applications. Chemical products containing active ingredients such as chlorothalonil, propiconazole, myclobutanil, or azoxystrobin are labeled for Cercospora leaf spot (Table 2). It is important to follow label directions and rotate fungicides to prevent the development of resistance.

Table 1. Susceptibility of *Lagerstroemia* cultivars to Cercospora leaf spot.

Cultivar	Parentage	Cercospora leaf spot	References
Apalachee	*L. indica* × *L. fauriei*	Resistant	Roth et al. (2025), Parajuli et al. (2023)
Arapaho	*L. indica* × *L. fauriei* × *L. limii*	Susceptible	Parajuli et al. (2023)
Cheynne	*L. indica* × *L. fauriei* × *L. limii*	Susceptible	
Choctaw	*L. indica* × *L. fauriei*	Moderately Resistant	
Dynamite	*L. indica*	Susceptible	Roth et al. (2025)
Fantasy	*L. fauriei*	Resistant	Hagan et al. (1998), Parajuli et al. (2023)
Kiowa	*L. fauriei*	Resistant	Parajuli et al. (2023)
Miami	*L. indica* × *L. fauriei*	Resistant	Roth et al. (2025)
Muskogee	*L. indica* ×*L. fauriei*	Resistant	
Natchez	*L. indica* × *L. fauriei*	Resistant	
Osage	*L. indica* × *L. fauriei*	Susceptible	Parajuli et al. (2023)
Ozark Spring	*L. indica*	Susceptible	Roth et al. (2025)
Pink Velour	*L. indica*	Susceptible	
Sarah's Favorite	*L. indica* × *L. fauriei*	Susceptible	Parajuli et al. (2023)
Tonto	*L. indica* × *L. fauriei*	Susceptible	
Townhouse	*L. fauriei*	Resistant	
Tuscarora	*L. indica* × *L. fauriei*	Susceptible	
Tuskegee	*L. indica* × *L. fauriei*	Susceptible	
Victor	*L. indica*	Susceptible	Roth et al. (2025)
Woodlander's Chocolate Soldier	*L. fauriei*	Resistant	Parajuli et al. (2023)
L. subcostata selection	*L. subcostata*	Resistant	

Table 2. Fungicides/biofungicides for the management of Cercospora leaf spot on crapemyrtle.

FRAC Code[1]	Active Ingredient	Trade Names[2]
1	thiophanate methyl	Allban Flo, 3336, SysTec 1998
3	metconazole	Tourney
	myclobutanil	Eagle 20
	propiconazole	Banner Maxx II, Propiconazole, Strider
	triadimefon	Bayleton 50
	triticonazole	Trinity TR, Trinity
7	isofetamid*	Astun
11	fluoxastrobin	Disarm O
	trifloxystrobin	Compass O
	azoxystrobin*	Heritage
	kresoxim-methyl	Cygnus
12	fludioxonil	Emblem Medallion
44	*Bacillus subtilis QST 713 strain*	Cease
7+11	benzovindiflupyr + azoxystrobin*	Mural
	boscalid + pyraclostrobin	Pageant
9 + 12	cyprodinil + fludioxonil	Palladium
M1	copper hydroxide	Champ, CuPRO 2005 T/N/O, Nu-Cop 50, Nu-Cop HB, Nu-Cop 3L
	copper salts of fatty and rosin acids	Camelot
M3	mancozeb	Dithane 75, Fore 80, Mancozeb, Pentathlon, Pentathlon, Protect
M4	captan	Captan 50
M5	chlorothalonil	Daconil Ultrex, Daconil Zn, Daconil Weather Stik
M5+ 1	chlorothalonil + thiophanate methyl	Spectro 90
M3 + 3	mancozeb + myclobutanil	Clevis

M5 +3	chlorothalonil + propiconazole	Concert II
M1+ M3	copper hydroxide + mancozeb*	ManKocide*, Junction
M3 + 1	mancozeb + thiophanate methyl	Zyban
Not classified	didecyl dimethyl ammonium chloride*	KleenGrow
	Bacillus mycoides isolates J.*	LifeGard

[1]*FRAC = Fungicide Resistance Action Committee.*

[2]*Trade names are provided as examples only and should not be considered a complete list of products available.*

***** *These products were tested by the Baysal-Gurel lab.*

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For additional information, contact your local nursery specialist at:

Tennessee State University, Otis L. Floyd Nursery Research Center
472 Cadillac Lane McMinnville, TN 37110
http://www.tnstate.edu/agriculture/nrc/
931-259-4824

Precautionary Statement

To protect people and the environment, pesticides should be used safely. This is everyone's responsibility, especially the user. Read and follow label directions carefully before you buy, mix, apply, store or dispose of a pesticide. According to laws regulating pesticides, they must be used only as directed by the label.

Disclaimer

This publication contains fungicide recommendations that are subject to change at any time. The recommendations in this publication are provided only as a guide. It is always the fungicide applicator's responsibility, by law, to read and follow all current label directions for the specific fungicide being used. The label always takes precedence over the recommendations found in this publication. Use of trade, brand, or active ingredient names in this publication is for clarity and information; it does not imply approval of the product to the exclusion of others that may be of similar and suitable composition, nor does it guarantee or warrant the standard of the product. The author(s) and Tennessee State University assume no liability resulting from the use of these recommendations.

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