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Diseases and Pests of Lagestroemia Indica L.

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Abstract: Lagestroemia indica is a very popular ornamental shrub or small tree. Although prized for its beautiful flowers and attractive bark, this plant is also susceptible to various diseases and pests. Pests that affect Lagestroemia indica include aphids, leaf spider mites. In terms of diseases, powdery mildew is a fungal disease that causes a white, powdery coating on leaves and flowers. To maintain the health and attractiveness of Lagestroemia indica it is important to monitor it for signs of infection or disease and take appropriate measures.

Keywords: Lagerstroemia, Erysiphe lagerstroemia, Erysiphe ausstraliana, Cercospora lythracearum, Tinocallis kahawaluokalani, Eriococcus lagerostroemia, Popillia japonica.

Introduction

Lagestroemia indica is a plant belonging to the genus Lagerstroemia, native to southern China, Japan and southern Korea, Australia and Oceania. The scientific name Lagestroemia was given by Carl Linnaeus in 1759 to honor the Swedish naturalist and director of the Swedish East India Company, Magnus fon Lagerstroem. Lagerstroemia indica is known worldwide as Crape myrtle. It derives its name from the resemblance of its general appearance and leaves to Myrtus communis [6]. Lagerstroemia indica is a common ornamental shrub or small tree that has become naturalized and cultivated in many tropical and subtropical regions of the world. Lagerstroemia indica is often used to provide shade around parking lots, as median plantings along roads, and is also planted in home gardens [2]. The tree was introduced in 2007 to improve landscaping in Tashkent. Lagerstroemia indica is a deciduous tree or shrub valued for its bright summer flowers, colorful fall foliage, and attractive bark. It is widely grown in gardens and landscapes in the southern United States and other warm-climate regions of the world. Although Lagerstroemia indica are generally considered hardy and disease-resistant plants, they can still be susceptible to a number of pests and diseases that can affect their health and appearance [5].

The main part

Lagerstroemia indica is valued mainly for its long-lasting, spectacular flowers. Flowers can be white, pink, red or purple. Flowering time varies by variety. In early summer, large flowers appear on the tips of new branches and last until autumn. After the flowers fade and fall from the tree, the fruits remain in the form of small brown capsules. These fruits are preserved throughout the winter. To give an attractive, fleshy appearance, the upper bark is removed. Its color is very beautiful from

brown to gray. In autumn, the color of the leaves changes from yellow to orange and red. Although the same plant can display leaves of several colors, white-flowered species often have yellow fall color, while pink and red-flowered species show yellow, orange, and red leaves in fall [3].

Lagerstroemia indica is generally considered a relatively disease- and pest-resistant tree. However, there are a number of problems that it may face. Common diseases and pests of Lagerstroemia indica include:

Powdery Mildew: This fungal disease can affect the leaves, stems and flowers of the tree, causing a powdery white coating. White to gray spots appear on the surface of leaves, flowers and new shoots. Heavily infected flowers may not open. Affected parts of the plant are damaged and may stop growing. The disease is most serious in shady, moist areas, especially where there is a lot of vegetation and poor air circulation. High humidity at night and dry, mild daytime conditions are favorable for the development of the fungus, as it often occurs in spring and autumn. This can be prevented by planting the tree in full sun and avoiding overhead watering. The fungus Erysiphe lagerstroemiae is known as the powdery mildew agent of Lagerstroemia indica in the United States, and Erysiphe australiana is a reported powdery mildew pathogen in Japan, China, and Australia. The pathogen hibernates in the form of mycelia in dormant buds [7]. During August-October 2020, signs of powdery mildew were observed on the leaves and branches of Lagerstroemia indica in gardens and green areas in Tashkent. Symptoms were more pronounced on young leaves and twigs than on old leaves and twigs. This disease of Lagerstroemia indica develops in Uzbekistan mainly in August and September, and the affected plants show severe defoliation and twisted leaves. Often leads to defoliation and death of young shoots. According to our information, this is the first report of powdery mildew of Lagerstroemia indica in Uzbekistan. Based on morphological analysis, the pathogen was identified as Erysiphe australiana [5].

Cercospora leaf spot. Leaf spot disease caused by the fungus, Pseudocercospora lythracearum (Cercospora lythracearum) is the second most damaging disease of Lagerstroemia indica [1]. Leaf spots develop in wet, humid weather from mid-summer to fall. Symptoms of Cercospora leaf spot include randomly scattered dark brown spots on leaves that range in color from yellow to red. It often starts on the lower leaves and moves up through the plant. Infected leaves drop from the plant early, and severely affected plants may defoliate before frost. Although Cercospora leaf spot does not significantly reduce plant health, it does affect the appearance of fall leaf color.

A **B**

Figure 1. A. Powdery mildew**. B. Lagerstroemia indica** aphids**.**

Lagerstroemia indica aphids. Tinocallis kahawaluokalani is a specific pest of Lagerstroemia indica It does not affect any other plant by causing body damage. They are located in Southeast Asia, but can be found almost everywhere where Indian mustard grows. This aphid is less than 2 mm long and has a yellowish-green color with black spots or spikes. Adults have wings with two large black markings on the upper surface of the abdomen. If there are a lot of them, they can make the plants look bad by directly damaging them, resulting in yellowing of the leaves, early leaf fall and mold that appears on the aphids that feed on the aphids [9].

Bark scale. An emerging pest was discovered in 2010 in northern Texas. It was originally thought to be a race of azalea bark, but subsequent molecular analysis indicates that it is a species endemic to crapemyrtle and possibly accidentally introduced. Current evidence suggests that the scale may be a migrant from Asia, Eriococcus lagerostroemia, which is common in the wood of Lagerstroemia indica In Japan and China, black mold and sticky exudate on leaves and bark may indicate infection. The color of the insects is white to gray, with pink oozing from the "crushed" [8].

Japanese beetle. Popillia japonica attacks the flowers, fruits, and leaves of more than 300 species of plants, including one of their favorite species, the Indian nasturtium. This beetle can significantly damage the leaves and flowers of the tree, turning them into skeletons [4]. The adults of this scab beetle feed heavily on flowers by skeletonizing the leaves.

Conclusion

To prevent and manage diseases and pests of Lagerstroemia indica it is important to maintain good cultural practices such as proper watering, pruning and fertilization. It is also important to carefully monitor the plant for signs of disease or pest infestation and, if necessary, take appropriate measures to solve the problem. This makes it very important to use fungicides or pesticides as needed, and to remove and destroy any infected or damaged plant material. It is important for farmers and landscapers to be aware of these problems and take appropriate measures to prevent or combat them.

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