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RESEARCH & EXTENSION
University of Arkansas System
Sherrie Smith

SPDN
Southern Plant Diagnostic Network
Issue 7-April 26, 2007

Arkansas Plant Health Clinic Newsletter

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Canola

Growers in Arkansas are looking at non-traditional oil seed crops as energy prices rise and such crops become more profitable. Canola in Arkansas has been in the ground for about 7 months. The clinic is starting to see samples with both insects and diseases. Black rot, a bacterial disease caused by *Xanthomonas campestris,* is unsightly but doesn't usually do much damage to yield. Infected leaves develop a bright yellow discoloration on leaf edges. Large angular water-soaked spots develop along leaf margins and veins. Leaf veins in infected areas may appear dark in color. Chemical control is not usually recommended. Cultural controls consist of crop rotation, and furrow irrigation instead of overhead irrigation.

One of the most damaging diseases of canola is White mold caused by *Sclerotinia sclerotiorum*. Stem rot starts as narrow elliptical sunken light tan to gray lesions in the mid to lower stem. Lesions may be more than a foot long. Infected stems often collapse. When the stems are cut open, black irregular sclerotia about ¼ inch long can be found inside the diseased stems. This is usually a springtime disease more prevalent at bloom under wet conditions. Quadris is the fungicide of choice. It must be applied at first flowering prior to infection to be most effective.

Gray mold caused by *Botrytis cinerea* is often a secondary infection that starts on plant tissues damaged by insects or frost. The disease can be recognized by the development of fuzzy gray mycelial growth on leaves, flower and stems during wet humid weather.
Botrytis infections have been associated with aphid damage. Green peach aphids are the most common aphid known to damage canola. Pods are often distorted and twisted by heavy aphid feeding. Aphids can debilitate and under some conditions kill plants. They are usually found in colonies under the leaves. Aphids are attracted to yellow. When scouting check yellowed leaves first. When aphids exceed five per leaf or 20% infested plants at the seedling and rosette stages, plants should be sprayed. They should also be sprayed at bud and early bloom when infested plants exceed 15%. Capture 2Ec, Proaxis 0.5CS, Warrior Z, and Methyl Parathion are labeled for aphid control on canola.

Canola White Mold- *Sclerotinia sclerotiorum*

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

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Canola Black Rot- *Xanthomonas campestris*

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Canola Pod Distortion-Aphids

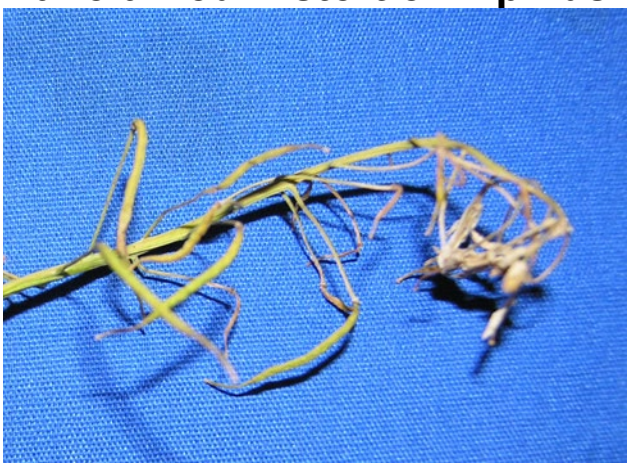

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Canola Pod Distortion-Aphids

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Liriope

Liriope, also known as Liriope or Lilyturf, is a versatile perennial. It grows in sun or shade and is not particular about soil except for requiring good drainage. Liriope is most used as an evergreen ground cover or edging plant.

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There are several cultivars available with grass-like foliage ranging in color from blue, green, to variegated. It flowers with spikes of lavender to blue flowers late summer to fall. Liriope grows 9-16" tall depending on variety and soil fertility. It is so hardy and problem free that it is sometimes considered invasive in the garden, especially Liriope spicata. Although problems are few, we sometimes see Anthracnose leaf spot on the foliage. Brown to grey spots appears on the leaves, especially leaf tips and leaf margins. Heavy infections sometimes kill entire leaves as the spots coalesce. Avoidance of overhead irrigation and the application of an ornamental fungicide such as Daconil usually provide excellent control of anthracnose.

Where soils are boggy it is not uncommon to find Phytophthora root and crown rot. The pathogen is *Phytophthora palmivora*. Symptoms are yellowed leaves that appear water-soaked, discolored, and rotted at the base. Affected leaves become chocolate-brown near the base and are easily pulled from the crown. The pathogen requires abundant free moisture in the soil to reproduce and infect. Purchase plants with healthy green foliage that is firmly attached to the crown. Avoid over-watering, plant crowding, and planting too deep. Do not plant in areas where water is prone to stand. Fungicides available to the homeowner only suppress the disease at best. If the bed is small, replacement of the soil and re-planting may solve the problem.

Liriope Anthracnose-*Colletotrichum* spp.

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

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Liriope Phytophthora Root Rot-*Phytophthora palmivora*.

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Phlox

Tall garden phlox, (*Phlox paniculata* and *Phlox maculata*) are very pretty plants that comes in colors ranging from pure white, orange, blue violet, through all the pink and magenta shades. They have a long bloom period beginning in late spring to midsummer, depending on cultivar. Some varieties such as Carolina phlox Miss Lingard repeat bloom. Many have a sweet fragrance. They all make lovely long lasting cut flowers. Size ranges from 18 inches to nearly 3 feet tall. They do best in rich moist soil in full sun. Some cultivars are very susceptible to powdery mildew. Symptoms are a powdery white-grayish film on the surface of the leaves. As a rule, maculata varieties are more resistant than paniculata varieties. Nursery catalogs will often mention whether a given variety has resistance to powdery mildew. Phlox 'David" has excellent powdery mildew resistance in a lovely white. 'Franz Shubert' in a lilac blue has good resistance also. An ornamental or rose fungicide will suppress powdery mildew.

Another problem that is less commonly seen is Septoria leaf spot. Symptoms are dark brown to blackish spots with paler centers. Badly infected leaves may turn yellow and fall off. This is seen more often under crowded nursery conditions with overhead irrigation than in the home garden. Again, an ornamental fungicide gives good protection.

Phlox Powdery Mildew-*Erysiphe cichoracearum*

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Phlox Septoria Leaf Spot-*Septoria divaricata*

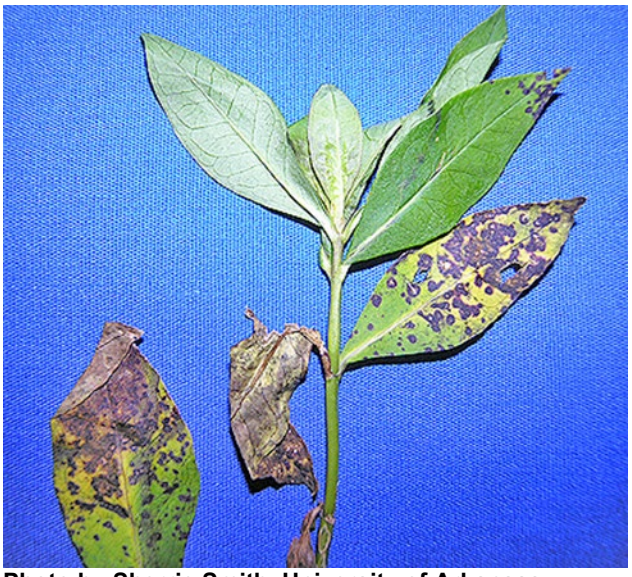

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Peach

Bacterial leaf spot caused by *Xanthomonas campestris* pv *pruni* is one of the most serious diseases of peach and nectarine. It also attacks plum and apricot. Symptoms begin on the leaves as reddish-brown spots which are angular in shape. The spots sometimes appear nearly black. The centers of the spots may fall out giving a shot hole appearance. Infected leaves turn yellow and eventually fall off. In severe cases trees may lose all their leaves. The fruit itself may become infected with brown or black bacterial spots that eventually become cracked or pitted in appearance. The bacterium also causes lesions on stems and branches that ooze bacteria when conditions are favorable. Bacterial leaf spot is difficult to control. There is no adequate chemical control for the disease. It can be suppressed with spring applications of a copper fungicide such as Kocide. Applications should be made at bud break. Cleaning up fallen leaves, twigs, and fruit, and cutting out infected branches are helpful. The best preventative is planting resistant varieties.

Peach Bacterial Leaf Spot-*Xanthomonas campestris* pv *pruni*

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Wheat

We are collecting isolates of wheat scab for Dr. Milus. Please send any suspicious samples to the lab with information about variety, location, planting date, etc. Thanks.

This bulletin from the Cooperative Extension Plant Health Clinic (Plant Disease Clinic) is an electronic update about diseases and other problems observed in our lab each month. Input from everybody interested in plants is welcome and appreciated.

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