



Arkansas Plant Health Clinic Newsletter

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Tomato

Tomato plants that are deficient in Potassium are smaller than normal and have smaller fruit. Areas on the sides and upper parts of the fruit may remain yellow or turn grayish. Fruits may be softer than normal and have lower acidity. Symptoms on the leaves include bronzing on the older leaves. The margins become tan, then brown. On severely deficient plants, some interveinal chlorosis along with necrotic margins occurs. These symptoms begin on the oldest leaves; proceed to middle leaves, and then upper leaves. Potassium is mobile in the soil and can become deficient because of leaching by rain or irrigation. Fertilization per soil test recommendations and side dressing during the season solves Potassium Deficiency. See extension publication FSA6017 *Home Garden Series: Tomato* for fertilizer recommendations.

[Link to the University of Arkansas Extension 'Home Garden Series' Article on Tomatoes](#)

Potassium Deficiency symptoms on fruit should not be mistaken for the physiological disorder of fruit known as "Yellow Shoulder" (Yellow Top, Persistent Green Shoulder). Yellow Shoulder mostly occurs on cultivars with green shoulders

and is linked to high temperatures during maturation. The shoulder area of the fruit exposed to the sun remains yellow or green as the rest of the fruit ripens. That area is hard and white inside. The susceptibility of a tomato to Yellow Shoulder is dependent on cultivar.

The disease Graywall has also been linked to Potassium Deficiency among other things. Black to dark brown necrotic tissue forms in the walls of tomato fruit infected with Graywall disease. In most cases, only the outer walls are affected. Wall tissue may partially collapse, causing the outer skin of the tomato fruit to appear wrinkled. The area appears woody when cut, and the fruit is of poor quality. Graywall has been associated with Tobacco Mosaic Virus, low light conditions, and cool weather as well as Potassium Deficiencies.

Tomato Potassium Deficiency of fruit-Abiotic



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

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Tomato Potassium Deficiency- Abiotic



Photo by D. N. Maynard, APS Image Library

Tomato Graywall-Abiotic



Photo by R. E. Stall, APS Image Library

Pentas and Phlox

Plant Bugs from the genus *Lopidea* are true bugs from the Miridae family of plant bugs. This insect is about 5.5mm (7/32") long with orange and black coloration. The color of the bugs warns predators that they taste bad. *Lopidea* bugs feed on the sap of plants, attacking leaves, stems, flowers, and seeds. Large populations can form and cause considerable damage, including speckling of leaves, browning, flower abortion, and death of severely infested plants. There are several species of *Lopidea* bugs, usually host specific. This is the first time we have found them on *Pentas*. We are waiting for species identification from our insect expert. One very well-known species is the Phlox Plant Bug



Lopidea davisii. It is a pest on cultivated phlox in the eastern United States. Most *Lopidea* species have only one generation a year, but the Phlox Plant Bug has two generations. Eggs overwinter on plant stems, hatching in the spring in May and June. The second generation appears in July and lasts to late September. The Phlox Plant Bug's range is the eastern United States from Maryland and West Virginia in the east to South Dakota, Minnesota, Arkansas, and Mississippi in the Midwest. You may use insecticidal soap at 1%-2% per gallon. Thorough coverage is necessary. Spray must contact the pests to be effective. Repeat spray three times at 5-7-day intervals. You also may use conventional insecticides such as acephate, acetamiprid, carbaryl, malathion, or pyrethroids. Always follow label instructions.

Pentas Lopidea Plant Bug feeding injury- *Lopidea* spp.



Photo by Ricky Corder, University of Arkansas Cooperative Extension

Pentas Lopidea Plant Bugs feeding on flowers-*Lopidea* spp.



Photo by Ricky Corder, University of Arkansas Cooperative Extension

Pentas Lopidea Plant Bug-*Lopidea* spp.



Photo by Ricky Corder, University of Arkansas Cooperative Extension

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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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