



SUNSCALD OF PEPPER AND TOMATO

Sunscald, a noninfectious disease of pepper and tomato, is caused by sudden exposure of the fruit to intense direct sunlight and is most serious during periods of extreme heat. Sunscald is common on plants that have suffered premature loss of foliage from leafspot diseases. Severely pruned plants or those attacked by *Verticillium* or *Fusarium* wilts are also likely to suffer from sunscald due to the loss of the lower foliage.



Figure 1. Sunscald on four pepper fruits.

Fruit of healthy plants may be damaged by sunscald if the vines are disturbed or broken and the fruit is exposed to the sun during hot, dry weather. Tomato vines can be disturbed by pruning, natural spreading of the plant caused by the developing fruit load, or upsetting of the plants by a picker. Insufficient nitrogen after fruit set may further aggravate this problem.

SYMPTOMS

Pepper. Irregular, light-colored, scalded areas appear on any part of the fruit exposed to direct sunlight. Affected areas soon become slightly sunken or wrinkled and creamy white on older fruit (Figure 1). On young fruits the spots are light brown. Scalded tissue dries out rapidly in hot weather, becoming thin and papery. A number of secondary fungi, such as *Alternaria*, *Brachysporium*, and *Cladosporium*, commonly grow over the scalded surface, giving it a black, gray, or green moldy appearance. Such fungi often gain entrance through the scald, causing the entire fruit to decay.

Tomato. A yellow or white patch develops on the side or upper half of the fruit directly exposed to the sun. The injured area may merely remain yellow as the fruit ripens, but frequently the tissues are more severely damaged. A whitish, shiny, blistered area then develops. The killed, bleached tissues gradually shrink to form a flattened, pale yellowish to grayish white spot with a wrinkled, papery surface. The scalded area is later invaded by secondary fungi, such as *Alternaria*, that produce a dark moldy growth on the surface (Figure 2). The fruit may later decay internally.

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CONTROL

1. Grow adapted pepper and tomato varieties recommended by University of Illinois horticulturists. Avoid varieties with sparse foliage. For the latest information on recommended varieties for growing in Illinois refer to Midwest Vegetable Production Guide for Commercial Growers. Also consult current seed catalogs and trade publications. A list of seed companies and distributors is also included in the above mentioned publication. Pepper varieties with luxuriant foliage that produce fruit that hang downward are less subject to damage by sunscald than those with upright fruit



Figure 2. Tomato sunscald. Note growth of secondary fungi (top middle) on scalded area of fruit (courtesy J.D. Paxton).

- that is not well protected by the leaves. Select tomato varieties with heavy foliage that is slow to spread out. Grow tomato varieties that are resistant to Fusarium wilt (see Report on Plant Diseases No. 939) and Verticillium wilt (Report on Plant Diseases No. 1010).
2. Treat pepper and tomato seeds and plants in the seedbed as outlined in the current Report on Plant Diseases No. 915, Vegetable Seed Treatment, and No. 910, Bacterial Spot of Pepper and Tomato. Seed and seedbed treatment helps to control pepper-defoliating diseases like bacterial spot, Cercospora or frog-eye leaf spot, and Phytophthora blight, and tomato-defoliating diseases like bacterial spot, early blight, and Septoria leaf spot.
 3. Proper spacing of staked or caged tomatoes helps to provide shade and thus reduces sun exposure caused by pruning. Use care during harvest to minimize plant breakage that can result in sudden exposure of the fruit to direct sunlight.
 4. In the garden or field, apply a suggested fungicide to peppers and tomatoes at 5- to 10-day intervals to control defoliating diseases as well as anthracnose and other common fruit rots. Start applications when fruits of the first cluster are first visible. Spraying is more effective, gives better coverage, lasts longer, and is cheaper than dusting. Apply dusts or sprays on a protective basis. For current recommendations, refer to the previously mentioned publication. Apply dusts and sprays in the early morning or evening when the wind is usually at a minimum (less than 5 miles per hour for dusting and 10 mph for spraying) and leaf surfaces are damp with dew. Dusts should contain at least 5 to 10 percent fungicide. Be sure to follow all directions and precautions for mixing and applying as printed on the container label.

Information concerning the availability of publications mentioned above can be obtained from your nearest Extension office or University of Illinois, ITCS, P345, 1917 S. Wright St., Champaign, IL 61820.