

Stink Bug on Tomatoes

injury and its prevention investigated in last season's outbreak in Yolo and Sacramento counties

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Several tomato fields in California showed severe stink bug damage this past season.

Tomatoes injured by stink bug feeding have been encountered in California tomato fields for many years. The damage occurred sporadically over a wide area but up to now never in sufficient amounts to be of economic importance. In California, it was not until the past season, that the characteristic injury was associated with the stink bug.

Tomato injury was found at Woodland, Yolo County, on July 20, 1951. The damage was definitely associated with the red-shouldered plant bug, *Thyanta custator* (Fab.). The bugs were present in more than usual numbers and it is believed that they had moved into the tomato field from surrounding clover and alfalfa seed fields, which contained a fair infestation.

Serious damage was also later found in a tomato field near Clarksburg, Sacramento County. This field was examined on August 26. In the half located next to an alta fescue seed field which had been harvested about July 1, a very large proportion of both the green and ripe

fruit was injured. In this case the responsible insect was the consperse stink bug, *Euschistus conspersus* Uhler. It was present in abundance and in all stages of development. The fruit of tomato served as a satisfactory host for the insect. The green fruit was preferred, and was the primary food on which the bugs developed.

Field Tests

To check the damage the field was treated with a 10% toxaphene dust at the rate of 30 pounds to the acre. Airplane application obtained sufficient control to insure a satisfactory harvest. At the rate used the toxaphene gave effective control of the nymphs.

Feeding by stink bugs results in the destruction of the cells just beneath the skin. The injury is very characteristic and hardly extends to a depth of more than 1/16 to 1/8 of an inch. The tissue below this area appears normal in every respect. Where the feeding is extensive on green fruit, the surface of the fruit appears mottled and relatively soft or spongy due to the destruction of the tis-

sue just beneath the surface. If a shallow surface cut is made through the injured area the tissue beneath the skin is nearly white and somewhat cottony in appearance. The mottled condition persists in the ripe fruit, and the injured area continues to be soft and spongy. Where injury is severe the skin of the tomato is slightly depressed. The destroyed tissue remains white and cottony in appearance as it does in the green fruit. Where feeding on green fruit has not been severe there is some tendency towards recovery. The damage caused by stink bugs is sometimes referred to as cloudy spot.

The exact point at which the feeding puncture is made is often very difficult to detect. It is not easily seen and at most appears as a tiny spot, sometimes dark in color and slightly raised.

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Stink bug injury to tomato. A surface cut has been made in the fruit to the right to show the whitish cottony destroyed tissue just beneath the skin.

