



DISORDERS OF PEACH FRUITS

Three major disorders of peach fruits are: (1) split pit, (2) internal breakdown, and (3) skin discoloration. All three disorders reduce marketing values of fruits.

Split pit. Split pit occurs at the site of the fruit attaches to the stem. Peaches with split pits are easily recognized while on the tree because they are often larger and ripen earlier than those without this disorder. Fruits with split pit are prone to infection with other pathogen and rots caused by saprophytic fungi and bacteria. Fruits with split pit have a shorter shelf-life.

During the development of the fruit, splitting may occur at two different times. First, approximately 20 days after bloom when the pit is still soft. Second, once the pit has hardened and the growing fruit flesh exerts pressure causing the pit to break along its join (Figure 1). Excessive rainfall near harvest promotes split pits. The occurrence of split pit is difficult to control. Some early cultivars (i.e. June Gold) have been reported to have more split pits. Planting mid to late season ripening cultivars may be a solution to avoiding fruit loss associated with split pit.



Figure 1. Peach fruits with split pit (upper fruits). Internal rotting, as the symptom is visible at the blossom end of fruit (lower fruits). Internal rot was caused by saprophytic fungi penetrated into fruits.

Internal breakdown. Internal breakdown, also known as chilling injury, is a major problem affecting the peach and nectarine fruits. Internal breakdown is the collective term for various disorders that occur during prolonged cold storage and/or after subsequent ripening of fruits. Symptoms include mealiness, flesh browning, loss of flavor, and red pigmentation (bleeding) (Figure 2). The problem is

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usually not noticed until fruit reaches consumers. Some cultivars tend to be more sensitive than others to internal breakdown. Studies have showed that internal breakdown of peach fruits can be managed by breeding for resistance.

Skin discoloration. Skin discoloration appears as brown and/or black areas on the skin of the fruit (Figure 3). Skin discoloration may be caused by long dry period, air pollution, and brushing and washing during packing. The symptoms may increase during storage due to dehydration. High velocity forced air cooling can also induce skin discoloration. Limited information is available on the nature of development of skin discoloration of peach fruits. To reduce the incidence of skin discoloration, abrasion to the fruit during pre- and post-harvest operations should be avoided. Dump tank and hydrocooler water should be maintained at around 6.5 to 7.0 pH.

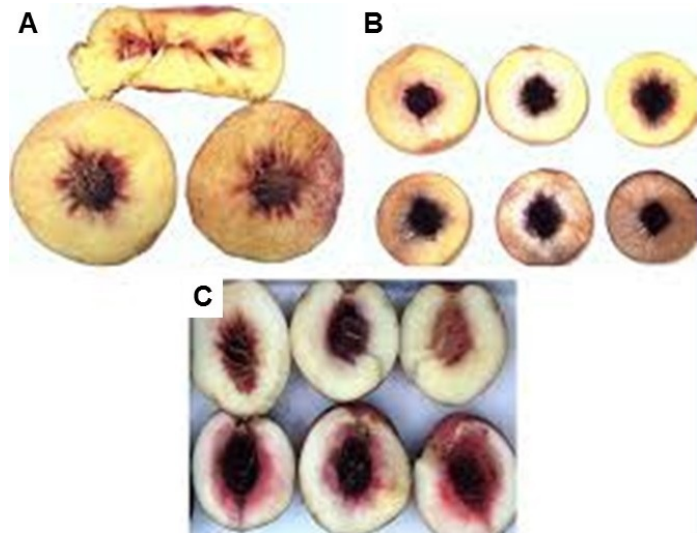


Figure 2. Disorders of peach and nectarine fruits, following storage. *A*, Mealiness or woolliness; *B*, Internal browning (upper fruits are healthy); and *C*, Internal reddening (upper fruits are healthy). (Courtesy: University of California, Davis).

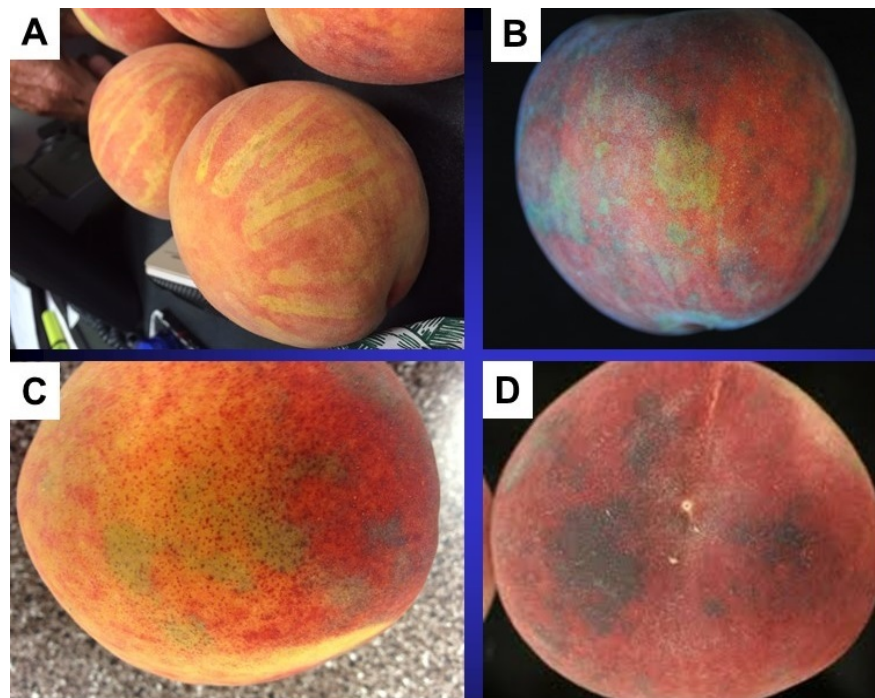


Figure 3. Peach fruits with skin discolorations. (Courtesy: *A* and *B*, Clemson University; *C*, Michigan State University; and *D*, University of Davis, California).