



RASPBERRY CRUMBLE

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Raspberries with only a few drupelets tend to crumble when they are picked. This is the result of abnormal development.

Normal flowers have from 100 to 125 pistils. Each is able to produce a seed and a drupelet. In normal berries, from 75 to 85 drupelets usually develop. If appreciably less than this number develop, the berry does not hold together and crumbles as it is pulled from the plant.

Crumbly berries have a number of possible causes.

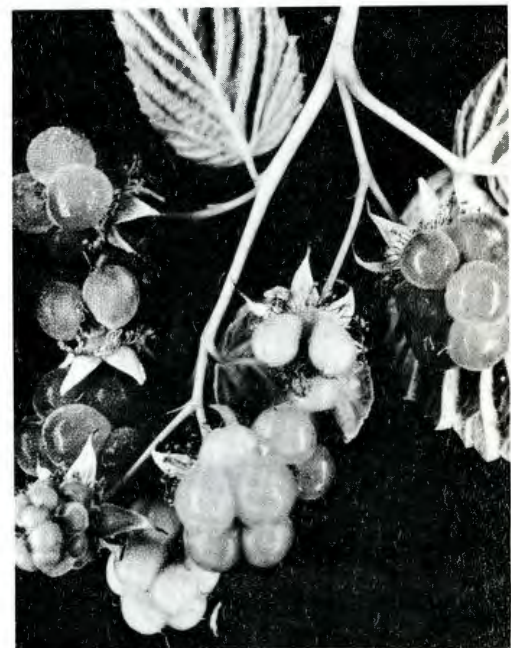
Lack of Nutrients. Anything that seriously interferes with plant nutrition--such as drought, extremely low fertility, or damage to roots or crowns from nematodes, symphylans, root rots, crown gall, crown borers, flooding in winter, or cultivating too deep--may bring about crumble.

Varieties. Some varieties tend to crumble more than others. The Tahoma variety had considerable tendency to crumble. Seedlings of the Latham variety often bear crumbly fruit. Some seedlings and some clones of the Sumner variety produce crumbly fruit--but this is not true of the Sumner variety overall. Occasional plants of most varieties apparently mutate to a crumbly condition.

Diseases. Viruses may cause failure of flowers to function or seeds to develop normally even though growth appears to be normal. The raspberry mosaic virus complex has been associated with crumble, but specific viruses associated with raspberry crumble have not been identified.

In certain instances, bacterial and fungus diseases--Pseudomonas (bacterial blight), Cladisporium, and Botrytis (gray mold)--have been suspected of contributing to crumble.

Other Causes. Lack of bee activity and lack of pollination may result in crumbly berries. Chemical damage to flowers from in-bloom applications of insecticides or fungicides could damage the anthers, pistils, or pollen.



The normal number of drupelets fails to develop and the berries fall apart when they are picked.

Prevention and Control. Select plants from fields that are known to be free from crumble. Plantings established for propagation should be inspected in fruit to eliminate plants that produce crumbly berries.

The plants should be from vigorous, disease-free fields. They should be kept growing vigorously through adequate fertilization, adequate watering, and insect and disease control.

If plants with crumbly berries also have cane buds that fail to grow or short, stiff fruiting laterals with odd-shaped leaves, have your soil tested for boron. You can get shipping cartons and directions for taking soil samples from your County Extension Office. If the soil test value is below 0.5, apply boron.