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AGRICULTURAL COLLEGE
CORVALLIS
APR 19 1934

Circular of Information No. 98

April, 1934

BLOSSOM END ROT OF TOMATO

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Blossom end rot is the proper name of the disease which blackens and rots the blossom ends of ripening tomatoes. Black, cankered areas extend from the wrinkled tip or "point" of the fruit into the meat within. The surfaces of the blackened ends are covered with black or green fungi which grow abundantly about the areas where the remnants of the flowers were attached.

Cause

Although numerous fungi are present and eventually bring about the rotting of the fruit, the primary cause may be any condition or set of conditions which will cause the skin of the fruit to crack. If the rate of growth or enlargement of the fruit is momentarily slowed up, the skin begins to mature at a more rapid rate than the "meat" within.

When growing conditions improve and rapid growth is resumed, the skin is overstretched, and tiny cracks form. The skin is the tomato's natural defense against fungi and bacteria; therefore, when the skin is broken or ruptured with minute cracks, a means of entrance for germs is provided. These germs may come from the soil or from dust in the air, or from adjacent rotting fruit. After gaining entrance they feed on the exposed tissue and give rise to the characteristic blossom end rot appearance.

Conditions Which May Lead to Blossom End Rot

1. Water supply. Irregularities in the water supply are usually the cause of blossom end rot. When the water supply becomes low, the leaves may utilize all the available water at the expense of the fruit, which, therefore, suffers and ripens prematurely. If extreme local drought ensues, the fruit may crack and permit the entrance of various fungi. When the water supply is renewed and rapid growth resumed, blossom end rot symptoms may be expected.

2. Fruit developing in dry air and in bright sunlight is more prone to rot than fruit in humid air and mild sunlight. (See suggestion below about foliage.)

3. Fertilization and cultivation practices which tend to make soil dry out quickly, tend to make tomatoes develop the rot. Many attempts have been made to select fertilizers which will prevent, or rather not induce blossom end rot. The effect of varying fertilizer formulas on the disease varies with the soil type under consideration, and therefore cannot be predicted. In general we may say that the use of heavy applications of stable manure, is especially unsatisfactory. Likewise, the use of any other fertilization method which greatly increases the aeration of the soil, is considered favorable to the production of blossom end rot, and therefore should be avoided in tomato culture.

Control

1. Maintain an even water supply for the plants. Try to water or irrigate at regular intervals, choosing an interval between watering or irrigation so that the growth of the plants will not be checked. Do not over-water at one time, and under-water at another.

2. Cultural practices and planting methods which tend to maintain a good foliage, and thereby produce self-shade for the plant, tend to ward off blossom end rot.

3. One should avoid heavy applications of stable manure, and for most soils, heavy applications of ammonia-forming fertilizers.

4. Some varieties of tomatoes are more prone to blossom end rot than others when grown under a given set of conditions. A careful grower will, therefore, observe the behavior of different varieties, and choose the kinds adapted to his particular conditions, and to the circumstances under which he is obliged to produce his tomato crop.