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CORE CONCEPT OF
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HONOUR'S PART 1

Paper - 1

DISEASE CAUSED BY BACTERIA : CITRUS CANKER



Cankers or warty is a bacterial disease. Citrus canker is a widespread disease in all



the citrus growing areas of the world. It is stated to have originated from China and spread to Europe and USA. the disease is quite serious in India, China, Japan and Java.

Symptoms - The disease occurs on leaves, twigs, thorns, older branches and fruits. Leaf lesions first appear as small round, watery translucent spots. They are raised and yellowish brown. They first develop on the lower surface of the leaf and then on the both surfaces. Spots occurring on petioles and midrib cause premature defoliation. On larger branches the necrotic lesions (cankers) are irregular, rougher and more prominent. Cankers on fruits are similar to those on leaves.

The causal organisation - *Xanthomonas campestris* Pv. *Citri* (Hassle) Dye [*Xanthomonas Citri* (Hassle) Downson].

The bacterium is a rod 1.5 - 2.0 x 0.5 - 0.75 microns



in size. It forms chains and capsule but no spots and is motile by one polar flagellum. It is gram-negative and aerobic. Colonies on beef agar are circular, straw, yellow to amber yellow, slightly raised and glistening. Nitrates are not reduced. The haustorium enters the host through natural openings (stomata) and through wounds such as those caused by insects.

Control measures : The disease is so serious that the only practical method is complete destruction of the diseased plants by burning them.

1. Use of disease-free nursery stock for planting in New Orchards.
2. Spraying the plants before planting in New Orchards.
3. In old Orchards pruning of the affected twigs and spraying with 1% Bordeaux mixture at periodical intervals.