

PRACTICAL NO 14

**PLANT DISEASE DIAGNOSTIC TECHNIQUES: STUDY OF SYMPTOMATOLOGY (SYMPTOMS, SIGN,
SYNDROME, INFECTIOUS AND NON INFECTIOUS DISEASES)**

Non infectious diseases

These are the diseases with which no parasite is associated; hence they are called as abiotic diseases. They remain non infectious and cannot be transmitted from diseased plant to healthy plant. If no organism is found in association with the diseased part and if viral symptoms are not present, the diseases may be due to inanimate cause. If symptoms look like those of nutritional deficiencies the identification can be confirmed by spraying a solution of the possible element in its salt form and usually recovery will occur within a week and identification can be confirmed. These non parasitic, non infectious diseases are due to disturbances in the plant body caused by lack of proper environmental conditions of soil and air, low and very high temperatures, unfavourable oxygen relations, unfavourable soil moisture, pH, presence of toxic gases in the atmosphere, mineral excess and deficiencies in the soil etc., are the major causes of non parasitic diseases.

Examples

Low temperature : potato tuber injury

High temperature : blossom end rot of citrus fruit

Effect of light : bean scald

Excessive moisture: blossom end rot of tomato

Low oxygen : black heart of potato

Air pollution : ozone on corn

Chemical injury : ammonia on apple **Herbicide**

injury : 2, 4-D on dicot leaf **Nutrient deficiency:**

Zn on citrus