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Quantity of maculum near host:
If the pathogen propagule is present near the host and is present in the large amount then there are more chances of the disease in epidemic form. (Remaining lecture on page 20).

Lecture No. 8

Environmental factors for Epidemic

Host:-

- Availability of host
- Growth stages of host
- Successence of host
- Genetic susceptibility of the host.

Pathogen:-

- Survival of pathogen
- Viability of pathogen
- Rate of multiplication
- Sporulation
- Ease of pathogen
- Direction of pathogen spread
- Distance of dispersal of pathogen
- Rate of spore germination & penetration

Vector:-

- No. of vectors population
- Activity of the vector

1. Moisture:-

Have the significant effect. When there is prolonged, there will be the abundant and more effect of epidemic. The abundant moisture will favour the fungi and oomycete. Moisture will be in the form of dew drop, relative humidity, rain drop. Diseases that are favoured by the high moisture are. Blights, downy mildew, powdery mildew, leaf spot, rust, anthracnose.

Bacterial diseases:- soft rot, favour blight, leaf spot and also favours the nematodes.

Host:- succulent, vegetative growth is also effected. In fungi, the high moisture favour the fungi sporulation. In bacteria, oozing occurs in the high moisture, spore germination, zoospore of bacteria, nematode multiplication. If there is less moisture or no moisture, then these function will be stopped. If the disease is cause by the soil borne fungi (Fusarium, streptomycetes) then moisture will have no effects. The moisture can increase or decrease the population of vector. aphid and leaf hopper.

2. Temperature:-

Epidemic favours by low and high temperature. It will cause the stress on the the variety. The variety may break partial/complete ^{resistance}. Low temperature reduce the amount of oomycetes bacteria and nematode. High temperature reduce the amount of

B₁-Microclimate:-

It is the climate of the plant solidatory. It includes the following eq equipment that are used to measure the microclimate.

- 1. Leave area meter or planimeter:-** The instrument the is used to measure the area of the leaves. Leave area profile index.
- 2. Temperature:-** It is the measurement of temperature of the plant i-e 2,5,10,15.
- 3. Thermoevaporator:-** It is the measurement of vapour pressure.
- 4. Gas chromatography:-** It is used for recording the gases i-e N_2 , O_2 & CO_2 .
- 5. Barometer:** It is used for measuring of atmospheric pressure and forecasting of weather.
- 6. Kipp solerometer cup:-** It is used to measure the radiation at the different height of plant

7. Protractor:- used to measure the angle of branches from a main stem and of leaves from branches.

8. Dew drops:- It is used to measure the dew drops from the entire surface of the plant.

9. Soil moisture tester:- It is used to measure the amount of soil moisture under the canopy of plant.

10. psychrometer:- a hygrometer consisting essentially of two similar thermometer bulb of one being kept wet so the cooling that result from evaporation makes it register a lower temp. than the dry one and with difference b/w ~~can~~ readings consisting a measure of dryness of atmosphere.