



# Let Lecture:-14

## Pattern of Epidemics:-

There are 3 epidemic structured Element

1. pathogen
2. Host
3. Element-Environment.

They are also influenced by the time. They are expressed in Pattern and rates. The patterns of disease are expressed in the form of disease progressive curve. The origin and shape of disease progressive curve tells us about the amount of inoculum and appearance of inoculum, host susceptibility with the passage of time, cultural practises performed.

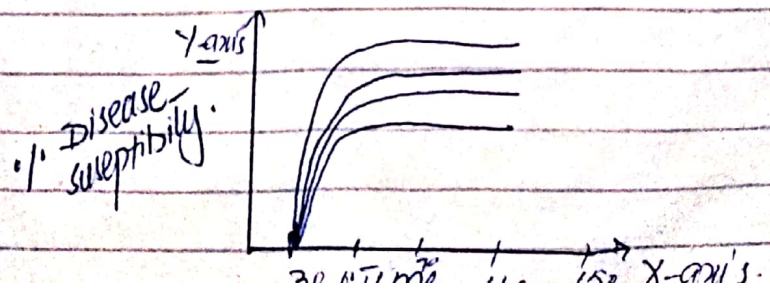
## Types of disease progressive

### Curve:-

There are 3 types of disease progressive curve

### Saturation type:-

It tells us about the characteristics of monocyclic disease.

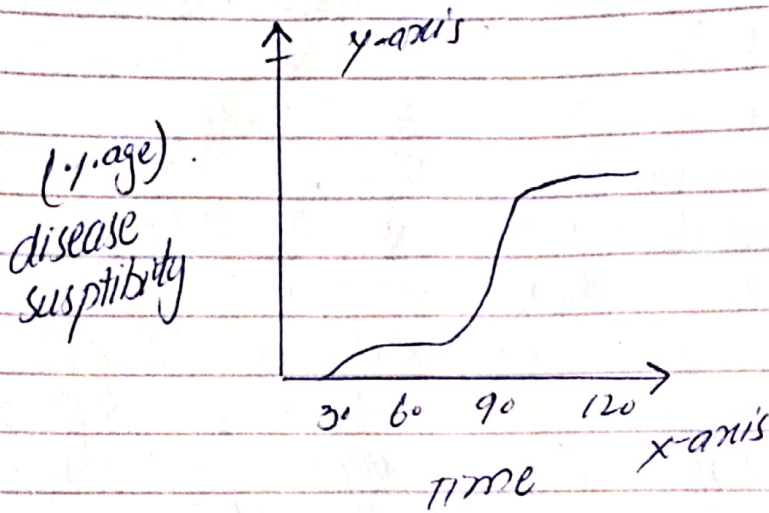




pathogen

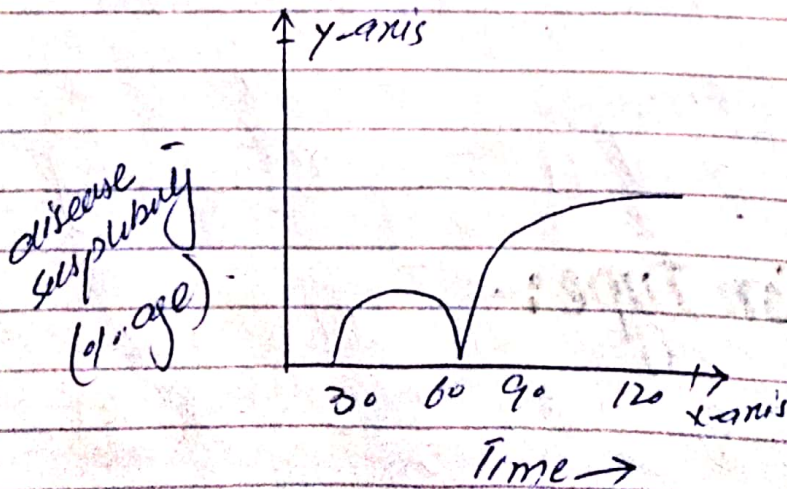
## Sigmoid type:-

The disease progressive curve that tells us about the polycyclic disease



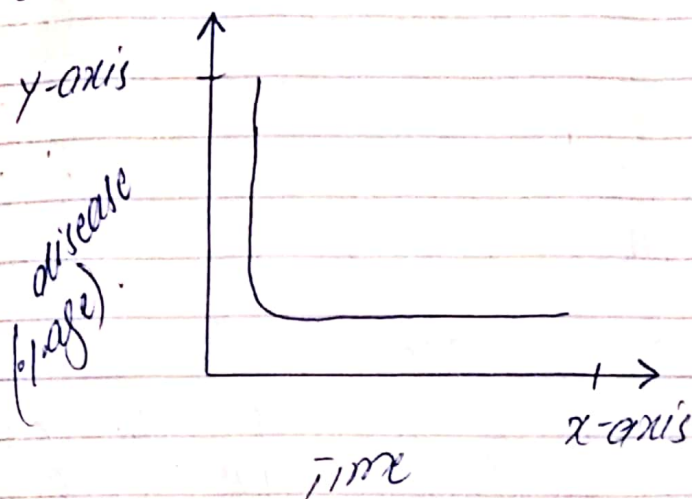
## Bi model:-

The curve that tells us about the disease effecting the different parts of plant/host.



## Spatial patterns-

The curve pattern that is influenced by the distance it is further influenced by the spread of pathogen / dispersal of pathogen. It gives the dispersal gradient curve.



## Disease epidemic rate:-

It is necessary to graph the disease progress curve for studying the epidemic rate.

## Disease gradient curve rates-

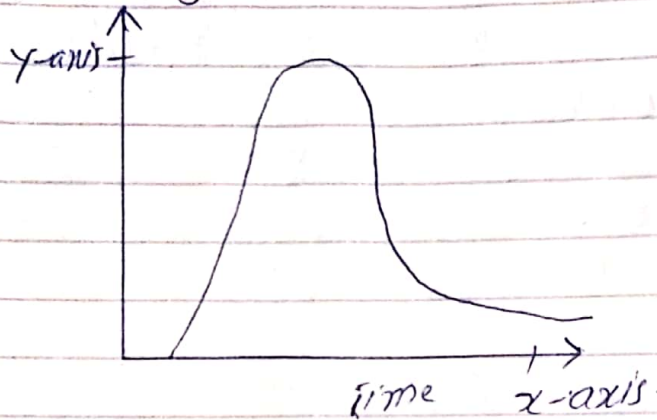
The amount of increase of Disease per unit time - The epidemic rates can also be expressed in the epidemic pattern. There are 3 disease rate curve.

1. Symmetrical
2. Asymmetrical
3. Bi model



## 1. Symmetrical curve rates:-

of it is for those diseases that occur at the all stages of the host. eg. potato late blight.



## 2. Asymmetrical curve:-

of it is the curve rate for those diseases that are over the specific stages of their life stages. eg:- apple scab, downy mildew, powdery mildew.

