



Lecture No.: 23

Date: 29th April, 2020

CORE CONCEPT OF
Group C - Microbiology

HONOUR'S PART 1
Paper - 1

CONTROL OF VIRAL DISEASE

Virus disease control are almost the same as for other diseases caused by Fungi and Bacteria. The applicability of these methods depends upon the value of the crop, severity of the disease the cost of labour and supplies and the care and efficiency with which they are used.

- 1. Selection of seed** - Although majority of the plant viruses are not seed borne, it is better to select feeds from disease-free localities.
- 2. Cutting bulb and tubes** - Many virus diseases depend for their dissemination on the vegetative parts used as seed. Sugarcane mosaic and viruses of potato are good examples. In such cases care should be taken to select those planting materials from plants that are not infected.
- 3. Tuber indexing** - This method is used for selecting virus free potato tubers for multiplication on a large scale. It consists of selecting tubers from plants appearing healthy. These tubers are numbered and one eye or bud from each is planted under suitable conditions.



4. Protection against insect vectors - This is one of the important steps in the prevention of plant viruses diseases during growth of the crop. In order to prevent insect vectors from reaching the disease or healthy plants proper spraying with insecticides should be undertaken.

5. The host free period - This method is a voluntary effort made by all the growers in an area in which the growers agree to eliminate all host plants of the disease for a period.

6. Destruction of weed hosts - It is well known that some virus diseases are carried in weeds. Every possible precaution should be taken to keep the field free from these weeds.

7. Temperature treatment - These treatment has been successfully used with some virus diseases such as those transmitted through cutting bulbs and grafts.

8. Immunization - This has not a very successful method of controlling.

9. Resistant varieties - This is the most satisfactory method of plant diseases control.