

DISEASES OF CROPS

Crop diseases can be defined as the departure or deviation from normal state of health of crop presenting marked symptoms or outward visible signs.

Causes of diseases

The primary causes of diseases can be classified into two groups - pathogens and physiological factors.

- a. **Pathogens:** Pathogens are disease-causing living organisms. Examples are viruses, bacteria, fungi and nematodes.
- b. **Physiological Factors:** These may be physical, chemical or environmental. when they are deficient or present in excess they cause diseases. Examples of physiological factors are: Nutritional deficiency, heat, water and inorganic salts.

Diseases of Crops

Name of disease	Causal organism	Method of Transmission	Symptoms and Economic Importance	Prevention and Control Measures
Maize smut	Fungus	I. Air borne II. Fungus spores deposited on fruits.	I) Reduced yield II) Galls on ears, leaves and tassels which later turn black.	I) Destroy diseased plant. II) Use resistant varieties. III) Seed treatment.
Rice Blight	Fungus	Airborne spores on leaves.	I) Small longitudinal red spots on leaves which turn grey or brown.	I) Use clean seeds II) Avoid heavy use of Nitrogen fertilizers.

			II) Reduced yield	III) Use resistant varieties.
Rosette disease of groundnut	Virus	By piercing and sucking insect (aphid)	<p>I) Yellow leaves with mosaic mottling.</p> <p>II) Stunted plant with curled leaves.</p> <p>III) Wilting and death of plant.</p> <p>IV) Shortening of the internodes.</p>	<p>I) Early planting</p> <p>II) Crop rotation</p> <p>III) Use insecticides</p> <p>IV) Uproot and burn infected plants</p> <p>V) Use resistant variety.</p>
Cassava mosaic	Virus	Through piercing and sucking insect (whitefly)	<p>I) Mottling of leaves or leaf curl.</p> <p>II) Distortion of leaves and stems</p> <p>III) Vein clearing.</p> <p>IV) Stunted growth</p> <p>V) Development of yellowish pale areas.</p>	<p>I) Use resistant variety</p> <p>II) Uproot and burn infected plant.</p> <p>III) Spray with insecticides to kill vector.</p> <p>IV) Use disease free stem cuttings</p> <p>V) Farm sanitization.</p>

Damping off disease of okra	Fungus	Infected soil	<p>I)Retarded growth</p> <p>II)Cells become water logged</p> <p>III) Gradual wilting of plants.</p> <p>IV) Death of plant</p>	<p>I)Spray with copper fungicide.</p> <p>II)Use resistant varieties.</p> <p>III) Sterilization of soil.</p>
Cocoa black pod disease	Fungus	<p>I)Rain splash</p> <p>II)Insects</p>	<p>I)Brown spots on pod</p> <p>II) Rotting of pods</p> <p>III)Entire pod turns black</p> <p>IV)Low yield.</p>	<p>I)Remove and destroy infected pods.</p> <p>II) Regular weeding</p> <p>III)Spray with fungicides e.g Bordeaux mixture.</p> <p>IV)Avoid over crowding of cocoa plants.</p>
Leaf spot of cowpea	Fungus	<p>I)Through rain splash</p> <p>II)Through wind depositing spores on the leaves.</p>	<p>I)Reddish brown spots on the leaves.</p> <p>II)Yellowing of the leaves.</p> <p>III) Stunted growth</p>	<p>I)Spray fungicide</p> <p>II) Practice crop rotation</p> <p>III)Early planting</p>

Leaf blight of maize	Fungus	1)Through wind (Airborne) 2. Rain splash	I)Blighting of leaves II)Death of crops III)Stunted growth	I)Spray fungicide on plant. II) Practice crop rotation III) Early planting
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General Effect of Disease on Crop Production

1. Low yield of crops
2. Stunted growth
3. Malformation of plant
4. Death of crop
5. Reduction in the income of the farmer
6. Increase in cost of production
7. Renders vegetables and fruits unattractive and unmarketable.

Ways by Which Disease Spread on a Crop Farm

1. By rainfall splash
2. Through contaminated tool.
3. Through wind
4. Through infected animals/vector
5. Through weeds
6. Through irrigation water

General Control on Crop Plant Diseases

Diseases of crop plants can be controlled by the following methods:

1. Cultural Method: Planting of resistant varieties, burning of infected crops, regular weeding are used to control or prevent diseases.
2. Chemical Method: This is the application of insecticides to get rid of vectors.
3. Biological Method: Introduction of natural enemies of pathogens to suppress their activities

