



# Bangabandhu Sheikh Mujibur Rahman Agricultural University

## Department of Plant Pathology PLP 340 DISEASES OF FIELD CROPS

Cr. hrs 3+1, Autumn Term 2022

Instructors: Prof. Dr. Md. Abu Ashraf Khan & Md. Tanbir Rubayet

### Course Description:

This course will focus on details of etiology, symptoms, mode of spread and survival of the pathogen, epidemiology, disease cycle, and management of diseases of different field crops.

### Objectives:

- To know the symptoms of major field crops diseases and life histories of causal organisms.
- To understand the potential loss of yield or quality from various diseases of field crops.
- To know the epidemiology and management of field crop diseases.

### Course Outline (Theory):

Date	Lect.	Topic
6 June	1.	Course Orientation Introduction to Diseases of Field Crops & Symptoms of Plant Diseases
7 June	2.	<b>Cereals:</b> Diseases of Rice (etiology, symptoms, mode of spread, survival of pathogen, epidemiology, disease cycle and management).
8 June	3.	-do
13 June	4.	-do
14 June	5.	-do
15 June	6.	Diseases of Wheat (etiology, symptoms, mode of spread, survival of pathogen, epidemiology, disease cycle and management).
20 June	7.	-do
21 June	8.	-do
22 June	9.	-do
5 July	10.	Diseases of Maize (etiology, symptoms, mode of spread, survival of pathogen, epidemiology, disease cycle and management).
6 July	11.	-do
11 July	12.	Diseases of Sorghum, Barley, Millets (etiology, symptoms, mode of spread, survival of pathogen, epidemiology, disease cycle and management).
12 July	13.	-do
<b>13 July</b>	<b>14.</b>	<b>Mid-I (Tentative)</b>
18 July	15.	<b>Fiber crops:</b> Diseases of Jute, Kenaf, Mesta (etiology, symptoms, mode of spread, survival of pathogen, epidemiology, disease cycle and management).
19 July	16.	Diseases of Cotton (etiology, symptoms, mode of spread, survival of pathogen, epidemiology, disease cycle and management).
20 July	17.	-do
25 July	18.	<b>Sugar crops:</b> Diseases of Sugarcane (etiology, symptoms, mode of spread, survival of pathogen, epidemiology, disease cycle and management).

26 July	19.	-do
27 July	20.	-do
1 Aug	21.	-do
2 Aug	22.	Diseases of Sugar beet (etiology, symptoms, mode of spread, survival of pathogen, epidemiology, disease cycle and management).
<b>3 Aug</b>	<b>23.</b>	<b>Mid-II (Tentative)</b>
8 Aug	24.	<b>Oil Seeds:</b> Diseases of Mustard (etiology, symptoms, mode of spread, survival of pathogen, epidemiology, disease cycle and management).
9 Aug	25.	-do
10 Aug	26.	Diseases of Groundnut (etiology, symptoms, mode of spread, survival of pathogen, epidemiology, disease cycle and management).
17 Aug	27.	-do
16 Aug	28.	Diseases of Soybean (etiology, symptoms, mode of spread, survival of pathogen, epidemiology, disease cycle and management).
17 Aug	29.	Diseases of Sesame and Sunflower (etiology, symptoms, mode of spread, survival of pathogen, epidemiology, disease cycle and management).
22 Aug	30.	<b>Pulses:</b> Diseases of Blackgram and Mungbean (etiology, symptoms, mode of spread, survival of pathogen, epidemiology, disease cycle and management).
23 Aug	31.	Diseases of Lentil, Chickpea, Green gram, Peas and Cowpea (etiology, symptoms, mode of spread, survival of pathogen, epidemiology, disease cycle and management).
24 Aug	32.	Course Recap
<b>Final Exam</b>		

### Course Outline (Practical):

Sl No.	Topic
1.	Collection and preservation of diseased plant specimen
2.	Study on blast and bakanae diseases of rice
3.	Study on leaf spot or blight disease of wheat
4.	Study on stem rust disease of wheat
5.	Study on anthracnose disease of jute
6.	Study on stem rot and black band diseases of jute
7.	Study on red rot disease of sugarcane
8.	Study on <i>Alternaria</i> leaf blight/ grey leaf spot of mustard
9.	Study on <i>Cercospora</i> leaf spot / tikka disease of groundnut
10.	Study on foot and root rot disease of lentil/grass pea/gram

### Selected References:

1. G.N. Agrios 2000. Plant Pathology, 4th Edition Academic Press, Singapore.
2. R.S. Singh 1998. Plant Diseases. Oxford & IBH Publication, New Delhi.
3. R.S Mehrotra. 1980. Plant Pathology, Tata Mc Grow Mill Pub. Co. New Delhi.
4. G. Rangaswami 1998. Diseases of Crop Plants in India. Prentice Hall of India Pvt. Ltd., New Delhi.
5. A. Mishra, A. Bohra and A. Mishra, 2005. Plant Pathology- Diseases and Management. Agro bios, India.
6. G.P. Gupta, 2004. Text Book of Plant Diseases. Discovery Publishing House, New Delhi, India.
7. K.M. Chadniwala, 2003. Bacterial Diseases in Plants. Anmol Publications Pvt. Ltd. New Delhi, India.
8. S. Sundara Rajan. 2000. Practical Manual of Fungi. Anmol Publications Pvt. Ltd, New Delhi, India.