PPATH-311 Epidemiology & Integrated Disease Management 2(1+1)

Theory:

Epidemiology and factors affecting disease development. Diagnosis of plant diseases. Disease triangle and tetrahedron. Forecasting of plant diseases. Principles of plant disease management. Methods of integrated disease management: Host plant resistance, cultural, physical, legislative, biological and chemical control. IDM modules for wheat, rice, sugarcane, cotton, groundnut, citrus and chickpea. Integrated nematode management in protected cultivation. Nature, chemical combination, general classification of fungicides and antibiotics.

Safety issues in fungicidal uses. Pest risk analysis.

Practical:

Diagnosis of plant diseases. Methods of plant disease measurement. Assessment of crop yield losses. Identification of bio-control agents. Mass multiplication of *Trichoderma*, *Pseudomonas* and *Bacillus*. Methods of pesticide application and their safe use. Study of structural details of sprayers, dusters and seed dressers. Awareness campaign at farmer's fields. **Lecture Schedule: Theory**

S.N.	Topics	No. of Lectures
1.	Epidemiology and factors affecting disease development	01
2.	Diagnosis of plant diseases	01
3.	Disease triangle and tetrahedron and forecasting of plant diseases	02
4.	Principles of plant disease management	02
5.	Methods of integrated disease management:- Host plant resistance, cultural, physical, legislative, biological and chemical control	02
6.	IDM modules for wheat, rice, sugarcane, cotton, groundnut, citrus and chickpea	02
7.	Integrated nematode management in protected cultivation	02
8.	Nature, chemical combination, general classification of fungicides and antibiotics	02
9.	Safety issues in fungicidal uses	01
10.	Pest risk analysis	01

Lecture Schedule: Practical

S.N.	Topic	No. of lectures
1.	Diagnosis of plant diseases	01
2.	Methods of plant disease measurement	02
3.	Assessment of crop yield losses	04
4.	Identification of bio-control agents.	01
5.	Mass multiplication of *Trichoderma*, *Pseudomona*s and *Bacillus*	04
6.	Methods of pesticide application and their safe use	01
7.	Study of structural details of sprayers, dusters and seed dressers.	02
8.	Awareness campaign at farmer's fields.	01