EXTENDED LECTURE OUTLINE

PAT6 311 Diseases of Field and Horticultural Crops and their Management (2+1)

Theory: Diseases of cereals, millets, pulses, oil seeds, cash crops, fruits, vegetables, plantation crop and flower crops with respect to symptoms, etiology, disease cycle, epidemiology and management practices.

Cereals: Rice, Wheat, Maize and Sorghum

Millets: Pearl millet (Bajra) and Finger millet (Ragi)

Pulses: Soybean, Grams, Pea, Blackgram & Greengram

Oilseeds: Groundnut, Sunflower and Mustard

Cash crops: Sugarcane, Cotton, Chilli, Ginger, Turmeric

Fruit crops: Citrus, Guava, Banana, Papaya, Pomegranate, Apple, Peach, Grapevine, Mango and Strawberry

Vegetable crops: Potato, Tomato, Brinjal, Cucurbits, Crucifers, Beans, Okra and Coriander

Plantation crops: Coconut, Tea and Coffee

Flower crops: Rose and Marigold

EXTENDED LECTURE OUTLINE

PAT6 311 Diseases of Field and Horticultural Crops and their Management (2+1)

Symptoms, etiology, disease cycle, eSpidemiology and management practices of diseases of:

I. Cereals

Rice - Blast, Sheath blight, Brown leaf spot, False smut, Bacterial leaf blight, Bacterial leaf streak, Tungro and Khaira disease

Wheat – Black rust, Brown rust, Yellow rust, Loose smut, Karnal bunt

Maize – Northern Corn leaf blight/ Turcicum leaf blight, Southern Corn leaf blight/Maydis leaf blight, Downy mildew (Crazy top), Banded leaf and sheath blight

Sorghum –Smuts: Grain smut/covered smut/kernel smut, Loose smut, Long smut, Head smut; Grain mold, Anthracnose.

II. Millets:

Pearl millet (Bajra) – Downy mildew/Green ear, Ergot/ Sugary disease

Finger millet (Ragi) – Blast and leaf spot

III. Pulses

Soybean- *Rhizoctonia* blight, Bacterial spot, Seed and seedling rot, Soybean mosaic virus

Grams- Wilt, *Ascochyta* blight, Grey mold

Pea – Downy mildew, Powdery mildew, Rust

Black gram and **Green gram** – Web blight, *Cercospora* leaf Spot, Anthracnose, Yellow mosaic virus

IV. Oilseed crops

Groundnut – Tikka (Early and Late leaf spots), Rust, Wilt, Peanut Bud necrosis virus.

Sunflower – *Alternaria* blight, *Sclerotinia* stem rot, Sunflower necrosis virus.

Mustard – White rust, *Alternaria* blight, Downy mildew, *Sclerotinia* stem rot

IV. Cash crops

Sugarcane – Red rot, Whip Smut, Grassy shoot, Ratoon stunting, Pokkah Boeng

Cotton – Anthracnose, Vascular wilts: *Fusarium* wilt, *Verticillium* wilt, Bacterial blight (Black arm)

Chilli– Anthracnose and fruit rot, Bacterial wilt, Chilli leaf curl virus

Ginger – Soft rot or Rhizome rot

Turmeric –Taphrina Leaf spot

V. Fruit crops

Citrus- Canker, Gummosis

Guava- Wilt, Anthracnose

Banana- Sigatoka, Panama Wilt, Bacterial wilt, Bunchy top

Mango- Anthracnose, Malformation, Bacterial Blight, Powdery Mildew

Papaya- Foot rot, Leaf curl, PRSV

Pomegranate- Bacterial blight, Wilt

Apple- Scab, Powdery mildew, Fire blight, Crown gall

Grape vine- Downy mildew, Powdery mildew, Anthracnose

Peach- Leaf curl

Strawberry- Leaf spot

VI. Vegetable crops

Potato- Early Blight, Late Blight, Black Scurf, Leaf roll, Mosaic

Tomato- Damping Off, Wilt, Early and Late Blight, Leaf Curl, Mosaic

Brinjal- *Phomopsis* blight and Fruit rot, *Sclerotinia* blight

Cucurbits- Downy mildew, Powdery mildew, Wilt

Crucifers- *Alternaria* leaf spot, Black rot, Cauliflower mosaic

Beans- Anthracnose, Bacterial blight

Okra- Yellow vein mosaic

Coriander- Stem Gall

VII. Plantation crops

Coconut- Bud rot, *Ganoderma* Wilt

Tea- Blister blight

Coffee- Rust

VIII. Flower crops

Rose- Dieback, Powdery mildew, Black leaf spot

Marigold- Botrytis blight, Leaf spots (*Alternaria* and *Cercospora*)