

**Vivekanand College, Kolhapur (Autonomous)**

**DEPARTMENT OF BOTANY**

**B.Sc. II: PLANT PROTECTION**

**Topic : White Rust of Crucifers**

**Dr. B. T. Dangat**  
M.Sc., Ph.D.

## White Rust / White Blisters of Crucifers

- All crucifers pls. affected
- All parts of country
- Occurs with D. M. (*Parnospora parasitica*)
- Loss – 17 - 37%

## Symptoms :

- All parts affected except roots

### (1). Local infection

- Leaves, stem, flower stalk – white /creamy, yellow  
blister like pustules (1-2 mm)
- Powdery growth on pls/ on lower surface of leaves
- Yellow on upper surface
- White pustules on stem & siliquae

## (2). Systemic infection

- Systemic infection on new stem & inflorescence
- Hypertrophy
- Hyperplasia
- Swelling & distortion of stem & floral parts resulting in hypertrophy & hyperplasia
- Known as **Staghead**















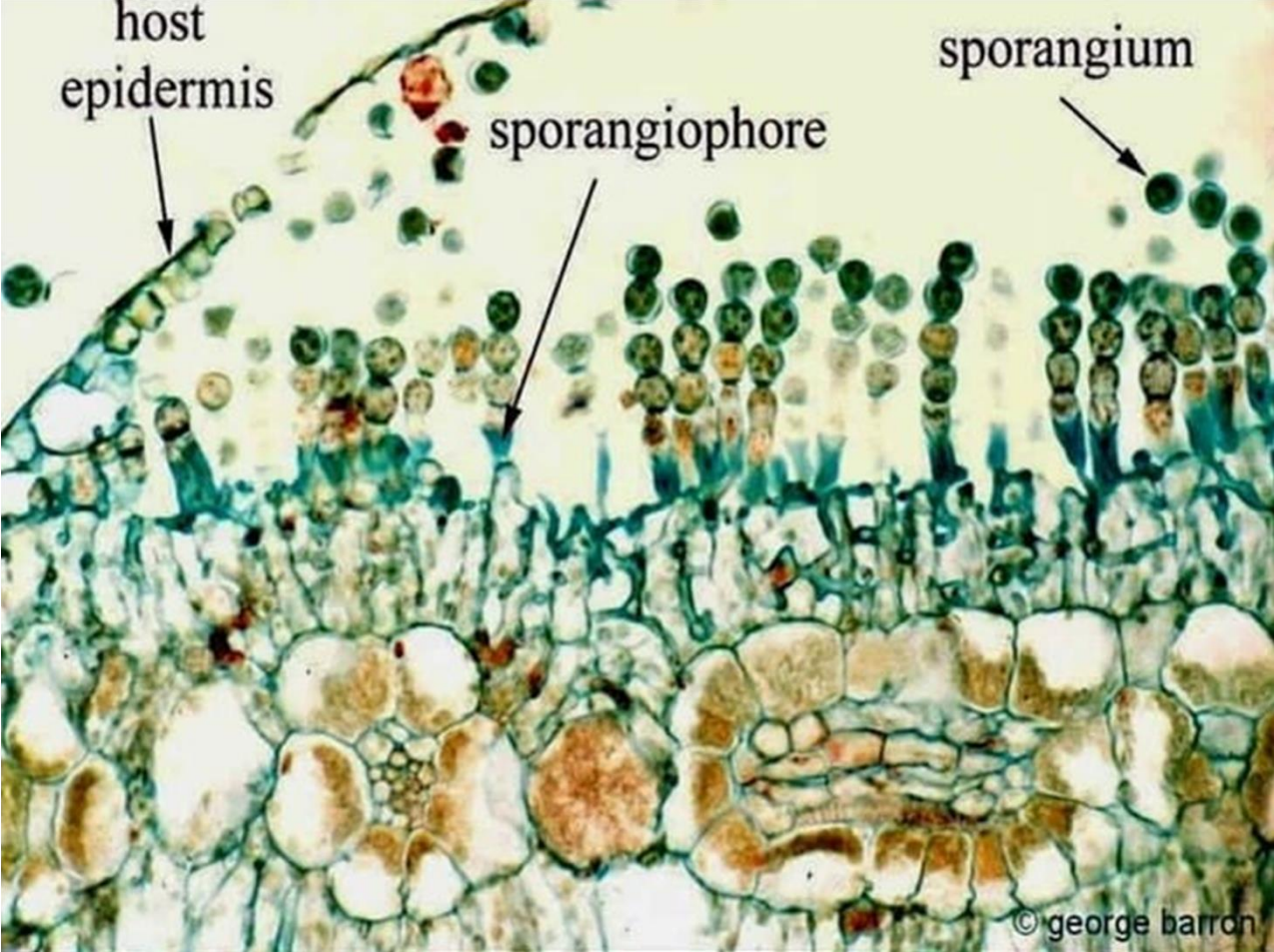


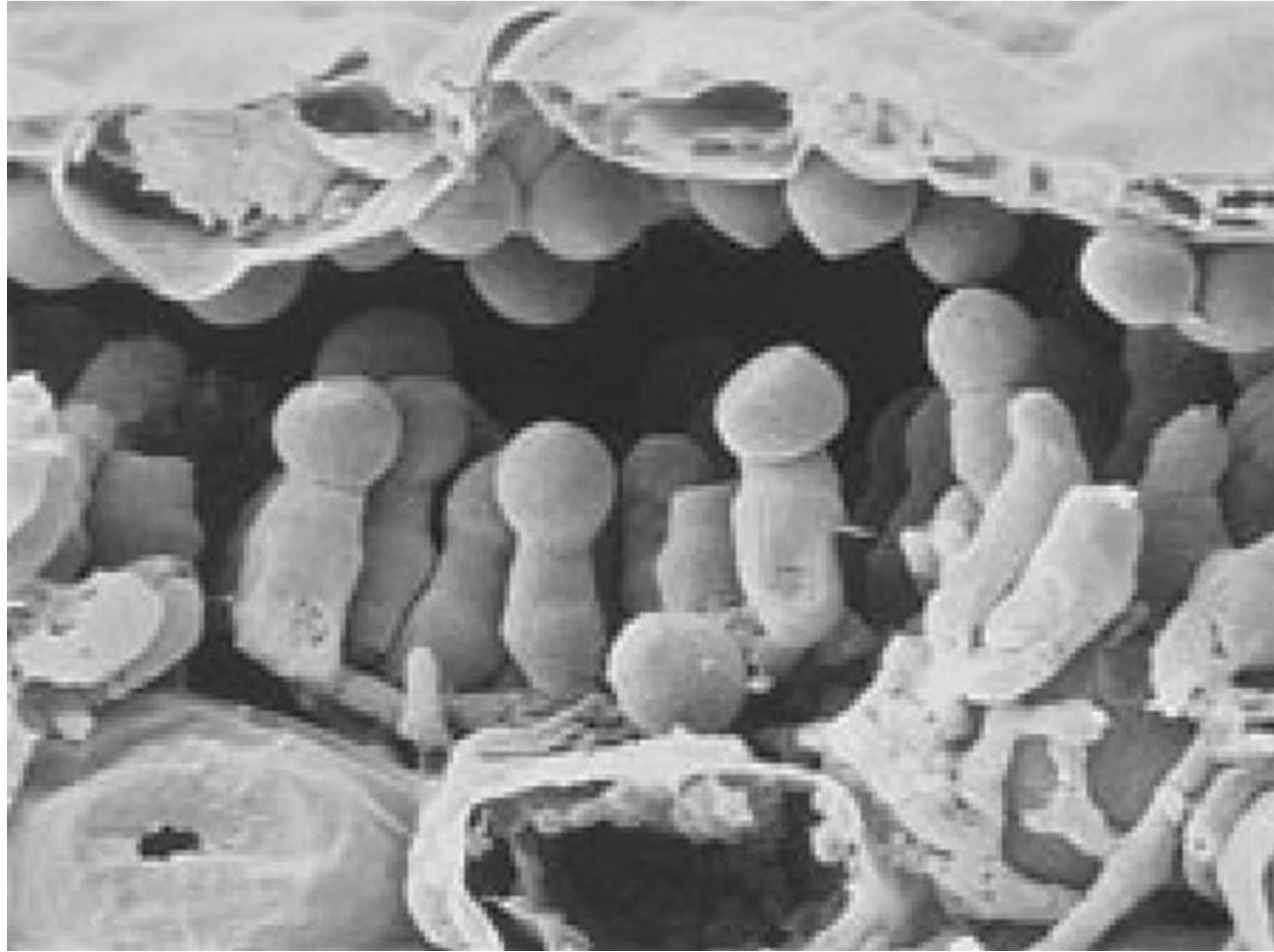
## **Pathogen – *Albugo candida***

- Survive in soil as Oospore in crop debris
- Survive in seed (primary inoculum)
- Survive on perennial weeds – horse radish
- Secondary spread by– sporangia & zoospore
- R. H. – >75%
- Tem. – 5-12° C

## **Systemic Position**

<b>Kingdom</b>	–	<b>Mycota/ Fungi</b>
<b>Division</b>	–	<b>Eumycota</b>
<b>Sub division</b>	–	<b>Mastigomycotina</b>
<b>Class</b>	–	<b>Oomycetes</b>
<b>Order</b>	–	<b>Pernosporales</b>
<b>Family</b>	–	<b>Albuginaceae</b>
<b>Genus</b>	–	<b><i>Albugo</i></b>
<b>Species</b>	-	<b><i>candidia</i></b>





## **Disease Management**

- Use certified seed
- Seed treatment – Metalaxyl (Apron 35 SD)- @ 6 gm/ kg seed
- Removal of weeds
- Destroy plant debris
- Crop rotation of 2-3 years
- Deep ploughing
- Early sowing
- Use balance fertilizers – no heavy use of N<sub>2</sub>
- Spray- Mencozeb (Dithane M- 45 / Indofil M-45) @ 2 kg/hect.
- Ridomil MZ 72 WP (mixture of Metaxyl 64% + Mencozeb 8%) @ 2 kg/hect.

3 sprayers at 15 days interval



**Thank You**