Black Sigatoka Disease (BSD) is a leaf borne disease caused by the fungus *Mycosphaerella fijiensis*. More rapid and aggressive than Yellow Sigatoka Disease, left untreated BSD reduces bunch weight, induces premature ripening of fruits, and can decrease overall yield by 50%.

**KNOW THE 6 STAGES OF BSD DEVELOPMENT & THE ACTIONS TO DEFEAT IT!**

1. **Faint reddish brown specks less than 1 mm, visible only on the underside of the leaf.**
   - **Specks elongate into reddish brown streaks parallel to leaf veins, becoming visible to the naked eye on the upper surface of the leaf.**
   - **Streaks now black elliptical or circular spots on the upper side. Higher production of ascospores. Infection spreads cross field and over long distances by wind.**
   - **The first of two necrotic stages. Spots are black surrounded by yellow halo. Centre of spot dries out and is grey. Rapid disease spread by wind especially after 48 hrs of leaf wetness.**
   - **Perform Cost-Effective Field Sanitation Practices**
     - Partial Deleafing as described in Stage 3.
     - Full Deleafing as described in Stage 3 or when bunch has 1 month remaining to harvest.
     - Pile leaves, topside down and chop.
     - After full deleafing, apply fertilizer to support new leaf emergence during vegetative growth.
   - **Actions**
     - Perform Cost-effective Field Sanitation Practices
     - Partial Deleafing as described in Stage 3
     - Full Deleafing as described in Stage 3 or when bunch has 1 month remaining to harvest
     - Pile leaves, topside down and chop
     - After full deleafing, apply fertilizer to support new leaf emergence during vegetative growth

2. **The second of two necrotic stages. Grey areas combine, entire sections of leaves become dry and dead. Ascospore production peaks.**
   - **Perform Cost-effective Field Sanitation Practices**
     - Partial or Full Deleafing
     - Partial Deleafing if less than 50% of leaf infected- remove infected part only.
     - Full Deleafing if more than 50% leaf infected- remove entire leaf.
     - Pile leaf parts or whole leaves topside down on sod and chop to reduce spore production and release.
   - **ACTIONS**
     - Partial or Full Deleafing
     - Perform Cost-effective Field Sanitation Practices
     - Partial Deleafing if less than 50% of leaf infected- remove infected part only.
     - Full Deleafing if more than 50% leaf infected- remove entire leaf
     - Pile leaf parts or whole leaves topside down on sod and chop to reduce spore production and release

3. **Streaks merge. Now darker, longer and larger. Conidia and ascospores are produced. Infection now spreads to nearby leaves and suckers by dew, rain and wind.**
   - **Perform Cost-effective Field Sanitation Practices**
     - Partial or Full Deleafing
     - Perform Cost-effective Field Sanitation Practices
     - Inspect suckers and elder leaves for advance signs of disease
     - Inform your extension officer so fields can be sprayed with fungicide within 5 days of disease identification. Sooner during wet season
   - **ACTIONS**
     - Partial or Full Deleafing
     - Perform Cost-effective Field Sanitation Practices
     - Inspect suckers and elder leaves for advance signs of disease
     - Inform your extension officer so fields can be sprayed with fungicide within 5 days of disease identification. Sooner during wet season

4. **The first of two necrotic stages. Spots are black surrounded by yellow halo. Centre of spot dries out and is grey. Rapid disease spread by wind especially after 48 hrs of leaf wetness.**
   - **Perform Cost-effective Field Sanitation Practices**
     - Partial or Full Deleafing
     - Partial Deleafing if less than 50% of leaf infected- remove infected part only.
     - Full Deleafing as described in Stage 3 or when bunch has 1 month remaining to harvest.
     - Pile leaves, topside down and chop.
     - After full deleafing, apply fertilizer to support new leaf emergence during vegetative growth.
   - **ACTIONS**
     - Partial or Full Deleafing
     - Perform Cost-effective Field Sanitation Practices
     - Partial Deleafing if less than 50% of leaf infected- remove infected part only.
     - Full Deleafing as described in Stage 3 or when bunch has 1 month remaining to harvest
     - Pile leaves, topside down and chop
     - After full deleafing, apply fertilizer to support new leaf emergence during vegetative growth

5. **Second necrotic stage. Grey areas combine, entire sections of leaves become dry and dead. Ascospore production peaks.**
   - **Partial or Full Deleafing – Partial Deleafing if less than 50% of leaf infected- remove infected part only.**
   - **ACTIONS**
     - Partial or Full Deleafing – Partial Deleafing if less than 50% of leaf infected- remove infected part only.

6. **Streaks now black elliptical or circular spots on the upper side. Higher production of ascospores. Infection spreads cross field and over long distances by wind.**
   - **Perform Cost-effective Field Sanitation Practices**
     - Partial or Full Deleafing
     - Partial or Full Deleafing
     - Partial Deleafing if less than 50% of leaf infected- remove infected part only.
   - **ACTIONS**
     - Partial or Full Deleafing
     - Partial Deleafing if less than 50% of leaf infected- remove infected part only.