



Coffee leaf rust
(FUNGUS - *Hemileia vastatrix*)

- Yellow-orange powdery spots on underside of leaves.
- Corresponding yellow-white patches on upper surface of leaf.



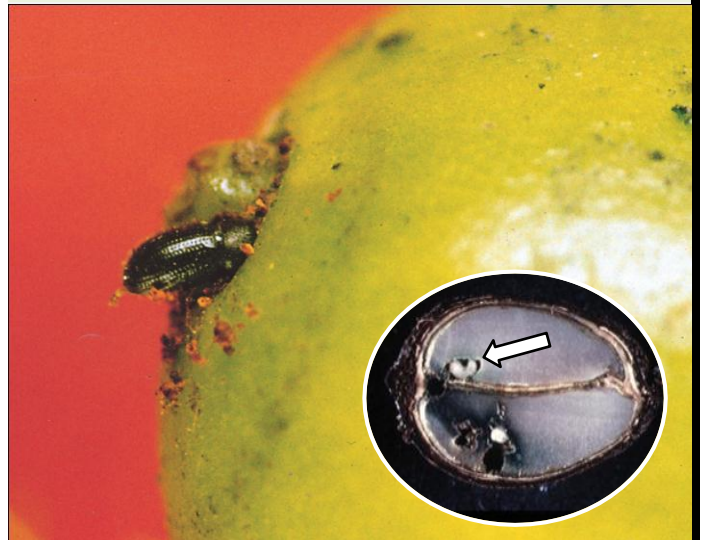
Coffee berry disease
(FUNGUS - *Colletotrichum kahawae*)

- Dark brown-black, slightly sunken lesions develop on green berries.
- Pink powder (spores of fungus) may be visible on lesions. Berries eventually rot.



Coffee wilt disease
(FUNGUS - *Gibberella xylarioides*)

- Leaves yellow, dry and fall from tree (left). Berries ripen prematurely.
- Blue-black discoloration of wood beneath bark (right, arrowed).
- Tree eventually dies.



Coffee berry borer
(INSECT - *Hypothenemus hampei*)

- Small, round holes (1 mm diameter) visible near tip of berry.
- Beans become blue-green, young berries may rot.
- Adult borer present in or on berries or beans. Small white larvae seen in beans (inset, arrowed).



White stem borer

(INSECT - *Monochamus leuconotus*)

- Holes (1 cm diameter) visible in stem of tree (arrowed).
- Bark on stem removed by feeding. Rings on stem can be seen (right).
- Adult borer (left inset). Borer larvae (right inset) tunnels into the wood
- Wood shavings ('frass') present at base of tree.



Leaf miner

(INSECT - *Leucoptera species*)

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- Irregular brown spots or patches on upper surface of leaves.
- Tunnels ('mines') caused by miner feeding under upper layer of leaf.
- Small white caterpillars (5-6 mm long) present in tunnels. Leaves die and fall prematurely.



Scale insects

(INSECT – various species)

(main picture © D.R. Sawant)

- Leaves yellow and droop. Roots become stunted. Gradual dieback of plant observed.
- Scales produce (sugary) honeydew that drips onto leaves and plant parts. Soot-like black fungus may grow on honeydew (main picture).
- Immobile or slow moving dome-like scales visible on leaves (mainly underside), berries, stems and branches (see inset). Scales may vary in colour and size.
- Ants may be seen attending scales.



Brown eye spot

(FUNGUS – *Cercospora coffeicola*)

- Small pale yellow-white circular or angular spots develop between leaf veins on upper leaf surface. Spots enlarge to become reddish-brown with greyish centre (inset).
- Leaf spots may be surrounded by a yellow border.
- Reddish-dark brown patchy lesions develop on berries ('berry blotch'), similar to those of coffee berry disease but not sunken.
- Small red spots ('red blister') appear on green or ripening berries (main picture, arrowed).