



Department
of Agriculture
STATE OF HAWAII

Field Guide to Coffee Leaf Rust (*Hemileia vastatrix*)

Coffee leaf rust is a fungal disease caused by *Hemileia vastatrix*. Hosts of note include but are not limited to *Coffea* spp. (worldwide) and *Gardenia* spp. (in South Africa). Symptoms appear first on the upper leaf surface and then the lower surface of leaves. Severe infections may lead to premature leaf drop, yield reduction, twig dieback, and tree death (Arneson, 2000)*.

LOOK FOR: Orangeish to yellow-orangeish circular spots or lesions on leaves.



Leaves on paper towel.

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RECTANGLES: As spots expand or form, they may join together or overlap to form large irregular shapes.

CIRCLES: As spots age their centers may turn brown.

*Arneson, P.A. 2000. Coffee rust. *The Plant Health Instructor*. Site: <https://www.apsnet.org/edcenter/disandpath/fungalbasidio/pdlessons/Pages/CoffeeRust.aspx> DOI: 10.1094/PHI-I-2000-0718-02



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SYMPTOMS: Seedlings may also display yellowish spots and lesions (circled).

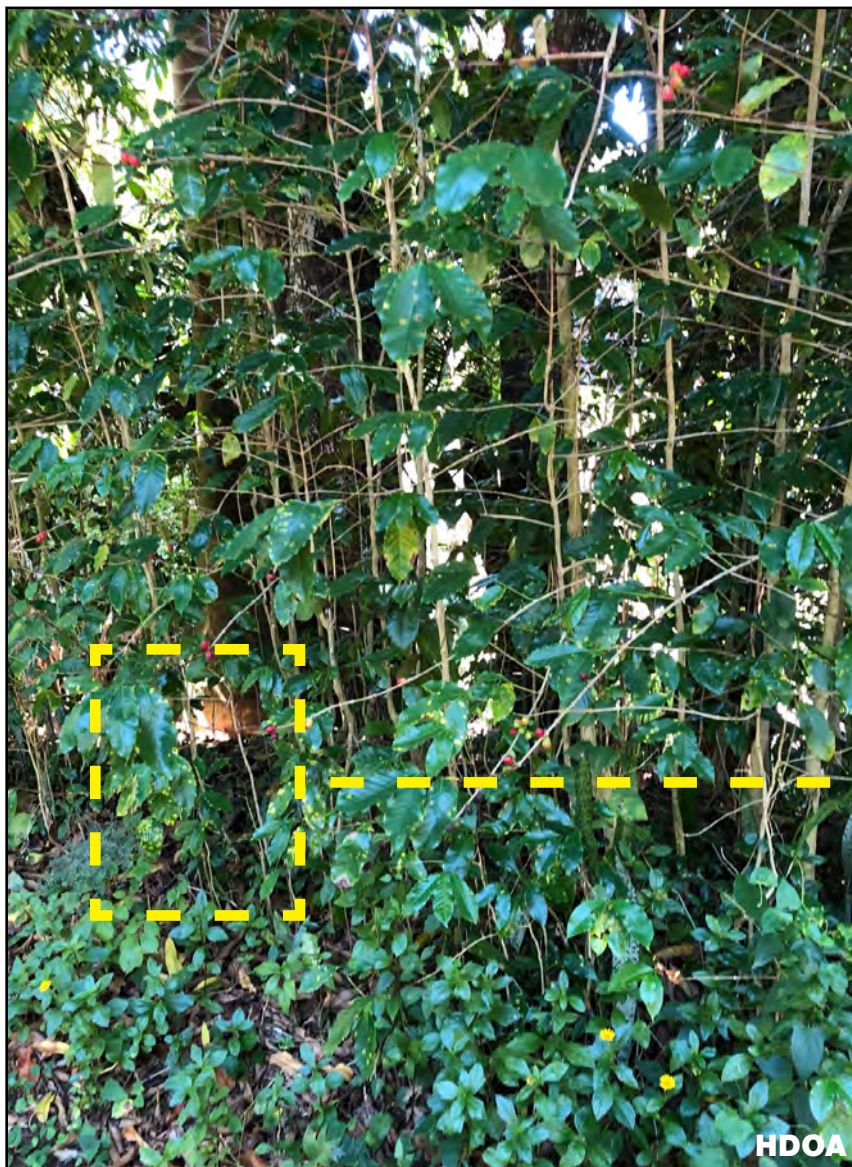




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LOOK FOR: Early infections typically start with yellowish spots or lesions on leaves towards the plant base.





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LOOK FOR: Dropping of green leaves and bare to nearly bare branches.





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PHOTOGRAPH LEAVES LIKE THESE.

LOOK FOR: Yellowish circular spots or lesions on leaves, which may or may not have brown centers.





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PHOTOGRAPH LEAVES LIKE THESE.

SYMPTOM: Yellowish spots with brown centers on leaves.



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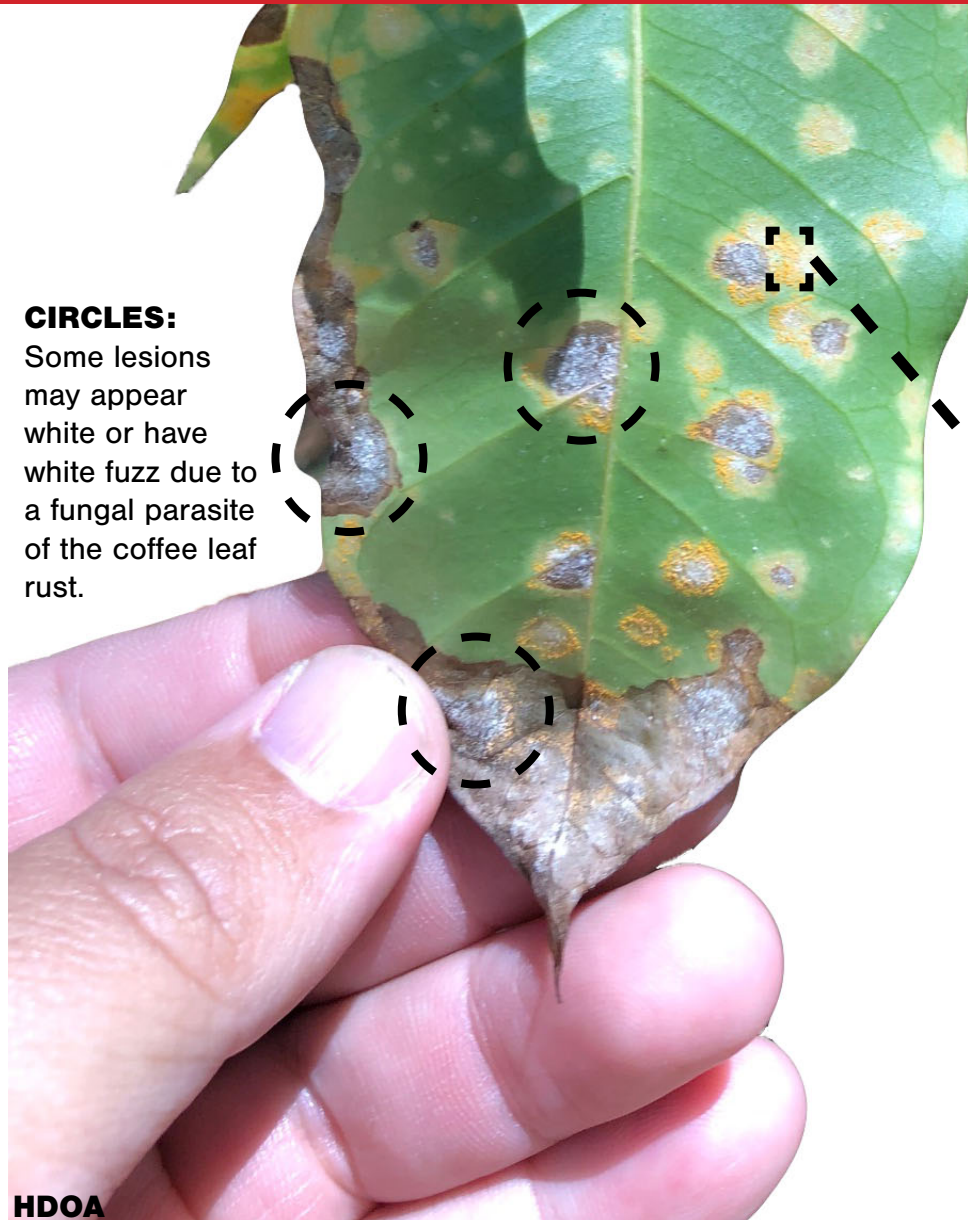
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PHOTOGRAPH LEAVES LIKE THESE.

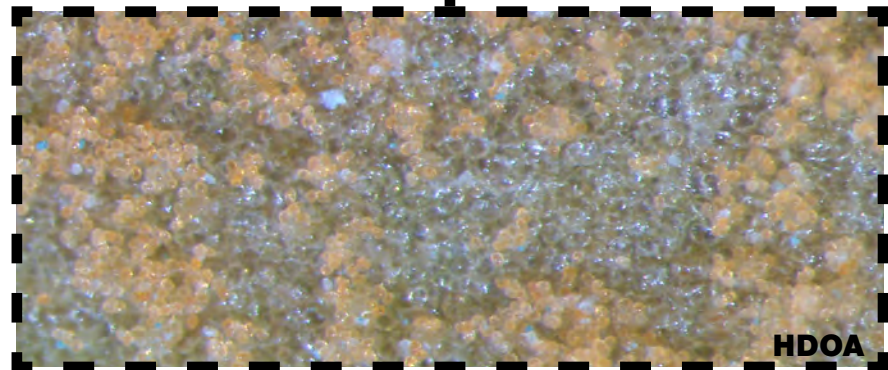
CIRCLES:

Some lesions may appear white or have white fuzz due to a fungal parasite of the coffee leaf rust.



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LOOK FOR: Clusters of orange to yellow-orange powder-like substance on the lower leaf surface below leaf spots on upper leaf surface.



If you suspect coffee leaf rust

1. **First, do not touch or collect diseased plants.**

2. Do take clear photos.

How to photograph coffee leaf rust:

- Take photographs of whole plant (refer to Field Guide to Coffee leaf rust pages 3 and 4).
- Take photographs of upper and lower surface of suspect leaves (refer to Field Guide to Coffee leaf rust pages 5-7).

3. Do not touch or collect diseased plants and flag or visibly mark the area where CLR was found. Let everyone (land owner, manager, workers, visitors, etc.) know to stay away. Do not move soil, plant materials, or supplies from the location.

4. Submit photos and Coffee Leaf Sampling Form to HDOA.PPC@HAWAII.GOV through e-mail with the Subject: **Suspect Coffee Leaf Rust**

- We will be in contact on how to proceed.
- Your information is confidential and will not be shared outside of Hawai'i Department of Agriculture.

5. Decontaminate at site if possible! If you have touched or contaminated your clothing, footwear, hat, etc. with the fungal pathogen or think you may have, shower immediately with soap and water and wash your clothing, footwear, hat, etc. in laundry detergent and hot water and dry with high heat. Once decontaminated, then it is safe to travel from your farm or location.

Coffee leaf rust Sampling Form

Please complete this form as it applies and to the best of your ability. Include it with corresponding image(s). Submit only 1 form per farm/location/residence. Your information is confidential and will not be shared outside of the Hawai'i Department of Agriculture.

Contact Name: _____

Disease symptoms or signs (check all that apply):

Contact E-mail: _____

Dropping of green leaves

Contact Phone: _____

Bare to nearly bare branches

Date collected: _____

Yellowish circular spots or lesions on leaves, which may or may not have brown centers

Farm name: _____

Address: _____

Clusters of orange to yellow-orange powder-like substance on the lower leaf surface below leaf spots on upper leaf surface

GPS Coordinates: _____

Number of plants affected: _____

Location Type (Indicate or describe in Other):

Farm

Nursery

Residence

Wild growing

Other: _____

This will be filled out by lab.

Received by: _____

Action taken: _____

Date received: _____

Final ID: _____

Notes: _____

Identifier: _____

Date identified: _____