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 surfce 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: Orange to yellow-orange circular spots or lesions on leaves.

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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No. 02-PP-2020

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SYMPTOM: Seedlings may also display yellow spots and lesions (circled).

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LOOK FOR: Early infections start with yellow spots or lesions on leaves at 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: Yellow circular spots or lesions on leaves, which may or may not have brown centers.

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PHOTOGRAPH LEAVES LIKE THESE .

SYMPTOM: Yellow spots with brown centers on leaves.

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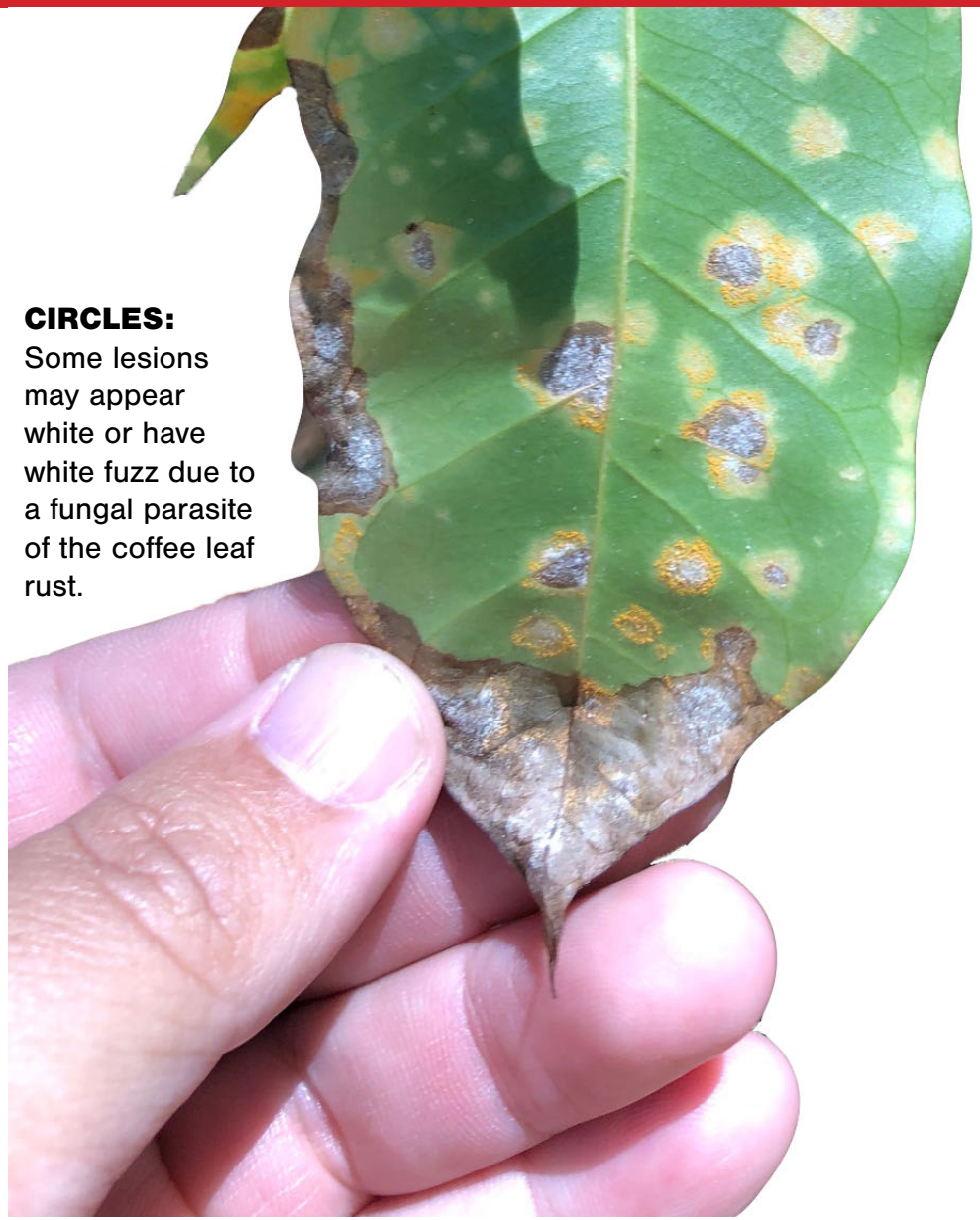
PHOTOGRAPH LEAVES LIKE THESE .



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

LOOK FOR: Clusters of orange to yellow-orange powder or fish egg like supstance on lower leaf surface below yellow leaf spots on upper leaf surface.

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DO NOT COLLECT SAMPLES OF INFECTED PLANTS TO PREVENT POTENTIAL SPREAD.

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. Flag or visibly mark the area where the CLR was found. Let everyone (land owner, workers, 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 dry with high heat. Once decontaminated, then it is safe to travel from your farm or location.

DO NOT COLLECT SAMPLES OF INFECTED PLANTS TO PREVENT POTENTIAL SPREAD.

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 Hawai'i Department of Agriculture.

Contact Name:_____

Contact E-mail:_____

Contact Phone:_____

Date collected:_____

Farm name:_____

Address:_____

GPS Coordinates:_____

Disease symptoms or signs (check all that apply):

- ☐ Lack of leaves on tree
- ☐ Premature leaf drop
- ☐ Yellow spots with brown centers on leaves
- ☐ Clusters of orange to yellow orange powder/tobiko like substance on lower leaf surface

Number of plants present:_____

Location Type (Circle or describe in Other): ☐ Farm ☐ Nursery ☐ Residence ☐ Wild growing ☐ Other:

This will be filled out by lab.

Received by:_____

Date received:_____

Final ID: _____

Identifier:_____

Date identified:_____

Action taken:

Notes:

DO NOT COLLECT SAMPLES OF INFECTED PLANTS TO PREVENT POTENTIAL SPREAD.