



KENYA AGRICULTURAL & LIVESTOCK RESEARCH ORGANIZATION

COFFEE RESEARCH INSTITUTE

COFFEE LEAF RUST AND ITS MANAGEMENT

Coffee Leaf Rust (CLR) is major disease of Arabica coffee that is caused by the fungus *Hemileia Vastatrix*. Symptoms of the disease include pale yellow spots on the underside of the leaves at the onset of infection (Plate 1). The spots later change to yellow/orange powdery masses (Plate 2) and the affected leaves fall off prematurely as the disease becomes more severe. This condition may cause may lead to dieback if not controlled.

Recently, we have observed increased cases of the disease in the farms which may lead to dieback and loss of the crop. There is therefore a need to step up the management of this disease to avoid crop loss.



Plate 1: CLR on single coffee leaf



Plate 2: CLR on many coffee leaves

CONTROL METHODS

1. Resistant Cultivars

Plant or convert susceptible coffee varieties to disease resistant cultivars such as Ruiru 11 or Batian

2. Cultural

- (a) Timely pruning, handling and de-suckering.
- (b) Regular change of cycle (young bearing heads have some tolerance)

3. Chemical

(a) East of Rift Valley areas

Timing is critical for the control of leaf rust by copper-based fungicides. Sprays for leaf rust control should start in October (mid-October) just before onset of the short rains. A second spray, three weeks after the first spray is necessary. The sprays in October and November reduce the production of new spores and thus the inoculum potential will be low at the beginning of the long rains. Therefore, a further one or two sprays at three-week intervals are necessary. If leaf rust is detected in April, a further spray should be applied to avoid dangerously high levels of infection appearing in July.

(b) West of Rift Valley areas

One spray in late February followed by further sprays in March and April. Where the disease is always severe, one spray in late October and another in November unless sprays against Coffee Berry Disease using fungicides that control both diseases are applied in the same period.

4. Where CLR infection approaches approximately 20% level (percentage of leaves with rust), it's recommended that a curative fungicide be used (see Technical Circular no 804 from KALRO-CRI website). A second application may be made 4 weeks after if the situation does not improve appreciably after the first application. **However**, not more than two (2) sprays of any systemic/curative fungicide can be used in one coffee season.

CONCLUSION

In view of the current situation in the field, most farms with traditional varieties will need a curative fungicide to avoid die-back and subsequent loss of crop.

CRI, JULY 2016