"KAHA ROGAYA"
YELLOWING DISEASE OF RICE
IN THE HAMBANTOTA DISTRICT.

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The disorder called "Kaha rogaya" (yellowing disease) of rice, observed in the Hambantota District was characterised by a yellowing of foliage, retardation of growth and profuse tillering. Crops were affected 4-8 weeks after sowing when brown planthoppers (BPH) were also observed. Insecticidal treatments were given to control BPH. Weedicides and fertilizers had been applied to fields. The varieties that succumbed were Bg 94-1 and Bg 380. The BPH tolerant variety, Bg 379-2 was not affected.

The association of BPH with the disorder is indicated and a virus may be involved. However, the symptoms, as observed, and the nature of prevalence of insect vectors transmitting virus diseases do not match the characteristics of known virus diseases to attribute this disorder to a viral cause, especially because it spread within a relatively short time to affect an area estimated at about 4000 acres. The plant hopper build-up also does not appear to have been of a magnitude sufficient to cause direct damage to crops.

Investigations are in progress to find out whether kaha rogaya is a virus disease. Meanwhile, it is advisable to adopt precautionary measures should the disease be caused by a virus.

1. Crop residues in the affected areas must be destroyed to eliminate the source of a possible virus. This may be done by the adoption of one or more or a combination of the following methods; burning, ploughing in, and treating with a total weed killer.

2. The cycle of infection must be broken, if a virus is the cause, by removing sources of infection and by preventing the perpetuation

of infective planthoppers that could transmit a virus. Accordingly, planting should be delayed by one month from the scheduled date of sowing for the next season.

3. A variety that was not affected by the condition, Bg 379-2, or short aged varieties should be grown during the next season.

This disorder may also have been caused by a toxic effect to plants operative through the agro-chemicals applied, by "decoctions" and mixtures of agro-chemicals, or by toxic components or impurities in fertilizers and agro-chemicals, or by insect toxins. The alteration of the chemical, physical and biological status of the soil are other possible causes. Depletion in the soil of essential micronutrients for the normal utilization of nitrogen and phosphorous fertilizers and for the synthesis and maintenance of chlorophyll may also cause yellowing and consequently retardation of plant growth. The inability of varieties to withstand certain stresses operative through the environment, irrigation water, etc, may also result in abnormalities. These factors too need to be considered as possible contributory causes of the total condition affecting extensive tracts in the Hambantota District.

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