

ABSTRACT

**Damage/Loss Assessment Studies on rice designed to Simulate
the Effects of *Hydrellia* spp.
(Diptera: Ephydriidae) Damage to Rice in Trinidad**

Leon Francis Granger

Rice is important as a staple in the diet of Trinidadians and its cultivation has expanded rapidly during the last decade. At the same time, many insects have attained pest status, among which is the undetermined species of *Hydrellia*. One of the methods of crop-loss assessment is the "simulated-damage" technique, which is used in this work to simulate the effects of *Hydrellia* damage on the growth, tillering and yield of the rice cultivar Orizica 1 under tropical conditions as exist in Trinidad.

Five levels of leaf-clipping (0, 25, 50, 75, and 100 percent) were carried out on rice at four growth stages (21, 28, 49, and 63 days after sowing (DAS)), to simulate leaf miner damage by *Hydrellia* spp.

Plant mortality was nil and all treatments matured at 124 DAS.

There was a significant difference in the final height of the crop for all treatments. When plots were clipped in the tillering stages of 49 and 63 DAS, the final height of the plants for 50, 75 and 100 percent leaf clipping were significantly shorter than the 0 and 25 percent levels.

An LSD analysis showed no significant difference for the number of tillers produced in each treatment, as well as for yields.

The results of this study demonstrated that Orizica 1 rice grown in Trinidad can tolerate and compensate for *Hydrellia* damage at all levels between 21 and 63 DAS. *Hydrellia* does not normally infest rice at the later stages, but more work is needed between seedling emergence and 21 DAS.