

Research Note

DIATRAEA SACCHARALIS (F.) IN RICE PLANTS IN PUERTO RICO^{1,2}

Rice, *Oryza sativa* L., grown in Puerto Rico is attacked by the sugarcane borer, *Diatraea saccharalis* (F.)^{3,4}. The female lays eggs on the foliage⁵. Newly hatched larvae bore into the stem of the rice plant and feed on plant tissue. If the attack is during the early stages of plant growth, the damage results in a condition known as dead heart. Damage done during panicle formation results in empty panicles known as white heads. Farmers usually apply insecticide to control this pest even though the infestation is rarely detected before damage to panicle (white heads) is observed. Once the white heads are observed, insecticide treatment will do little to prevent damage to the next crop. This work was initiated to study *D. saccharalis* incidence in rice plants.

Rice fields were surveyed at two locations, Vega Baja and Lajas, in 1986 and 1987. Commercial fields were selected at random. In each field 20 sites were sampled and the number of panicles per square meter and white heads were counted in each field. Each field consisted of 2 to 3-ha ponds. The percentage of affected panicles was calculated for each field. Five fields were inspected at each location.

The overall number of affected panicles was 1.6%. More white heads were collected within 2 meters from the edge (2.4%) than in the rest of the field (0.8%). The infestation level observed in this trial is similar to that reported in Louisiana (less than 1%) for the combined effect of *D. saccharalis* and *Chilo plejadellus* Zincken. In a simulated tiller damage trial, Chaudhary⁶ reported significant yield reductions with 2 and 10% damaged tillers when the damage was done 60 and 40 days after seeding, respectively.

This information on damage distribution in rice fields can be used in integrated pest management and scouting programs in which farmers usually overestimate the damage by counting the number of affected panicles on the edge of the field. Infestation in panicles on the edge is usually more visible than infestations in mid-field. The low percentage of infested panicles also suggests that *D. saccharalis* infestations will rarely warrant control in Puerto Rico rice fields.

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²This study was conducted under CBAG-26 Research Project.

³Martorell, L.F., 1976. Annotated Plant Food Catalog of the Insects of Puerto Rico. Agric. Exp. Sta. Univ. Puerto Rico.

⁴Vicente-Chandler, J., F. Abruña, J. Lozano, S. Silva, A. Rodríguez y C.T. Ramírez, 1977. Cultivo intensivo y perspectivas del arroz en Puerto Rico. Esta. Exp. Agric. Bol. 250.

⁵Wolcott, G.N., 1948. The insects of Puerto Rico. *J. Agric. Univ. P.R.* 32:1-975.

⁶Chaudhary, R.C., G.S. Khush and E.A. Heinrichs, 1984. Varietal resistance to rice stem-borers in Asia. *Insect Sci. Appl.* 5:447-63.6.