Texas Ratoon Rice: New Hoja Blanca Disease and Rice Delphacid Alert

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A new viral disease, **Hoja Blanca**, caused by the rice hoja blanca virus (RHBV), has been visually identified in 1,400 areas of ratooned rice crops in Wharton County and 450 acres in Waller County. However, the actual acreage affected is suspected to be much larger. Impacted rice varieties include PVL03, CLL18, CL153, CLJ01, Dixiebelle, and Presidio, with 5% to 20% of plants showing symptoms. The disease emerged roughly 3 weeks after the main crop harvest (Fig. 1). Infected plants showed the following symptoms (Fig. 1):

1) Chlorotic stripes - yellow or whitish stripes primarily on flag leaves
2) Leaf discoloration - mottled appearance with patches of yellow or pale green among healthy tissue
3) Stunted growth and reduced tillering
4) Incomplete panicle exertion
5) Sterility or absence of flowers,
6) Distorted and bronzed palea and lemma
7) Incomplete grain filling, resulting in reduced yields



Fig. 1. Symptoms of rice Hoja Blanca in a ratoon crop field (Left), on a rice plant (Middle), and on a flag leaf blade (Right)

This virus is transmitted by the **rice delphacid** (*Tagosodes orizicolus*) (Fig. 2). The rice delphacid is an invasive species native to Central and South America and the Caribbean. This insect was first detected in Galveston County, Texas in 2015, and has since spread to other rice-growing counties in Texas. In 2024, the planthopper has become problematic in ratoon crops. Weather-related events like hurricane Beryl on July 8, 2024, may have contributed to an increase in planthopper populations.

This is the first documented case of the Hoja Blanca disease in Texas, though the disease has previously been reported in Florida, Louisiana, and Mississippi. The presence of this new viral disease poses a serios threat to Texas rice production, as it can cause up to 75% yield loss, a major issue in Central and South America and the Caribbean. Drs. Zhou (plant pathologist) and Bernaola (entomologist) are working together to better understand how the virus is transmitted by the insect vector and identify potential alternative plant hosts.



Fig. 2. Adults (left) and nymphs (right) of rice delphacid

Management Recommendations:

1. Implement **weed control**, especially for grass species such as *Echinochloa* spp., which can harbor the virus.
2. Avoid **successive rice plantings** in fields with a known history of Hoja Blanca to minimize recurrence.
3. **Apply insecticides** to control rice delphacid populations. Endigo ZCX and Tenchu 20SG are currently labeled for use. Users must have the insecticide labels in the possession at the time of application.
4. Use **resistant rice varieties** to reduce the risk of future outbreaks. The rice entomology program is currently assessing common rice varieties against this pest.

Farmers are advised to monitor their fields closely for the presence of both the insect and Hoja Blanca symptoms to help minimize further losses. We would like to emphasize that the full extent of the disease and insect outbreaks will remain unknown until growers, dealer representatives, crop consultants, and county extension agents actively begin monitoring both the disease and the planthopper.

For more information on diagnosing and managing Hoja Blanca, please contact Dr. Xin-Gen (Shane) Zhou, Plant Pathologist, at xzhou@aesrg.tamu.edu or (409) 245-8627.

For inquiries about rice delphacids and their management, please contact Dr. Lina Bernaola, Entomologist, at lina.bernaola@ag.tamu.edu or (409) 245-8632.