

Mexican Rice Borer

Eoreuma loftini



Photo: Anna Meszaros, ©2013, Louisiana State University AgCenter



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Mexican Rice Borer

- Stem-boring moth
- Major pest of sugarcane, rice, and other grass crops
- Not yet established in Florida, but detected in Levy Co.



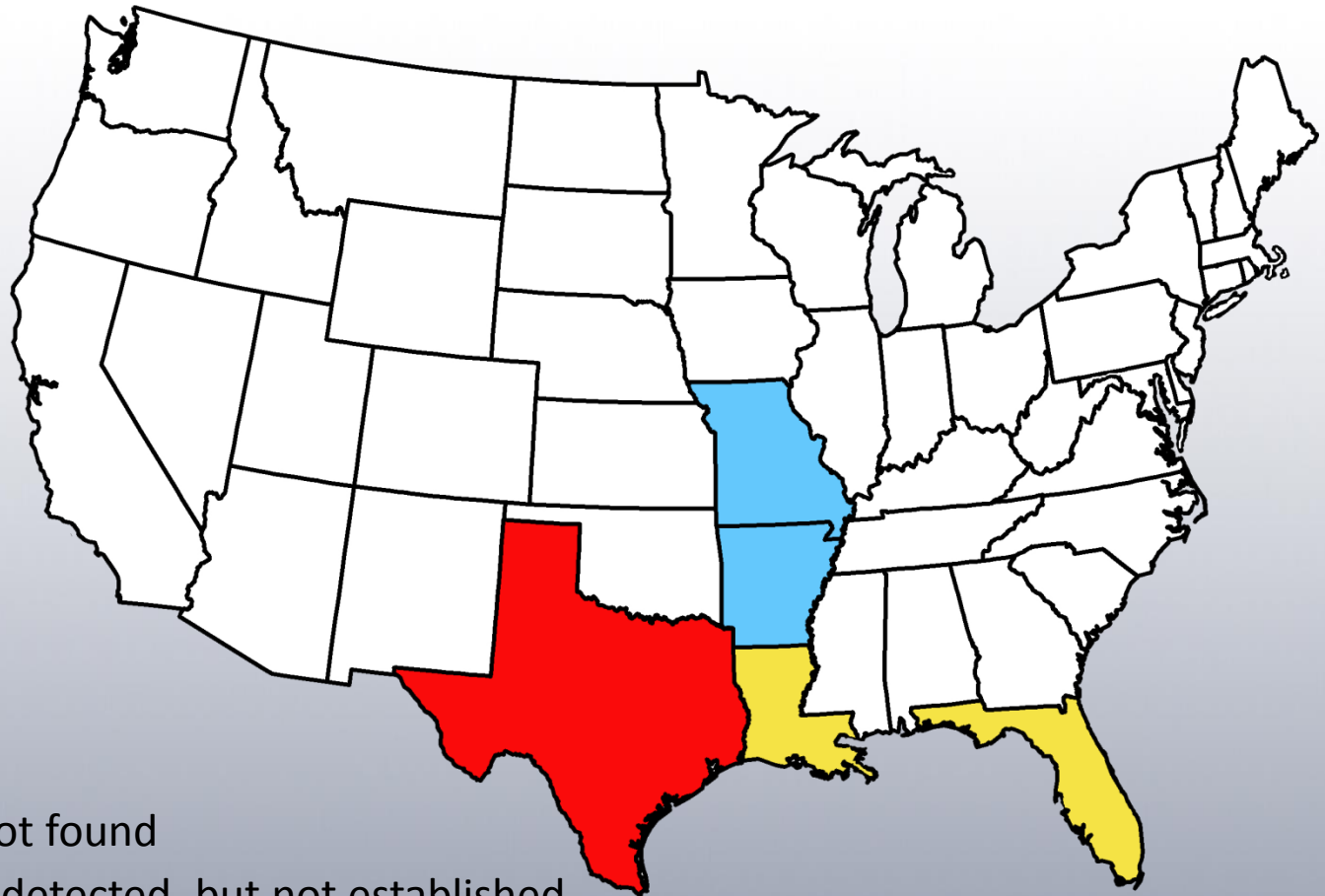
Photos: Anna Meszaros, Louisiana State University AgCenter; Josh Wickham, University of Florida Institute of Food and Agricultural Science



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Distribution



- ☐ No sampling
- ☐ Sampled but not found
- ☐ Intercepted or detected, but not established
- ☐ Established by survey or consensus

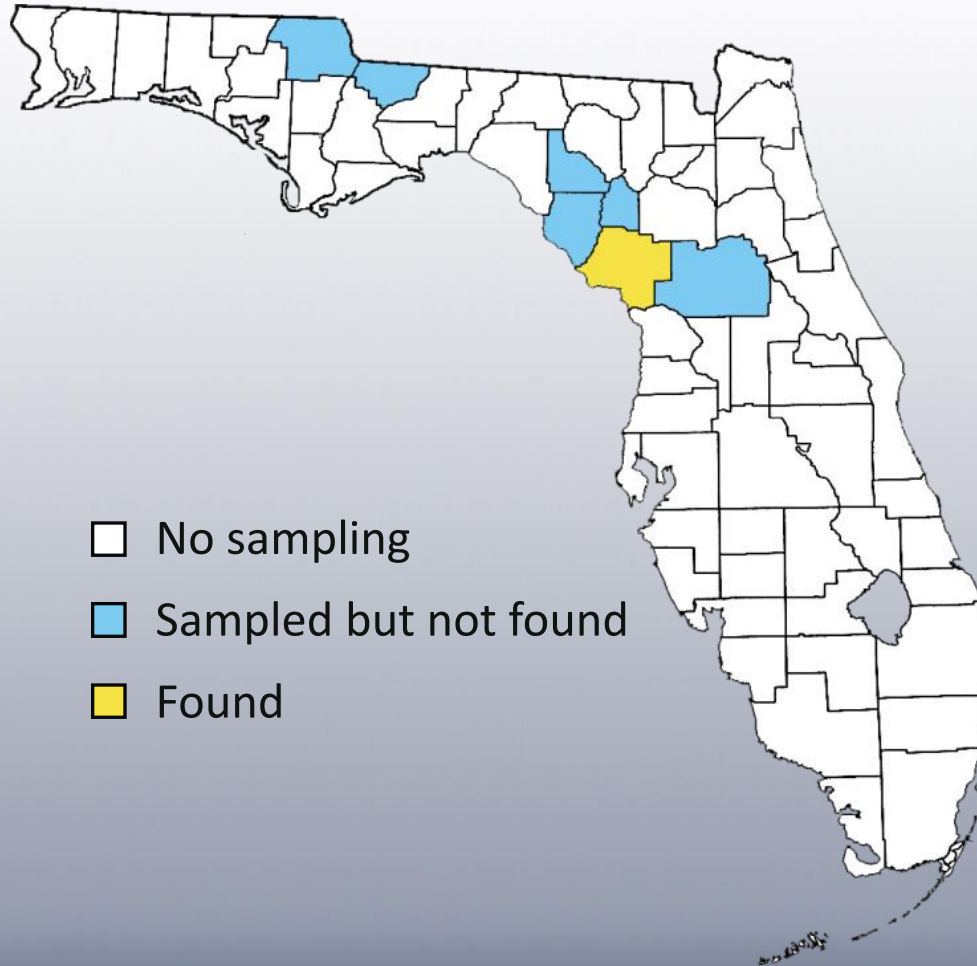
Map courtesy of Pest Tracker, National Agricultural Pest Information System (NAPIS)



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Florida Detections



- ☐ No sampling
- ☒ Sampled but not found
- ☒ Found

Map courtesy of FL CAPS



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Susceptible Plants

Rice



Barnyardgrass



Johnsongrass



Sugarcane



Photos (from left to right): Fuger Dou, Department of Soil and Crop Science, Texas A&M University; Larry Allain, U.S. Geological Survey; George Yatskievych, Missouri Botanical Garden; Josh Wickham, University of Florida Institute of Food and Agricultural Science



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Identification: Eggs

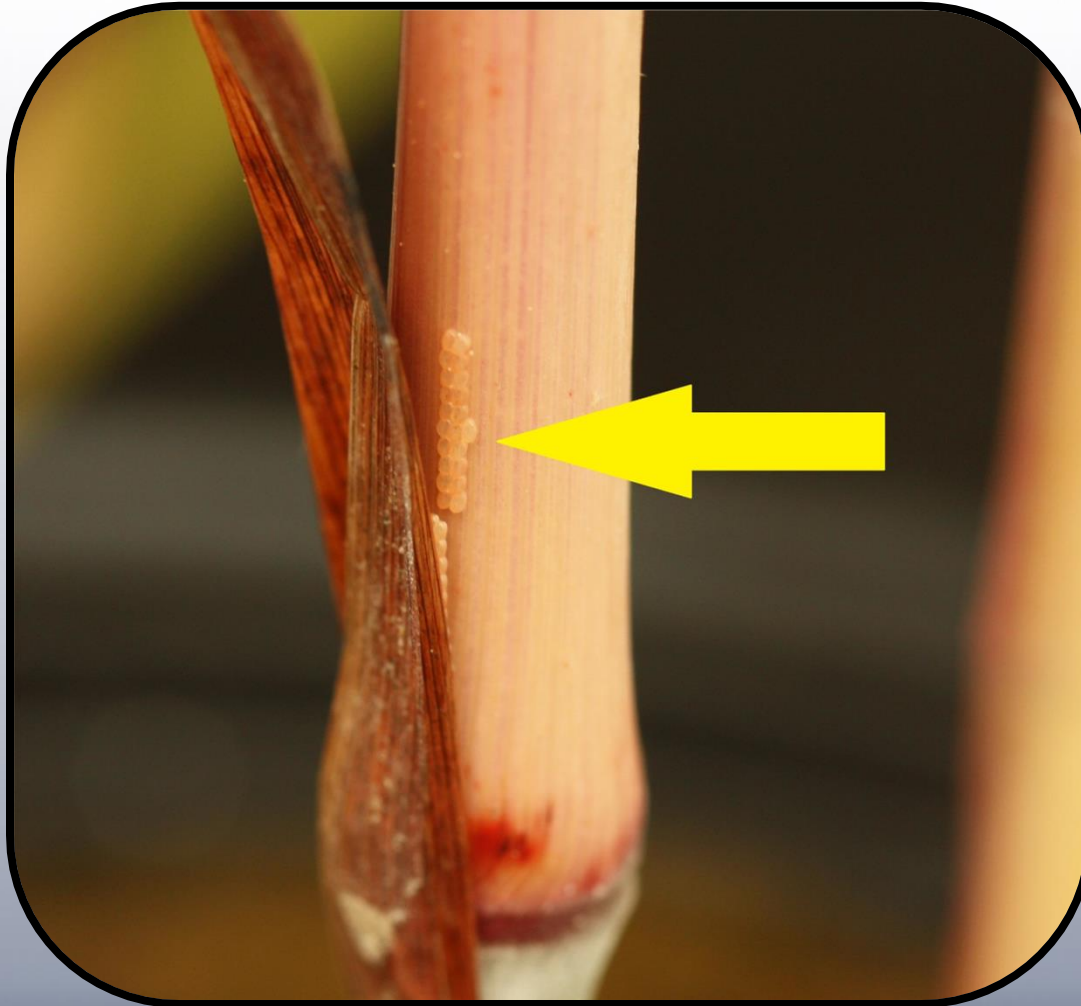


Photo: Julien Beuzelin, ©2013, Louisiana State University AgCenter

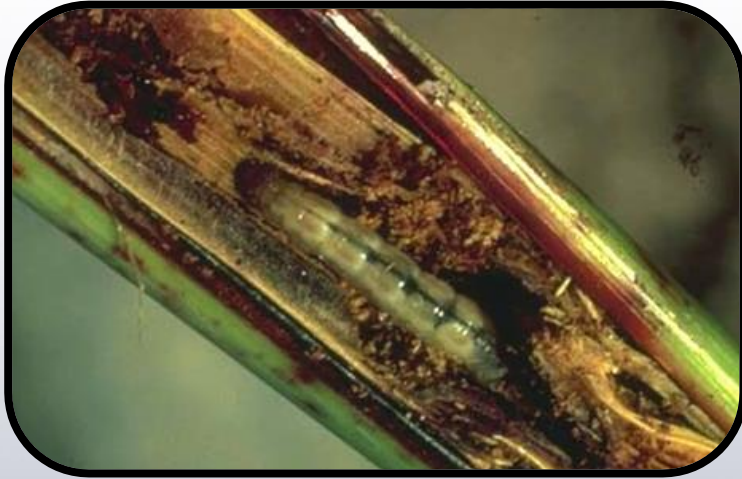


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Identification: Larvae

Larva in a stem



Laval head capsule and thorax



Larva boring into a stem

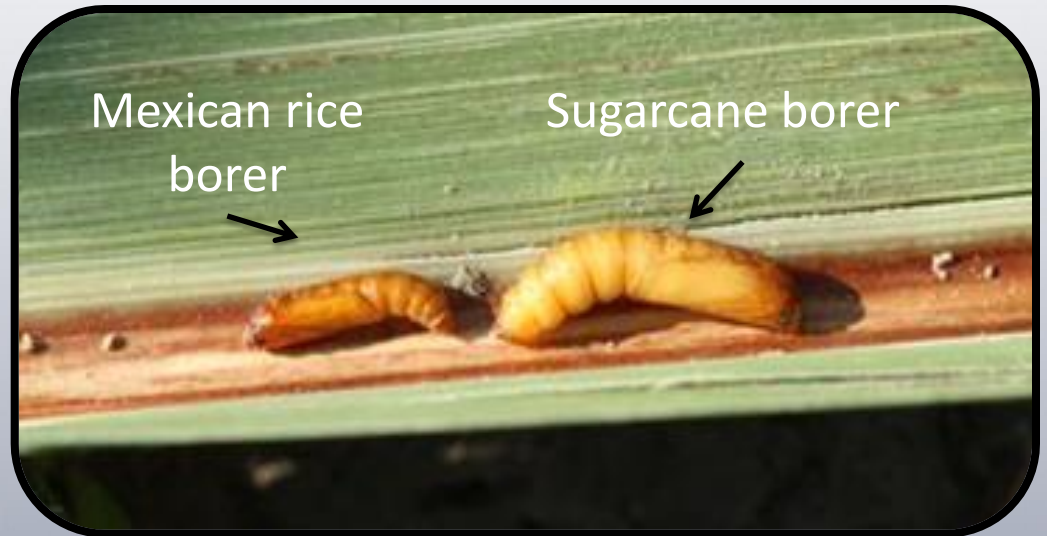
Photos: (Top Row) - courtesy of insects.tamu.edu; Anna Meszaros, ©2013, Louisiana State University AgCenter. (Bottom) - T. Eugene Reagan, Louisiana State University AgCenter.



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Identification: Pupae



Photos: Anna Meszaros, ©2013, Louisiana State University AgCenter.



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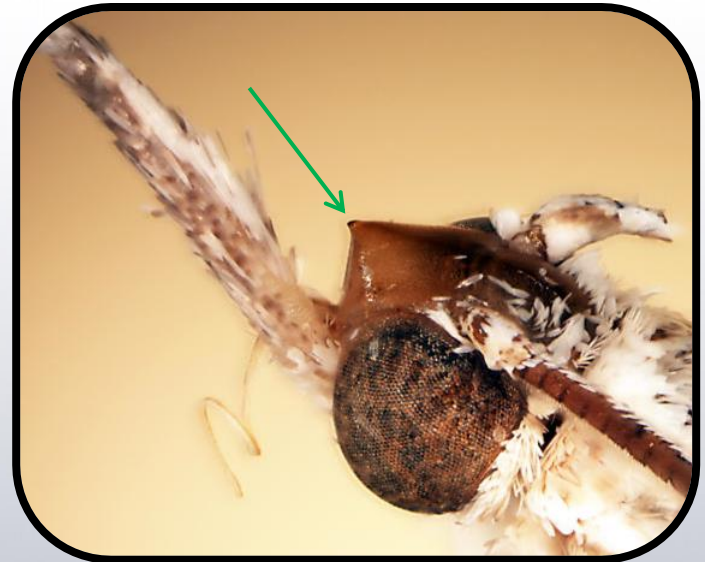


Identification: Adults

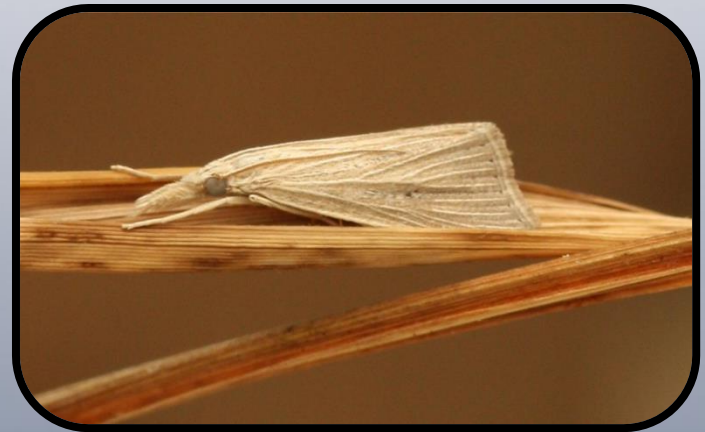
Patterns on the forewings



Mouthparts



Closed wings



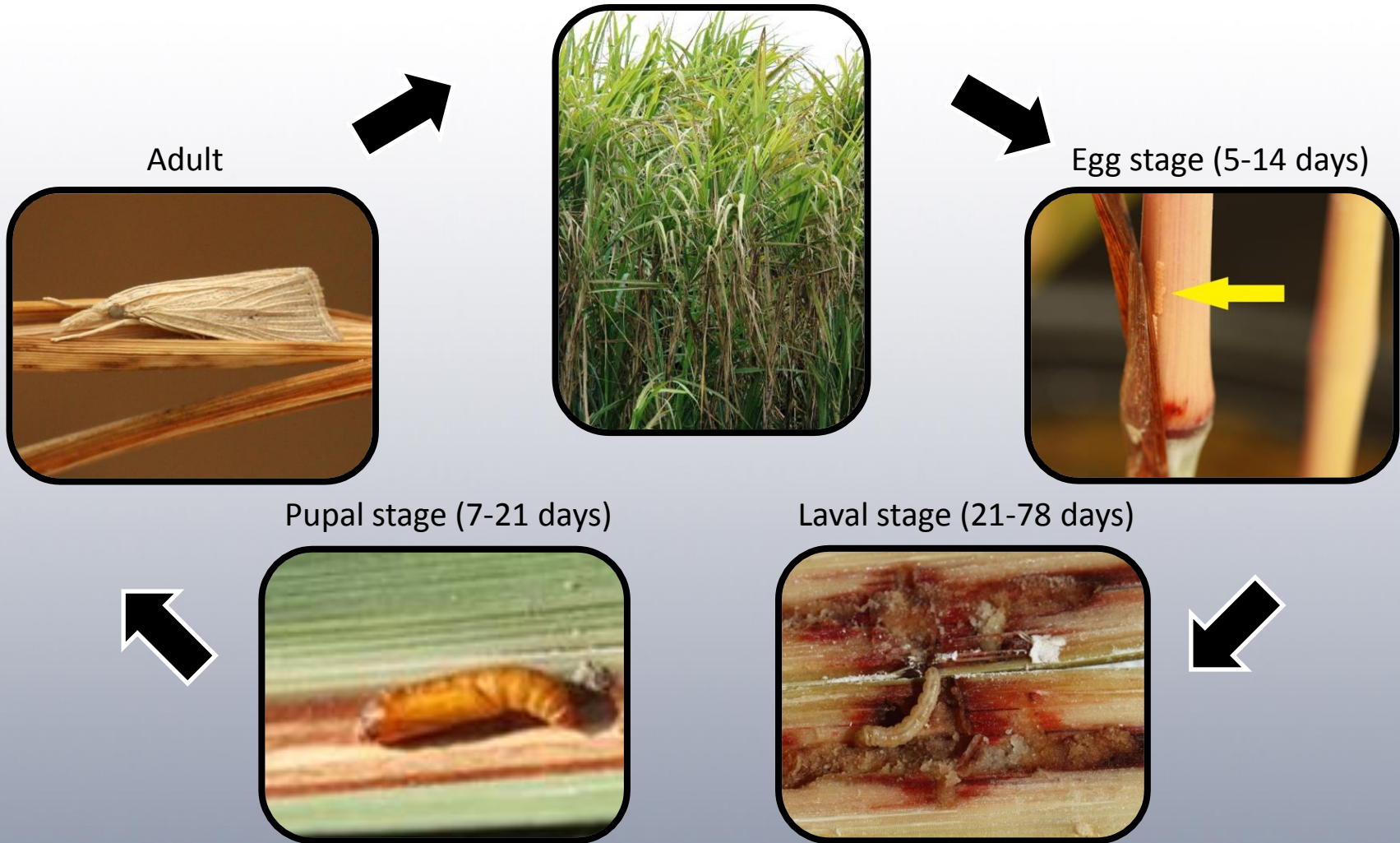
Photos: (Left & Top Right) - Kira Metz, USDA, APHIS, Plant Protection and Quarantine; (Bottom Right) - Anna Meszaros, ©2013, Louisiana State University AgCenter



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Life Cycle



Photos: Anna Meszaros, JulienBeuzelin, Natalie Hummel, and Johnny Saichuk; ©2013, Louisiana State University AgCenter, Josh Wickham, University of Florida Institute of Food and Agricultural Science

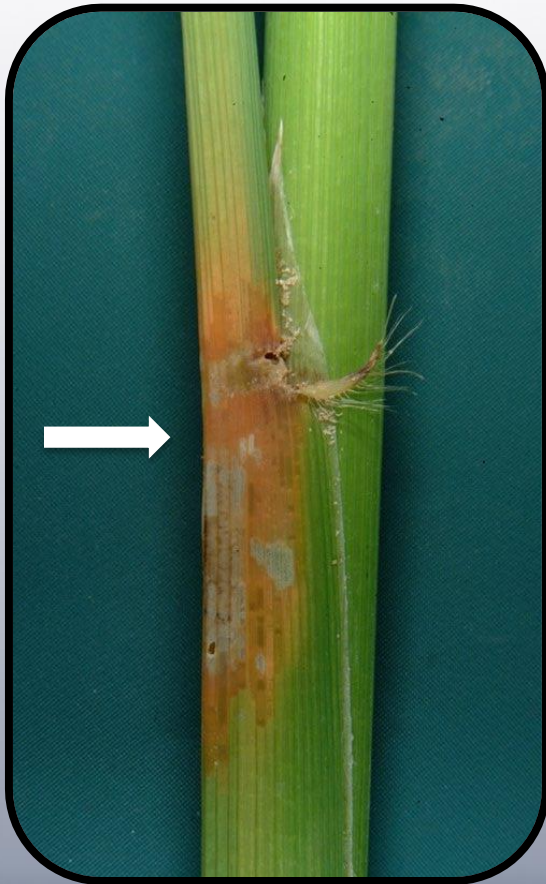


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Damage

Orange coloration and Withering



Deadheart



Photos: (Left to Right) - Johnny Saichuk; Anna Meszaros; Bruce Schultz. ©2013, Louisiana State University AgCenter



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Damage

Lodging of stalks in sugarcane



Whitehead condition in rice



Photos: Johnny Saichuk, ©2013, Louisiana State University AgCenter



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Monitoring

- Surveying should begin:
 - When internodes are visible in most plants (sugarcane)
 - Green ring stage (rice)
- Look for orange lesions caused by larval feeding
- Peel off the leaf sheath to detect larva or frass
 - Frass = MRB
- Check the edges of fields or clusters of plants.
- Check individual plants in a systematic way (e.g., every 5th plant, or every 10th plant).



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Management

- Plant resistant varieties
- Apply narrow-range minimum-risk insecticides
- Minimize plant stress
- Plant early
- Process cane at closest mill to minimize spread



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Look-alike Species



Sugarcane borer (*Diatraea saccharalis*)



Rice stalk borer (*Chilo plejadellus*)



Mexican Rice Borer (*Eoreuma loftini*)

Photos: (Top Left) - - Johnny Saichuk, ©2013, Louisiana State University AgCenter; (Top Right & Bottom) - Anna Meszaros, ©2013, Louisiana State University AgCenter

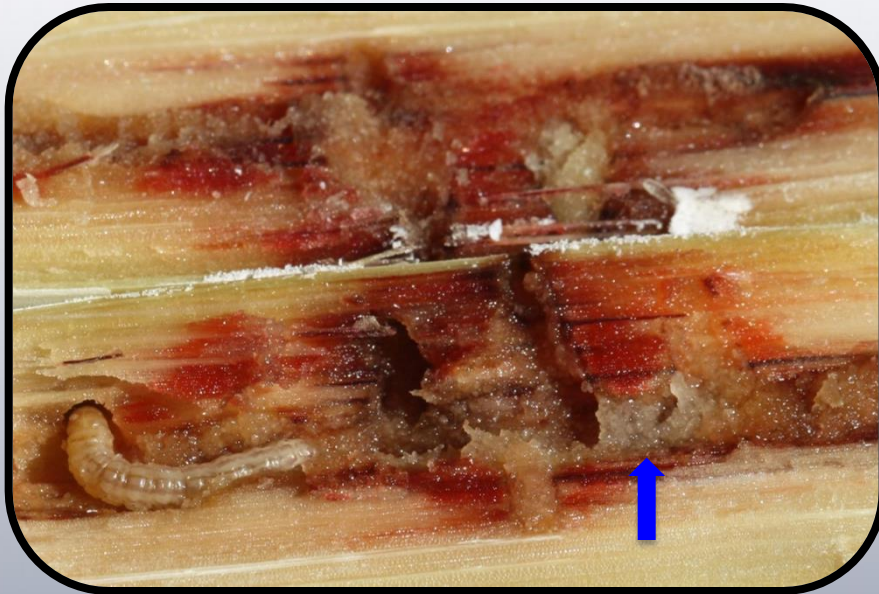


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Look-alike Species

Mexican Rice Borer (*Eoreuma loftini*)



Frass packed tunnels

Sugarcane borer (*Diatraea saccharalis*)



Frass build up outside exit hole

Photos: - Anna Meszaros; Natalie Hummel - ©2013, Louisiana State University AgCenter



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Look-alike Species



Sugarcane borer (*Diatraea saccharalis*)



Rice stalk borer (*Chilo plejadellus*)



Mexican Rice Borer (*Eoreuma loftini*)

Photos: (Top Left) - William White, Bugwood.org # UGA1324047; (Top Right) - Anna Meszaros, ©2013, Louisiana State University AgCenter; (Bottom) - Francis Reay-Jones, Clemson University.



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Collaborating Agencies

- U.S. Department of Agriculture Animal and Plant Health Inspection Service (USDA-APHIS)
- Cooperative Agricultural Pest Survey Program (CAPS)
- Florida Department of Agriculture and Consumer Services (FDACS)
- National Plant Diagnostic Network (NPDN)
- Sentinel Plant Network (SPN)
- Protect U.S.
- University of Florida Institute of Food and Agricultural Sciences (UF-IFAS)



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Educational Disclaimer and Citation

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