

**CHARACTERIZATION OF CORN LEAFHOPPER, *DALBULUS MAIDIS* DELONG AND WOLCOTT ELECTRICAL PENETRATION GRAPH WAVEFORMS**

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The stylet probing activities of the leafhopper, *D. maidis*, a vector of corn stunt spiroplasma, *Spiroplasma kunkelii*, were studied by electrical penetration graph technology. Six distinct waveforms were characterized and correlated with major probing activities of *D. maidis* via transmission of corn stunt spiroplasma and excretion of honeydew as markers. Major waveforms comprise stylet pathway (waveform 1), active ingestion in non-sieve elements (waveform 2), nonvascular probing (waveform 3), phloem contact (waveform 4, the X wave), phloem ingestion (waveform 5) and oviposition (waveform 6). Our results support most previous findings for this species, and also indicate that some waveforms (2, 4 and 5) are related to biopotentials generated during probing, as was previously found for other hemipteran species. The most important finding from this work is that *D. maidis* ingests from phloem sieve elements more frequently and for longer durations than seen in previous research, probably due to longer observation periods used in this study. This work provides basic information relevant to the understanding of probing behavior of *D. maidis* and to the characterization of potential sources of insect-resistant maize.