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Effect of environmental temperature on transmission of mollicutes by *Dalbulus maidis* leafhopper in maize

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The objective of this work was to evaluate the effect of winter-spring temperatures on transmission and latent period of maize bushy stunt (MBS) phytoplasma and *Spiroplasma kunkelii* by *D. maidis*. In one screen house experiment, where the temperature was daily recorded from the climatic station of the experimental farm of Embrapa, Sete Lagoas, State of Minas Gerais, Brazil, half of a healthy leafhopper population was confined in maize infected with *Spiroplasma* and the other half in maize infected with phytoplasma, for 6 days as acquisition access period (AAP). After that, leafhoppers were feeding with healthy seedlings. Transmission tests were performed with one leafhopper per seedling for each mollicute, with 12 replicates, at 12, 20, 30, 40 days since the first day of AAP. In addition, at 40 days, one leafhopper from AAP-phytoplasma and other from AAP-spiroplasma were confined together in 24 maize seedlings. The access period for inoculation (API) was 3 days. Until flowering, only at latent period of 40 days, 41.6% and 58.3% of plants respectively submitted to phytoplasma or to both mollicutes presented MBS-phytoplasma symptoms. Temperatures during AAP ranged from 8°C to 26°C and like this until 40 days. During the API-40 days test, the temperatures ranged from 8°C up to 34°C, and after that, in general, higher than 8°C up to 34°C. Results of plant symptoms and for PCR tests indicated that MBS-phytoplasma is more tolerant to low temperatures than *S. kunkelii*.



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