INFECTION "*IN VITRO*" OF MAIZE BY THE PHYTOPATHOGEN *Sporisorium reilianum*.

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Introduction. The fungus *Sporisorium reilianum* is a soil pathogen that causes the head smut of corn disease, which is distributed worldwide. The infection process of this pathogen occurs during the seedling stage, through the penetration by the appressoria that develop at the tip of the hyphae of the plant epidermal cells. The subsequent infection is systemic, with a progressive colonization around the vascular bundles; in such cases, the mycelia can be observed in all the tissues of the plant. The symptoms are apparent until the flowering stage, when the formation of phyllody in the inflorescences and the presence of carbon masses composed of teliospores in the inflorescences or cobs are observed; the teliospores are then liberated and disseminated by wind (Matyac and Kommedahl, 1985; Martinez et al., 2002; Ghareeb et al., 2011). In this work the detection of this basidyomicete infection during primary moments of the seedling stage was made using molecular methods.

Methods. The variety maize seeds AS106 were sterilized with chlorine solution to 2% and following the protocol of Ghareeb et al. (2011). All contaminated germinating seeds were discarded. Seeds free of microbial contamination were transferred to flasks each containing 100 mL of solid medium with refined sugar or brown sugar (30 g/L) and 8 g/L agar and incubated at 28 °C for 5 days and were infected with the strain of *S. reilianum* in stage yeast it was inoculated with a suspension with 10^6 cell/mL by drip and incubated at 28°C for 12 days. The DNA of the roots and the stem with leaf was extracted with the CTAB method (Doyle and Doyle, 1987). These samples were used to detect the fungus by specific PCR following the protocol of Xu et al. (1999).

Results.
Both sugars allowed the development of plants.

The plants were infected with *S. reilianum*, the presence of pathogen was detected by PCR in roots and stem with leaves (Figure 1), obtaining the size expected for the 960 bp amplified.

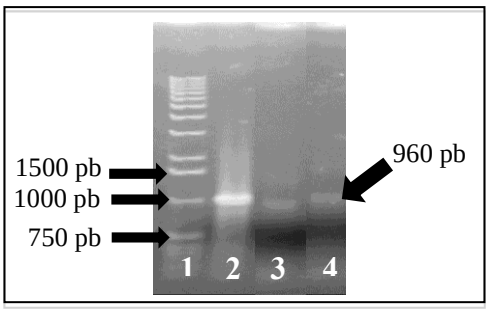

Fig. 1. Amplification of *S. reilianum*. 1. Molecular weight marker. 2. Positive control. 3. Stem with leaf. 4. Root.

Conclusions. The methodology in this work allowed of detection the infection of this pathogen during seedling early stage.

References.

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