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PATHOGENICITY OF STRAINS OF *MYCENA CITRICOLOR* FROM DIFFERENT HOSTS

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Conventionally, coffee farmers try to control American leaf spot disease by applying treatments directed to residual inoculum present on old damaged coffee leaves. However, the effectiveness of these treatments is low, particularly in Niña years where the epidemics increase faster. Our hypothesis is that there is a "hidden inoculum" not controlled, living all the year, in the companion vegetation (weeds and shade trees) which can efficiently contribute to the epidemic onset.

In this study, we assessed the aggressiveness of different strains we isolated from several hosts found in coffee plantations. We collected leaves with symptoms or/and gemmae from shade trees, weeds, Caturra (McCa) and Catimor (McK) coffee varieties. These samples were transported to the University of Costa Rica Phytopathology Lab for pathogen isolation or for direct inoculum picking. At least 15 gemmae, one by inoculation point, were placed on the surface of healthy and fresh Caturra leaves of two years old. Then, these were maintained into humid boxes at 20-21°C and 100% of relative humidity for 15 days, and at 24-25°C and approximatively 80% of relative humidity for other two weeks. During this period, the number of formed lesions, the mean diameter of each lesion and the quantity of geminifers produced were assessed each two days. Infection success (IS), gemmae production capacity, incubation and latent periods, and the pathogenicity index (PI) were calculated for each strain.

Inoculum directly coming from field was more aggressive than inoculum coming from *in vitro* culture. The strain McK had a 100% IS; all its gemmae were viable; it was the first in producing lesions (2 days before the others); it also started the geminifers production 6 days before McCa. The isolates with major PI were recovered from *Anredera cordifolia* (9.1), Catimor (9.9) and *Bryophyllum calycinum* (18.9). Caturra only showed a PI of 3.67, reflecting a low pathogenicity.

The main conclusions were: 1) There are differences in pathogenicity of *M. citricolor* strains recovered from different coffee varieties, 2) Inoculum coming from Catimor is more aggressive than inoculum coming from Caturra and 3) There are differences in pathogenicity of *M. citricolor* isolates recovered from other hosts like *Anredera cordifolia* and *Bryophyllum calycinum*. We hypothesized that these differences are physiological and are not due to genetic variation.

This work indicates that there are more sources of inoculum in coffee plantations than those normally expected. It is important to control this inoculum by applying a selective management of weeds, using less susceptible shade trees, and controlling isolated Catimors within Caturra plantations, particularly in localities with favorable conditions for the pathogen.