

Identificación del oídio causado por *Erysiphe trifoliorum* (Wallr.) U. Braun en *Melilotus officinalis*.

Identification of the powdery mildew caused by Erysiphe trifoliorum (Wallr.) U. Braun on *Melilotus officinalis*.

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LOS AUTORES DECLARAN NO TENER CONFLICTO DE INTERESES

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Key words: longitubus; germination; conidium

Molecular identification of powdery mildews is challenging due to the impossibility of processing sterile mycelium or cultures. For this reason, inexpensive and fast methods based on conidial germination are still a very reliable alternative for identifications at the species level. *Melilotus officinalis* is a very extended forage crop in the central regions of Argentina. High incidence of a powdery mildew was diagnosed on a spontaneous population of this species in wetlands of the Río de la Plata close to the city of Buenos Aires. Conidial germination assays were conducted in different media and culture conditions in order to identify the pathogen to the species level.

Conidia were obtained by scraping the infected leaves and transferred to agar plates with different culture media (agar water, malt extract agar and potato dextrose agar). Germination was evaluated under light and in darkness at room temperature (24 °C) for a period of 48 hours. Conidial features were observed at microscope as well

as germination site, shape and length of the germ tube, and presence / absence of appressoria.^{1,2,4}

The onset of germination was observed within the first 4 hours under light conditions and did not take place in the dark even after 10 hours of incubation.

A typical longitubus germination pattern was observed⁵, which consist of the presence of an apical or sub apical germ tube, medium to moderately long, simple, whitout apical appressorium differentiation (Fig. 1). The average lenght of the germ tube was: 74 µm on malt extract agar, 68 µm on potato dextrose agar and 46.5 µm on water agar.

This methodology allowed a precise identification of *Erysiphe trifoliorum* (Wallr.) U. Braun, already recorded in Prov. Buenos Aires on *Melilotus albus* and *M. officinalis*³ in anamorphic stage. Further records for Argentina include *E. trifoliorum* in Río Negro and Chubut on *Lupinus polyphylus*, *Trifolium pratense* and *T. repens* in Río Negro and Neuquen on *Galega officinalis*.^{6,7}

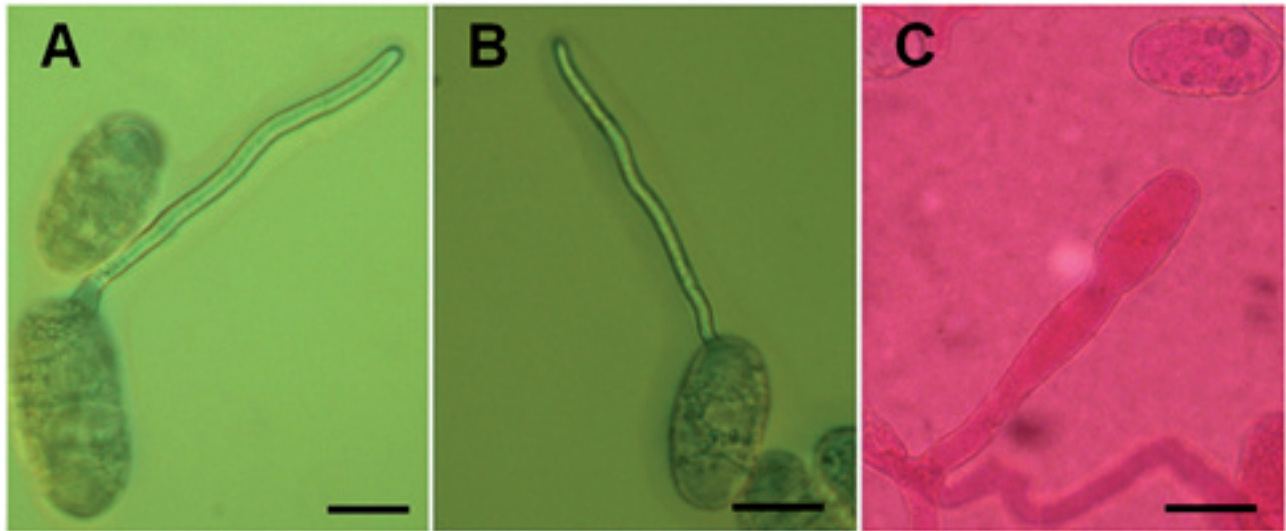


Fig. 1. **A and B,** Longitubus subapical conidial germination pattern on MEA media (A 400x), Scale bar: 15 µm. **C,** Conidiogenous cell and conidium of *E. trifoliorum* staining with phloxine (A 400x). Scale bar: 20 µm.

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