Citrus Likulin Pathogens in Salivary Glands of Diaphorina citri

Ming-hsiung Chen, T. Miyakawa, and C. Matsui

Plant Pathology Laboratory, Faculty of Agriculture, Nagoya University, Nagoya, and Horticultural Experiment Station, Katsura, Tokushima, Japan.

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ABSTRACT

Thin-sectioning of infective adults of Diaphorina citri fed on Likubin-diseased Ponkan citrus revealed numerous mycoplasmalike bodies in mucous cells of the salivary glands. The bodies were spherical, oval, or filamentous in form. They were surrounded by thin membranes and contained ribosomelike particles. These pleomorphic bodies in D. citri were similar to those observed in Likubin-diseased citrus trees.

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Adults of D. citri caged on Likubin-diseased Ponkan citrus (Citrus reticulata Blanco) for about 1 month were fixed with glutaraldehyde for 4 hr (3) and osmium tetroxide for 4 hr (3). Thin-sections prepared from the fixed D. citri embedded in Epon 812 were observed in an electron microscope after a staining with uranyl acetate and lead citrate.

Numerous pleomorphic bodies were readily observed in mucous cells of the salivary glands (Fig. 1). They were spherical, oval, or filamentous in form and varied in size. They were surrounded by thin outer membranes. All of them contained ribosomelike particles, and light central areas were observed within some. These characteristic profiles of the pleomorphic bodies in the salivary glands of infective D. citri are similar to the mycoplasmalike bodies found in Likubin-diseased citrus trees (4). No mycoplasmalike bodies were observed in the salivary glands of noninfective adults of D. citri caged on healthy Ponkan citrus. More detailed distribution of the mycoplasmalike bodies in infective D. citri will be discussed in a later paper.

LITERATURE CITED

Fig. 1. Numerous mycoplasmalike bodies (M) in a mucous cell of the salivary gland of infective Diaphorina citri (× 9,300).

Mycoplasma bodies associated with Likubin-diseased Ponkan citrus. Phytopathology 61:598.


