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CHESTNUT INK DISEASE. ASSESSING RESISTANCE TO *Phytophthora cinnamomi*

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Inoculation techiques have suggested that some European chestnut, *Castanea sativa*, are resistant to *Phytophthora cinnamomi*, fungus most frequently associated with chestnut ink disesase.

This paper reports a new inoculation method for assessing resistance of chestnuts to *P. cinnamomi*. Micelium was inoculated in excised chestnut stems, when plant annual growth was approximately 30–40 cm long. Stems were incubated in suitable temperature and humidity conditions and the lesion extension was measured. This method allows the assessment of mature trees resistance and a quick testing of large amounts of plants. Besides, it is easy to undertake and makes the selection criteria more objective.

Based on morphological and biochemical criteria, differents isolates of *Phytophthora* were studied as well. Difficulties in obtaining all the morphological characters to identify the species of *Phytophthora* were overcome by the analysis of proteic and enzymatic profiles of micelial proteins on acrylamide gel electrophoresis.

P-28-4

THE EFFECTS OF NATURAL ENEMIES AND RAINFAL THE CITRUS MEALYBUG, *PSEUDOCOCCUS CITRIC* GREEN

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The citrus mealybug, *Pseudococcus citrici* Green, is a common pest of citrus in Japan is known as a troublesome greenhouse pest has seldom caused economic damage in ci orchards.

To investigate the effect of natural enem and rainfall on citrus mealybug, the surv rate of *P. citriculus* was recorded in outside of the greenhouse.

Experiments were done from late-summe autumn in 1992, and during the rainy seasc 1993. In 1992, though rain was slight during nymphal stages, the rate of nymph morta outside the greenhouse was higher than inside. The percentage of those survivin oviposition in the greenhouse was 0.8% parasitization of the nymphs was 5.3%, w outside, 1.6% nymphs survived to ovipositio 2.3% nymphs were parasitized.

In 1993, the survival rate to oviposition 2%, and the rate of parasitization was 4.3 the greenhouse; outside, all the nymphs eradicated during the second instar. The ef of rainfall is thus thought to be an impo factor in the suppression of the citrus mea