



Research Paper

EVALUATION OF RESISTANCE MECHANISMS OF MULBERRY CULTIVARS THROUGH COMPONENT ANALYSIS OF AECIAL INFECTION CYCLE OF MULBERRY RED RUST (*AECIDIUM MORI* BARCLAY)

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ABSTRACT

Component analysis of resistance of mulberry cultivars against the mulberry red disease caused by *Aecidium mori* Barclay showed that the resistant reaction conferred by resistant cultivars was due to their ability to limit or suppress sporulation capacity, prolong latent period and shorten the infectious period of the fungus. The cohort life statistics revealed that the survival rate, proportion of infection units of *Aecidium mori* Barclay at various infection stages and infection efficiency of mulberry red rust (MRR) did not vary significantly among resistant (Alfonso), moderately resistant (S13 and SRDC2) and susceptible (Mlocal, S54, S61 and Batac) mulberry cultivars. Regardless of cultivar, high mortality of infection units was recorded during the early stages of infection process. Sporulation capacity, infectious period and latent period of *A. mori* significantly differed among resistant, moderately resistant and susceptible cultivars. The infectious period of *A. mori* on susceptible cultivars was longer (20-32 days) compared to moderately resistant (12-28 days) and resistant (10 days) cultivars. *A. mori* produced abundant aeciospores in susceptible cultivars, less number in moderately resistant cultivars and very few in resistant cultivars. The latent period was longer in resistant cultivar compared with that of susceptible ones. The observed resistant reaction of cv. Alfonso can be attributed to its ability to limit or suppress sporulation capacity, prolong latent period and shorten infectious period of the fungus.

Key words: Aecial infection cycle, *Aecidium mori*, component analysis of resistance, infectious period, latent period, sporulation capacity.