

N O T E

Japanese Beetle (Coleoptera: Scarabaeidae) Response to Field-Grown Crape Myrtles¹

S. Kristine Braman², Jim Quick, Marta Mead and Shakunthala Nair

Department of Entomology, 1109 Experiment Street, University of Georgia, Griffin, Georgia 30223 USA

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The Japanese beetle, *Popillia japonica* Newman, is recognized as the most widespread and destructive pest of turf, landscape and nursery crops in the eastern United States (Fleming 1972, U.S.D.A. Tech. Bull. 1449; Potter and Held 2002, Annu. Rev. Entomol. 47: 175 - 205). The adults feed on more than 300 plant species including crape myrtle which is one of the most popular deciduous flowering trees grown in the United States (Pettis et al. 2004, J. Econ. Ent. 97: 981 - 992). Crape myrtles (*Lagerstroemia* spp.) owe their popularity to their striking appearance and easy cultivation and maintenance requirements, which are associated with low insect and disease problems. Some of the common problems encountered are the crape myrtle aphid, *Tinocallis kahawaluokalani* (Kirkaldy), granulate ambrosia beetle, *Xylosandrus crassiusculus* (Mot.), powdery mildew, *Erysiphe* sp., and *Cercospora* leaf spot. However, in recent years, crape myrtle cultivation has been challenged by arthropod pests like flea beetles (*Altica* spp., Coleoptera: Chrysomelidae) and the Japanese beetle. Whereas flea beetles are primarily a problem on crape myrtles in the nursery rather than on established landscape plantings, Japanese beetles attack both nursery and field-grown plants. Insecticidal control remains the only option to manage or prevent Japanese beetle damage to susceptible nursery stock. Short-term residual insecticides have been used effectively against adults (Pettis et al. 2005, J. Environ. Hort. 43: 145 - 148), although they may flare secondary pests (Potter and Held 2002). Plants vary in their susceptibility to this pest (Held 2004, J. Arboric. 30: 328 - 335) providing a means to manage Japanese beetle while minimizing insecticide use. Previous work has identified resistance to insects and disease-causing organisms among crape myrtle species and cultivars (e.g., Mizell and Knox 1993, J. Entomol. Sci. 28: 1 - 7; Hagan et al. 1998, J. Environ. Hort. 16: 143 - 147; Pettis et al. 2004).

Excised whole leaves or leaf discs are the most common substrates for testing the feeding or ovipositional preferences of phytophagous insects because it is often not

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²Corresponding author (email: kbraman@uga.edu).