SURFACE STERILIZATION OF BULB MITES FOR PHYTOPATHOGEN TRANSMISSION STUDIES—(*Note*). The presence of breeding populations of *Anoetus feronarium* Dufour and *Rhizoglyphus robini* (Claparede) in association with a complex of bacterial and fungal pathogens inhabiting the underground storage organs of gladiolus grown in the sandy soils of Florida suggested possible vector relationships. The interactions and species involved were studied by Engelhard (1969, Phytopathology 59:1025), Poe (1971, Fla. Ent. 54:127-33), and Noble and Poe (1973, Proc. Fla. State Hort. Soc. 85:401-4).

To determine if mites ingested and excreted phytopathogens, and the duration of gut infectivity, a technique was needed to destroy or remove inoculum from the external body surface without harm to the mite or to its internal flora. Individual mites were removed from lawns of 2 isolates, Br-ISR (Streptomycin-resistant) and F-1 (an isolate which formed a white precipitate (WP) on nutrient agar (NA)) of *Pseudomonas marginata* Mccullough and dipped in 0.78% sodium hypochlorite or 95% ethanol. Mites remained in the solutions for periods of 3-5 min., were air dried, and placed on NA for 5 min. Each mite was then aseptically transferred to a nutrient broth (NB) tube and placed on a rotary shaker at room temperature (76°-78°F). Each NB tube was observed daily for turbidity indicative of bacterial growth. Samples of turbid broth were streaked on NA and NA + 200 ppm Streptomycin + 100 ppm penicillin (NASP). Data taken included numbers of days for turbity to appear in the NB and presence or absence of a white precipitate, a sensitive test on NA for the F-1 isolate.

No detrimental effects to the mites appeared to result from their treatment with bactericidial solutions or culturing. Observation revealed that 2-3 days were required for turbidity to appear in the NB containing dipped mites compared to undipped mites, which resulted in turbidity within 24h. Bacterial colonies with a white precipitate were obtained from the NB cultures containing dipped *Rhizoglyphus,* indicating that the F-1 isolate of *P. marginata* survived in the gut of the mite. Bacterial colonies growing on the NASP indicated that the streptomycin resistant isolate had also survived the treatment. Half of the *Rhizoglyphus* mites tested proved to be positive for transmission; however, neither isolate of the bacterium was recovered from *Anoetus.* The latter species is a bacterial feeder while the former is primarily a fungus feeder.

Based on these results, we feel that the surface sterilization techniques employed in these tests were successful and will be used in our transmission studies.—W. E. Noble, (Dept. of Ornamental Horticulture, Cal. Poly., San Luis Obispo); S. L. Poe, (Dept. Entomology & Nematology), and R. E. Stall (Plant Pathol., University of Florida, Gainesville, 32611).