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Agriculture and Natural Resources
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In this March issue of the Postings from the Palo Verde I include recent research done on pocket gopher trapping across California. Roger Baldwin, Ph.D. will be presenting to the Progressive Farmers on Sept. 18th so keep a "look out".

- **The influence of trap type and cover status on capture rates of pocket gophers in California -** Roger A. Baldwin, Daniel B. Marcum, Steve B. Orloff, Stephen J. Vasquez, Cheryl A. Wilen, Richard M. Engemanm University of California, Agricultural and Natural Resources

Regards:

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The influence of trap type and cover status on capture rates of Pocket gophers in California

Roger A. Baldwin, Daniel B. Marcum, Steve B. Orloff, Stephen J. Vasquez, Cheryl A. Wilen, Richard M. Engeman and edited by Vonny Barlow

Many wildlife species cause extensive damage to agriculture throughout the world. However, in California and throughout many other states in the western U.S., none may be as damaging as the pocket gopher (*Thomomys* spp.). The damage that pocket gophers cause can be quite varied but includes girdling of young trees and vines, consumption of root systems, chewing on buried irrigation tubing, increased water loss and soil erosion from burrowing activity, and increased hazard to farm equipment and farm laborers. An integrated pest management (IPM) program that incorporates multiple techniques to maximize damage control while minimizing the impact to the environment is the most effective approach to control most wildlife pest species, including pocket gophers. For further information regarding IPM please go to the UC IPM website located here, http://www.ipm.ucdavis.edu/. Control techniques available to mitigate damage caused by pocket gophers include habitat modification, burrow fumigation, the use of toxicants, and trapping.

Trapping can be a particularly valuable component of an IPM program because it is an effective follow-up technique to other less labor intensive control strategies. Many pocket gopher traps have been created over the last 148 years with most no longer in production, but several are still used extensively in North America. The most commonly used trap throughout the western U.S. is likely the Macabee which has been available since 1900. In contrast, the Gophinator is a recently developed trap which incorporates some of the best attributes of several other traps.

Work was done to determine if capture rate differed between Gophinator and Macabee traps, and if covering trap sets resulted in greater capture success of pocket gophers. The Gophinator trap was clearly more effective at capturing pocket gophers than the Macabee, resulting in a substantially higher rate of capture and subsequent number of captures in an 8-h period. The Gophinator trap was designed to be a powerful trap that grips the animal high on the body using upward thrusting pincer mechanism for a more secure capture. This is an especially important point in capturing larger animals such as large females which are more fecund than smaller females making their removal critical. Covering trap sets also improved trapping of pocket gophers during late spring and early summer. Pocket gopher plugging behavior is influenced by external temperature which results in greater plugging behavior before reaching uncovered traps. Covering trap sets provides “the illusion” that nothing abnormal exists in their tunnel system which increases trap captures of gophers. However, increase in efficacy associated with covered trap sites can sometimes be negated by increased time to set the trap which is often a limiting factor to workers.

Extracted from Baldwin et al. 2013. The influence of trap type and cover status on capture rates of pocket gophers in California. Crop Protection 46. pps. 7-12