

## MAXIMIZING IPM AND MITIGATING FLY RESISTANCE IN CONFINED ANIMAL OPERATIONS

B. A. Mullens<sup>1</sup>; J. M. Darbro<sup>1</sup> and A. C. Gerry<sup>2</sup>

<sup>1</sup>Dept. Entomology, University of California, Riverside, CA 92521, USA

<sup>2</sup>Vector-Borne Disease Section, California Dept. of Health Services, Visalia, CA, 93277  
USA

Confined animal operations frequently have serious problems with muscoid flies developing in accumulated manure and feedstuffs. Problems are particularly acute with *Musca* and *Fannia* on caged layer poultry operations, usually due to complaints from housing developments recently built nearby. Production systems and integrated fly management options will be discussed. Declining and difficult-to-define nuisance thresholds (approaching zero flies in some cases) and relatively few insecticidal options set the stage for development of high levels of fly resistance. Mitigation strategies include more care in land use (zoning) decisions, public education efforts, implementing sampling strategies to document the nature and extent of the problem, and altering aspects of legally-binding fly management plans that encourage resistance development.