

EVALUATION OF LYGUS SAMPLING METHODS

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Lygus can be difficult to manage because the adults are highly mobile and all stages are difficult to sample accurately. Most contemporary evaluations of lygus sampling methods rely on numbers of insects collected or apparent precision of population estimates as measures of the adequacy of evaluated methods. In the absence of an absolute sampling method neither of these criteria indicates whether population estimates exhibit fidelity to the actual field population. In 2008, we developed mark-release-recapture techniques to efficiently and accurately estimate collection efficiency of the standard 38-cm diam. sweepnet for sampling adult lygus in cotton. The sweepnet collected about 20% of the bugs present in plants <50 cm in height, but collection efficiency was lower and more variable in larger plants. We propose to refine the use of the markrelease recapture methods to improve our understanding of the influences of plant size or development on sweepnet collection efficiency, evaluate additional sampling methods, and to conduct preliminary investigations of additional factors influencing sampling efficiency including time-of-day, time of release, and sampler.