

1823 Laboratory Measured Resistance and Field Control of *Helicoverpa armigera* Hub. By Profenofos

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Resistance to Profenofos in the field population from Tamil Nadu, India. was 13.6 - 47.3 per cent. Study was made to obtain level of control achievable in the field at realistic application rates and to compare and obtain relationship between lab measured resistance and field control. Profenofos was evaluated by bouquet bioassays in the laboratory and in field by releasing the larvae *in situ* at different application rates at different field doses. The per cent mortality at recommended dose of profenofos (500 g ai /ha) was 71.8, 65.5 and 61.2 on cotton leaves, squares and bolls respectively by bouquet /foliar residue/terminal bud bioassay in the laboratory. Ten times increase in dose resulted in maximum mortality of 91.2 - 96.5 per cent. At 1/3rd and 1/10th RD the per cent mortality was 46.9 - 57.8 per cent and 35.4 - 40.0 respectively. The reduction in field released population at recommended dose was 68.2- 73.0 per cent. The percent mortality both in field and laboratory are dose effective. Field mortality was comparable with resistance level diagnosed in the laboratory