Mass trapping as a component of the IPM of eggplant fruit and shoot borer, *Leucinodes orbonalis*

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The brinjal fruit and shoot borer, *Leucinodes orbonalis* is the major pest of eggplant in South Asia. Analysis of pheromone extracts from Indian and Taiwanese insects confirmed (*E*)-11-hexadecenyl acetate (E11-16:Ac) as the major pheromone component with 0.8 to 2.8% of the related (*E*)-11-hexadecen-1-ol (E11-16:OH), as previously reported from Sri Lanka. In field trials conducted in India blends containing between 1 and 10% E11-16:OH caught significantly more *L. orbonalis* than E11-16:Ac alone and addition of 1% E11-16:OH to E11-16:Ac was significantly more attractive to *L. orbonalis* than either 0.1 or 10% E11-16:OH. Trap catch was positively correlated with pheromone release rate, with the highest dose tested, 3000 µg, catching significantly more male moths than lower doses. Locally produced water traps were more effective than commercially available trap designs and traps placed at crop height caught significantly more moths than those 0.5 m above or below the crop canopy. Trap catch was proportional to the radius of sticky disc traps in the range 5 to 20 cm radius, discs with a 2.5 cm radius caught no moths. Preliminary mass trapping trials (3 x 0.5 ha per treatment) were conducted in farmers fields with 100 traps per ha and infested shoots being removed weekly. The results showed that fruit damage was significantly reduced from an average of 41.8% and 51.2% in check plots of young and mature crops respectively to 22% and 26.4 respectively in the associated mass trapping plots and an increase in marketable fruit of approximately 50% in both trials.