

IDENTIFICATION AND FIELD EVALUATION OF COMPONENTS OF FEMALE SEX PHEROMONE OF MILLET STEM BORER, *Coniesta ignefusalis*

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Abstract—Five active compounds were detected during analyses of ovipositor washings and effluvia from virgin female *Coniesta ignefusalis* moths by gas chromatography (GC) linked to electroantennographic (EAG) recording from a male moth. These were identified as (Z)-7-dodecen-1-ol (Z7-12:OH), (Z)-5-decen-1-ol (Z5-10:OH), (Z)-7-dodecenal (Z7-12:Ald), (Z)-7-dodecenyl acetate (Z7-12:Ac), and (Z)-9-tetradecen-1-ol (Z9-14:OH) by comparison of their GC retention times, mass spectra, and EAG activities with those of synthetic standards. Laboratory tests of dispensers for these compounds showed that release rates from polyethylene vials increased to relatively uniform values after three to four days, but release from septa was very rapid and nonuniform and decreased to low levels after two to three days. Trapping tests in Niger showed that the major component, Z7-12:OH, and two of the minor components, Z5-10:OH and Z7-12:Ald, were essential for attraction of male *C. ignefusalis* moths. The most attractive blend contained these three components in a 100:5:3.3 ratio in a polyethylene vial, which emitted the components in similar proportions to those produced by the female *C. ignefusalis* moth. Water traps baited with this blend containing 1 mg of Z7-12:OH caught more male *C. ignefusalis* moths than traps baited with newly emerged female moths. Addition of up to 10% of the corresponding *E* isomers of the pheromone components had no effect on catches, but addition of the other two minor components detected, Z7-12:Ac and/or Z9-14:OH, to the attractive blend at naturally occurring levels caused significant reductions in trap catch.

Key Words—*Coniesta ignefusalis*, *Acigona ignefusalis*, Lepidoptera, Pyra-

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