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## Methomyl Resistance in Strains and Crosses of Tobacco Budworm: Degree of Dominance and Patroclinous Effects

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Authors: D.A. Wolfenbarger and D.J. Wolfenbarger  
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A field-collected (field) and a susceptible reference strain of tobacco budworm [*Heliothis virescens* (F.)] were crossed to determine mode of inheritance for their response to methomyl (Lannate). The field strain was not selected because we wanted to determine the mode of inheritance of a non-selected strain. Our results were different from previous results on the inheritance of response to this insecticide with other strains of this insect. Methomyl was applied topically to progeny of the field and susceptible strains and crosses of them. LD<sub>50</sub> values (as µg methomyl/larva) were determined after 48 h. Probit analysis was used to calculate 95% confidence intervals and slopes of regression. The LD<sub>50</sub> value of the field strain was significantly greater (17-fold) than that of the susceptible strain. The LD<sub>50</sub> values of both reciprocal crosses of F<sub>1</sub> and F<sub>2</sub> were not significantly different from the LD<sub>50</sub> of the field strain, indicating that response to methomyl by this field strain was dominant. The LD<sub>50</sub> of susceptible x field (female listed first) in the F<sub>1</sub> reciprocal cross was significantly greater than the LD<sub>50</sub> of field x susceptible, indicating a possible sex linkage. Results indicate a possible patroclinous effect.