

Title Cooking oils and “Triplex” in the control of *Sitophilus zeamais* Motschulsky (Coleoptera: Curculionidae) in farm-stored maize

Author Girma Demissie, Addis Teshome, Demissew Abakemal and Abraham Tadesse

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Abstract

The uses of some cooking oils viz., noug oil, soybean oil, sunflower oil, corn oil and olive oil, and the reputedly non-toxic botanical “Triplex”, were evaluated against maize weevil, *Sitophilus zeamais*, in stored maize grain under local Ethiopian storage conditions in 2003. For comparison, an untreated sample and the synthetic insecticides, malathion 5% dust and Actellic 2% dust, at the recommended rates of 0.05% (w/w) were included. All the cooking oils tested had a significant toxic effect on the weevils in stored grains. The oil treatments showed significantly higher mortality of adult weevils at each sampling period compared with the untreated grains. The cooking oil treatments also significantly reduced weight loss and grain damage as compared with the untreated control. The Triplex treatment was of comparable effectiveness to the synthetic insecticides, causing high mortality of adult weevils, low-percentage grain damage and low-percentage weight losses. These promising oils and Triplex could be recommended for use as part of an integrated pest management program in stored maize, particularly at low levels of pest infestation and, in the case of cooking oils, for grain intended for home consumption.