Title The efficacy of flufenoxuron, azadirachtin and a diatomaceous earth, when admixed with oilseed rape, against storage mite pests.

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Abstract

The efficacy of three compounds that might prove suitable alternatives to organophosphorus compounds (OP) were evaluated, when admixed with oilseed rape (cv. Capricorn), against mixed stages of OP-susceptible strains of *Acarus siro*, *Lepidoglyphus destructor* and *Tyrophagus putrescentiae* at 15 deg C and 80% relative humidity. The treatments consisted of flufenoxuron at 0.25, 0.5, 1 and 2 mg/kg; azadirachtin at 20, 40, 60 and 80 mg/kg; and Protect-It (diatomaceous earth) at 0.5, 1, 3 and 5 g/kg. Population inhibition was evaluated after at least one generation. Protect-It appeared to be the most effective treatment against all the mite species, with 3 g/kg inhibiting the populations by >96%. Flufenoxuron was highly effective at all rates against L. destructor, resulting in >90% inhibition. Azadirachtin appeared to be the least effective against all the species, recording an inhibition of 66-80% at the highest rate.