

Title Effect of magnesium phosphide, an alternative to methyl bromide, on dried fig quality
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Abstract

Methyl bromide (MB) more widely known as a soil fumigant is an important pesticide used in dried fruit sector to control storage pests. According to the Montreal Protocol, it is banned for use in developed countries since 2005 and will be banned in 2015 in developing countries except laboratory, quarantine and pre-shipment uses due to its effect on ozone layer depletion. Each country prepared a phase-out plan and many research works were initiated to find alternatives to Methyl Bromide. Turkey is a major producer and trader in the world dried fruit and nut market especially in dried fig, apricot, raisin, hazelnut and pistachio nut. Storage pests are of great concern after mycotoxins for the dried fruit and nut sector. A research was carried out on magnesium phosphide as a methyl bromide alternative in controlling major pests of dried figs and effect of fumigation on dried fig quality. The paper summarizes the results obtained in magnesium phosphide treatment of dried fig stack at 600 and 1000 ppm phosphine for 3 days under tarpaulin compared with Methyl bromide treated control. The tested concentrations and exposure periods provided 100% mortality in test insects and no negative effect on fruit quality for 9 months in storage under ambient conditions.