

New approaches for tackling the khapra beetle

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Abstract

The khapra beetle, *Trogoderma granarium* Everts (Coleoptera: Dermestidae), is a very destructive pest of stored agricultural products and one of the most important quarantine insect pests worldwide. Very strict legislation and other measures are being taken by many countries to prevent the introduction of this pest and avoid export restrictions on their agricultural products. In countries where the khapra beetle is established or occasionally detected, classic management tactics are being improved and new methods are being developed in order to prevent the spread of the infestation or to eradicate, if possible, this feared pest. Insight in recent advances on identification, detection, exclusion, and control methods of *T. granarium*, is provided. Available recent and older information is also consolidated, and an analysis of the published work is presented. Potential areas for growth in the management of khapra beetle include, among others, rapid molecular identification, trapping, combination of fumigation with modified atmospheres or heat, irradiation, and plant extracts. Certain advantages, limitations, mode of action, potentiality, and effectiveness of each method are discussed.

Keywords: *Trogoderma granarium*, quarantine, detection, identification, control