

Control Measures For Stored Product Pests

- ✓ Employ good sanitation practices.
- ✓ Ensure commodities are stored at 'safe' moisture content for storage.
- ✓ Use physical barriers to exclude stored product pests entering food processing, manufacturing and preparation areas. Screens of 10 openings per linear inch are adequate barriers to flying insects. An air stream, no less than 1,600 ft./min., will exclude insects from entering food establishments.
- ✓ Methyl bromide and phosphine are two fumigants which can be applied directly on durable food to control stored product pests.

Only insecticide active ingredients approved by the Food Storage and Prevention of Infestation Division may be used in food and food-related areas to control stored product pests. These are to be used in approved methods/control practices.



Ministry of Industry, Investment & Commerce

**FOOD STORAGE & PREVENTION
OF INFESTATION DIVISION**

"Ensuring Safety & Wholesomeness"

FACTS ABOUT STORED PRODUCT PESTS

For further information please contact:

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Overview

- Insects, as well as some arachnids (e.g. mites), are frequent pests of stored commodities.
- About 1,000,000 species of insects have been described. Only about 100 species however, damage stored foods and 20 of these species are important pests and are distributed worldwide. These pests mostly belong to the orders Coleoptera (beetles) and Lepidoptera (moths) and live and breed in stored food.

Some common stored product pests are: -

Beetles

- ◆ *Tribolium castaneum*
(rust-red flour beetle)
- ◆ *Oryzaephilus surinamensis*
(saw-toothed beetle)
- ◆ *Sitophilus* spp.
(rice & maize weevils)

- ◆ *Alphitobius* sp.
(black fungus beetle)
- ◆ *Lasioderma serricorne*
(cigarette beetle)
- ◆ *Acanthoscelides obtectus*
(bean beetle)
- ◆ *Rhyzopertha dominica*
(lesser grain borer)
- ◆ *Cryptolestes pusillus*
(flat grain beetle)

Moths

- ◆ *Plodia interpunctella*
- ◆ *Ephestia* spp.
- ◆ *Corcyra cephalonica*

Mites

- ◆ *Acarus* spp.

Economic Importance and Health Concerns

- Stored product pests contaminate far more food than they consume.

- They cause loss in the mass and quality of food.
- They often cause serious damage to stored foods. An entire stock may be lost if control measures are not employed.
- Visible damage resulting from their feeding activity will cause food to be rejected by consumers. In addition, if seeds for planting are attacked the seeds will die.
- The presence of large numbers of pests will cause food to be rejected by consumers.
- The activity of stored product pests may lead to the growth of fungi which may be harmful to consumers.
- Some insects produce benzoquinones (odour chemicals) which may cause persistent disagreeable in commodities.