

# Ready or Not, Here They Come: How to Identify and Prevent Stored Product Pests

Pests are good at hide-and-seek. And you may not know they are there until it's too late.

In the food processing and manufacturing industry, certain pests can compromise products without anyone realizing they're there. High pest pressure abounds in these types of facilities due to the nature of the food processing environment, both inside and outside the building.

Known as stored product insects, these pests can cause serious concerns if they find their way into products. They're capable of damaging packaging and contaminating and altering the taste of products. This could mean major concerns for your business's brand and bottom line—not to mention potential detrimental effects on your next audit.

The new Food Safety Modernization Act (FSMA) regulations require that prevention must be emphasized. The best way to make sure your company is on track is to implement a risk-based Integrated Pest Management (IPM) program. IPM programs take a holistic approach to help proactively prevent pests by inspecting, monitoring and eliminating conditions that attract or harbor pests. It utilizes tactics like prevention, exclusion and sanitation and uses chemicals as a last resort.

In addition, these programs maintain documentation to monitor pest trends and ensure things are always on the up-and-up. It's no secret that auditors will check for proper paperwork, so it's important to have detailed records at the ready.

First, however, it's important to understand what these pests are and why they're attracted to your facility.

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## THE FOUR TYPES OF STORED PRODUCT INSECTS

There are actually many species of stored product insects, but they can be classified in four main categories based on their biology and habits:

- 1) **External feeders:** True to their name, these pests feed on the exterior of cereal (grain) and kernel products, gradually working their way inside products and packaging. Pests in this category include Indian meal moths and cigarette beetles.
- 2) **Secondary feeders:** These pests will consume almost anything without discrimination, typically product residues. They include the red flour beetle and sawtoothed grain beetle.
- 3) **Scavengers:** Typically feeding on debris in cracks and crevices, these pests consume moldy and damp food products. Among them are rusty grain beetles, flat and fungus beetles.
- 4) **Internal feeders:** Known for laying eggs in grain, pests in this category include Angoumois grain moths, granary weevils and lesser grain borers.

## WHICH PESTS TO LOOK FOR

It helps to know which pests you should look for and what the signs are. This will aid in determining the correct treatment protocol. You should also consider enlisting the assistance of a trained professional who can help correctly identify the species and recommend the best way to solve the problem.



The most common stored product pests include:

- **Indian Meal Moths:** Distinctive signs are silk webbing or powdered wood near the surface of the product.
- **Sawtoothed Grain Beetles:** These pesky pests can burrow directly through boxes and packaging and prefer processed food products like bran, chocolate, oatmeal, sugar and macaroni.
- **Dermestid Beetles:** Some are general feeders that include milled grain, nuts and spices in their diet. Others specialize in products derived from animals.
- **Granary and Rice Weevils:** These weevils have a snout jutting from their head and reddish-brown bodies. Their meals of choice include whole grains or seed products like popcorn, birdseed and nuts. Grains infested by them will be hollow and have small holes.
- **Cigarette and Drugstore Beetles:** True to their name, these beetles prefer tobacco, pet food, spices and any packaged food.



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## HOW TO PREVENT STORED PRODUCT PESTS

When pests are observed crawling or flying, you may have an infestation. Remember, stored product pests reproduce rapidly, so it's critical to stop them early before they damage or contaminate your products.



To help prevent an infestation of stored product pests, your IPM program should include the following actions:

- **The first-in, first-out (FIFO) approach for products:** Ensure that older products go out first and remove any with damages. Products that sit and deteriorate become beacons for pests.
- **Close inspection of incoming shipments and packages:** Keep a sharp eye out for the signs of stored product pests, like webbing, larvae and live adult insects. You should also check for signs of damage, especially for holes that can be caused by boring pests.
- **Use of pheromone traps:** One of the most widely used tools to monitor pest activity, these traps can also be placed inside trailers or containers to determine if the cargo or vehicle is infested with certain store products pests.
- **Temperature management:** Insects will not reproduce or actively feed under refrigerated or cool storage conditions. Extreme temperatures — especially heat — can be used under certain circumstances to control insects.
- **Stay on the sanitation schedule:** No food debris means less pests. Be sure to clean up product spills immediately, and wipe down everything on a regular basis.

## THE IPM APPROACH: A LONG-TERM SOLUTION

When it comes to food processing and manufacturing, it's essential to make pest control prevention a priority. But it's not a one-person job. A proper plan requires a team effort. Make sure you have a strong partnership with your pest management provider and work alongside them to proactively prevent pest problems.



In addition, make your staff aware of the pest management program and expectations. This can go a long way in stopping infestations, which is why many pest management providers offer complimentary staff training classes.

Together with the right pest management provider, you can create a tailored IPM plan that will help prevent pests, protect your business and get you back to doing what you do best.