



Pests in the Pantry

Keys to moth management

By Meghan Taylor

Those who have had moths flying around their kitchen know what a hassle it is to get rid of them. Pantry pests cause quite a disturbance in your cabinets, not to mention in your delicious food! They live, die and hatch eggs in your groceries. Sounds crass. But fortunately there is a way to keep a moth infestation from occupying your kitchen, and you don't have to give up the whole grains and delectable treats that currently grace your cupboards to do so.

Inspection

Most moth-infested cabinets are a result of infested food that has been brought in from the outside. All it takes is one female to enter the house in your grocery bag, and you may face an influx. Once she is there, she has the potential to lay over several hundred eggs. All groceries, packages and food should be carefully inspected for signs of infestation to keep her and her buddies out of your home. Usually, if recently purchased food is infested, it will contain pests in the egg stage. The eggs will then hatch, feed and pupate and infest the other food in your cabinet. Products including flour, whole grains, crackers, peas, beans, nuts, dried fruit, spices and even pet food need to be checked for moth presence. Look for tell-tale signs of moths: small holes in the packaging and webbing in the tighter areas of the package.

Once detected, you have several options. If the pests are present in groceries you've just purchased, place the food in a bag in the freezer, and save your receipt. After four days in the freezer, the insects will be dead. Take your receipt and food

back to the store and alert the manager to the infested supply. If the food is not recently purchased, you can simply place the contaminated food in a sealed plastic bag and discard outside the home. Alternatively, if you'd prefer not to part with all of those groceries, you can kill moths in your food by manipulating temperatures they are exposed to. If you choose this method, just remember the moths' bodies will remain in the food and must be sifted out afterwards. Storing food in your freezer for four days will guarantee killing the moths. Heating also works. 130 degrees Fahrenheit for two hours should do the trick. Just make sure that insects are exposed to the heat for the required time. Those in the middle of the food may not feel the heat as soon as those on the top.

Prevention

- Keep the infested food out of your house, and you keep the moths from invading. Always inspect your groceries for infestation.
- Check out packaging while at the grocery store, looking for signals of moth and larva presence, such as small holes. When buying bulk grains, keep your eye out for any insects in the food.
- Store all of your food in tightly sealed containers. This



will keep any pantry pests that slipped through your inspection from infesting other food in your kitchen. Glass jars with lids that have rubber gaskets are an excellent choice. Beware that even jars with screw tops may not be sufficient against pantry pest invasion.

- Clean up all spills and crumbs promptly. If you notice cracks and crevices where crumbs tend to become lodged, use caulk to seal these up.
- Cupboards and shelves should fit flush against cabinet walls so as not to provide spaces for crumbs to accumulate.
- Make sure that other areas that attract crumbs, such as in the toaster, stay clean.

Control

If moths have already made themselves at home in your cabinets, it is best not to use chemicals to get rid of them.

- Inspect all of your food. Go through each and every package and container, looking for the common signs of infestation. If you see any holes, or webbing in the corners, consider it infested.
- Discard the infested food in sealed bags outside of your home or use temperature manipulation described above to kill off the insects. Remember to sift them out of the food afterwards.
- If you store larger than normal quantities of grain that become infested, you can use *Bacillus thuringiensis* (Bt) to manage the problem. Apply only to the surface, since these pests usually will not go deeper than four inches into the grain.
- Once the food in your pantry is moth-free, thoroughly clean the infested area. Use soap and hot water in your pantry, paying special attention to corners and crevices.
- Take all cans out and wash them as well to kill any microscopic larvae.
- Vacuum any infested areas in the kitchen.
- Take the preventive measures described above and monitor the problem after clean up.
- Pheromone traps come in handy here. After you have taken care of the majority of the infestation, they can be used to kill any leftover moths and to monitor their population. These traps are normally effective for about three months. If you notice an increase in the number of moths in your traps, it is time to inspect your food again. Non-toxic pheromone pantry pest traps are available from companies such as Victor Safer Brand (www.victorpest.com)
- Without having to buy any supplies, you can just leave your kitchen light on at night, with all other lights in the house off. You can capture the stray moth when it comes out from its hiding spot to the light.

- If you are still catching moths after a thorough cleanup, and you have taken all preventive measures, consider using a least-toxic insecticidal soap such as Safers Brand to clean out your cabinets. Be sure to clean it up thoroughly, and as with any pesticide, use caution. Use this only as a last resort.

Resources

Moeller, Mike. 1988. "Controlling Pantry Pests." *Straight Talk From TDA*. Deputy Commissioner, Texas Department of Agriculture.

Olkowski, William and Sheila Daar. Fall 1986. "Pantry Pests: Beetles and Moths in Stored Foods." *Common Sense Pest Control*. 2(4): 16-19. Berkeley, CA.

Which moths are in my cabinets?



More likely than not, you will not have to identify the exact type of moth that is in your kitchen. The control methods described below apply to a broad range of pantry moths. However, if you are going to use pheromone traps, which are helpful in detecting if a moth problem still exists after a cleanup, you will have to know which type of moth you have on your hands in order to buy the right trap. Generally, one of three moths will be in your pantries. The Angoumois Grain Moth is rather small, with a buff, gray or yellow-brown coloring. The hind wings, with long hairs, narrow to a point. The Mediterranean Flour Moth is a bit longer (about .48"), and is usually a pale gray with two black lines on its forewings. Lastly, the Indian Meal Moth, about .8" long, has pale gray wings with a red-brown coloring on its outer forewings.