

# Insects Destructive To Food In The Home

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The continued loss of foods in the home due to the work of various household insects amounts to willful waste, especially now that the world's food supply is so critical. When there is a food shortage it is just as important to protect available supplies from loss by insects as it is to produce more food. Millions of dollars worth of foods in American homes are destroyed every year by insects, due largely to food spoilage. These losses can and must be prevented, and this report has been prepared to help Missouri housewives reduce such losses in their homes. Of the various pests attacking food in the home, cockroaches, ants, Indian meal moth, flour beetles, bean weevils, flies, meat skippers, larder beetles, cheese mites, vinegar gnats, and a few others are most important.

## Cockroaches

No other insect in the home is so hated and loathed as are the cockroaches. They really eat very little food, but they leave an odor on and spoil everything with which they come in contact. There are three important domestic species of cockroaches in Missouri—the Oriental, the American, and the German. Of these, the Oriental is usually most common. It is most abundant about cupboards and shelves in the kitchen and pantry, but frequently appears all over the house in closets, bathroom, and basement. When full-grown the female is about an inch long and half as wide and has only partly developed wings. The males are smaller with developed wings. They vary in color from brown to almost black. All household cockroaches are very flat and able to pass through narrow cracks. They feed at night mostly on starchy foods and hide by day behind baseboards and in other dark nooks about the home. They deposit their eggs in bean-shaped packets tucked away in dark places. On hatching the

young nymphs are very small and rapid on foot so that one is apt to overlook them until they are half-grown.

The American cockroach is much larger when full-grown, often being nearly two inches long with well-developed wings and a rich mahogany brown to black in color. They are much less commonly found in homes than the Oriental, but they frequent mills and experimental animal laboratories where cereal foods are exposed. The German cockroach is small, about half an inch long, light gray in color, and slender. It breeds mostly around sinks or where it has access to moisture. Some call it the "water bug" or the "croton bug." Being so small, it is often overlooked until the place is badly infested.

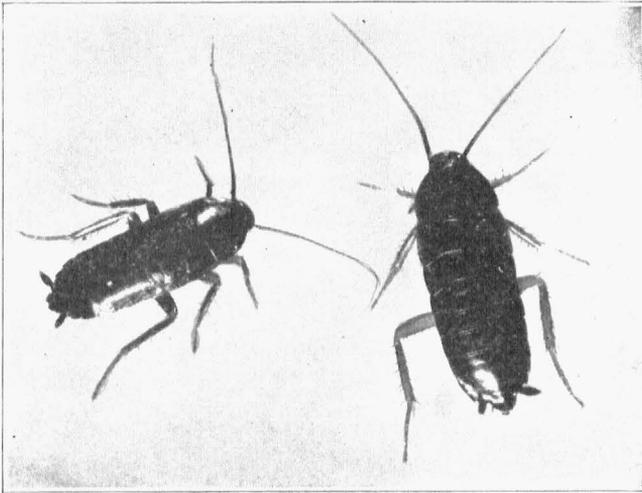


Fig. 1.—Cockroaches spoil much valuable food in the home, as well as in stores and mills.

Cockroaches feed mostly on starchy foods, such as crumbs, pastries, book binding, wallpaper sizing, and the like. Any foods, such as bread, pies, crackers, dried fruits, and powdered sugar, over which they crawl take on the sickening cockroach odor and have to be thrown away.

**Control.**—Few homes are ever absolutely free of cockroaches, though it is possible to so reduce them that they may seldom or never be seen about the home. If one is not careful they may be brought into the home in cartons of groceries, feed from mills, and in baskets of laundry, and they frequently move in from adjoining infested houses. Care to avoid bringing them in with supplies and their destruc-

tion by hand, combined with good housekeeping and the continuous use of an effective insecticide will keep cockroaches under control. There are many commercial brands of roach powders and pastes, most of which have merit. However, it has been found that none of these work any better than sodium fluoride powder, which costs only a few cents a pound and which can be secured from most grocery and drug stores. It is simply sifted into cracks and crevices where cockroaches are known to hide. *It is a poisonous white powder and must be kept away from food and from children.* When the roaches come in contact with it, it sticks to their legs and bodies and is later licked off and swallowed by the roach in cleaning itself. The powder will not immediately clean up a severe infestation, but if used persistently wherever roaches are found to hide it will, in time, clean up any infestation. Frequently, one will find that he is maintaining a regular cockroach harbor in barrels or boxes of paper, feed, or other materials in the basement. If so, these must first be eliminated.

### Ants

Ants are frequent offenders in the home, where they cause much food spoilage. The worst offenders are the very small, so-called red ants which frequently set up housekeeping in secluded places in the house. Not infrequently, the large, black, outdoor forms also come into the house in search of food. In the South and in a few more northern cities the small Argentine ant is often a very serious household pest. As a rule, ants are attracted to sweets such as sirups, honey, candy, sugar, cakes, and the like. The small, red ones are frequently trapped in countless thousands in honey and sirup pitchers. While ants are usually most fond of sweets, one small species is known as the grease ant. It feeds on shortenings, butter, peanut butter, meat, coconut, cracked nuts, and other fatty foods.

**Control.**—To prevent the large, outdoor ants from causing trouble, one can frequently locate and fumigate their ground nests by using a sharp stick to make a hole six inches deep in the center of the mound, into which a tablespoonful of either carbon bisulfide or calcium cyanide is poured and the hole then closed. If they continue to cause trouble, a poison ant bait can be used sparingly where they will find and feed on it. There are on the market a number of ant baits which, if used as directed, will give results, but one must not expect such things to give complete control immediately. A simple bait which can be prepared at home includes  $\frac{1}{2}$  pound sugar dissolved in  $\frac{1}{2}$  pint of water, to which is added  $\frac{1}{8}$  ounce sodium arsenite. This should then be kept in a tight bottle containing a conspicuous *poison label* and out of reach of children. To apply, put a few drops of the

poison bait on bits of paper, drop these in empty tin cans, and place the cans near where the ants appear.

To control the small, red, sugar-feeding ants, use the same sweet poison baits suggested above. To control the grease-loving ants, use one of the commercial baits which contains a fatty substance and prepared especially for this type of ant. When the small, sweet-toothed household ants are not too serious, some find that a sponge can be moistened with a sweet sugar or sirup solution and concealed in an old tin can near where they are attacking foods. Then when the sweetened sponge has attracted large numbers of ants it is dropped into boiling water to kill the ants and then retreated and put out again to collect more ants. Plenty of patience and persistence may be required in cleaning up serious ant infestations.

### Indian Meal Moth

It is the caterpillar of this moth which is often found in sealed packages of dried fruits, candy, nuts, cereals, and other materials, as they are received from the grocery store. In the home, opened packages of such foods, cracked nuts, cereals, dried fruits, and many other foods in the pantry may become infested. The small moth is often seen sitting on the ceiling with its wings tightly folded over its back. It resembles a splinter, grayish-white in front and reddish-brown behind. It is often mistaken for a clothes moth, but it is larger and is the moth most commonly found in the home. While this is the most important moth pest of foods in the home, there are a number of other small moths whose caterpillars also attack stored foods.

**Control.**—Do not permit opened packages of any food which it attacks to remain long in the pantry and do not permit pans of cracked nuts to set around. Keep chicken feed and other attractive foods out of the house. When it is found in any package of food, place the package in a slow oven to kill the pest, and if worth saving do not throw the food away. If several packages of food are found infested, they can be fumigated in a trunk or other tight enclosure by using 1 ounce of carbon bisulfide to each 6 cubic feet of space enclosed, *and keep fire away as the fumes are explosive.*

### Grain and Flour Beetles

There are several small species of brownish beetles and a few larger black beetles which may attack grains, flour, and meal in the home. The grubs of these beetles also feed on such foods. Frequently, they even appear in packaged cereals. In the home, they are found most often in the flour bin and in sacks of meal, oatmeal, and other cereals.

**Control.**—Do not keep on hand too large a supply of flour, cornmeal, and other cereals. Check and clean out the flour bin a time or two each summer. If a small supply of flour or cornmeal is found to be badly infested it is better to use it as chicken feed and thoroughly clean out the bin before a new supply is put in the bin. Cereals slightly infested can be treated in a slow oven to kill the eggs and living stages of the pests.

### Rice and Granary Weevils

Not infrequently, small, brownish, snout beetles, scarcely an eighth of an inch long, appear in the home attacking rice, whole grain, and other cereal products. Similar to the small, brown, grain beetles, they may destroy considerable food. To control them and prevent food spoilage in the home, use the same control measures as suggested for controlling grain beetles.

### Bean Weevils

Dried beans, lima beans, black-eyed peas, and edible soybeans are all subject to attack by species of small beetles commonly known as bean weevils. These pests normally begin their work by attacking the growing pods of the crop in the garden. When the dry beans are hulled and stored they may already be infested with the small white grubs. If stored in a warm place the grubs mature and eat their way out of the dry beans and appear as the small, grayish-brown



Fig. 2.—Bean weevil injury, showing how the pest may completely destroy beans for either food or seed.

beetles. These in turn may lay eggs on the beans and another generation of the pest then develops. In time, they may completely destroy one's supply of dry beans.

**Control.**—As a rule, we pay no attention to this pest in green beans, as we usually unknowingly eat the tiny grubs with the green beans. However, no one cares to eat “buggy” dried beans. To control the pest in dry beans, first remember that late-planted beans are less likely to be exposed to attack in the garden and field. Then plan to treat the dry beans as soon as they are gathered and hulled. To treat dry beans, one may either fumigate them or treat them in a slow oven. To fumigate them, place them in any tight box or tank and use 1 ounce of carbon bisulfide to each 6 cubic feet of enclosed space, as suggested for controlling the Indian meal moth. To treat in an oven, use a temperature of from 120° F. to 150° F. and place the beans in a shallow pan and treat for about an hour, or until all beans are well heated through. After the beans are treated, store them in a weevil-proof container and keep in an unheated place until used. Beans kept for seed should be fumigated as heating may injure germination.

### Flies

In the home, cooked meats and vegetables are often left out to cool before going into the refrigerator, and frequently such foods become exposed to flies, especially the so-called blowflies which get in when screen doors are opened or they may even come down fireplace chimneys and thus gain access to the house. If such foods are accidentally exposed to flies even for just a few minutes, fly maggots may later appear in the food, making it unsafe for human use. Frequently, cold leftovers thus become infested and if eaten later without reheating, the maggots may cause serious intestinal trouble. Naturally the remedy for such troubles is to keep flies out of the home and all attractive foods out of reach of flies, and to avoid eating cold leftovers without reheating. Much valuable food is spoiled by flies, and not infrequently medical attention is required when one unknowingly eats maggot-infested cold meats and leftovers. As is well known, the common house fly may carry disease germs to exposed foods and this should always be guarded against, if possible.

### Meat and Cheese Skippers

Home cured meats often become infested with the maggot of a small black fly, and these are called “skippers” because the maggots jump or skip by a quick movement of the body. Pork shoulders and hams suffer most. Even well cured and smoked pork may become

infested. Trouble is more apt to occur in the smokehouse or in rooms where from year to year some pork is carried over. This is primarily a summer pest, but in a short time it can destroy much valuable meat and cheese if exposed to it.

**Control.**—With a pest of this sort, prevention is much more effective than control. Avoid carrying the pest over from one year to the next in the smokehouse or where meat is stored. Ham or shoulder bones, or odds and ends of pork leftovers, may carry an infestation over. If the pest attacks meat one year, make sure that no carryover is possible by completely using up or disposing of all meat rinds, bones, or other leftovers.

Once hams and shoulders become infested it is difficult to rid them of the skippers. Cut away and burn maggots and infested parts which are usually around exposed portions of bones. Then wrap in newspaper and in a week unwrap and destroy any of the pests which have crawled out of the meat. Rewrap and repeat the weekly checkup and destruction of the escaping pests. If low temperature cold storage locker facilities are available, meat can be rid of infestation by subjecting it to subzero temperatures for a few days.

### Larder Beetle

This is another meat pest which frequently appears in the smokehouse or where cured pork is stored. It may also attack beef, hides, and stuffed animals. If allowed to live over and breed up on cured pork it frequently does much damage. Both the beetle, which is one-third inch long and dark brown with a light band across its middle, and the hairy grub, which is about the same length, feed on cured meat. As in the case of skippers, prevention is better than control. However, if the pest appears, go over each piece of meat and examine carefully around exposed portions of bone and in cracks and folds in the meat for the beetles or grubs. Recheck once a week until you find no further evidence of the pest. Smoked meat kept in tough paper sacks is not likely to become infested.

### Cheese and Meat Mites

Frequently, mites, which are related to the spiders, cause damage to cheese, cured meat, and other foods in the house. When abundant, they may also cause much annoyance by crawling about all over the house and getting into other foods. They are small, light colored creatures the size of a pinhead, and they are frequently brought into the home on cheese. If they are found in the home, promptly get rid of the infested material or dip in boiling water to rid it of the mites.

### Fruit Gnats

These small flies cause much annoyance and get into dishes of fruit and fruit juices in the home from early fall until cold weather begins. They may also breed in jars of pickles, kraut, and vinegar, if not kept well covered. They are attracted by fruit peelings and spoiling fruit. To keep them out of the house, dispose of garbage every day and do not have any spoiling fruit in the house. Also, keep curing pickles, kraut, and fermenting cider and other fruit juices covered to exclude the pest. Around the kitchen and sink, if they become troublesome, the liberal use of a household fly spray will get rid of them.