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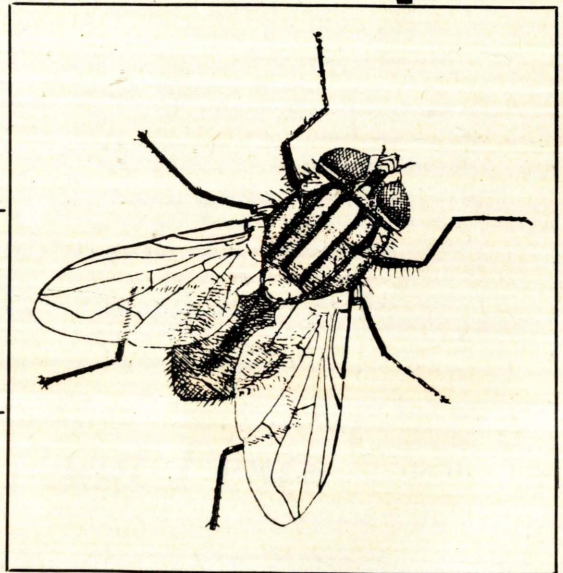
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CONTROL HOUSEHOLD INSECTS

Agricultural Extension Service
South Dakota State College
U. S. Department of Agriculture



HOUSEHOLD PEST CONTROL

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The development and general acceptance of the new insecticides has greatly helped housewives in their battles with insects found in the home. Yet the use of these chemicals does not rule out the importance of sanitation and good housekeeping in preventing the establishment of these pests. Sanitation is a basic principle of pest control.

Insects found in South Dakota homes destroy and contaminate foods and ruin fabrics. Some attack our dwellings and other buildings; others bite or annoy humans, carrying diseases and causing irritation or secondary infections. The presence of other insects merely constitutes a nuisance. Even the most well-kept homes sometimes become infested. This situation is no disgrace but every effort should be made to control these pests once they are detected.

Equipment and Insecticides

There is a great variety of handy, inexpensive sprayers on the market which are adequate for household use. The small hand sprayers may be used for most jobs around the house. For large scale applications they are rather laborious to operate and may give an uneven coverage. The larger, constant pressure, knapsack type of spray-

ers are very good for all around household and garden use. A fairly uniform coverage can be applied to large areas with this equipment. They range in size from two to four gallons in capacity.

A paint brush may often be used effectively, especially for painting DDT preparations on window and door screens and applying chlordane under sinks and around cupboards for cockroach and ant control.

Precautions

It must be remembered that many of the insecticides commonly used may be irritating or toxic to humans and pets. All insecticides should be used with caution. Recommendations should be followed closely and directions on the labels of containers should be followed.

Oil solutions should not be sprayed near an open flame because of the fire and explosion danger. Oil solutions or emulsions of insecticides should not be applied to the skin or hair of humans or pets. Food or utensils should not be brought into contact with insecticides; chemicals spilled on the skin or clothing should be washed off immediately. All insecticides, plainly labeled, should be stored in a safe place out of the reach of children, irresponsible persons or pets.

Stored Food Pests

Many different kinds of beetles and moths may infest food and food products stored in the

home. Infestations may build up very rapidly under warm, undisturbed conditions.

Stored food pests are often brought into the home with infested cereal products. Such foods should be purchased in unbroken packages. Once stored food pests become established the infested material should be removed and destroyed. Uninfested cereal products such as opened boxes of breakfast food, beans, flour or nuts should be heat sterilized in the oven at 140 degrees for 30 minutes and then put into tightly closed containers. Apply 5 percent DDT household grade solution to the corners, cracks and walls of the cupboards. It may be sprayed on or painted on with a paint brush. Look on the floor under built in flour bins and keep spilled flour cleaned up. Avoid storing ground feed or similar livestock feed in or near the kitchen.

CONFUSED FLOUR BEETLE

Small reddish brown beetles about one-sixth of an inch long. The larvae are yellowish white and hatch from eggs laid in the food. When found in flour they are often called "weevils" by housewives.

SAW-TOOTHED GRAIN BEETLE

Dark brown flattened beetles about one-tenth of an inch long. The name is derived from six saw tooth-like projections on each side of the thorax. Frequently found in flour, cereals, dried fruits and nuts.

BEAN WEEVIL

Infested beans have circular holes cut from the inside. Adults are brownish-gray about one-eighth of an inch long. Larvae feed inside the beans and when full grown they change to the

adults which emerge, mate and deposit eggs on the beans.

INDIAN MEAL MOTH

The adults are small moths often mistaken for clothes moths. They deposit eggs in cereals, flour, fruits, nuts, even candy and cookies. The moths have a wing span of about one-half inch. The fore wings are copper-colored on the outer two-thirds. The larvae, or caterpillars, grow to about one-half inch long and are dirty white in color sometimes with shades of green or pink. The caterpillars spin a fine webbing as they crawl and feed. When full grown the larvae spin cocoons in which they change to the adult or moth stage.

Some other commonly found beetles are larger beetles, granary and rice weevils, meal worms, drug store beetles and red flour beetles. Other moths are the Mediterranean flour moth and the meal moth.

Cockroaches and ants, even though they do not breed in stored foods, are often encountered in the kitchen where they are attracted by various foods.

Ants and cockroaches may be controlled by sanitation—keeping food away from them—and by the use of insecticides. Two percent chlordane oil solution, household grade, will kill roaches and ants. Use a paint brush and apply the chlordane under drawers, shelves and in corners of the cupboards—places where these pests hide or travel. For the control of ants attempt to find the nest and treat it with the chlordane. Apply the insecticide on window sills or thresholds of doors where the ants enter the house.

Clothing, Fabric Pests

Clothes moths and carpet beetles cause much damage to stored woolens, upholstered furniture and rugs and carpets. The control of these two pests is the same. It is important to clean or launder, sun and carefully store furs and woolens. Store them in pastboard, wooden or metal containers and sprinkle paradichloro benzene crystals into the material as it is folded. Then seal the container.

DDT Clothes Spray

Clothing may be sprayed lightly with 5 percent household grade DDT solution. It is best to

spray the clothes outdoors on a warm sunny day. Closets, carpets, rugs and upholstered furniture may also be protected from moths and carpet beetles by spraying them with 5 percent DDT or 2 percent household grade chlordane solution. Applying too much insecticide may leave a whitish deposit on dark colored material. It is important to cover the material lightly but completely with the spray. A new protective chemical developed by the USDA and called EQ-53 may be added to the wash water or rinse water when washing woolens. EQ-53 is a DDT preparation and will

remain effective for more than a year.

The clothes moths, or adults, do no damage. It is the larvae or caterpillars of the moths which feed on the woolens and furs. The adult clothes moths are small tan colored moths a half inch in wing span. They fly erratically and prefer dark corners and closets, they are not attracted to lights.

Carpet Beetles

There are several species of carpet beetles found in South Dakota. The most common are small dark colored beetles about one-eighth inch long. The larvae are brownish or black and very hairy, often with long tufts of hair on the tail

end of the body. They often live on lint which collects behind baseboards, and in cold air ducts. They may become numerous in homes with wall to wall carpeting. Frequent cleaning, brushing and vacuuming will help prevent carpet beetles from becoming established.

Crickets and silverfish may on occasion damage fabrics; book binding, paste on wallpaper and sizing on stored paper. They may be controlled by applying 5 percent chlordane household grade solution to basements, around baseboards, behind radiators, and other areas where these pests may hide and feed. Places where water or heating pipes pass through the floor should receive special attention.

Pests Attacking Wood

Termites occur very rarely in extreme southern South Dakota. They are of course very serious pests and if they become established in a building, immediate steps should be taken to destroy them.

Usually when a wooden structure becomes infested, some part of it is in contact with the soil. If not, covered runways made by the termites connect the wooden structures with the ground where the insects nest. This contact between wood and soil must be broken by rebuilding or by using soil chemicals. For information on termite control contact a reliable pest control operator or write to South Dakota State College, College Station, South Dakota.

Other Wood Insects

Other more common wood infesting insects are usually mistaken for termites. The most common of these are powder post beetles. These pests can be recognized most readily by the damage they do. Fine sawdust is forced out of tiny round holes in the wood. Termites make no similar opening to the outside. Adult powder post beetles

are small cylindrical dark brown beetles about one-eighth inch long. They lay eggs in the pores of well seasoned wood. The eggs hatch into grubs which feed and burrow in the wood. When full grown they change to the adult beetles which emerge by way of the small round holes in the wood.

Badly infested wood should be replaced. When early infestations are noticed they may be controlled by injecting pentachlorophenol into the holes in the case of finished wood. The holes may be filled with wood filler and refinished. Unfinished timber should be sprayed or painted with pentachlorophenol, and then the exposed surface should be painted.

Carpenter Ants

Carpenter ants are large black ants about one-fourth to one-half inch long. They tunnel out nests in timbers but do not feed on wood. Masses of sawdust are forced from the burrows. Two percent chlordane solution painted or sprayed on the timbers will kill the ants.

Pests of Man and Pets

FLIES

There are many species of flies which may be found in and around the home. Some bite, others are attracted to our food and carry filth and diseases to it. The most common flies are houseflies,

stable flies, blowflies, and fruit flies. Of these the most numerous and troublesome is the housefly. Houseflies breed in decaying organic matter and filth. They carry diseases and constitute a menace to the health and well being of man.

Fly control should be based on sanitation and not on the use of insecticides. Flies breed so rapidly that if the breeding areas are left undisturbed the application of insecticides will not kill them as fast as they multiply.

The removal of breeding areas must be as complete as possible before fly control can be achieved. Sanitation is a never ending job. All dwellings should be completely screened with the screens kept in good repair. This will help keep the flies out. Once flies get into the home they may be killed with DDT, or sprayed with pyrethrum sprays or aerosal "bombs." Many flies are killed by applications of DDT, chlordane, or lindane on the screens.

Stable flies are about the same size as houseflies and are often confused with them. Stable flies have piercing mouth parts with which they obtain blood for food. Houseflies do not bite. Stable flies breed mainly in well rotted straw. As in the case of houseflies, the breeding places must be removed in order to obtain control.

(For control of flies as pests of livestock, refer to Extension Circular 488, Livestock Pest Control Guide.)

MOSQUITOES

These pests need no description. There are many different kinds of mosquitoes in South Dakota. These have different habits and preferences for breeding places. The common house mosquito breeds in standing water in sloughs, ditches, watering troughs, rain barrels, tin cans—almost anyplace where water may stand for a little more than a week. Eaves troughs which are plugged or do not drain properly, fish ponds and undrained puddles are often sources of mosquitoes around a home.

Control measures which give most complete and permanent results are those directed at eliminating the breeding areas. Fill or drain small pools and puddles, dispose of trash and tin cans, cover rain barrels with fine screen, clean and refill bird baths every few days, repair eaves troughs. Clean and refill livestock and poultry watering troughs weekly. Small ponds should be stocked with fish which will feed on the larvae. Mosquitoes which rest during the day in bushes and shrubbery may be killed by spraying such places with DDT. Mosquitoes in the house can be easily killed with Pyrethrin, DDT household sprays or aerosal bombs.

If it is necessary to be out in an area heavily infested with mosquitoes, a good repellent like 6-12, or dimethyl phthallate will give relief. Repellents may be sprayed on the outer garments and rubbed onto exposed skin surfaces.

BED BUGS

These blood sucking insects are flat wingless reddish-brown bugs about one-fourth inch long. They hide during the day along the seams and tufts of mattresses, in the springs, in cracks and crevices of the bed and under wallpaper and baseboards of the bedroom. Bed bugs may be carried into a home in the clothing or in used furniture. They should be controlled immediately after they are discovered.

It is no longer necessary to fumigate a house to control bed bugs. A 5 percent DDT household applied to the beds, springs and mattress seams will control them.

LICE

Head lice, body lice and pubic lice ("crabs") may be controlled by rubbing 10 percent DDT dust into the hair of the infested person. The same dust should be applied in caps and hats.

FLEAS

Fleas are often found in homes or other buildings where cats or dogs are kept. They are small, black or brownish jumping insects. The adults feed on blood of animals and the larvae are found in cracks, under bedding of pets and other places, where they may feed undisturbed. The larvae feed on bits of hair and skin shed by cats and dogs.

To control fleas treat the infested pet first. Use a 5 percent rotenone powder or a commercial flea powder on cats. Dogs may be treated with a 5 or 10 percent DDT dust. *Do not treat cats with DDT.* Rub the powder thoroughly into the hair. Then the basement, garage, dog house or other places where infested animals have been kept should be sprayed with 5 percent DDT emulsion or solution.

CHIGGERS

These pests are not insects but very small mites which attach themselves to the skin under tight fitting clothing. They pierce the skin of the host and secrete an irritating substance which causes secondary infections. Chiggers do not burrow under the skin as do scabies mites. If you are going into an area probably infested with chiggers, treat

your clothing with repellent like dimethyl phthalate, 612 or 622. Dusting the tops of stockings with dusting sulfur will help keep them out. Avoid lying or sitting on lawns or grassy areas known to be infested.

Chigger infestation in lawns may be controlled with chlordane, toxaphene or lindane. One pint of 25 percent lindane concentrate in 25 gallons of water or one pint of 40 percent chlordane or toxaphene concentrate in five gallons of water will give control for about two months.

SCABIES

Scabies or "itch" is caused by a very small mite

which burrows under the surface of the skin especially between the fingers, around the waist and crotch. Intense itching is caused by the irritating secretions and excretions of the mites. Scratching may cause secondary infections and further spread of the mites. Infestations occur by direct contact or use of clothing, bedding or towels of an infested person. Scabies infestations may also result from handling an infested animal.

Application of ointments containing benzenozoate or sulfur and lanolin are usually prescribed for treatment. Your physician should be consulted.

Annoying, Harmless Pests

BOX ELDER BUGS

These are the common black and red flat bugs about one-half inch long which congregate in large numbers on tree trunks, walls and steps during the fall. Many of them find their way into houses where they crawl and fly around but do no damage. They are very resistant to sprays and dusts.

To obtain control remove boxelder trees which are near the house and replace them with more desirable species of trees. Caulk cracks around windows, doors, foundations, chimneys and other places large enough for a box elder bug to enter. Apply 5 percent chlordane or 0.25 percent diel-drin spray on the trunks of the trees when the bugs are congregating. Use a fly swatter or household fly spray on those which enter the house.

CENTIPEDES

Centipedes or "hundred legged worms" are not insects but are near relatives. They have many long legs and are able to run very rapidly. They like damp places and are frequently found in basements, cellars, bathrooms and occasionally in kitchens. Centipedes feed on insects so they may

be called beneficial.

When it is necessary to control large numbers of centipedes apply a 5 percent DDT or 2 percent chlordane spray on the floor along the walls in the basement or other infested area. A fly water may be used to dispose of the few which may find their way into other parts of the home.

MILLIPEDES

These creatures are related to the centipedes. They have shorter legs and these legs are arranged two per body segment while the centipedes have one pair of legs per segment. Millipedes are rather hard shelled and often curl up and feign death when disturbed. These pests frequently move in considerable numbers and enter basements through cracks in the foundation or around cellar windows. Cracks where millipedes may enter should be caulked up. Slices of potatoes may be dusted with Paris green and buried just beneath the surface of the ground around the foundation or basement walls. Five percent DDT dust may be sprinkled around the edges of the basement floor next to the walls where the millipedes will come in contact with it.

Assistance in Control

If you have some problems in controlling household insects contact your local county agent, or write to the Extension Entomologist or the Entomology-Zoology Department, South Dakota State College, College Station, South Dakota. Whenever possible such inquiries should be accompanied by specimens of the insect and/or the

damage. Put them in a strong box not loose in an envelope. Give as much information as you can about the specimens—where they were found and the damage, if any, being done. If this is done, identification and recommendations for control will be more prompt.

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