

1
Ag 84Hg
cb. 2
8

#121

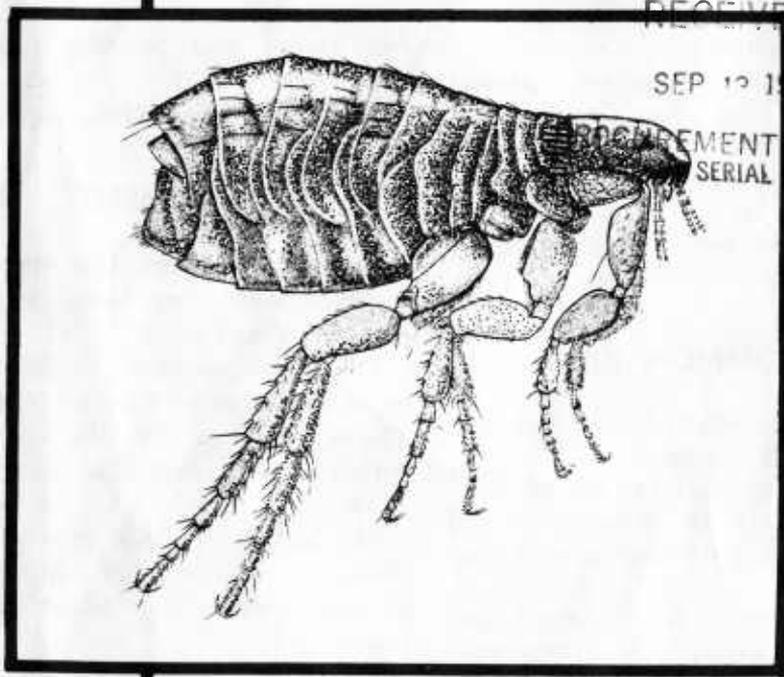
CONTROLLING

FLEAS

U. S. DEPT. OF AGRICULTURE
NATIONAL AGRICULTURAL LIBRARY
RECEIVED

SEP 12 1971

PROCUREMENT SECTION
SERIAL RECORDS



HOME AND GARDEN BULLETIN NO. 121
U. S. DEPARTMENT OF AGRICULTURE

59

CONTROLLING FLEAS

Fleas often breed in large numbers where pets and livestock are kept. They spread through homes, buildings, and yards. They attack pets, livestock, poultry, and people.

Pets infested with fleas scratch and bite themselves almost constantly. Their coats become soiled and roughened, and their skin becomes irritated.

Domestic animals are painfully annoyed by fleas, and young chickens and other poultry are sometimes killed by heavy infestations.

You can control fleas by applying proper insecticides.

COMMON KINDS

Many kinds of fleas attack animals and people.

The dog flea¹ and the cat flea² are the most widespread and abundant. Each kind attacks dogs and cats.

The human flea,³ a severe pest in many areas, lives on numerous animals. It is often found on hogs, and it breeds in hog houses. It also lives on dogs, cats, goats, and domestic rats and on wild animals such as skunks, coyotes, and badgers.

¹ *Ctenocephalides canis*.

² *C. felis*.

³ *Pulex irritans*.

It most often is found in the Mississippi Valley, in Texas, and westward to the Pacific coast.

The sticktight flea⁴ infests poultry and occasionally annoys people and pets in the Southern States.

Several species of rat fleas, particularly the oriental rat flea,⁵ infest houses and buildings that harbor rats.

All of these fleas can bite people.

DEVELOPMENT

Fleas pass through four stages of development—egg, larva (maggot), pupa, and adult.

The female adult lays eggs on an animal or in its sleeping place. The eggs fall off the animal and, within a few days, hatch into larvae.

The larvae are fully grown in about 2 weeks; then they spin tiny cocoons in which they change into pupae.

The pupae change into adults in about 1 week and emerge from the cocoons.

Adult fleas can live several weeks without food. This is why owners of dogs or cats sometimes return

⁴ *Echidnophaga gallinacea*.

⁵ *Xenopsylla cheopis*.

SAND FLEAS

Although fleas found in sandy places often are called "sand fleas" there is no flea by this name. Many kinds of fleas develop in sandy places—as a result of being dropped there (as eggs or adults) by flea-infested animals.

from vacation to find their homes overrun with fleas, even though no adult fleas were in evidence when they left for vacation.

Fleas feed on animal or human blood; they cannot breed or survive without it.

CONTROL WITH INSECTICIDES

The kind and amount of insecticide needed to kill fleas depend on (1) the kind of animal that is infested and (2) whether an infestation is inside or outside a home. Insecticides used in the home differ from those used in other locations.

Control of fleas on animals is necessary to prevent infestations in homes, animal quarters, and yards.

Fleas on Animals

Dogs and Cats

Malathion, methoxychlor, rotenone, or pyrethrum (pyrethrins) will kill fleas on dogs and cats. You can buy these insecticides ready for use as flea powders or sprays.

Powders.—Use a powder that

contains no more than: 5 percent of malathion, 5 percent of methoxychlor, 1 percent of rotenone, or 1 percent of pyrethrins. Flea powders sold for dogs and cats often contain several of these insecticides combined—each at a lower concentration than those listed above.

Sprays.—Use a spray that has not more than 0.5 percent of malathion or methoxychlor.

Use insecticides carefully. Follow directions on the container. Don't be alarmed if your dog or cat shows discomfort for a few minutes after the application. Insecticides often cause increased activity by the fleas in their last moments of life. If the animal has free run, treatments may have to be repeated to keep fleas under control. (Treat the animals only as often as suggested on the container label.) If the animal is confined to an area free of fleas, one treatment usually is enough.

Fleas begin to leave the animal within a few minutes after a pyre-



N-14410

Applying powder for control of fleas.



N-14411

Rubbing powder into dog's hair.

thrum powder is applied, but they are only paralyzed and may recover. Treat the animal outdoors or in an enclosure where the paralyzed fleas can be swept up and destroyed.

Chickens

Sticktight fleas may be a problem on chickens. Spray infested chickens with a 0.5-percent malathion spray (see chart) or treat them with 5-percent malathion dust.

Fleas in Animal Quarters and Yards

To destroy fleas in dairy barns and poultry houses, use malathion. In other barns and animal quarters, in yards and lawns, and under houses, spray or dust with the insecticides recommended under "Fleas on Animals" or apply a 1-percent ronnel spray (see chart). If animal quarters or pens are littered, remove the litter before spraying or dusting.

Spraying.—Apply spray at the rate of 2 gallons to 1,000 square

feet (but apply 1 gallon of 1-percent ronnel). Use a garden-type compressed-air sprayer or small power sprayer.

Dusting.—Apply malathion dust at the rate of 1 pound per 40 square feet in poultry quarters. Apply 1 to 2 pounds per 1,000 square feet in dog kennels or goat or hog quarters.

Apply methoxychlor dust at 1 pound per 1,000 square feet, but only in dogs, goat (except milk goat), and hog quarters. Dusts often can be blown under low buildings where spraying would be difficult.

Fleas in Homes

Sprays that contain methoxychlor, malathion, or ronnel will destroy fleas in homes.

Apply a 5-percent methoxychlor spray or 2-percent malathion spray to floors and baseboards and to walls to a height of about 1 foot. Apply a light mist to upholstering, rugs, and other fabrics; a heavy spray may stain fabrics. Before spraying, clean rooms and up-



N-14414

Dusting under doghouse for control of fleas.

GUIDE FOR MIXING SPRAYS

Insecticides and some of the forms in which they may be purchased	Percentage of insecticide desired in spray	Approximate amount of purchased product to mix with 5 gallons of water
METHOXYCHLOR		
50-percent wettable powder.....	0.5	6 ounces.
25-percent emulsifiable concentrate.....	.5	1 pint.
MALATHION		
25-percent wettable powder.....	.5	12 ounces.
57-percent emulsifiable concentrate.....	.5	6 ounces.
RONNEL		
24-percent emulsifiable concentrate.....	1.0	1½ pints.

holstered furniture with a vacuum cleaner.

To prepare sprays for use in homes: Mix 6¼ tablespoons of 25-percent methoxychlor emulsifiable concentrate, or 3¾ teaspoons of 50 to 55-percent malathion emulsifiable concentrate in 1 pint of water.

If you apply a ronnel spray, see that it is labeled for home use and follow instructions on the label.

PRECAUTIONS

Pesticides used improperly can be injurious to man, animals, and plants. Follow the directions and heed all precautions on the labels.

Store pesticides in original containers—out of reach of children and pets—and away from foodstuff.

Apply pesticides selectively and carefully. Do not apply a pesticide when there is danger of drift to other areas. Avoid prolonged inhalation of a pesticide spray or dust. When applying a pesticide it

is advisable that you be fully clothed.

Do not apply methoxychlor, ronnel, or rotenone in dairy barns or poultry houses.

After handling a pesticide, do not eat, drink or smoke until you have washed. In case a pesticide is swallowed or gets in the eyes, follow the first aid treatment given on the label, and get prompt medical attention. If the pesticide is spilled on your skin or clothing, remove clothing immediately and wash skin thoroughly.

Dispose of empty pesticide containers by wrapping them in several layers of newspaper and placing them in your trash can.

It is difficult to remove all traces of a herbicide (weed killer) from equipment. Therefore, to prevent injury to desirable plants do not use the same equipment for insecticides and fungicides that you use for a herbicide.



Use Pesticides Safely
FOLLOW THE LABEL
U.S. DEPARTMENT OF AGRICULTURE

This edition replaces all previous editions of this publication. Because of changed insecticide recommendations, earlier copies should be destroyed.

Prepared by

Entomology Research Division

Agricultural Research Service

United States Department of Agriculture

Washington, D.C.

Revised April 1971

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington, D.C. 20402 - Price 10 cents