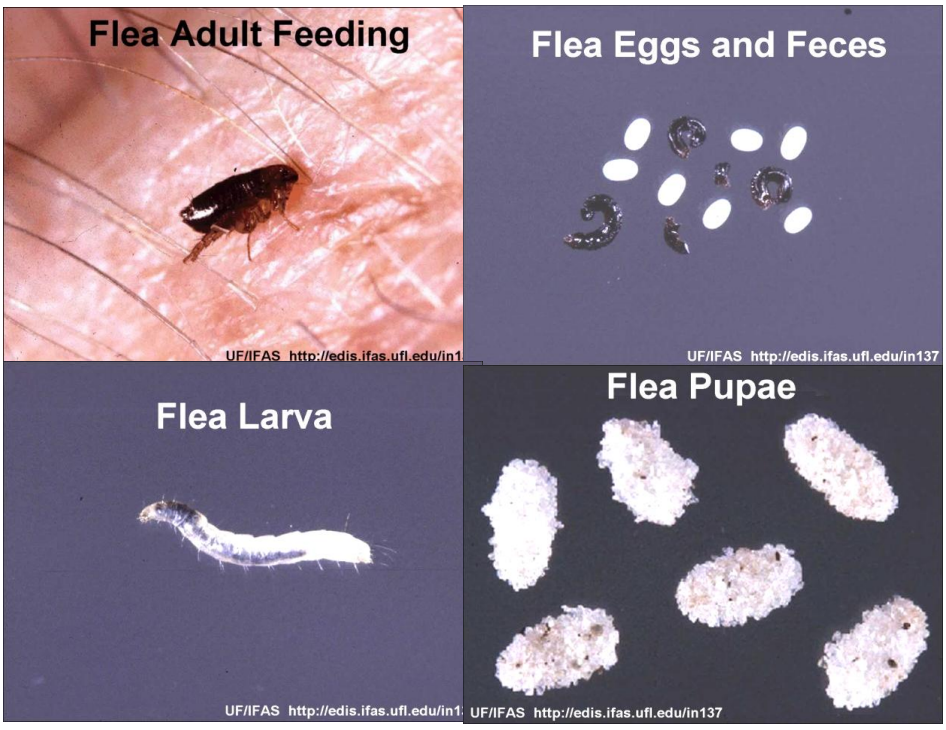
Flea Management for Homeowners HANDOUT

The most common fleas people encounter are found on cats and dogs year-round, but are most common during warm and humid weather. Fleas are attracted to animals by body heat, movement and the carbon dioxide that animals exhale. Adult fleas can jump up to 150 times the length of their body to reach a host. Adult fleas feed on blood while the immature larval form of the flea feeds on organic debris. The typical life span of the flea is more than 100 days – enough time for a pair of fleas and their descendants to produce millions of offspring. Under ideal conditions and assuming that none die; a pair of fleas has the potential to produce more than 20 trillion descendants in one year.

The cat flea ranges in size from 1/12 to 1/6 inch long. They are small and have no wings, and therefore do not fly. Instead, they jump or spring. Their bodies are narrow if viewed from the sides (said to be laterally compressed), ideal for a life spent moving among hairs. Because their bodies are covered with spines projecting backwards, they are difficult to remove by shaking or scratching.

Adult fleas (the biting stage seen by pet owners) spend most of their time on the animal, not on the floor or in the carpet. This is why treatment of the pet in conjunction with the pet's environment is an essential step in ridding fleas from a home.

Adult female fleas lay all of their eggs on the pet (up to 50 per day and up to 400 in their lifetime). However, the eggs soon fall off the animal into carpeting, beneath furniture cushions, and wherever else the pet rests, sleeps or spends most of its time. This is where homeowners should focus control measures.



Flea eggs hatch into flea larvae within a few days to several weeks, depending upon conditions of temperature and humidity. After hatching, the tiny, worm-like flea larvae remain hidden deep in carpet fibers, beneath furniture cushions and in other protected areas. The larvae feed mainly on adult flea feces (dried blood) which accumulates, along with the eggs, in pet resting and activity areas.

Before becoming adult fleas, the larvae transform into pupae within a silk-like cocoon. Pupae remain inside the cocoon for 2 to 4 weeks, sometimes longer if a suitable host is unavailable. Under warm conditions, increased vibrations or the increased presence of carbon dioxide, adult fleas may suddenly emerge from this protective pupal cocoon to seek a host. The cocoon is resistant to

insecticides and this is why some adult fleas can be seen for an extended period, even after the home and pet are treated.

The various flea stages will be found most concentrated in the areas that the pet spends most of its time. Proper flea management must cover the infested animal's entire environment, focusing largely on areas where the animal spends the majority of its time; i.e. sleeping/resting areas and foraging/walking areas.

The best time to start a flea management program is usually in the late spring, prior to an infestation. Since adult fleas comprise only a small percentage of the total flea population, a thorough inspection is required. Proper pest identification is also important to be sure fleas are what you are dealing with and not springtails, mites, lice or something else.

Ridding a home of fleas can be a frustrating and costly endeavor. Unlike some pests encountered around the home, fleas cause discomfort and irritation to both pets and people. Fleas account for more than half of all dermatological conditions requiring veterinary assistance, and even a single flea bite to a hypersensitive animal or person may cause intense itching and irritation. Fleas are also important vectors of disease. The most important diseases that fleas transmit to man are plague and flea-borne typhus (transmitted primarily by rodent fleas). Fleas also serve as intermediate hosts for some tapeworms (which infest rodents, dogs, and occasionally man) and a filarial worm of dogs. They may also serve as vectors of tularemia.

For successful flea control, the home, pet and oftentimes, the yard must be treated. Yet the manner in which these treatments are performed can greatly influence the results. The following information will help frustrated pet owners effectively rid their homes and pets of fleas.

To deal with flea infestations, it's best to remember where they live and reproduce. Flea larvae develop in floor level cracks and crevices, furniture used by pets, and in rugs and carpets, making them difficult to eliminate. Thorough cleaning is one of the best ways to reduce the amount of flea larvae and eggs found in the home environment. Carpeted areas need to be vacuumed and treated with a residual flea control product plus insect growth regulator (IGR) labeled for indoor carpets. *Foggers/Bug Bombs are most effective in controlling flying insects and are **NOT** recommended for flea control.* Daily vacuuming is recommended. Concrete floors may be treated with the same flea control product, but remember to first vacuum and wash concrete floors thoroughly with soap and water to remove dust, flea larvae and flea eggs.

By treating infested pets and the interior of the home, most flea problems can be eliminated. However, treatment of the yard may be necessary when pets spend most of their time outdoors. A good way to tell if your yard is infested with fleas is to walk around the property wearing knee-high white socks. As you walk, fleas will jump onto the socks and can be easily seen against the white background.

Outdoor flea treatments should target areas where pets rest, sleep, and run (doghouse, kennel areas, under decks, along fences, next to the foundation). Rarely is it necessary to treat the entire yard or open areas exposed to full sun. Insecticide formulations containing a pyrethroid insecticide are somewhat effective for outdoor flea treatment and these can be applied with a hose-end or pump-up sprayer. Long-term suppression of fleas infesting kennels or outdoor areas can be improved by using insecticide formulations containing an IGR such as methoprene or pyriproxyfen.

You can successfully control a flea problem by following the **Flea Management Steps** listed in the next section. However, if you lack the time to do your own flea control or are uncomfortable applying pesticides, you may wish to enlist the services of a pest management professional (PMP). In addition, professional pest control firms will have additional control materials available to them that are not available for homeowner use.

In a recent nationwide survey of commercial pest management companies (PCT 2016 State of the Flea Market survey compiled by Readex Research, a privately held research firm based in Stillwater, MN), 3434 owner/operators of pest control business were selected randomly from the PCT database. Data on price for a typical residential flea control service of was collected from 337 respondents (10% response rate) via an online survey from Jan. 28 to Feb. 8, 2016. The margin of error for percentages based on the 337 usable responses is ±5.2% at the 95% confidence level and can be seen in the accompanying figure.

Flea Management Steps:

Step 1. With veterinarian supplied products that are currently available, control of fleas in small to moderate sized infestations is likely to occur by using those pet treatment products alone. It may take 2 months to completely break the flea life cycle. If pet treatment alone does not provide sufficient control, initiate a complete control program.

Step 2. Vacuum infested areas twice a week and prior to treatment to remove eggs, larvae, adults and organic matter. Steam cleaning your carpet may also reduce populations. Eliminate fleas from pets, bedding and premises before departing on vacation.

Step 3. Treat pet resting areas indoors and clean or remove pet bedding on the same day. The use of insect growth regulators is important to break the flea life cycle. A combination of an insect growth regulator and an adulticide may be the most efficient insecticide formulation to use**. Keep pets and people out of treated areas (indoors and outdoors) until spray dries.** Remove all pets from the premises during the treatment process and according to label compliance procedures for materials being used; (usually several hours for any liquid materials to completely dry on treated surfaces). Be sure the control material has the treatment site and fleas on the label; also heed any warnings regarding fish, birds, etc. (It is a good idea to remove birds from the home. Cover or remove fish and tanks, and turn off any re-circulating air pumps.) Also cover and be watchful of all pet water and food dishes. If you also plan to incorporate an insect growth regulator (IGR) in your tank mix with the product of choice, please be aware that IGR's may also negatively affect pet invertebrate animals like hermit crabs, shrimp, snails, etc. Be sure to keep all pet animals out of the treated area until the material has dried; in compliance with the application material labels.

Step 4. Outdoors, mow grass, keep weeds down, and trim shrubs to expose flea eggs and larvae to lethal desiccation. Irrigating areas surrounding buildings, but not against building, may kill fleas by drowning. If fleas are surviving outdoors, apply an insecticide carefully following the directions on the label.

After the flea management procedure is completed, monitor for any future flea activity using glue boards / sticky traps placed in areas of previous flea activity. If a glue board ever becomes attached

to a pet animal's fur, it can be removed with a little vegetable oil. Completely ridding a home of an established flea infestation requires diligence and persistence and may require several applications of a labeled insecticide over time as well as continuing veterinarian prescribed treatments for pets.

Recommended materials for flea control (indoor, outdoor, and on animals) may be found in the HOUSEHOLD AND STRUCTURAL PEST CONTROL and the AMINAL INSECT CONTROL Sections of the current MP144 "Insecticide Recommendations for Arkansas" by clicking on the following link:

http://www.uaex.edu/publications/mp-144.aspx

All chemical information is given with the understanding that no endorsement of named products is intended, nor is criticism implied of similar products that are not mentioned. Before purchasing or using any pesticide, always read and carefully follow the directions on the container label.

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