

by Balakrishna Rao, Ph.D.

## Sanitation, insecticides kill fleas

**Problem:** How do you destroy fleas? (Fla.)

**Solution:** To manage flea populations, it is important to learn about their biology and proper identification.

Cat fleas are frequently found in houses and in yards where dust and organic debris accumulate. They can attack dogs, cats, foxes, raccoons and even humans. They may not bite hard, but their irritation is painful.

Fleas are capable of transmitting infectious diseases. Adult fleas are 1/8-inch long, wingless insects with piercing/sucking mouthparts. They are dark reddish-brown with a flat body. They can jump several feet when off the host. Cat fleas undergo complete metamorphosis (egg, larvae, pupae and adult). The females lay four to eight tiny, white oval eggs after each blood meal.

Eggs hatch in about 10 days and the larvae feed on dried blood, bits of feces and other materials. They go through three molts which may take from seven days to several months.

To manage flea problems, thorough sanitation, proper use of insecticides and treatment of the pet(s) by a veterinarian is recommended. Determine the hot spots of fleas in the home by walking wearing white socks. Dark fleas show up easily when they jump from floor to the host. The suspected area, such as floor cracks, furniture, carpet edges and pet sleep area, should be thoroughly vacuumed prior to treatment to remove larvae, pupae and organic debris.

Also, pet hairs should be cleaned and pet bedding should be discarded or washed in hot soapy water.

For indoor treatment, application of insecticides such as malathion premium grade 3%, diazinon (Knox Out 2FM) 1% or propoxur (Baygon) 1% is recommended. Reports also suggest that dust of bendiocarb (Ficam D) 1% and Pyrethrins (Drione) 1% can be effective too. In addition, there are some automatic foggers containing ronnel (Korlan) plus dichlorvos (Vapona) available in canister, which will knock down and kill many adult fleas.

Outdoor areas frequented by pets should be treated with insecticide such as Ficam, Sevin, Dursban, diazinon, malathion, propoxur or silica gel. In addition, pets should be treated by a veterinarian for flea problems.

Check with your local extension personnel for further advice.

## Eliminating perennial weeds

**Problem:** The landscaping division of our company undertakes new lawn establishment in new home developments. Often in these newly-seeded lawns, we find a lot of annual and perennial-type weeds. Although we follow good lawn establishment procedures, a lot of these unsightly perennial grassy weeds appear gradually over time. Our clients think that these weeds are from our seed mixtures.

Can we use Roundup or a fumigation method to kill the weeds prior to establishment? (Pennsylvania)

**Solution:** Several different factors such as the cultural practices used prior to seeding, the type of seeds used, mulching, post-seeding care, seed germination and seedling establishment can partially contribute to weed establishment in any newly-seeded lawn.

Generally, most soils contain thousands of seeds of several kinds of weeds, which can remain viable in soil for many years. These seeds as well as vegetative parts of certain weeds can present problems whenever soil is disturbed, particularly perennial grassy weeds. Therefore, prior to tilling, grading and seed bed preparation, the first step in soil preparation should be to control persistent weeds. This can be achieved by the use of non-selective herbicides or soil fumigation.

Use of non-selective herbicides such as glyphosate (Roundup) should make the existing vegetation easier to manage. Remember, this product will not have any effect on viable weed seeds in the soil, which may present a potential problem later. Therefore, wait for three to four weeks and repeat applications if desired.

If your objective is to get rid of all viable plant structures, fumigate the seed beds. Before fumigating, prepare the soil for seeding by covering the seed beds with polyethylene (plastic) covers while applying 250 to 300 lbs. of methyl bromide per acre. Keep the plastic cover on beds for 48 hours after fumigation and make sure its edges are firmly secured. Then, before seeding, remove the plastic and let the seed beds air out for 48 hours. Remember that methyl bromide is highly toxic; therefore, follow good safety procedures while fumigating. Read and follow the label specifications.

Besides this method, weed populations can also be minimized to some extent by:

1. using weed-free certified seed with good germination potential;
2. maintaining seed and soil contact when seeding;
3. using good mulch cover to maintain moisture and temperature, protect seeds from erosion and discourage bird feeding;
4. keeping the seeded area moist throughout the germination and establishment period; and
5. if only a few weeds are present, consider using either pre- or post-emergence herbicides to manage these weeds, only after the turfgrass has established. Remove persistent weeds by sanitation (digging where practical) or spot treat with a non-selective herbicide like Roundup. Then reseed these areas.

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Questions should be mailed to Problem Management, LANDSCAPE MANAGEMENT, 7500 Old Oak Boulevard, Cleveland, OH 44130. Please allow 2-3 months for an answer to appear in the magazine.