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# Lawns 'n' Dogs

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If you feel you have to choose between your best friend and your lawn, you are not alone (fig. 1). Many homeowners face the familiar patches—either dark green and overgrown or else yellow and dead-looking—declaring to the world that they own or are visited by canine friends (fig. 2). What most people don't realize, however, is that it's possible to have both a green lawn and a, ahem, relieved dog!

Dog injury (i.e., “doggie spot”) is a problem that almost every lawn owner experiences at one time or another. Although dogs can severely damage lawns through digging or other such wear and tear, it is what they must do naturally that most commonly affects the lawns of pet and nonpet households alike (fig. 3). And while dog feces are an eyesore and unpleasant to dispose of, dog urine is more damaging and can actually kill the grass.

## WHAT ARE THE SYMPTOMS?

Damage from dog urine usually appears as circular dead patches (rarely more than 3 inches in diameter). Each patch consists of necrotic, dried out, yellow to brown tissue, often encircled by a border of healthy, dark green grass. This margin is often a darker green than the surrounding turf. Because several lawn patch diseases cause symptoms similar to dog spots (e.g., dollar spot and brown patch), it is important to observe the behavior of one's own (or the neighborhood's) dog to confirm the origin of the spots. Otherwise, the appearance of such spots, especially if they increase rapidly in size and number, may indicate active lawn disease. Dog urine damage may not always include dead grass. Very small dogs or dogs releasing a slight amount of urine in one spot (e.g., “marking” behavior) may cause spots with very dark, taller growth compared to surrounding grass (fig. 4).

Burned spots may recover with regrowth depending on the amount of urine released, the type and health of the lawn grass, time of year, irrigation, and rain con-



Figure 1. Dogs love to play on lawns!



Figure 2. “Doggie spot” (lawn killed by dog urine). Older spots may remain dead, but the turf on the perimeter may turn dark green and grow faster due to nitrogen release.



**Figure 3.** It takes only a few “doggie spots” to significantly reduce the quality and uniformity of a lawn.



**Figure 4.** Where dog urine does not kill grass, its nitrogen causes plants to grow faster and darker than surrounding turf, compromising lawn uniformity.

ditions during or after the “event.” If the burn is severe, however, the spots may need to be reseeded or resodded; otherwise, weeds may eventually replace the lawn grass on these spots.

### WHAT CAUSES THE DAMAGE?

Urine, consisting mainly of uric acid, delivers large amounts of nitrogen and salts to a small area. The result is similar to the “burn” caused by overapplication (e.g., accidental spilling) of lawn fertilizers. It is the soluble salts (primarily nitrogen compounds) in urine that kill the grass, essentially pulling water out of turfgrass blades and causing death of leaf tissue through dehydration. The darker green, fast growing ring around the dead spots is a response to moderately increased availability of nitrogen in those areas.

All dogs’ urine contains salts and nitrogen that can kill the grass. But it is the way dogs deposit their urine on a lawn that determines the extent of injury. Dogs that squat to urinate deposit a large volume of urine in a small spot and cause more severe damage than dogs that raise their legs when urinating. Generally speaking, female dogs and young dogs of both sexes squat to urinate. Older male dogs raise their leg, spreading urine to a larger area. Male dogs are also more territorial and do more “marking” than female dogs, and so they tend to urinate small amounts in a number of different locations. Thus, dogs that are young, large, or female often do more damage than ones that are old, small, or male.

### ARE ALL GRASSES EQUALLY SUSCEPTIBLE?

All lawn grasses are susceptible to dog urine burn. However, severity of injury and recovery characteristics vary among grasses. Generally, warm-season, aggressively growing grasses such as bermudagrass, kikuyugrass, and St. Augustinegrass recover from injury faster than cool-season or noncreeping grasses. Warm-season grasses have horizontally growing rhizomes or stolons which quickly grow back into the dead spot, filling it before weeds invade. Among cool-season grasses, tall fescue appears to tolerate dog urine damage better than either Kentucky bluegrass or perennial ryegrass.

Dog urine damage to lawns is exacerbated by hot, dry weather, which also contributes to leaf dehydration and thus increases the degree of burn. Damage is less severe during cooler months or when frequent rain can wash urine from grass leaves and leach excessive urine and salts from the root zone.

## HOW TO SOLVE THE PROBLEM?

There are basically two approaches to dealing with dog injury on lawns. Preventive methods are often adequate. If not, then repair of the damaged area is in order.

### PREVENTION

Training a dog not to urinate on the lawn may be possible if alternate locations for urination are available. Testimonials for dietary approaches to reducing dog urine's lawn burning effects are abundant. However, no such approach has been proved effective and such claims are not supported by research results. Most homeowners, therefore, must rely primarily on physical remedies after the fact.

Flooding the urine spot with large volumes of water immediately after the "act" is the most effective way to prevent lawn burn. The water will wash off the salts and nitrogen from the foliage, diluting and leaching them below the leaves and crowns of the grass plants. The sooner the water is applied after urination, the better. An observant, dedicated lawn and dog owner, with a hose or full watering can at the ready, stands the best chance of preventing spots on lawns caused by dogs! In some locations, motion-activated sprinklers designed to keep animals out of gardens may prevent neighborhood dogs from visiting one's yard. Once triggered, these sprinklers operate for a short period of time, but long enough to encourage the animal to take his/her business elsewhere. Check with your local garden center for the availability of such systems. Another effective option, if neighborhood dogs are causing the problem, would be fencing off the lawn area.

### REPAIR

If lawn burn is mild, and especially if it is on warm-season, creeping-type grasses like bermudagrass and kikuyugrass, it is likely that the spot will eventually repair itself and lawn owners may not have much to worry about. However, if the burn is extensive or occurs on noncreeping grasses, then repair may be necessary to prevent weed invasion.

To repair individual burn spots, either reseed or resod. With either approach, begin by watering the spot thoroughly to leach urine salts from the root zone. Then remove the dead grass and, using a small spade or hand shovel, loosen up the soil. To reseed, mix a handful of lawn grass seed with potting soil and mix with the spot's loosened soil; gently pack it down. Water immediately and keep moist until seedlings emerge. A more effective and faster way to repair the spot is to resod. If repairing many spots at once, purchase a slab of sod from the local nursery and cut it into small pieces to fill the spots. If there are only a few spots, you may want to cut pieces of sod (2 inches deep) from an inconspicuous edge of the lawn and use these for repair. Remove dead grass and loosen the soil. Place cut pieces of sod on each spot and step on them gently to assure good contact with the soil. Water thoroughly and keep moist until the sod has rooted. Small pieces of sod dry out very quickly. You may need to irrigate the sodded spots several times during the day to keep sod from drying out.

Severely and extensively damaged lawns, especially where dogs are constantly active, may require total renovation: removal of dead grass, tilling, and soil preparation followed by reseeding or resodding. The best times to do this in much of California are either fall (mid-September to late October) or spring (mid-March to mid-April).

As frustrating as doggie spots may be to homeowners, it can help to remember that a damaged lawn is a lot easier to replace than a relationship with a beloved pet!

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