COMMON SENSE LAWN CARE GUIDE

YARD SMART 2011 Fact Sheet #1
from the ECOLOGY ACTION CENTER

SOIL SENSE: Good soil grows healthy grass. Squeeze your soil. Desirable loamy soil (abundant in organic matter and minerals) stays together, but falls apart easily upon poking. Sticky clay and fall-apart sandy soils are less friendly to grass, suffering aeration and moisture or drainage problems. Spreading compost—which is good, clean, easy-to-use organic matter—will help clay or sandy soils become more hospitable.

Next, if you're having weed or disease problems, learn your soil's chemistry. Grass wants a slightly acidic soil (pH 6.5-7.0) to absorb nutrients. Most garden supply stores offer home-testing pH kits. If your soil is too acidic, sweeten it with limestone following guidelines available at nurseries or extension offices. If your soil is too alkaline, sour it with sulfur. For a more complete, reliable analysis use a private lab (GMS Labs at 877-315-6007 sells $13 kits available by mail or at Casey's Garden Shop in Normal; Stark Soil Testing 217/735-4233) or the cooperative extension office (locally they refer to Stark). These test for pH, phosphorus and potassium, supplying specific recommendations to correct imbalances (request organic rather than synthetic solutions).

Lastly, if you've got plenty of aerating, decomposing, thatch-busting earthworms you're in good shape. Stop using chemicals, including acidifying synthetic fertilizers, and they'll come back.

GOOD GRASS: Common sense guides us to choose low maintenance grass types suited to local conditions, resistant to pests, weeds, disease and drought. Just fifty years ago, northerners grew Kentucky bluegrass, while southerners carpeted with Bermuda grass, period. Kentucky bluegrass is still king in the humid Illinois climate, but cool-season varieties once native to prairies and pastures have gained favor, including Chewing fescues, tall fescues, and improved perennial ryegrasses. Complicating choices, each variety has numerous strains and hybrids, each boasting specific attributes (e.g., shade tolerance, disease resistance, weed control). The best grasses for you depend on many factors, including how you use the yard. Consult with organic lawn care books, local experts or successful ecologically-minded homeowners with similar lawn conditions.

NATURAL FERTILIZING: In your efforts to nourish, don't turn your lawn into a chemical "junkie" waiting for its next nitrogen fix. (If it's already addicted, consult organic lawn resources on withdrawal techniques.) Eliot Roberts, director of the Lawn Institute informs us that heavy chemical fertilizer will literally grow the grass to death. This steroid-like growth makes it easy prey to disease. In addition, the synthetic fertilizer disagreeably acidifies and salts the soil. Natural fertilizers help maintain a neutral pH, invite slower growth, deeper roots, more realistic greening, and help earthworms and soil bacteria thrive, making more nutrients available to grass. Additionally they protect your water supplies from carcinogenic nitrogen by-products.

Light grass clippings offer free fertilizer. Within just two weeks, nitrogen from clippings emerges in new grass. Supplemental organic fertilizers include dehydrated cow manure, dried poultry manure, fish emulsion, bloodmeal, or cottonseed meal. These and easy mixed organic fertilizers are available with feeding schedules from companies like Gardens Alive and Peaceful Valley Farm Supply (see resources). Finally, rely on some old wisdom and add clover and other nitrogen fixing plants to your lawn seed mix for self-fertilizing.

MINIMAL WATERING: Like us, grass plants don't like to work any harder than they have to. If water is readily available on the soil surface (due to ambitious daily watering, but also heavy early rains) the roots won't probe deep into the subsoil for moisture. This pampered grass with shallow roots will suffer in a dry spell. Northern grasses, like Kentucky bluegrass handle the heat and dryness of summer by going semi-dormant. You harm more than help by forcing them out of hibernation with a well-intentioned hosing.

That said, a rule of thumb is to water only when the lawn begins to wilt from dryness (when color fades and footprints stay compressed). Then, thoroughly drench the lawn, soaking 1" of water the full depth of the roots, perhaps 6-8" deep. Never let the flow rate of the sprinkler exceed the infiltration rate of your soil, even if it means cycling your sprinkler on and off. Water after the dew has dried in the morning to prevent disease, but before the heat of the day which speeds evaporation so less water reaches the roots. Heavily fertilized lawns need more watering (and mowing), because of faster growth.

THE ART OF MOWING: Your grass doesn't want to be mowed—it's unnatural. Grass prefers to keep growing tall (maximizing the blade's food-producing photosynthesis factories), to mature and set seeds. Cornell University turfgrass expert Norman Hummel informs us that mowing is a violent, physical removal of living tissue that shocks the plant by suddenly amputating its food source. Additionally, while chopping the blade encourages side shoots, it creates ports of entry for disease.

The problem is we love our cropped turfs and simply won't settle for nature's way. Skillful mowing strives for compromise between your stress, and your grasses'. Mow **high** and **often** to minimize plant trauma, while still encouraging deep roots. "High" means cutting popular Kentucky bluegrass, tall fescues and ryegrasses to about 3" much of the growing season (high maintenance bentgrass and Bermuda grass will tolerate shorter cropping). In addition to leaving more food in the plant's kitchen, taller grass helps shade out weeds, prevents sun from drying out soil, and encourages deeper roots.

Regardless of height, cut no more than 1/3 of the blade at one time to minimize tissue loss. This means cutting bluegrass, fescue and ryegrass before they reach about 4". Additionally, while short clippings return nitrogen to the soil, exceptionally long clippings can choke the lawn with too thick a thatch. Time mowing by grass growth, mowing less often in hot, dry spells. Lastly, clean cut your grass with a sharpened blade to minimize damage.

MINIMIZING THATCH: Thatch is a buildup just above the soil surface of mainly creeping stems and roots, with some matted clippings. When less that ½" deep, thatch beneficially mulches offering insulation, soil cooling and moisture preservation. But a thick thatch that bounces your step keeps out water, air, and fertilizer, harboring insects and promoting disease.

While over-watering, compaction and improper mowing contribute to thick thatch, chemical use is the main culprit. In a healthy lawn, earthworms and microorganisms (bacteria, fungi) decompose thatch rapidly (within a week) releasing nutrients into the soil. Chemical dousing often makes soil life inhospitable to these essential lawn critters. Raking (try a thatch rake) and aerating (poking tiny holes in the soil) can loosen the soil to help it breath and assist thatch decomposition. But earthworms are the prize thatch-busters, and lawns with a good supply have no thatch problem. Invite them back by withholding anything that doesn't smell earthy.

KID-SAFE WEEDING: What's a weed? Society's perception changes, and a flower today may be considered a weed tomorrow. Take clover, for example. Once a sign of prestige, in the 1950s the silky, nitrogen-fixing clover lawn was demoted to weed status following a seed and chemical company's public relations campaign (which was not-so-coincidentally launched in tandem with introducing a clover-killing herbicide). And dandelions? While they delight the fairy-puffing child and the gourmet greens diner, they furl the brow of suburbanites and call the chemical lawn trucks to attention.

Forget weed-free. It's unnatural. Instead, decide just how many uninvited guests you'll tolerate, and learn to live with them. If you're up to 25% weeds, experts recommend action. Weeds often thrive in conditions inhospitable to grass: heavy use, soil compaction, improper fertilization, drought, and short mowing. Killing off weeds with herbicides will do nothing to correct these problems. Do your homework and fix the problems not the symptoms.

In the mean time, grab some good hand tools and pull, cut, dig or mow the unwelcome intruders. Before the weeds flower and set seed, get as many and as much as you can, including the root. It really works. It's perfectly safe and perhaps therapeutic. If you absolutely can't muster the muscle to hand weed, squirt spray only individual plants, sparing the rest of the lawn. Follow label instructions and keep kids, pets, neighbors and everyone else off.

Pre-emergent corn gluten—a natural, non-toxic weed-and-feed technology developed at Iowa State University—can be applied in early spring to discourage dandelions and other weeds before they emerge (see Gardens Alive! reference or simply search the web for suppliers).

PESTS: Most bugs don't damage grass. Some even do good work. If you've got a bad bug problem, turf scientists suggest first addressing mowing, fertilizing, watering and thatch issues. As with de-weeding, if you're patient this works most of the time.

If you need more help, don't reach for the poisons yet. Master Gardeners of Cooperative Extension recommends using *Integrated Pest Management* (IPM). This common-sense approach teaches us to: 1) *identify the pest* (local cooperative extension offers insect and plant disease identification for a small fee 309/663-8306); 2) *determine the damage* 3*) implement organic treatments*—mechanical trapping devices, natural predators, insect growth regulators (pheromones), mating disrupting and natural chemical pesticides, borax, soap; and 4) *use synthetic pesticides only as a last resort, starting with the least toxic*. Chemical labeling advises on acute toxicity (but not necessarily chronic): *Warning* is least poisonous, *Caution* more poisonous, and *Danger*, most poisonous.