






Drug Free Lawn

Broad Leaf Weeds	Mowing	Watering	Soil Conditions	Grass Factors
	Too short. Allows weeds to sprout and spread.	Too dry promotes weeds that thrive in arid areas. Grass stays weak and can't compete. Wet soils stimulate swamp grass and weeds.	Compacted. PH too high or too low. Low fertility or missing nutrients. High in salts, toxins in soil makeup.	Not enough seed when establishing lawn. Not using any spreading type grasses in seeding. Short or creeping grass allow weeds to invade.
	<p>Solution: Test soil. Improve soil fertility, PH, moisture level and structure. Thicken lawn with overseeding. Perennial ryes sprout fast, bluegrasses spread best underground. Mow Higher. Hand-pick flowers (dandelions, Etc..) before they go to seed. Dig out by hand. Spot-treat with natural vegetation killers.</p>			
	Too short. Exposes crabgrass seed to sunlight and heat. High mowing alone can prevent most crabgrass.	Too dry. Crabgrass can sprout in dry soil, weak lawn situations.	Compacted soil. Low humus, low calcium, high salt content. Often found by curbs. Lime acidic lawns.	Grass too thin and short.
	<p>Solution: Improve soil with organics. Neutralize salts. Get lawn thick and high. Try turf type tall fescue in poor soil areas.</p>			
	Too short. Promotes thatch where insects breed and hide. Short, weak grass attracts insects.	Too dry. Chinch bugs usually appear in sunny sections of lawn, often by sidewalks where it is drier and hotter.	Compacted and dry soil. Over or under fertilized. Dead soil where thatch doesn't break down. Poor PH.	No chinch and web worm resistant grass in lawn. Shallow rooted, thatch forming grasses attract insects. Chinch bugs breed best in fine fescue patches in sunny areas.
	<p>Solution: Use insect resistant seed containing "Endophytes" (A fungus that is toxic to chinch bugs and sod web worms). Water regularly, remove thatch. Improve soil and encourage birds. They can wipe out an insect infestation quickly.</p>			
	Too short. causes shallow roots. Deep rooted grass can tolerate more grubs with less visible damage.	Grubs and sod web worms can do more damage to lawns that have been weakened through lack of water.	Well structured, porous soil encourages deep roots and healthy grass.	Sod web worms enjoy thatchy lawns sun or shade. Grubs feed on roots. Any grass type that will root deeply and thrive in given conditions will be less susceptible to grub damage.
	<p>Solution: Natural soaps or insecticidal soaps can discourage insects. Diatomaceous earth products dehydrate any surface insects. Web worms can be controlled with BT (a bacterial control). Grubs and web worms can be controlled with parasitic nematodes, which are microscopic worm like creatures, Be sure you use an extension service recommended variety. Japanese beetle grubs can be controlled with milky spore powder over the long run in less frigid zones.</p>			
	Mowing too short or too much at once weakens grass. A dull blade tears grass, inviting disease organisms to establish. Letting grass get too high causes it to mat down, encourages disease.	Overly wet lawns are more prone to fungus and root rot. Water early in the day so lawn can dry out before nightfall. Occasionally lack of water will also induce lawn disease.	PH too high or too low. No humus. Soil microbes too low to fight fungus. Compaction, shallow roots. Over fertilizing in early spring, mid summer or late fall. Heavy quick release nitrogen fertilizing late fall before grass growth slows down.	Not using seed with any disease resistance. Planting wrong grass for conditions makes weak, disease prone grass.
	<p>Solution: Use disease-resistant grasses. Improve PH, humus, soil structure and drainage. Don't over fertilize, encourage earthworms, soil bio-life, reduce thatch. Apply compost, top. Don't water at night. Don't let high grass, debris or leaves smother the lawn.</p>			





- A National Cancer Institute study indicated that children are as much as six times more likely to get childhood leukemia when pesticides are used in the home and garden.
- A report from the Journal of the National Cancer Institute suggest that non-Hodgkins lymphoma may be linked to pesticide exposure.
- 95% of the pesticides used on residential lawns are considered probable or possible carcinogens by the EPA.



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Chart by Stuart Franklin, Author of Building A Healthy Lawn: A Safe and Natural Approach. Front cover spot illustration by Penny E. Wyatt

* Every year more and more pesticides are being used by commercial companies and homeowners for lawncare and indoor pest control. The benefits of urban lawn care applications have become increasingly controversial. The U.S. General Accounting Office report on lawn care pesticides addresses the uncertainty regarding the safety of many lawn care pesticides. Despite the recognized hazards of high dose acute exposures, considerably less is known about delayed effects from low dose or cumulative exposures.

* The American Medical Association Council on Scientific Affairs recommends that medical societies collaborate with government and other agencies to develop materials to inform the public, physicians and others about the risk of pesticides. Having done so in the pesticide awareness brochure, this American Cancer Society brochure will provide information to the homeowner and others on effective less-toxic alternative methods to control insects and weeds and maintain a healthy lawn.

For Local Information:

AMERICAN
CANCER
SOCIETY

Pesticide Free Lawn Care

Most lawn experts agree that "a healthy lawn can crowd out many weeds, and resist insects and disease." Weak unhealthy lawns, on the other hand, are constantly being invaded by these pests. Killing off weeds, insects etc. with pesticides is just treating SYMPTOMS of unhealthy lawns. They'll reappear until you correct the CAUSE of the problem. If you want to reduce the need for pesticides you have to learn how to get and keep your lawn healthy.

Mowing:

The grass makes its food (photosynthesis) in the Blade part of the grass plant. Each time you mow, you are cutting off some of the grass plant's food factory. Therefore, it is critical that you learn to mow correctly. If you constantly mow too short, or cut off too much at once the grass won't be able to produce enough food. Roots stay shallow, and you have a weak, unhealthy lawn, attractive to weed, and pest invasion.

The general rule is mow high and mow often so clippings are short. Leave the clippings on the lawn to recycle. Mow often enough so you're not cutting more than 1/3 of the blade at once (its too much of a shock). For example, if you want to keep your lawn at 3", don't let it get much higher than 4" before you mow. Higher grass means deeper roots and healthier grass (and less pesticide need).

Mow regularly with a sharp blade between 2-4" height. Mow shortest when its cold and the grass isn't growing faster (mid/late fall). Mow higher when the grass is growing faster (mid spring /early fall). Leave it high over the summer even if growth

stops. It will help keep itself and the soil from baking.

Watering:

Regular watering helps the lawn stay strong and pest resistant. The grass takes on a wilted, bluish hue when it needs water. Water deeply, so the water gets well into the root zone. Water penetrates SLOWLY unless you have sandy soil. Water for a few hours once or twice a week depending on the weather and the appearance of the lawn. Water early enough in the day so the grass can dry out and not stay wet at night (causes fungus).

The Soil:

The ideal soil has good structure (not too sandy or clay like) and is loaded with nutrients and Humus (made from decayed organic matter). Water, air and roots penetrate deeply. The pH is neutral to slightly acidic. Earthworms and other soil life is abundant, granulating and aerating the soil, digesting thatch and clippings and releasing nutrients to the plants.

Typical lawn soils are depleted of nutrients and need fertilizing to keep the grass aggressive and pest resistant. The best (and easiest way to remember) times to fertilize are the holidays: Memorial Day (mid-spring); Labor Day (early fall), and Thanksgiving (late fall). In the more frigid areas use Halloween for your last fertilizing. The grass should be green but barely growing when this application goes down.

A balanced fertilizer that delivers about 1 lb. nitrogen per 1000 sq. ft. of lawn is recommended.

If you use organic or organic-based fertilizer you will also be helping improve the soil, with less chance of burning the lawn.

Choose The Right Grass Type:

Seed all bare and thin spots before weeds fill in. Modern grasses are much hardier than their predecessors. Some have insect resistance and many have some disease resistance bred into them. There are mixtures designed for sunny, shady, and heavy traffic areas. Typical northern mixes contain Bluegrass, Perennial Ryegrass and Fine Fescue. Beware of too much Annual Rye or any Tall Fescue (unless it says Turf Type Tall Fescue). Planting the wrong grass type or using discount or "quick grow" seed can bring untold misery to the homeowner. Consult a qualified seedsman, or your cooperative Extension service for recommended varieties for your lawn. The right grass type will have the best survival chances and the least need for pesticides.

It must be noted here, and importantly so, that no matter what grass mix you plant, most or all of it can disappear if it can't flourish under given conditions. Usually Fine and Tall Fescues take over when conditions are severe.

The main conditions to avoid are short mowing, compact soil, infertility, too much shade, soggy soil and lack of water. If you have an older lawn, what you see now is a result of how it has been treated in the past.

Written by Stuart Franklin Author of Building A Healthy Lawn: A Safe and Natural Approach Garden Way Publishing