PREPARING A SITE FOR NATURAL LANDSCAPING WITHOUT USING CHEMICALS

BY POLLYANNA LIND AND BECKY RILEY

Groomed lawns and manicured shrub beds have become the landscape standard now dominating America's urban and suburban environments. These highly artificial landscapes are frequently maintained with herbicides, but also with many other polluting, costly, and resource-intensive techniques.

Natural landscapes have a great potential to reduce the use of herbicides, as well as provide many other environmental benefits (see Landscaping Nature's Way, pg. 25). However, it is not uncommon for those promoting natural landscaping to recommend the use of herbicides to kill existing vegetation when preparing to convert a conventional landscape to a more natural one. But for the same reasons that using herbicides is not desirable in the maintenance of our landscapes, their use is also not desirable for site preparation. Fortunately, non-chemical techniques are available that can help us convert our artificial landscapes to more natural ones without polluting our soil, yards and nearby waterways, or exposing our families, pets, and wildlife to harmful herbicide residues.

Planning

Remember, no site preparation technique, including herbicide applications, will completely eliminate unwanted grasses or plants. Your best bet is to take the time to plan a landscape that is well-suited to your site, and to start small and gradually expand your efforts as you learn what works. A well-designed landscape should establish easily, grow vigorously, and outcompete unwanted plants.

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Removing an Existing Lawn

The most effective methods for removing a lawn are stripping, smothering, or solarizing the turf.

Regardless of the method used, if you feel it is necessary, you may want to use an edger or a small spade to make a vertical incision at the edge of the area where you plan to remove lawn. Then, working from inside of the site, remove wedges of turf to form a deep, narrow trench around the perimeter.[1] Such a trench may help keep nearby lawn grasses or other vegetation from encroaching back into the area. However, this step is not needed or worth the effort on every site.

Stripping the turf by hand or with a sod cutter is the fastest method to get rid of a lawn. The soil should be moist but not saturated. Cut the turf into narrow strips with an ax, edger or small spade and then detach the strip by using a hoe to cut through the roots. A gas operated sod cutter work in much the same way. Stripped sod can then be composted. Drawbacks to this process are that good top soil is removed (although it can be used after composting) and the removed sod can take a long time to decompose.[1,2]

Smothering the turf can be done with organic or synthetic mulches. A mulch is any protective substance that covers the soil.[3]

Using organic mulches is the preferred way to smother out existing lawns or vegetation in rainy parts of the Pacific Northwest. A benefit to using organic material is that it eventually decomposes[4] and does not require much clean up before installing the desired landscape. Organic mulches can be attractive,[4,5] improve soil health,[4] and usually take only one winter season to do the job in the Northwest.[5]

Using a newspaper and leaf mulch to kill a school lawn in preparation for a natural landscaping project. A thick layer (6") of whole leaves can kill a lawn without the need for newspapers.

Organic mulches include leaves, newspaper, cardboard, straw, wood chips, and lawn clippings.[4] Thick layers of whole leaves can be especially effective at blocking out light and killing underlying turf and weeds.[7] Mulches such as compost, sawdust, or shredded bark are not a good choice for killing a lawn (nor for other weed control applications). These fine-textured mulches can create ideal growing conditions for weeds.[7]

When using newspaper, make sure that it is five or six pages thick.[5] When laying paper or cardboard mulches, a layer of leaves, straw, woodchips, or grass clippings should be spread over the paper or cardboard to hold it in place, improve its effectiveness, and enhance its appearance.[5] Whether covering paper mulches or using natural debris alone, "thicker the better" is the key; use at least 3 inches.[4]

Use of synthetic mulches can be preferable for killing large areas of lawn where laying newspapers is impractical, or for sites where the type of landscape ecosystem you are trying to create is not naturally high in organic matter. Synthetic mulch usually consists of black plastic (at least 4 mils thick) or a landscape fabric.[2,3] Cover the designated area with the plastic or fabric and then weight it down with rocks or boards and wait for the vegetation to die.[2,4] You can cover the tarped area with leaves, bark, or straw to make it more attractive.[4]

Solarizing makes use of the sun's heat to kill a lawn. The method can work well in areas with a hot dry season lasting several months. It is less effective in cloudy or windy areas. For best results, follow these steps carefully. First, scrape existing vegetation from your area or mow closely (to 1/2 inch). Irrigate the soil thoroughly, and make sure the surface of the soil is smooth. Cover the area with clear plastic approximately 2 mils thick. Make sure that the plastic lies close to the soil and seal the edges of the plastic with soil. Leave the plastic in place for about 6 weeks during the hottest part of the year. Be sure to remove the plastic promptly at the end of this period, as it will readily disintegrate if left in the sun for too long. If the plastic is punctured, repair the holes with tape.[4]

Naturalizing a Lawn

An alternative to removing an existing lawn is to simply let it become more like a natural meadow. Add native (or non-native) wildflowers and mow the lawn less frequently to increase species diversity. Consider turning off the water in some areas and letting the grass grow tall, flower, and set seed. This provides habitat for insects, birds, and other wild creatures, and eliminates polluting and wasteful practices such as mowing, fertilizing, herbicide use, and irrigation that are typically used to maintain "groomed" lawns. Letting grasses grow taller and intermixing them with flowers and other species can also help shade out and draw the eye away from "weeds." Start small and experiment to see how a natural lawn or meadow area can fit into your landscape.

To start wildflowers from seed, mow the lawn as low as possible ("scalp" it!) in early fall or spring. Remove the clippings and thatch, scratch the soil with a rake, and sow seeds over the surface.[6] Note that many wildflowers are annual species that need to germinate from seed every year. Such species will grow well the first year, but may die out in subsequent years as they are unable to compete with vigorous non-native turf grasses.[7]

You can also purchase bulbs or divisions of perennial wildflowers from a nursery, or plant plugs of flowers such as English lawn daisy, veronica, or buttercup that have been taken from another site.[7] Consult local plant experts about which native and non-native species will be able to successfully compete with turf grasses.

Stumps

A landscape alteration can include removal of larger plants like shrubs and trees that are not easily mowed, dug up and moved, or smothered with mulches. Cut the plants down to a stump as close to the ground as possible. Cover stumps with cardboard to block the light and prevent resprouting.[7] If using a stump grinder to eliminate the remains, be sure to use the wood chips to smother the stump and other exposed roots. Or, immediately after cutting down the woody plant, cut grooves with a hatchet or chainsaw in the top of the stump and other exposed roots. Put at least three inches of damp soil over the grooves and then cover completely with black plastic or roofing paper. The grooves will provide a pathway for decay organisms in the soil to make their way into the stump and speed up the natural decay process. Covered stumps can be hidden with organic mulch to keep your site looking tidy and presentable.[8,9]

Stump removal is usually not worth the effort unless a stump is fairly small. Follow the roots away from the stump and cut, then remove the whole stump. A rule of thumb is that roots cut at a depth equal to five times their diameter will not be able to regrow.[10]

Conclusion

Use nonchemical techniques to prepare a site for natural landscaping. Costs are minimized, the site is healthy, and the use of pesticides is simply unnecessary. In addition, you will eliminate the risk of exposing yourself or the environment to harmful chemical residues.

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