



10 Ways to Make Your Landscape **EARTH-KIND®**

Tim Hartmann, Extension Program Specialist, Horticultural Sciences
The Texas A&M University System

EARTH-KIND® focuses on using environmentally friendly management practices to produce landscapes that are beautiful, low-maintenance, and sustainable. The goals of an EARTH-KIND® landscape are to conserve water and energy, reduce pesticide and fertilizer use, and to recycle landscape wastes. Unfortunately, some EARTH-KIND® principles can be difficult to implement in an established landscape especially if the owner does not wish to make drastic changes to the existing design and plantings. The following, however, are ten practices that can easily be implemented to transform an existing landscape into one that is EARTH-KIND® (<http://aggie-horticulture.tamu.edu/earthkind/>).

1. Mulch

Adding and maintaining a three-inch layer of plant-derived mulch, such as native hardwood, will significantly reduce the amount of water required in the landscape. This is especially true when drip irrigation is placed underneath it. Mulch also helps prevent weeds and erosion, modifies the soil temperature, and serves as continuous supply of organic matter for the soil beneath. Mulch can easily be added to an existing landscape and may be available free from municipal or utility sites.

Learn more at: <http://aggie-horticulture.tamu.edu/earthkind/files/2010/10/mulch.pdf>



Native hardwood mulch spread evenly to a thickness of 3 inches, with drip irrigation buried beneath.

2. Low-volume irrigation

Micro and drip irrigation is typically at least 90 percent efficient compared to traditional sprinkler irrigation (50 to 70 percent) because it applies water only where it is needed and slowly enough to minimize runoff and evaporation loss. It also reduces salinity damage and disease on foliage by keeping the water and soil splash off the plants' leaves. A wide variety of products and kits are available, as are many internet resources that offer guidance on installation.

Learn more at: <http://aggie-horticulture.tamu.edu/earthkind/files/2010/10/lowvolume.pdf>



In-line drip tubing releases water slowly, reducing water loss to evaporation and runoff.

3. Irrigation auditing/evaluation

An assessment of your irrigation system's efficiency and effectiveness will help identify problems such as leaks or sprinkler heads that are damaged or misaligned. Measuring sprinkler output and coverage will help you determine if the coverage is uniform and how long you should run your irrigation system. A licensed irrigator can perform a formal system audit, or a homeowner can conduct an informal evaluation.

Learn more at: <http://aggie-horticulture.tamu.edu/earthkind/files/2010/10/audit.pdf>



Tuna can used as a simple device for measuring precipitation rate in an irrigation evaluation.

4. Cycle and soak watering

Programming your irrigation system to split run-times into several shorter cycles can save a substantial amount of water. This method allows more time for water to soak into the soil than if you apply the water all at once. Cycle and soak watering is especially beneficial on compacted or clay soils or landscapes with steep slopes where infiltration is slow. Modern irrigation controllers can be easily programmed for cyclic watering, and some are already equipped to perform this special function. For manual irrigation, move sprinklers around instead of completely watering one area at a time.

Learn more at: http://dallas.tamu.edu/media/75308/cycle_and_soak_irrigation_method.pdf



Irrigation controllers with multiple programs allow waterings to be broken up into several shorter cycles for each zone.

5. Integrated Pest Management (IPM)

This balanced approach to pest control focuses on using cultural, biological, and mechanical control measures. Under IPM, chemical control is used only as a last resort. Strategies include using pest and disease tolerant plants, preserving pest's natural enemies, and excluding or physically removing pests. Chemical treatments are selected carefully and used only when pest populations warrant such measures. In the case of chemical control, select the product that is least toxic, but yet still effective, and avoid using broad-spectrum insecticides that also kill beneficials.

Learn more at: <http://aggie-horticulture.tamu.edu/earthkind/files/2010/10/ipm.pdf> and <http://landscapeipm.tamu.edu/>



Use chemical pesticides only when pest levels are high enough to warrant them. Occasional visitors, such as a lubber grasshopper, are a natural part of the landscape.

6. Composting

You can convert yard waste such as leaves, grass clippings, and pruning waste into compost, rather than paying to have it removed and added to a landfill. A properly managed compost pile can produce a valuable soil amendment in one to three months—and often without disagreeable odors. Compost is derived from once-living material so it contains most of the nutrients that plants need in a slow-release form, it improves soil structure, and it is free.

Learn more at: <http://aggie-horticulture.tamu.edu/earthkind/files/2010/10/compost.pdf> and <http://aggie-horticulture.tamu.edu/earthkind/files/2010/10/compostleaves.pdf>



You can make compost easily from kitchen and yard waste.

7. Fertilizing based on soil tests

Sampling the soil in your lawn or landscape properly and having it analyzed can help the environment and your wallet. A soil test will reveal the specific nutrients that your soil may be lacking and will help you choose an appropriate fertilizer. This will allow you to save money and avoid excess nutrient levels in the soil by applying only the type and amount of nutrient needed. You will also reduce pollution in the form of runoff or groundwater contamination.

Learn more at: <http://soiltesting.tamu.edu/publications/E-534.pdf> and <http://aggie-horticulture.tamu.edu/earthkind/files/2010/10/fertilizers.pdf>



Fertilizing based on soil tests will greatly reduce the cost of fertilizer use to your wallet and the environment.

8. Rainwater harvesting

Collecting and storing rainwater can reduce your water bill. It is also pure, and in areas where tap water is high in salts or chlorine, irrigating with it can allow you to grow sensitive plants such as azalea and camellia where they otherwise could not. Capturing rainwater is easy if gutters are already in place, but if not, they can easily be installed. Capture and storage can be as simple as placing a barrel under a downspout.

Learn more at: <http://aggie-horticulture.tamu.edu/earthkind/files/2010/10/rainwater.pdf> and <http://rainwaterharvesting.tamu.edu/>



A simple rainwater capture system using a trash can placed under a gutter downspout.

9. Preparing planting areas

Preparing the soil properly can drastically reduce the need for fertilizers in both new and existing beds. It can also reduce disease problems and the amount of water required. Incorporating at least 3 inches of finished, plant-derived compost into the soil will improve the nutrient and water holding capacity in sandy soils and improve drainage in clay. Compost supplies nutrients slowly, encourages beneficial soil microorganisms, and allows roots to penetrate deeper for greater water uptake. Raised beds approximately 12 inches high and crowned in the center will greatly improve plant performance where soils drain poorly.

Learn more at: <http://aggie-horticulture.tamu.edu/earthkind/files/2010/10/soilimprovement.pdf> and <http://aggie-horticulture.tamu.edu/earthkind/files/2010/10/raisedbeds.pdf>



Planting beds raised by approximately 1 foot and crowned in the center improves drainage in clay soils and adds interest to the landscape.

10. Turf maintenance

Sound turf management can greatly reduce your lawn's labor, water, and fertilizer requirements. Keeping turf mowed to a reasonably greater height promotes a deeper root system, reduces plant stress, and provides more shade for the soil surface. All these factors reduce the lawn's water needs. Grass clippings generally contain approximately 2 to 3 percent nitrogen. Leaving them on the lawn will significantly reduce the need for nitrogen fertilizers. Mulching grass clippings (rather than bagging them) also returns organic matter to the soil. Research shows that this practice does not contribute to excessive thatch accumulation when the turf is mowed regularly.

Learn more at: <https://aggieturf.tamu.edu/education.html>



Mulching grass clippings recycles nutrients and organic matter back into the soil.

Summary

The EARTH-KIND® Challenge is a great way to assess your landscape's current effect on the environment. The challenge can also serve as a guide to implementing the principles of EARTH-KIND®.

<http://aggie-horticulture.tamu.edu/earthkind/challenge/>

Texas A&M AgriLife Extension Service

AgriLifeExtension.tamu.edu

More Extension publications can be found at *AgriLifeBookstore.org*

Educational programs of the Texas A&M AgriLife Extension Service are open to all people without regard to race, color, sex, religion, national origin, age, disability, genetic information, or veteran status.

The Texas A&M University System, U.S. Department of Agriculture, and the County Commissioners Courts of Texas Cooperating

Produced by Texas A&M AgriLife Communications

New