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A Guide for Louisiana Landscape Professionals

Best Practices for Landscape Bed Preparation

Jeb S. Fields, Ph.D., Assistant Professor and Extension Specialist, Hammond Research Station
Damon E. Abdi, Ph.D., Assistant Professor and Extension Specialist, Hammond Research Station

Proper landscape bed preparation is imperative to the establishment of a healthy landscape, however, there is no single method to follow. Therefore, this guide can help demonstrate some of the key concepts involved in proper landscape preparation. Successful planning and installation will ensure landscapes are sustainable for long durations, have reduced regular maintenance, are environmentally sound and remain both healthy and aesthetically pleasing longer.

Site Assessment and Planning

The first step to a properly prepared landscape bed is site assessment. If an existing bed is being renovated, make sure the borders are well defined. If the bed is new, clearly determine the size and shape first. Identify any existing trees or valued plantings that need to be considered in the preparation since many clients will want their prized trees and shrubs included in the landscape. Assess the proximity to the house. Be sure to leave at least 1 foot of space between landscape beds located near houses or other structures. This space should be filled with a pest and weed barrier such as gravel. This will deter termites and weeds from growing alongside the house. It is best to make sure plant material or wood mulches are kept approximately a foot away from any slabs or piers of a building. Identify window locations and how low the windows are to the ground to prevent blocking the view from inside with plant material. Assess the potential of water runoff from the roof, gutters and other locations uphill of the site and ensure the landscape bed will not flood during rainstorms. Also, identify any established fixtures that need to be considered such as sidewalks, power lines or light fixtures. Develop a clear plan involving all of the information gathered in this step before continuing. Most importantly, it is required by law to have underground utilities marked before digging on the property. Louisiana 811 is a free service where an individual will mark your utility lines, allowing you to avoid a costly and potentially dangerous situation. Call 811 or visit www.louisiana811.com to submit a request.

Site Preparation and Establishment

Mark off the landscape bed with either flags or turf paint. To calculate the area of a bed, use one or more geometric equations. For a rectangle, this would be length times width, but for more irregularly shaped beds you may use a combination of various shapes to get an assessment of the area. To calculate the soil volume, measure the square feet and multiply that by the desired depth. For example, a rectangular bed that is 5 feet wide, 10 feet long and 6 inches deep would have its soil volume calculated as 10 x 5 x 0.5 = 25 cubic feet. The area within the bed should be cleared of all plant material not involved in the final plan and any additional debris. Existing grass should be removed, and this can be done in one of several ways. Common methods include application of a non-selective herbicide, covering the area with black landscape fabric until the grass completely dies, or manually removing it using hand tools. After everything is removed, apply bed mix to the area and spread. This is a great time for a soil test. Build landscape beds up 4 to 8 inches to ensure adequate drainage and a sufficient rooting environment. If the soil is compacted below, you may till 2 inches of bed mix into the soil and then add the remaining 2 to 6 inches on top. Otherwise, the entire 4 to 8 inches of bed mix can be applied to the top of the soil and raked smooth. Grade the soil/bed mix slightly away from the bed and any house or sidewalk to encourage water to flow to desired locations.

Plant Selection and Installation

When selecting plants, it is important to remember the maturation of the landscape. Bedding plants will likely not overgrow their area in the season they are installed if planted properly. However, trees and woody shrubs will continue growing over time. Proper planning is achieved by considering the mature size and shape of the plant, as opposed to the size at the time of planting. Remember the old adage "right plant, right place" when laying out the design. Plants that are grown in proper

conditions generally have lower pest pressure and require less maintenance. Do not place bedding plants too close to walkways or houses. Ensure that plants placed near each other have similar water and fertility requirements. Placing bedding plants with a heavy water requirement next to shrubs that need drier rooting areas will result in reduced health from one or more of the plantings. Moreover, some plant species require acidic soil and will not thrive in neutral or alkaline soils, while others require the complete opposite. Be aware of the sun/shade requirement of plant selections, and remember that the degree of shade may change as trees mature and structures are built. Make sure to check the hardiness zone of long-term plantings. Some perennials in south Louisiana may not be perennial in north Louisiana. Finally, be sure to recognize what the client desires from the planting and what you need to do to meet those goals.

Irrigation, Fertilization, and Mulching

Identify the irrigation requirements of the plants, and ensure that the irrigation design fits those needs. Overhead sprinklers can cover a large area if everything in that area has similar water requirements. Micro-irrigation methods such as sprayers and drippers are generally more efficient with water but can be more expensive and require more routine maintenance. However, if different irrigation requirements exist in a relatively small area, micro-irrigation can be the most effective choice. Ensure that the irrigation system has uniform coverage and there is sufficient drainage. Establish irrigation so that none is applied outside the desired area since roads, driveways and buildings do not need water. Make sure plants will not block irrigation sprayers as they grow. Test the system early for leaks, as it will be more difficult to identify and repair as the landscape matures.

Determine the fertility requirement of the landscape and apply only what is needed. Make sure to apply at appropriate times in the year. For example, fertilizing in late fall or winter will encourage new tender growth that is susceptible to freeze damage. Over fertilizing can stress plants, as well. In fact, too much fertilizer is worse than not enough. If using a controlled-release fertilizer, check the fertilizer longevity on the bag. Remember, longevities are recommended for mild temperatures, and with Louisiana's hotter, more humid temperatures, fertilizer will be expended more quickly.

Apply 2 to 4 inches of mulch to the surface of the landscape bed. Mulching reduces water and fertilizer loss by creating a buffer layer on the bed surface. Mulching can also lower pest pressure and will inhibit weed germination throughout the season. Proper mulching will encourage a healthy soil and continue to add organic matter to the landscape as it breaks down over time. Mulching also greatly improves the aesthetics of the landscape. Pine needles and bark nuggets make great mulch. Pine needles will break down relatively quick and typically need to be replenished yearly; however, they will stay in place during heavy rains. While bark nuggets typically last longer, they do tend to float away during heavy rains. Some mulches are prone to degrading faster than others, particularly in hot, humid climates; therefore, replacement time is highly variable. Using black plastic beneath the mulch further helps with weed control.

For more information on landscape bed preparation, please contact your local LSU AgCenter Extension office or visit www.LSUAgCenter.com

Matt Lee, Interim LSU Vice President for Agriculture
Louisiana State University Agricultural Center
Louisiana Agricultural Experiment Station
Louisiana Cooperative Extension Service
LSU College of Agriculture

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