



SOUND  
NATIVE  
PLANTS

## Fascine installation

Fascines are long, cylindrical bundles of brush material (branches with twigs and growing tips still attached) that are tied with twine and are usually 4-8 inches thick and 6-12 feet long. Fascines can be comprised of a single species or a combination of species, usually willow (*Salix* spp.), red-osier dogwood (*Cornus sericea*) and/or cottonwood (*Populus balsamifera*) (for recommendations and species characteristics see our Live stakes and cuttings information sheet, [www.soundnativeplants.com/PDF/Live%20stakes.pdf](http://www.soundnativeplants.com/PDF/Live%20stakes.pdf)).

Fascines are bioengineering measures used to stabilize slopes. Fascines reduce runoff velocity by shortening, or breaking up, the slope face. Fascines strengthen slopes and absorb moisture by rooting deeply into the slope. They reduce soil erosion by trapping soil particles that would otherwise wash down the slope. Fascines can also successfully stabilize the toe of slopes. This technique is often used on lakeshores, shorelines and other sites that experience low to medium erosion due to wave action. Fascines can be installed easily with manual labor, which causes less site disturbance than machinery. Soil moisture should dictate species selection, and fascines do best in at least part-sun.

To install fascines, dig a shallow trench that follows the contour at the toe of the slope. The trench should be deep enough to bury  $\frac{3}{4}$  of the fascine below the soil surface. When digging the trench, place soil on the upslope. Any soil that is not replaced into the trench during installation will end up there through the course of gravity and surface runoff. If more than a single fascine is needed to run the length of the trench, overlap the fascines enough to eliminate gaps. Use stakes to anchor the fascines at intervals of 3-4 feet. Use standard, untreated wooden stakes or live stakes, 2-3 feet in length, and pound the stakes into the soil immediately down slope and angled slightly away from the fascine. For extra stability, pound tapered wood stakes through the middle of the fascine at a 45° angle to the slope, staggered between the down slope stakes. Finally, shovel the soil back over the top of the fascine and into the trench, and stomp it down well to work the soil through the fascine. Following backfilling, only the very top (10-15%) of the fascine should be visible.

Dig additional trenches up slope of the initial line of fascines. Distance between trenches depends upon the slope of the site and the soil type. If the soil is loose and very prone to erosion, try 3-5 feet between rows. In other situations, 5-7 feet between rows may be sufficient. A good rule of thumb is to stand on the first row and dig the next trench as far up the slope as you can comfortably reach.

Upon breaking dormancy, the stems will send out new roots and shoots. A portion of a fascine may not root but nonetheless will provide a barrier that physically attenuates erosive forces and traps sediment moving down slope. Fascines will have higher success if installed between October 15<sup>th</sup> and March 15<sup>th</sup>, the earlier the better within this window.



This work is licensed under the Creative Commons Attribution-NonCommercial-No Derivative Works 3.0 Unported License. To view a copy of this license, visit <http://creativecommons.org/licenses/by-nc-nd/3.0/>. 2006.