

Soil Preparation

Objective: to explain and demonstrate the reasons for, and correct methods of, soil preparation.

Training Materials: triple mix, peat moss, compost, composted manure, shovel, rake, rototiller, operator's manual.

Personal Protective Equipment: Work boots, gloves, hard hat, hearing protection, eye protection.

Lesson: *No matter what or where you're planting, the soil is a critical element on any landscape site. The healthiest plants will suffer if the soil in which they are growing is lacking in some form. Soils can be improved with the addition of amendments before plants are installed.*

Soil is made up of various amounts of sand, silt and clay, but should include space for water and air. If the spaces for holding moisture and oxygen are too little or large, the roots won't have adequate access to the vital nutrients essential for growth.

The planting plan of a landscape design will usually specify what soil amendments are required for the site. This can include combinations of triple mix (topsoil, peat moss and composted manure), sand, compost, peatmoss, and fertilizer as determined by a soil test. Using sterilized topsoil and manure will ensure no new weed seeds and pathogens are introduced to the landscape.

Remove any stones, twigs and other large debris before spreading the new amendments on the soil surface. It is not necessary to remove large quantities of the existing soil before planting, as mixing the old soil and new amendments together creates a more natural environment that will encourage roots to eventually grow out into the surrounding soil.

The new amendments should be dug in or rototilled as deeply and thoroughly as possible. When finished the bed level may look high, but the soil will settle when it is watered. The beds should be raked smooth and level and again any rocks and debris removed before planting.

- *Both clay and sandy soils can be improved by the addition of organic matter (compost, peatmoss, manure). Organic matter will improve the water holding capacity of sand and help break up compacted clumps in clay soil.*

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