

PRACTICAL INSTRUCTIONS FOR AMENDING URBAN SOILS

Avoid scheduling compost amending on days when significant rainfall is possible, as this can cause washout or erosion where concentrated runoff occurs.

PREPARING THE AREA TO BE AMENDED

1. Soil amending should not occur until all on-site construction traffic has ended. All building construction, including outdoor pavement, and installation of major utilities should be completed. Installation of irrigation lines and components should occur after amending is complete to avoid risk of damaging irrigation lines during tilling.
2. The soil surface should be graded smooth and free of any foreign debris, trash, or rocks larger than 2 inches.
3. It is recommended that irrigation components, irrigation installation equipment, and sod be staged on-site in preparation to install irrigation system and lay sod as soon as possible after amending the soil.

TURF AREAS

Apply Soil Amendment to Areas to be Sodded:

1. Using a small front-end loader or spreader, compost should be spread evenly over the surface (Figure 1) at a rate of 4 yd³ / 1,000 ft², which is a depth of 1.3 inches.
2. Even out any shallow or deep compost areas to ensure even incorporation (Figure 2).
3. Spot check the material depth with a ruler to check that the material is 1 to 2 inches. No areas of bare soil should be visible.
4. Visually assess that compost has an even color and texture across the amending area.
5. When using mature compost, it is not necessary to add fertilizer as nutrients in compost are most available after initial incorporation.



Figure 1. Spread compost with front-end loader. Credit: UF/PREC.

Incorporate Soil Amendment

1. Using a rotary tiller, incorporate amendment to a depth of 6 inches into the soil (Figure 2).
2. The bottom of the tiller should be 6-8 inches below the top of the compost layer.
3. Avoid tilling deeper or using such techniques as deep chiseling since this risks damage to utilities (e.g. water lines, electricity, natural gas, etc.).
4. Any vehicle tracks made during tilling should be re-tilled and eliminated.

After Amendment Incorporation

1. Once the area is amended, check for uniform incorporation, looking for exceptionally light or dark areas (Figure 3).
2. Use a shovel to expose the side of the amended soil profile in multiple locations to check the incorporation depth. The predominant incorporation depth should be 6 inches below the amended surface, with no areas having less than a 4-inch incorporation depth.
3. Check for high, low, or uneven areas of the amended surface to ensure proper incorporation.
4. No vehicle traffic shall be permitted once incorporation is complete as this can recompact the amended soil.
5. Install irrigation lines and components.
6. Rake or screed the amended surface until level to ensure sod lays level (Figure 3).
7. Install sod as soon as possible after amending to avoid erosion or washout from unexpected rain events.
8. Avoid excess foot traffic as this can recompact soils.



Figure 2. Hand repair any unevenly applied areas and incorporate compost using a rototiller. Credit: UF/PREC.



Figure 3. Check for a general 6-inch incorporation depth, 4-inch minimum in small areas and level the amended surface after compost incorporation. Credit: UF/PREC.

LANDSCAPE BEDS AND TREES

For plants installed within planting beds, planting holes should be individually amended with compost. Add 1-2 inches of compost to the bottom of the hole and work compost into the bottom and sides of the planting hole.

EVALUATE INCORPORATION

As compost quality can vary between batches, it is a good practice for establishing quality assurance to collect and analyze amended soil samples. This provides comparable data to soils prior to amending and can help inform the direct effects of compost amending. Common tests include pH, salinity, organic matter, and nutrient content.

REPAIR DAMAGED AREAS

For washout, the eroded areas should be regraded to the pre-erosion elevation with amended soil blended at the same ratio as the amended soil in the landscape. For small areas, they may be done using hand tools (e.g. shovels, rakes). For larger areas, larger equipment may be necessary to regrade the lot. In either case, avoid compacting amended soil to the maximum extent possible. If amended soils are compacted such that the soil surface is > 3 inches below the adjacent soil, then these areas should be re-tilled to restore the soil porosity and structure.

Caution should be used to avoid impacting irrigation lines or other utilities that may be below the soil surface. These areas should be raked or screed smooth before installing sod over top.



Take care not to damage any underground irrigation or utility service lines.

Do not till deeper than 6 inches.