

Recycling Home Construction Waste Benefits Turfgrass Establishment

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A case study examined the potential to utilize home construction waste materials as soil amendments for turfgrass establishment. In 2007, during construction of a 1500 sq. ft. addition to my home, I collected all waste materials and made an effort to find beneficial uses. With the exception of old asphalt roofing and scrap pressure-treated lumber, a recycling outlet or beneficial use was found for nearly every waste material.

The collected non-recyclable material filled about one-half of a dumpster and was sent to a landfill. The contractor had originally estimated that the accumulated construction waste would require three dumpsters. In the final analyses, a volume of two dumpsters of material was recycled. For the savings associated with this effort the contractor agreed to deduct \$1000 from the final construction project invoice. This was a welcome compensation for the laborious recycling effort.

Waste materials that were diverted from the dumpster by hauling them to a recycling center included bottles, cans, scrap metal (such as used saw blades, nails, etc), and cardboard. Compostables (such as food waste, paper napkins, and sawdust from untreated lumber) were collected and composted. Fiberglass insulation scraps were collected and saved for augmenting the layer of insulation in the home attic. Gypsum board accounted for about one-third of the total amount of waste. This material (mostly calcium sulfate and paper) was applied to land area intended for lawn establishment. Once this material became moist after a rain, it was tilled into the soil. Soil compaction, an often serious and persistent problem following construction, was alleviated with use of the contractor's backhoe by digging down one bucket depth and lifting and loosening the soil.

Homemade compost, supplemented with imported mushroom compost, was spread in a one-inch layer over the intended lawn area and mixed with the surface, six inches of soil with tillage. No NPK fertilizer was necessary. Limestone was applied, as needed, based on soil tests. The lawn was seeded to Kentucky bluegrass in the fall of 2008. For my efforts, tons of waste was diverted to beneficial use, and a beautiful, dense green lawn was established.



Gypsum Board Waste



Breaking Up Soil Compaction



Tilling Gypsum Board into Soil



Established Bluegrass Lawn,
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