

## Urban Uses for Dairy Manure Compost

### Background

Construction of new homes and businesses is a continuous process in rapidly growing urban areas such as the Dallas- Fort Worth metropolis. Post-construction landscaping usually considers only plant-selection, and little attention or effort is devoted to severely disturbed soil. Subsoil and construction debris are often mixed with or completely replace the original top soil, thus creating a severely disturbed soil. Although ornamental plants and turf grasses planted in disturbed soils may perform well in the short term, they usually decline with time and with heat and drought stress. Dairy manure compost (DMC) is readily available for amending disturbed soils, especially in areas near large dairy operations. These dairies often need alternative ways for disposing of their manure to avoid soils elevated in phosphorus. Consequently, dairy farmers and state regulatory agencies are developing mechanisms for using composted dairy manure to remedy disturbed soils in urban areas.

### Objective and Approach

The objective of this study is to evaluate the effect of large single applications of DMC on the establishment and subsequent growth of typical urban landscape plants and to evaluate the effects on soil nutrient levels, especially phosphorus and water infiltration.

### Program Benefits

- Amending landscape soils with abundant amounts of composted dairy manure prior to planting and establishing ornamental and turf plants reduces the need for consumer's to apply large amounts of fertilizer and water.
- Annual, perennial and woody ornamental plants routinely respond favorably to dairy manure compost applications.
- Plants established in landscapes developed with abundant composted dairy manure recover more quickly after harsh winters and survive better.
- Increased organic matter and residues in soil routinely improve irrigation efficiency by increasing water infiltration rates and subsoil moisture content.
- Converting dairy manure to compost creates a value-added product for dairy ranchers and increases the profitability of their dairy operations.
- Removing dairy manure from agricultural watersheds improves the quality of surface waters in those watersheds.

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