August 2005

Range Revegetation Pilot Project for Fort Hood, TX

2K4

Federal Initiative Accomplishments

Purpose:

To evaluate the potential and develop scientifically based standard operating procedures for the use of composted dairy manure as a soil amendment and best management practice for the restoration of drastically disturbed primary maneuver lands at Fort Hood, Texas.

Accomplishments/Impacts:

- One year after treatment, evaluated impacts of composted dairy manure as a soil amendment to increase soil fertility. Analysis indicates a significant initial increase of soil nitrogen concentration after application of composted dairy manure. This increase is important for the establishment and vigor of seedlings applied to sites. Soil phosphorus concentrations demonstrated little impact from application of materials.
- Analyzed data from storm water runoff samples and compared to eight years of instream storm water. Data collected from treatment plots are within the natural range of variation in comparison to water quality samples collected from surrounding water courses.
- Initial analysis of demonstration plots (two-year data set) and treatment research plots (one-year data set) indicate positive response by current vegetation and seeded species to the addition of composted dairy manure. Significant decrease in bareground and increase in vegetative cover are being observed. Currently collecting third-year data from demonstration plots, second-year data from first-year research plots, and six-month post-treatment data on second-year research plots.
- Monitored costs associated with composting practice and will analyze findings at the end of 2005 to provide initial economic analysis of practice compared with other soil-conservation best management practices currently applied in military training systems.
- Leveraged additional $150,000 in funding from Texas Commission on Environmental Quality to treat drastically disturbed roadside sites.

Lead Agency:

Texas Agricultural Experiment Station

Partners:

Texas Water Resources Institute; U.S. Department of Agriculture-Natural Resources Conservation Service; U.S. Department of Defense, Fort Hood, Texas; Texas Cooperative Extension

NRCS
Natural Resources Conservation Service

Texas Agricultural Experiment Station
THE TEXAS A&M UNIVERSITY SYSTEM