Using Composted Dairy Waste to Improve Eroded Soils and Restore Vegetation in Impacted Training Areas at Fort Hood, Texas

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Acknowledgments: Jerry Paruzinski (ITAM) Don Jones (ITAM), Chris Miller (ITAM), Dennis Herbert (DPW) & James Alderson (NRCS)
FORT HOOD’S NEW WEAPON TO COMBAT SOIL EROSION

REVEGETATION OF TRAINING MANEUVER AREAS THROUGH THE USE OF COMPOSTED DAIRY MANURE
LOCATION

- Northeastern edge of the Texas Hill Country (Edwards Plateau)
- Characterized by rolling hills, shallow soils, woodlands, prairies and rocky streams.
ECOSYSTEM INDICATORS OF IMPACT

Delta formation on Cowhouse Creek, 1995

Delta formation on Cowhouse Creek, 1999
EROSION & IMPACTS ON TRAINING
ACTIONS

Project Managers
Dr. William Fox
Dr. Dennis Hoffman
COMPOST

• One word = many meanings

• A product of the controlled microbial decomposition of almost any organic material
  – Stabilized
  – Reduced volume
  – Environmentally safe (no pathogens, weed seeds)
  – Odor free
Compost Benefits Soils

- Adds nutrients
- Increases organic matter
- Improves CEC (nutrient cycling, retention, etc.)
- Improves structure
- Increases water holding capacity
- Stabilizes pH
- Assists in establishing and maintaining vegetation
- Aids in erosion control
- Reduces potential for runoff
Due to terrain, application of compost is a challenge. TAES researchers have designed and are developing a compost spreader specifically for the challenges posed by the Fort Hood terrain.
Treated areas are visibly greener and vegetative cover has increased. Further, these areas have a higher population of desirable vegetation necessary in combating soil erosion.
MAY 2003

Demonstration site post land preparation activities

MAY 2004

Demonstration site 1-year after compost application
FUNDING

- Funding for Rangeland Restoration Pilot Project provided through federal earmark and administered by:

THANK YOU!