

**Marketing Compost Manure to Public Entities
Texas Cooperative Extension
FY 01 319(h) Nonpoint Source Grant
TCEQ Contract No. 582-2-44407**

Quarter no. 4 From 03/16/03 Through 06/15/03.

I. Introduction/Abstract

Project efforts during the fourth quarter focused upon administrative tasks to complete required TCEQ documents for establishment of project activities within the project region while continuing to publicize the project and its efforts to both participants (compost facilities, TCE and TAES specialists, SWCDs, etc) and to recipients (public entities, private growers, etc.). What appeared to be at one time an interminable process, the Applied Research Study QAPP Final Draft was submitted during this quarter to TCEQ. TCEQ is making final revisions and TCE expects EPAs approval during the next quarter. The Dairy Compost Use and Production Survey Assessment Report was submitted and approved. Although the CEMP was not officially approved, TCEQ gave us authorization to initiate marketing and outreach efforts. Some of these activities included the development of a project brochure, a production and marketing training workshop for the compost facilities, a booth at the Texas Public Works Association Annual Meeting and Exhibitor Show, and establishment of the Upper Leon Soil and Water Conservation District Rebate Program, which will allow local end users to participate in the Composted Manure Incentive Payment.

In looking forward to the next quarter, RAA will continue to coordinate marketing efforts by participating in workshops and attending tradeshow with TxDot/TCEQ personnel. TCE and RAA will finalize the Compost Education and Marketing Plan (CEMP), the Applied Research Study QAPP and will have submitted the Compost Quality Assessment QAPP for final approval. Furthermore, following the approval of the Applied Research Study QAPP, research studies will be installed and developed as described in the QAPP and the RDDP.

II. Overall Progress and Results by Specific Work Task within each Phase

PHASE 1

Task 1.1 Texas Water Resources Institute (TWRI) will serve as the prime contractor for the project and provide overall administration required fulfilling the "Technical Contractor" responsibilities under the Texas Commission on Environmental Quality (TCEQ) Composted Manure Incentive Project scope of work. Responsibilities include planning and facilitating meetings; negotiating subcontracts; submitting reimbursement documents and appropriate documentation of project progress; handling budget and fiscal reviews; adherence to Texas State Soil and Water Conservation Board (TSSWCB)

and TCEQ nonpoint source management program; and ensure all activities, deliverables and tasks follow TCEQ contract provisions.

The following actions have been completed during this reporting period:

- a. TWRI and TCE participated in a joint meeting with all Program (DMESP and CMIP) participants including representatives from TCEQ, TSSWCB, DMES, TIAER and TxDot. The purpose of the meeting was to discuss tasks for each aspect of the Program and coordinate efforts between agencies. Tasks discussed that relate directly to the project include: developing a photo gallery on the project website, distribution of all project related literature to coordination group for review, and potentially developing EQIP incentive funds for utilization of compost.
- b. TWRI continued to participate in the restoration projects at Fort Hood and within the Leon River basin. Both projects were developed under separate funding sources and will utilize dairy manure compost from the watershed. In the Fort Hood Project, research plots have already been installed. Mida Bio of Hewitt, TX delivered and applied the dairy manure compost, which was purchased at Producers Compost out of Stephenville, TX. In the Leon River Project, dairy manure compost will be utilized as a late fall application prior to seeding. Future dairy compost purchases and applications in both projects will be noted in subsequent QPRs.
- c. TCE and TWRI conducted a teleconference with specialists in College Station, Dallas and Stephenville involved in applied research studies to review QAPP requirements and discuss future project tasks. An outline of needed fact sheets and/or publications and training sessions was developed. Specific tasks were assigned to participating specialists and a deadline was established for each publication. Drafts will be submitted to TCEQ for review prior to final publication.
- d. The project brochure was distributed to all Program participants for review. Following revisions, TWRI submitted the brochure for printing. The brochure is now available for all program participants to utilize in their individual project efforts. TWRI will contact each agency involved and the participating compost facilities and distribute brochures on an as needed basis during the next quarter.

Task 2.1 Assess the potential market, the compost product quality, existing educational and promotional materials available for a composted manure marketing project, and research and demonstration needs.

The following actions have been completed during this reporting period:

- a. TCEQ reviewed the “Dairy Compost Use and Production Survey Results” Report and provided comments to TCE. TCE corrected the report as requested and resubmitted the document to TCEQ for approval. TCEQ approved the “Dairy Compost Use and Production Survey Results” Report on May 22, 2003.
- b. Urban and rural dairy compost use by private citizens will be assessed in the

future through an informal survey conducted by the County Extension Agents within the watershed.

Task 2.2 Develop a strategic Compost Education and Marketing Plan (CEMP). The CEMP will include a Research/Demonstration Design Plan (RDDP) to address the research and demonstration needs and a Quality Assurance Project Plan (QAPP) to address environmental data collection.

- The following actions have been completed during this reporting period:
- a. TCE submitted the RDDP during the last quarter and is waiting on approval from TCEQ.
 - b. TCE met with TCEQ quality assurance (QA) personnel to discuss the Applied Research Study QAPP and the Compost Quality Assessment QAPP. As a result, TCE established specific guidelines and developed formatting issues for the two QAPPs: Applied Research QAPP and Compost Quality Assessment QAPP. It was also suggested and discussed at this meeting to develop a Compost Use Assessment Plan rather than a third QAPP for the evaluation of the compost application sites.
 - c. The first QAPP, the Applied Research Study QAPP, went through several revisions and reviews during this quarter. TCEQ QA and TCE Soil, Water and Forage Testing Laboratory personnel discussed testing parameters and laboratory QA issues. The final draft of the Applied Research QAPP will be submitted during the next quarter for EPA approval.
 - d. The second QAPP, the Compost Quality Assessment QAPP, is in progress. Currently, TCE is reviewing comments from the Gulf Coast Waste Disposal Authority (GCWDA) Laboratory in Houston regarding QAPP requirements. GCWDA expressed concern with some of the quality assurance/quality control requirements as they do not have bias or precision limits established for compost analysis due to a lack of sufficient compost samples analyzed within their laboratory. TCE approached TCEQ with this issue and are revising the QAPP accordingly to more appropriately fit GCWDA and a draft will be submitted to TCEQ within the next quarter.
 - e. In a teleconference, TCE and RAA discussed the CEMP outline submitted to TCEQ during the previous quarter. Revisions and a plan of work were established and a draft CEMP was developed.
 - f. The CEMP was submitted to TCEQ for review. TCE is waiting for comments from TCEQ and will complete the approval process for the CEMP during the next quarter.
 - g. The Compost Use Assessment Plan will outline the steps TCE will take to ensure that applications and use techniques by public entities are made in an environmentally sound fashion. Furthermore, with this plan, TCE will assess the satisfaction of selected public entities, which use dairy compost. Plant and land management results will also be assessed at selected application sites under this plan.

Task 2.3 Implement the strategic CEMP. The CEMP will provide educational outreach, technical assistance, and documented materials for compost producers and users. It will also provide for the direct marketing of composted manure. The CEMP will target both public entities and private citizens throughout the region.

The following actions have been completed during this reporting period:

- a. Following compost facility visits during the last quarter, RAA developed evaluation reports for each individual composter. RAA communicated these reports to each composter electronically and gave each facility an opportunity to present concerns or questions verbally.
- b. Current compost product has high sand content and low organic matter. Therefore, TWRI, TCE with the Erath County Extension Agent (Joe Pope), and RAA visited dairy facilities within the watershed to evaluate manure collection practices within the watershed. Todd Williams, an associate of RAA, visited Gustine Compost and dairy facilities in contract with Gustine. Both groups determined in site evaluations that the source of sand contamination was from the dairy manure collection procedures, whether the manure is collected by mechanical scraping or through vacuuming.
- c. The following was reported by RAA as direct assistance provided to compost facilities:
 - d. TCE and RAA conducted a compost production and marketing training session for the composters within the watershed. All compost facilities except for O'Neals Compost participated in the training. Specific issues addressed in the training included the low organic matter content and sand contamination issues.
 - e. RAA and Todd Williams provided assistance to Gustine Compost (during May visit) and to Texas Best Compost (via telephone) in facility operation and production.
 - f. As requested, RAA and TCE visited Texas Best and Erath Earth following the training to provide further assistance in production and marketing aspects. RAA provided Erath Earth with technical and marketing tools by reviewing company's marketing plan.
 - g. RAA evaluated product analysis and discussed potential methods to improve product quality with Gustine Compost and Wolf Tree Farm.
 - h. RAA assisted Gustine Compost and Wolf Tree Farm in obtaining and bidding a TxDOT project.
- i. TCE participated in the Texas Public Works Association (TPWA) annual meeting in San Antonio as an exhibitor. Project literature and TCEQ Composted Manure Incentive Payment information was made available to TPWA participants.
- j. TCE met with representatives from the Upper Leon Soil and Water Conservation District and the Cross Timbers Soil and Water Conservation District to further discuss Upper Leon Soil and Water Conservation District (ULSWCD) Rebate Program. The ULSWCD rebate program will be finalized in the next quarter.

Task 2.4 Develop a project web site comprised of technical information for project cooperators, demonstration locations and research data, sources of available compost, educational literature from TCE, and facts about TCEQ rebate program and the TCEQ and TSSWCB nonpoint source management program.

The following actions have been completed during this reporting period:

- a. Links were revised to more appropriately reflect the information on TCEQs website regarding their additional efforts in producing and marketing dairy compost.
- b. TxDot, TCEQ and RAA submitted to TCE electronic photos of composting efforts throughout the watershed. This collection of photos will be added as a photo gallery on the project website. A short description of the photos contents and the responsible agency will be included with each photo. The photo gallery will be a continued work in progress yet should become accessible within the next quarter.

Task 3.1 Provide TCEQ with assistance for quality assurance activities. Compost production sites will be evaluated to ensure sound production practices and at least 20 random site visits will be conducted to monitor uses of compost to ensure applications, BMPs and rates are made in an environmentally appropriate manner.

The following actions have been completed during this reporting period:

- a. TCE will develop a compost use site assessment tool for the evaluation of the 20 random site visits. The assessment tool will correlate with the compost use assessment plan.
- b. No compost use sights have been evaluated to date.

PHASE II

Task 1.1 TWRI will continue to provide overall administration required to fulfill the "Technical Contractor" responsibilities under the TCEQ Composted Manure Incentive Project scope of work in FY 2004. In addition to the responsibilities detailed in the Phase I scope of work, TWRI will negotiate a subcontract with a Compost Marketing Firm to assist with marketing and educational tasks.

The following actions have been completed during this reporting period:

- a. No progress to report at this time as Phase II administrative tasks begin in September, 2003.

Task 2.3 Implement the strategic CEMP. The CEMP will provide educational outreach, technical assistance, and documented materials for compost producers and users. It will also provide for the direct marketing of composted manure. The CEMP will target both public entities and private citizens throughout the region.

- a. A Compost Sampling Guideline draft publication was developed for the participating compost facilities. The guideline outlines TMECC method

- 2.01B for compost sample collection and analysis and will be completed and distributed in the next quarter.
- b. RAA approached regional Texas Chapter of American Society of Landscape Architects by providing a product end use/product marketing article for the upcoming newsletter.
 - c. A Turf/Ornamental Field Day is scheduled for September 17, 2003 at the Dallas Research and Experiment Station. Selected research studies utilizing dairy compost will be included in the field day.
 - d. An organics training program for County Extension Agents was scheduled for September 23-24 in Stephenville. All four district extension directors have been notified and committed involvement from CEAs within their district.

Task 2.4 TWRI will maintain project web site by incorporating new information from the project's success in year 2. Information added to the web site will include, but is not limited to the following: results of compost use in field trials and demonstration programs from year 2 of the RDDP; success stories of compost use as a result of the project; and recent technical information obtained from project activities in year 2.

The following actions have been completed during this reporting period:

- b. No progress to report at this time.

Task 3.1 Continue to provide TCEQ assistance with quality assurance activities by conducting at least 20 random site visits to monitor the beneficial uses of compost by participating state and local government entities and assess the agencies= and users= implementation of suggested BMPs.

The following actions have been completed during this reporting period:

- c. The 20 sites have not been identified yet so no progress to report at this time.

Task 3.2 Where existing guidance literature is lacking, reports of current and past field trials and result demonstration activities will be documented and published. All effective compost production and use aspects will be documented in draft case studies, cost analysis and effectiveness assessment reports.

The following actions have been completed during this reporting period:

- d. No progress to report at this time.

Task 3.3 Develop and submit annual and final joint reports of 'success stories' including assessment and feasibility of program strategies so that similar programs could develop from the provided outline.

The following actions have been completed during this reporting period:

- a. No progress to report at this time.

III. Related Issues/Current Problems and Favorable or Unusual Developments

Requirements of various project related documents has inhibited development of some project activities. Requirements were clarified at discussion meeting between TCE and TCEQ and are either already fulfilled or will be fulfilled shortly. Completion and approval of these documents will allow more productive activities to occur and project goals will be met.

IV. Conclusion/Projected Work for Next Quarter

The following will be accomplished during the coming quarter:

- a. The RDDP and the Applied Research QAPP will be approved by TCEQ and applied research studies and demonstration plots will be implement accordingly.
- b. The CEMP will be revised per TCEQs comments and resubmitted for approval.
- c. The Compost Quality Assessment QAPP will be submitted to TCEQ and following approval, compost quality will be evaluated at each production facility.
- d. Additional fact sheets will be developed and submitted to TCEQ for review. An outline of needed fact sheets and/or publications will be developed by
- e. The photo gallery and more project materials/documents will be added to the project Website during the next quarter.
- f. The process between the Cross Timbers and the Upper Leon SWCD and the compost facilities will be finalized to allow for complete utilization of incentive programs in the fall.
- g. CEA organics training and a Turf/Ornamental Field Day will be held in September.
- h. RAA and Scott McCoy of TCEQ will attend the Texas Nursery and Landscape Association (TNLA) Show in Dallas to promote and educate participants on the use of dairy compost.
- i. RAA would like to develop a more intensive marketing training for the compost facilities in mid to late December.