I. Abstract
Work this quarter consisted of preparing the application sites where berms were repaired on the plots and the land was leveled for the establishment of vegetative cover. Runoff samples were collected during the quarter to ensure that all samplers properly worked. Samples were discarded because the sampling period does not start until August 1, 2010. POSC conducted two meetings with Pilgrims Pride growers and managers to discuss the windrowing process. The QAPP has been completed and currently the signature pages are being routed to appropriate personnel. Lastly, since the project website has gone online, 48 unique visitors have visited. Work next quarter will consist of a project update meeting as well as the submission of the next QPR.

II. Overall Progress and Results by Task

TASK 1: Project Administration

Subtask 1.1: TWRI will prepare electronic quarterly progress reports (QPRs) for submission to the TSSWCB. QPRs shall document all activities performed within a quarter and shall be submitted by the 15th of January, April, July and October. QPRs shall be distributed to all project partners.

The following actions have been completed during this reporting period:

a. TWRI submitted Year 1, Quarter 3 Progress Report on July 14, 2010.

24% Complete

Subtask 1.2: TWRI will perform accounting functions for project funds and will submit appropriate Reimbursement Forms to TSSWCB at least quarterly.

The following actions have been completed during this reporting period:

a. As of May 31, 2010 $2,825.14 or 1% of federal project funds had been expended.

1% Complete

Subtask 1.3: TWRI will participate in meetings with TSSWCB and project partners as appropriate in order to efficiently and effectively achieve project goals, coordinate monitoring efforts and summarize activities and achievements made throughout the course of this project.

The following actions have been completed during this reporting period:
a. Project personnel have been in contact regarding efforts of locating growers to meet project goals.

24% Complete

Subtask 1.4: *TWRI will work with the POSC, USDA-ARS, and SAML to ensure appropriate communication with the poultry industry.*

The following actions have been completed during this reporting period:

a. POSC conducted two meetings (April and May) with Pilgrim’s Pride growers and managers to discuss the windrowing process.

24% Complete

Subtask 1.5: *TWRI will organize semi-annual TTVN meetings with project participants to discuss project activities, project schedule, lines of responsibility, communication needs, and other requirements.*

The following actions have been completed during this reporting period:

a. No activity to report this quarter.

0% Complete

**TASK 2: Quality Assurance**

Subtask 2.1: *TWRI will develop a QAPP for activities in Task 3 and 4 consistent with the most recent versions of EPA Requirements for Quality Assurance Project Plans (QA/R-5) and the TSSWCB Environmental Data Quality Management Plan.*

All monitoring procedures and methods prescribed in the QAPP shall be consistent with the guidelines detailed in the TCEQ Surface Water Quality Monitoring Procedures, Volume 1: Physical and Chemical Monitoring Methods for Water, Sediment, and Tissue (RG-415) and Volume 2: Methods for Collecting and Analyzing Biological Assemblage and Habitat Data (RG-416).

The following actions have been completed during this reporting period:

a. Signature pages for the QAPP are currently being circulated for approval

90% Complete

Subtask 2.2: *TWRI will submit revisions and necessary amendments to the QAPP as needed.*

The following actions have been completed during this reporting period:

a. No activity to report this quarter.

0% Complete
TASK 3: Demonstration of IWC of Poultry Litter

Subtask 3.1: POSC will work with integrators (primarily Sanderson Farms) in Limestone and Falls Counties to identify a cooperator (poultry grower) for conducting the IWC demonstration. The cooperator demonstration site will provide the poultry house where IWC will be performed and the IWC and raw litter for land application.

The following actions have been completed during this reporting period:

a. No activity to report this quarter.

5% Complete

Subtask 3.2: IWC will be conducted by POSC at the cooperator site identified in Subtask 3.1 in years 1 and 2 to demonstrate and evaluate IWC utility prior to litter removal from poultry houses.

The following actions have been completed during this reporting period:

a. No activity to report this quarter.

0% Complete

Subtask 3.3: Raw and IWC poultry litter samples will be collected by POSC prior to land application to evaluate the effect of composting on levels of bacteria, nutrients, and volatiles in the litter. Bacteria levels (E. coli) in the litter will be analyzed by SAML. Nutrient levels (N-P-K) in the litter will be analyzed by SWFTL. Volatiles emitted from the litter prior to land application will be analyzed by W-TAMU.

The following actions have been completed during this reporting period:

a. No activity to report this quarter.

0% Complete

Subtask 3.4: Raw and IWC poultry litter will be applied by POSC at 3 tons/ac to the USDA-ARS Riesel site. Annual soil tests will be performed by SWFTL and by USDA-ARS.

The following actions have been completed during this reporting period:

a. No activity to report this quarter.

0% Complete

Subtask 3.5: POSC will assess the cost of implementing IWC on poultry operations for inclusion with educational materials as compared to conventional methods.

The following actions have been completed during this reporting period:

a. No activity to report this quarter.
TASK 4: Analysis of Environmental Effects of IWC

Subtask 4.1: Runoff samples will be collected from two pastures at the USDA-ARS Riesel site for about one year prior to litter application and for about two years following litter application to evaluate the impacts of using IWC poultry litter versus raw poultry litter. Runoff samples will be collected from all other field- and watershed-scale sites at Riesel to quantify nutrient and bacteria from background sites and litter application sites. E. coli levels in water samples will be evaluated by SAML. Nutrient analysis (NO₃-N, NH₄-N, and PO₄-P) for water samples will be conducted by the USDA-ARS with funding from another project.

The following actions have been completed during this reporting period:

a. No activity to report this quarter.

5% Complete

Subtask 4.2: Runoff samples will also be collected from four 0.25 acre field sites at the USDA-ARS Riesel site for about 1 year prior to litter application and for about 2 years following litter application to compare the impacts of using IWC and raw poultry litter on bacteria and nutrient runoff. Two of the field sites will receive raw litter and two will receive IWC litter. Rainfall amounts, runoff, and quantities of E. coli and nutrients will be evaluated. E. coli levels in water samples will be evaluated by SAML. Nutrient analysis (NO₃-N, NH₄-N, and PO₄-P) for water samples will be conducted by the USDA-ARS with funding from another project.

The following actions have been completed during this reporting period:

a. Berms were repaired on these plots. The land was also leveled, and coastal Bermuda was “sprigged” to established vegetative cover.

b. Runoff samples were collected during one runoff event this quarter. All samplers worked properly. The samples were discarded because the “study year” will begin on August 1, 2010

15% Complete

Subtask 4.3: POSC and W-TAMU will also evaluate other potential environmental benefits of using IWC poultry litter instead of raw litter. Through the use of field assessment of volatile levels at the litter application sites at Riesel by POSC and W-TAMU, the environmental impacts of using IWC poultry litter instead of raw litter will be demonstrated/evaluated.

The following actions have been completed during this reporting period:

a. No activity to report this quarter.

0% Complete
TASK 5: Technology Transfer

Subtask 5.1: POSC, SAML, and USDA-ARS, with assistance from TWRI and project participants, will develop outreach materials (1 refereed journal article and 1 Extension fact sheet) summarizing the results of the demonstration and the analysis of the environmental impacts of IWC poultry litter. The Extension Fact Sheet will be submitted to the TSSWCB and poultry integrators for review prior to publication.

The following actions have been completed during this reporting period:

a. The one-page fact sheet has been completed, and is currently being finalized by the TWRI publications team

40% Complete

Subtask 5.2: POSC will conduct 6-9 grower meetings throughout the poultry producing areas of the state to present results of the IWC demonstration/evaluation. POSC will work with poultry integrators to deliver 2-3 programs for growers for each integrator (Sanderson Farms, Tyson, Pilgrim’s Pride). At least 1 field day will be held in conjunction with the grower meetings to view the IWC at the cooperator site and Riesel field sites. TWRI will assist POSC by developing press releases, meeting notification materials for distribution prior to the meetings, and post meeting summaries.

The following actions have been completed during this reporting period:

a. No activity to report this quarter.

5% Complete

Subtask 5.3: TWRI, with assistance from POSC, USDA-ARS, and SAML, will develop (Month 1-6), host and maintain (Months 6-36) a project website for dissemination of project materials.

The following actions have been completed during this reporting period:

a. The Environmental Effects of In-House Windrow Composting of Poultry Litter website is currently active. It can be found at http://windrowlitter.tamu.edu/. Since the website went online, it has been viewed by a grand total of 48 unique visitors.

b. This quarter, the website was viewed by:
   • 17 unique visitors in April 2010
   • 7 unique visitors in May 2010
   • 5 unique visitors in May 2010

76% Complete

Subtask 5.4: POSC, with assistance from TSSWCB, TWRI and USDA-ARS, will work with USDA-NRCS to make necessary revisions to various practice standards (i.e., 629 Waste Treatment, 633 Waste Utilization, 317 Composting Facility) to include IWC.

The following actions have been completed during this reporting period:

a. No activity to report this quarter.
Subtask 5.5: *POSC will work with SAML, USDA-ARS, and TWRI to develop a final report summarizing the results of the project.*

The following actions have been completed during this reporting period:

a. No activity to report this quarter.

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

IV. Projected Work for Next Quarter

- Submit Year 1 Quarter 4 QPR on October 15, 2010
- Conduct a Project Update Conference Call
- Begin Sampling