I. Abstract
Work, beginning this quarter, consisted of a project kickoff meeting on January 29, 2010 where project goals, tasks, and timelines were discussed with all project personnel. A draft QAPP has been developed and is being reviewed by project personnel. POSC has contacted Sanderson Farms where they discussed the scope of the project and full support was given to the project by Sanderson Farms. Work with the application sites consisted of selecting the pasture sites (Y14, SW17) for this study. Runoff structures have been repaired and flow monitoring equipment has been installed on the 0.25 ac sites. Lastly, POSC and USDA-ARS attend the Limestone-Falls SWCD board meeting on March 15, 2010 in Groesbeck and provided a project overview. Project work next quarter will consist of repairing berms and renovating the 0.25 ac plots, weather permitting. Also, the pasture sites will be plowed to facilitate hay cutting and bailing.

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 2 Progress Report on April 13, 2010.

16% 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 February 28, 2010, $664.84 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. A project kickoff meeting was held on January 29, 2010 with all project personnel to discuss project goals, tasks and timelines.

16% 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 has communicated with Sanderson Farms (who fully supports the project activities) and discussed with them the scope of the project.

25% 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. A draft QAPP is currently being reviewed by project personnel.

50% 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. POSC contacted the live production manager in for Sanderson Farms on January 29. The scope of the project was discussed, and the manager assured POSC that a demonstration site in Limestone or Falls County would be easily identified and pledged to fully support the project.

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.

0% Complete

**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. Field-scale pasture sites (Y14, SW17) have been selected for this study.

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. Runoff structures have been repaired and flow monitoring equipment has been installed on the 0.25 sites.

5% 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. No activity to report this quarter.

0% 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. POSC and USDA-ARS attended the Limestone-Falls SWCD board meeting on March 15, 2010, in Groesbeck, and provided a project overview.

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 went online in February 2010. It can be found at http://windrowlitter.tamu.edu/. Since the website went online, it has been viewed by a grand total of 19 unique visitors.

b. This quarter, the website was viewed by:
   • 1 unique visitor in February 2010
   • 18 unique visitors in March 2010

75% 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.

0% Complete
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.

0% Complete

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

- The unusually wet conditions have prevented repair of berms and pasture renovation on the 0.25 plots.

IV. Projected Work for Next Quarter

- The berms will be repaired and the pasture renovated on the 0.25 ac plots, weather permitting.
- The field-scale pasture sites (Y14, SW17) will be plowed to facilitate hay cutting and baling.