

Texas Water Resources Institute

Bacteria Runoff BMPs for Intensive Beef Cattle Operations Agreement No. 68-7442-7-482

Quarter no. 11 From 4/1/10 Through 6/30/10

I. Abstract

Maintenance and runoff collection from the three watershed sites continued this quarter. One runoff event was sampled this quarter, bringing the total number of runoff events for the project to 20. The sites were fertilized, a water line was installed, and the moderate and heavy grazed sites received significant grazing this quarter. Next quarter, the berm for BB1 will be repaired, the water line will be buried, and runoff sampling will continue. The LSHS Program was introduced by AgriLife Extension to 169 program attendees at 4 locations around the state. Program delivery will continue next quarter.

II. Overall Progress and Results by Task

TASK 1: Project Coordination and Administration

Subtask 1.1: Preparation of progress reports.

The following actions have been completed during this reporting period:

- a. The Year 3, Quarter 2 Progress Report was submitted on April 15, 2010.

92% Complete

Subtask 1.2: Coordination of meetings as appropriate with project participants to discuss project activities, schedule, lines of responsibility, communication needs, and other requirements.

The following actions have been completed during this reporting period:

- a. On April 19 and 29, and June 10 and 22, AgriLife Extension and TWRI met to discuss the project contract, budget, deliverables, activities, and schedule.

92% Complete

Subtask 1.3: Submission of required financial forms every quarter (SF-272 and SF-269).

The following actions have been completed during this reporting period:

- a. As of June 30, 2010, \$63,532 or 85% of federal project funds had been expended.
- b. Progress of Allocations to each Department is as follows:
 - TWRI has expended 87% of their funds
 - SCSC has expended 81% of their funds

85% Complete

Subtask 1.4: Development of the final project report within 90 days of project completion.

The following actions have been completed during this reporting period:

- a. No activity to report this quarter.

0% Complete

TASK 2: Assess Bacteria Runoff from Intensively Managed Beef Cattle Operations

Subtask 2.1: Install three (3) watershed sites at the Texas A&M University Farm in Brazos County to evaluate un-grazed, moderately stocked, and heavily stocked irrigated pasture conditions.

The following actions have been completed during this reporting period:

- a. Equipment installation has been completed and monitoring initiated on September 15, 2008.

100% Complete

Subtask 2.2: Maintain the three watershed sites and assess bacteria concentrations, runoff volume, and precipitation from each of the three (3) sites for a period of two (2) years.

The following actions have been completed during this reporting period:

- a. ISCO maintenance was conducted on each watershed site on April 22, May 5, and June 2.
- b. On April 17, 32-0-0 liquid fertilizer was applied to all sites at the rate of 285 pounds per acre to yield 91.2 lbs. N/acre.
- c. Grazing treatments were conducted June 21-July 2. The moderately grazed site received 116 AUD and the heavily grazed site received 212 AUD. Grazing is planned for next quarter.
- d. In early June, a water line was run to the sites so that water will no longer have to be hauled to the sites. The water line will be buried next quarter.
- e. Repair work is still needed on the ungrazed site BB1 berm. This work will be completed next quarter.

90% Complete

Subtask 2.3: Evaluate the water quality data collected throughout the project in order to develop timely and up-to-date information for presentation to producers.

The following actions have been completed during this reporting period:

- a. Runoff samples were collected on June 9. Monitoring will continue until September 15, thus providing 2 full years of data.

90% Complete

TASK 3: Technical Transfer

Subtask 3.1: Develop and deliver educational materials regarding bacteria runoff and BMPs for reducing it to agricultural producers.

The following actions have been completed during this reporting period:

- a. In September 2007, TWRI developed the website titled "Improving Water Quality of Grazing Lands." This website displays the efforts of this project and two related projects evaluating BMPs and developing education programs to address bacteria.
 - It can be found at the following web address: <http://grazinglands-wq.tamu.edu/>.
 - The website was viewed by:
 - 19 unique visitors in April 2010
 - 9 unique visitors in May 2010
 - 10 unique visitors in June 2010
 - A grand total of 1,019 unique visitors since September 2007
 - The website will be updated as new data and information are obtained.
- b. The LSHS concept was introduced by AgriLife Extension at the following dates and locals this quarter:
 - April 13 – Victoria County (23 attended)
 - April 30 – Fayette County (90 attended)
 - May 19 – San Angelo - Texas Beef Workers (14 attended)
 - June 7 – Liberty and Limestone Counties (42 attended)
- c. Finally, this quarter AgriLife Extension succeeded in getting LSHS on the TAMU Beef Cattle Short Course program agenda for 2010 under "Hot Topics".

92% Complete

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

- N/A

IV. Projected Work for Next Quarter

- Prepare and submit Year 3, Quarter 3 Progress Report.
- Submit an invoice for the billing period of 1/1/10-3/31/10.
- Conduct grazing treatment.
- Continue monitoring runoff.
- Continue delivery of educational materials regarding bacteria runoff and BMPs.