

Texas Water Resources Institute

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

Quarter no. 6 From 1/1/09 Through 3/31/09

I. Abstract

This quarter, the first grazing treatment was conducted and the first runoff samples were collected. A no-cost extension was requested to allow for a full 2 years of data. Hopefully, good rains will continue so that additional samples can be collected. Finally, work continued on developing educational materials regarding bacteria runoff and BMPs for reducing it.

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 2, Quarter 1 Progress Report was submitted on January 15, 2009.

55% Complete

Subtask 1.2: Coordination of meetings as appropriate 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. On February 13, 2009, TWRI met with NRCS staff to discuss the need for a no cost extension.

55% 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 the last billing period which ended on December 31, 2008, \$15,839 or 21% of federal project funds had been expended.

21% 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. Routine maintenance is conducted on each watershed site twice a month.
- b. The first grazing treatment was conducted January 12 – 16, 2009. The moderately grazed site received 16 AUD and the heavily grazed site received 32 AUD.

29% 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 March 13, 25, 26, and 27, 2009. The average *E. coli* concentration was 1200 cfu/100 mL at the ungrazed site, 1250 cfu/100 mL at the moderately grazed site, and 3985 cfu/100 mL at the heavy grazed site.

29% 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/index.php>.
 - The website was viewed by:
 - 54 unique visitors in January 2009
 - 42 unique visitors in February 2009
 - Estimated 46 unique visitors in March 2009
 - A grand total of 815 unique visitors since September 2007
 - The website will be updated as new data and information are obtained.
- b. Texas AgriLife Extension Service (Extension) continued work on a PowerPoint presentation and white paper for dissemination to the public.
- c. Extension provided a 1-hr educational program to central Texas cattlemen at the Central Texas Cow-Calf Clinic in Milano on January 9.
- d. TWRI also provided a presentation on the project and results to date at Howard Payne University in Brownwood on January 21.
- e. Additionally, Extension also presented educational materials regarding bacteria runoff and BMPs for reducing it to agricultural producers in Walker County, Williamson County, Travis County, and Rusk County

55% Complete

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

- A request for a no-cost extension was submitted to NRCS on February 26, 2009 to extend the project to September 30, 2010. Due to persistent drought conditions, only a limited number of runoff events have occurred and an additional year is needed to provide the data needed to assess the effects of grazing management on bacteria runoff. This extension will allow the project to collect 2 full years worth of data.

IV. Projected Work for Next Quarter

- Prepare and submit Year 2, Quarter 2 Progress Report.
- Submit an invoice for the billing period of 1/1/09-3/31/09.
- Conduct second grazing treatment.
- Continue monitoring runoff.
- Continue development of educational materials regarding bacteria runoff and BMPs.