Research Farm Project Outline

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Please contact Kelly Eisele at (706) 542-2151 or agresch@uga.edu with any questions.

Required fields marked by an *

General Information

Title *

Utilization of sodium butyrate in beef cattle diets to improve

Participating Research Farm *

Georgia Mountain Research and Education Center, Blairsville, Ga.

Dates

Start Date *

11/06/2019

End Date *

01/30/2020

CAES Principal Investigator *(Required. If not populated, a non-CAES Principal Investigator must be entered.)*

Stewart, Lawton

CAES Secondary Contact

Blackwell, Marrissa

Commodity/Discipline

Commodity *

Beef Cattle

Other/Secondary Commodity

Discipline *

Animal Nutrition

Other/Secondary Discipline

Primary Area to Which the Project Pertains *

- (●) Research (Replicated Treatments)
- ( ) Extension (Unreplicated Treatments)
- ( ) Teaching

Summary of Project

Justification * *(Maximum of 250 words)*

Beef cattle producers maintain their economic livelihood by producing the most pounds of beef in an efficient manner. Given the right genetic stock, nutrition and health are the drivers in maximizing profitability for beef cattle producers. Proper management during the periods of high growth and potential stress can play a key

Objectives * *(Maximum of 250 words)*

There is potential merit for sodium butyrate to improve gut health in high stress situations such as post -weaning and shipping. Therefore, the objective of this study is to evaluate if the inclusion of sodium butyrate in the diets of stocker cattle will minimize the impact of shipping stress and improve animal performance of

Scientist and Station Responsibilities

Attachments

Treatment List

Choose File No file chosen

Plot Map

Choose File No file chosen

Calendar

Choose File No file chosen

Project Involves Plants/Animals

Use the checkboxes below to indicate plant or animal project (if "animal" or "plants and animals" is chosen, an AUP number must be entered in order for the form to send.)

Plants	Animals
☐	☑

Animal Science Projects

NOTE: An Animal Use Protocol (AUP) must be completed for each project involving animals, even if no treatments are applied to the animals and no data are collected from the animals. This would include, for example, studies in which animals are used for grazing trials or used to create runoff in field studies.

General Animal Project Info

AUP Number *

2019 10-015-Y1-A0

Number of Animals

81

Description of Animals (sex, breed, etc.)

Cross bred steers and heifer

Source of Animals

Other Station ▾

Final Disposition of Animals

Return to Resident Herd ▾

Animal Feeding Information

Describe feeding regime, including composition of diet(s) (If special feed is needed, has feed mill been contacted?)

Steers and heifers will be pen fed in nine pens with nine animal per pen. The cattle will be fed a corn silage based diet that is typical management of this unit. The experimental diets will be commercially mixed and delivered to station by an auger truck. The station will unload and store the three diets and store in designated feed

Total amount of feed needed

12 tons, 4 tons per treatment

Feed storage location (bin number if available)

Commodity bay

Responsibilities By Task

(Where applicable, please provide detailed instructions to the REC staff in the boxes below.)

Task	Special Instructions	Responsible Party
Preparation of Paddocks/Pastures		○ Project Leader ◉ Center Staff ○ Both ○ N/A
Forage/Feed Sample Collection	The center staff will collect hand-grab samples of the corn silage and each experimental diet during the morning feeding at D0, 28, 56, and 84. This will coincide with the cattle weigh days. These will be stored in a freezer and collected by the project leader.	○ Project Leader ◉ Center Staff ○ Both ○ N/A
Pasture/Paddock/Pen Rotations (both timing and the actual act)		○ Project Leader ○ Center Staff ○ Both ◉ N/A

Task	Special Instructions	Responsible Party
Transportation (animals between test stations, feed transportation, etc.)	The center staff will coordinate trucking to and from the Eatonton Station. The project leader will coordinate the purchase and delivery of the experimental diets to the station	○ Project Leader ◉ Center Staff ○ Both ○ N/A
Feeding of Animals (supplements, minerals, etc.)	The center staff will be responsible for the daily feeding. Additionally, the staff will clean out the feed bunks, weigh back the oats (leftovers), and collect a sample (approximately a gallon-sized bag) to be later analyzed. These will be stored in a freezer and collected by the project leader.	○ Project Leader ◉ Center Staff ○ Both ○ N/A
Administering Experimental Protocol (medications, etc.)		○ Project Leader ○ Center Staff ○ Both ◉ N/A
Breeding Procedures (if different from standard practices on farm)		○ Project Leader ○ Center Staff ○ Both ◉ N/A
Collection of Phenotypic Data	Animal weights will be recorded on D0, 28, 56, and 84 by the center staff. The project leader and students will go the station on these days to assist.	○ Project Leader ◉ Center Staff ○ Both ○ N/A
Record Keeping (dates of procedures)	The center staff will collect animal weights. Additionally, they will keep daily records of any general management performed and animals that needed medical attention.	○ Project Leader ◉ Center Staff ○ Both ○ N/A

Task	Special Instructions	Responsible Party
Sample Collection (blood, fecal, milk, etc.)	The project leader will go to the station on D0 and D14 to collect ruminal fluid and blood.	(•) Project Leader ( ) Center Staff ( ) Both ( ) N/A

Special needs necessary to perform project

Important Dates

Date	Procedure or activity to be performed	
11/06/2019	Cattle will arrive at the Blairsville station at approximately 7:00 PM. The cattle will be housed overnight in a common pen.	Remove
11/07/2019	This will be D0. The project leader will be there to assist in weighing, animal sorting, and to collect ruminal fluid and blood samples.	Remove
11/21/2019	Day 14. Animals will be brought to the working facility by the center staff. The project leader will be there to assist in weighing and to collect ruminal fluid and blood samples.	Remove
12/05/2019	Day 28. Animals will be brought to the working facility by the center staff. The project leader will be there to assist in weighing.	Remove

Date	Procedure or activity to be performed	
01/02/2020	Day 56. Animals will be brought to the working facility by the center staff. The project leader will be there to assist in weighing.	Remove
mm/dd/yyyy		Add

Additional Responsibilities and Funding

Safety Precautions

Financial Support

Please enter the dollar amount (cash or value of in-kind contributions) allocated to Georgia Mountain Research and Education Center, Blairsville, Ga..

3000

Location where results will be published

Popular press, Extension publications, and scientific journa

Routing and Approval

The form will be routed electronically to the appropriate department or unit head, REC or Farm Superintendent, and finally the individual responsible for the REC (usually an assistant or associate dean). The form can be returned at any approval level with requested changes. The form submitter will be notified by e-mail once the project has been approved.

Station Superintendent

Alan Ray Covington

Department Head

Francis Fluharty

Office of Research

Robert N. Stougaard

By submitting this form, the principal investigator verifies that all relevant University Guidelines are being met and project protocols were approved by the relevant committees as appropriate (radiological safety, biological hazards, animal use).

Save Without Submitting Submit for Approval