



Title: Burnett Center for Beef Cattle Research and Instruction

SOP Number: 023

Purpose: This document outlines the standard operating procedures for the Burnett Center at the New Deal Farm, which includes the concrete slated floor pens, the dirt floor pens, and the processing areas. Specific experiments may warrant modifications to the general procedures described below.

RECORDS MAINTAINED AT THE BURNETT CENTER

A. Records Maintained at the Burnett Center

1. Health Records. Animal Treatment/Observation Form recording the date of any medical treatments will be prepared when an individual animal is treated. The form should include the date, animals' ID number, a brief diagnosis, medical treatments administered, the outcome of treatment, and be initialed by the person administering the treatment.
2. Cattle Removed from Pens. A record of cattle removed from pens will be maintained in the notebook for each experiment located in the Feed Mill Office. Generally, decisions to remove cattle from pens should be made by the Principal Investigator or Project Coordinator in conjunction with the Manager and Assistant Manager.
3. Necropsy Results. Results of any post-mortem examinations that are conducted for any cattle that die during the course of an experiment will be maintained in the book containing the animal health records. Veterinary post-mortem examinations are typically conducted only when specified in the experimental protocol for a particular research study, although all unexpected deaths will be notified immediately to Texas Tech University Veterinary Staff.

CATTLE RECEIVING AND WORKING PROCEDURES

General: The cattle working facilities at the Burnett Center are designed to allow cattle to be unloaded from or loaded onto trucks and (or) brought from pens for routine weighing with a minimum of labor and animal stress. Care is taken to avoid loud noises, use of electric cattle prods, and other stressful procedures when cattle are worked. Aspects of initial processing that involve vaccinations, deworming, and other animal health issues are planned in conjunction with the Texas Tech University Veterinarian and reviewed periodically.

A. Processing Summary

1. When cattle arrive in the morning or early afternoon, they are unloaded into pens without feed and water, and processing is started immediately. When have traveled for greater than 6 hours, or arrival is in the late afternoon or at night, cattle are placed in holding pens with access to feed and water and processed the following morning. At the time of unloading, cattle are inspected carefully to access any injuries or health problems and noted on the Large Animal Receiving Record.
2. Initial Processing of cattle includes the following items:
 - a. Individual unique identification tag placed in the ear;
 - b. Vaccination with a seven-way clostridial vaccine;

- c. Vaccination with a modified live preparation of IBR, PI3, BVD, and BRSV;
 - d. Treatment for internal and external parasites with an oral and or pour-on product;
 - e. Individual body weight measurement;
 - f. Administration of growth promoting implants.
 - g. Rectal temperatures may be taken based on individual behavior of lightweight or stressed animals
 - (a) Animals with an arrival rectal temperature of $\geq 104^{\circ}$ may be treated with an antibiotic and or NSAID (unless contradicted by the experimental protocol).
 - (b) Depending on condition, cattle may be housed in sick pens isolated from the rest of the cattle or they may be commingled with the group.
- B. Sorting Procedures Summary
1. After processing, animals are sorted to pens with access to feed and water by a "gate cut" process.
 - a. After 7 to 35 days, sorting into body weight blocks (sorting 1) and sorting to smaller pen allocations (sorting 2) according to a predetermined plan detailed by the experimental protocol will be performed.
 - b. The initial 7 to 35 days can be used to accommodate any extra management related to specific experimental protocols.
 2. Eighteen sorting pens are available in the cattle working facilities at the Burnett Center. In the event that more than 18 sorting pens are required, cattle are sorted out of their temporary pens into the number of sorting groups required for the experiment.
 3. Once all the animals in a group have been assigned their final group, they are moved to their permanent pens in the Burnett Center partially slotted floor pens or to assigned dirt-floor pens.

CATTLE HEALTH EVALUATION AND TREATMENT

General: As noted in the **Records Maintained** section, all cattle housed at the Burnett Center are observed at least twice daily for signs of illness or injury. Animals that require attention are removed from their pens and brought to the cattle working facility for further observation. Treatment protocols are planned in cooperation with the Texas Tech University Veterinarian, and only FDA-approved treatments at label dose are administered. A health card is filled out by the person administering the treatment, and this card is filed with other records from the experiment in the Feed Mill Office. The record should include: 1) the animal identification number; 2) the animal's pen number; 3) a brief statement of diagnosis; 4) the name and dose of all medications given, including lot number, and expiration date; and 5) the name and initials of the person administering the treatment.

- A. Treated cattle will normally be returned to their assigned pen, unless it is deemed necessary to move the animal to a separate pen to promote recovery from the illness or injury. When removal is deemed necessary, it must be approved by the Principal Investigator.

- B. At the discretion of the Principal Investigator and the University Veterinarian, cattle that die suddenly or of unknown causes may be examined post-mortem.
- C. This examination can be performed by the Texas Tech University Veterinarian, or when more detailed examination is required by the Texas Veterinary Medical Diagnostic Laboratory (P.O. Box 3200, Amarillo, Texas 79116-3200, 806-353-7478).
- D. Cattle that die of known causes, such as injury or chronic illness, and cattle that are examined post-mortem at the Burnett Center will be composted or rendered, unless prohibited by drug withdrawal requirements.
- E. Flooding contingency plan for the dirt-floor receiving pens
 1. Slope: Pens contain approximately 1.5% slope to induce drainage
 2. Concrete area inside pens: 240 ft² (12x20) of concrete floor is available in the front of each pen (feed bunk line), and 160 ft² (8x20) of concrete floor is available in the back of each pen.
 3. Concrete area in the back-alley: If needed, animals can be granted access to the back-alley space for each pen (concrete floor). Such management will provide additional 300 ft² (15x20) of concrete floor for each pen, and still maintain organizational structure of each lot of animals within pens.
 4. If flooding prolongs for multiple days (rare exception), as emergency last instance, animals can be temporarily allocated into the Burnett Center concrete-slotted floor pens until acceptable conditions are reestablished at the receiving pens.

MANURE HANDLING

- A. General. The partially slotted floor pens at the Burnett Center are constructed so that manure is worked through the slots by cattle. A 2.5-foot deep pit under the pens collects manure, which is moved to the east end of the pens by a scraper. Manure collected by this system can be spread on adjacent farmland or conveyed to a settling pond/lagoon system. The partially slotted floor confinement pens at the Burnett Center are cleaned after each experiment.
- B. Soil-surfaced pens are cleaned using a tractor/loader each summer or fall after the completion of a group of experiments.