

## STANDARD OPERATING PROCEDURE

### RECEIVING, QUARANTINE, ACCLIMATION, AND PREVENTIVE HEALTH MANAGEMENT MEDICINE STANDARDS FOR CATTLE

#### 1.0 PURPOSE:

- 1.1 This SOP specifies the responsibilities of the Animal Resources (AR) and Oconee County Farm personnel relating to the receiving, quarantine, and acclimation procedures for beef and dairy cattle used for research or instruction at the College of Veterinary Medicine
- 1.2 The individual assigned to perform the duties and tasks listed in this SOP is responsible for its implementation.

#### 2.0 STANDARDS:

- 2.1 All animals should be housed and husbanded in accordance with the environmental, primary enclosure and enrichment standards outlined in the applicable husbandry SOP for cattle.
- 2.2 Animals will be obtained only from vendor/sources approved by AR.
- 2.3 All animals must undergo a seven (7) day quarantine and acclimation period.
- 2.4 Animals who do not meet the health status requirements, order specifications or do not have appropriate documentation may be subject to rejection by AR.

#### 3.0 SPECIAL CONSIDERATIONS:

- 3.1 **Animal Health:** As the animals are received from the vendor/source, the general health condition of each animal should be evaluated by the individual assigned this task. This individual is responsible for performing the physical health examination and carefully observing each animal for signs of illness upon receipt, including animals picked-up from the vendor and transported by AR personnel.

- 3.1.1 Observe the cattle for respiratory problems

- 3.1.1.1 Coughing

- 3.1.1.2 Labored breathing

- 3.1.1.3 Check for nasal discharge

- 3.1.1.4 Check for lesions or inflammation of the muzzle or nostrils.

- 3.1.2 Always, observe cattle for obvious signs of mastitis such as inflammation of the udder and/or teats. Look for udders that are red in color, indicating inflammation/heat. **Note:** Mastitis may be subclinical and cattle may not exhibit any visible symptoms. Mastitis is more prevalent in dairy cows, but also occurs in beef cattle.

- 3.1.3 Check for lesions and/or contusions on the skin.

- 3.1.4 Check for ocular discharge. Check for conjunctivitis or inflammation around the eyes. Eyes should be fully open and clear. There should be no discharge or crusty matter present.

- 3.1.5 Check for lameness and/or stiffness in legs and feet. Look for foot rot or heel warts. Cattle should exhibit normal posture, movement, and gait. Look for any animal unwilling to stand or reluctant to move.

- 3.1.6 Look for any signs of diarrhea and/or blood.
- 3.1.7 Look for any animals that appear to be dehydrated, depressed, weak, or has an unthrifty appearance.
- 3.1.8 Look for any signs of edema around the lower jaws and neck region.
- 3.1.9 Look for animals with lowered head and/or drooping ears.
- 3.1.10 The use of electric probes, “hot sticks,” or “hot shots” in the movement, manipulation and/or transport of cattle is strictly prohibited by Animal Resources personnel in Animal Resources facilities. This may only be used at Oconee County Farm under the supervision of the Director of Oconee County Farm. The use of electric prods, “hot shots” is strongly discouraged in the normal handling, movement, loading and transport of cattle. In exception, cattle that need to handled/moved and refuse all reasonable efforts should be humanely and correctly coaxed by use of single discharges of an electric prod and repeated as minimally as necessary. The use of prods should be guided under the supervision of trained cattle operations employees and the veterinary supervisor. The standard of animal handling and movement applied is that approved by the National Cattleman’s Beef Association.
- 3.1.11 Cattle suspected of or found with any animal health problems should be reported to the Animal Health Technician (AHT), the attending veterinarian and/or the Lab Animal Facilities Supervisor (LAFS) before accepting the cattle from the vendor/source. In situations where AR personnel are picking up animals from the vendor, a determination will be made as to whether to take receipt of the animal(s) or reject them.
- 3.1.12 Hooves should be checked regularly and trimmed as appropriate.
- 3.1.13 All newly received cattle should be tested prior to arrival for BVD-PI status or tested upon arrival and maintained in quarantine/isolation until test results are confirmed

**3.2 Health and Safety:**

- 3.2.1 Follow all Personal Protection Equipment (PPE) requirements.
- 3.2.2 Follow all SOPs when using equipment and chemicals.
- 3.2.3 Material Data Safety Sheets (MSDS) and First Aid Kits are located in all Animal Facility Offices.
- 3.2.4 Be familiar with the locations of fire extinguishers, emergency showers and eye wash stations.
- 3.2.5 **NOTE:** Personnel should exercise care, caution, and good judgment while working with cattle in confined areas such as stalls, the corridor of Building 11 and/loading and unloading cattle. **BE CAREFUL.**
- 3.2.6 Personnel should wash their hands and lower arms after manipulating cattle and/or working with chemicals.

**3.3 Personal Protection Equipment:**

- 3.3.1 Appropriate attire is required while receiving and manipulating cattle. Animal Resources personnel must follow SOPs, which will require scrubs or coveralls and gloves to prevent cross-contamination of infectious diseases. Personnel at OCF should follow best practices as professionally directed, where appropriate, for biosecurity.

- 3.3.2 3.3.3 Rubber boots and/or dedicated boot/shoes are required while receiving and manipulating cattle.

#### 4.0 MATERIALS:

##### 4.1 Equipment:

- 4.1.1 Mobile animal transport cages or crates (as needed)
- 4.1.2 Identification ear tags (as applicable)
- 4.1.3 Misc. cattle handling equipment (as needed)

##### 4.2 Preventive Medical Treatment:

###### 4.2.1 Vaccines:

4.2.1.1 Adult cattle will be annually vaccinated for the following as appropriate.

- 4.2.1.1.1 Bovine Respiratory Syncytial Virus (BRSV) vaccine
- 4.2.1.1.2 Parainfluenza-3 Virus (PI3) vaccine
- 4.2.1.1.3 Infectious Bovine Rhinotracheitis (IBR) vaccine
- 4.2.1.1.4 Bovine Viral Diarrhea (BVD) vaccine Type I & II
- 4.2.1.1.5 Leptospirosis (5-way vaccine) effective against *L. canicola*, *L. grippityphosa*, *L. hardjo*, *L. icterohaemorrhagiae*, *L. pomona*

4.2.1.2 Calves will be vaccinated for the following:

- 4.2.1.2.1 Bovine Respiratory Syncytial Virus (BRSV) vaccine
- 4.2.1.2.2 Parainfluenza-3 Virus (PI3) vaccine
- 4.2.1.2.3 Infectious Bovine Rhinotracheitis (IBR) vaccine
- 4.2.1.2.4 Bovine Viral Diarrhea (BVD) vaccine Type I & II
- 4.2.1.2.5 Clostridium (7-way vaccine) effective against *C. chauveoi* (Blackleg), *C. clostridium septicum* and *C. sordelli* (malignant edema), *C. novyi* (black disease), and three types of *C. perfringens* (enterotoxemia)

**4.2.2 Antibiotics:** Cattle may be treated with appropriate antibiotics as determined by the attending veterinarian during the quarantine and acclimation period.

**4.2.3 Anthelmintics:** Cattle will be treated with FDA-approved anthelmintics for use in beef and dairy cattle as determined by the attending veterinarian.

###### 4.2.4 Antiparasitocides/insecticides

External parasite control should be practiced as necessary and timely to minimize the stress and discomfort of flies, lice, ticks, etc. FDA-approved products and methods of application should be followed at all times.

**4.2.5. Withdrawal times:** Animals which will be sold after being held in CVM facilities or farms must be held, *without exception*, for the full time length of FDA-mandated withdrawal periods.

#### 5.0 PROCEDURES:

## **5.1 Animal Receiving:**

- 5.1.1 Upon receipt AR personnel should check all animal(s) to ensure they meet the animal order specifications for weight, age, gender, etc. If any animal(s) are found not meeting these specifications the Principle Investigator (PI), Assistant Director of Animal Resources (ADAR) and/or Animal Resources Manager must be notified before receipt of these animals can be approved.
- 5.1.2 Personnel should exercise caution, care, and use good judgment while working with cattle and transporting cattle from vendor/source to pastures and/or stalls.
- 5.1.3 Proper and appropriate techniques must be employed while manipulating and transporting cattle. Exercise patience and care when moving cattle to in order to minimize stress and reduce risk of injury to animal and yourself.
- 5.1.4 AR personnel must perform a physical health examination on each animal (refer to section 3.1, Animal Health) prior to official receipt from the vendor/source.
- 5.1.5 Any animals failing the physical health examination will be rejected. In questionable cases, personnel should seek a second opinion from or consult with the veterinary staff.
- 5.1.6 Upon arrival the PI or his staff should be notified by the LAFS or their designee and given the opportunity to examine the animals. The physical health examination will be performed by AR staff.
- 5.1.7 Animals used for research projects lacking appropriate health and transit documentation (e.g., USDA APHIS forms, interstate shipment certificates, etc.) will be rejected.

## **5.2 Quarantine and Acclimation Procedures:**

- 5.2.1 All cattle scheduled to be housed at Building 11 will be held for a seven (7) day quarantine and acclimation period at the \. Exceptions are cattle used in non-survival anatomy labs in which case animals are euthanized the day of receipt or other projects which have the prior approval from the ADAR. Procedures at Oconee County Farm will be dictated by the professional opinion of the OCF Director.
- 5.2.2 During the seven (7) day acclimation period, AR staff or the user will have the right of refusal of any animal not suitable for research or teaching.
  - 5.2.2.1 Cattle will be sold (if possible) or euthanized if not suitable.
  - 5.2.2.2 Any financial loss because of sale or euthanasia will be borne by the user.
- 5.2.3 The health status of these cattle should be closely monitored during the seven (7) day quarantine period. Animals may not be used during the quarantine and acclimation period.
- 5.2.4 A health history will be requested from the vendor/source.
- 5.2.5 Cattle vaccinations and treatment for parasites during quarantine will be determined after assessment of the health status and history of the cattle.
- 5.2.6 Newly arriving animals should be segregated from other cattle until their health status is verified.

## **6.0 RECORDS:**

- 6.1 Health and vaccination papers (as applicable)
- 6.2 Invoice or Bill of Sale (as applicable)
- 6.3 Interstate transport documents (as applicable)

## **7.0 DEFINITIONS AND REFERENCES:**

### **7.1 Definitions:**

- 7.1.1 Acclimation (Conditioning): time given to a newly arrived animal to become accustomed to its new surroundings before the research for which it is intended begins.
- 7.1.2 Anthelmintic: a type of drug that eliminates a wide variety of worms.
- 7.1.3 Antibiotic: A type of drug that kills or prevents the reproduction of pathogenic microorganisms on or in animals.
- 7.1.4 Enrichment: a method of providing animals with the opportunity to behave as they do in the wild, playing, foraging, grooming, and interacting in other ways with one another.
- 7.1.5 Mastitis: an infection of the mammary glands characterized by unusual firmness, heat, and discoloration.
- 7.1.6 Material Safety Data Sheets (MSDS): summary of information (manufacturer information and product ingredients; physical/chemical properties, reactivity, toxicological, ecological information on the product; and personnel health hazards information.
- 7.1.7 Personal Protective Equipment: articles of clothing and equipment that protect workers against direct contact with infectious, toxic, or corrosive agents and against temperature extremes or other physical hazards
- 7.1.8 Primary enclosure: a cage, run or pen which is used as the principal housing containment area for animals.
- 7.1.9 Principal Investigator (PI): the scientist who plans and coordinates all phases of the research work and the research protocol.
- 7.1.10 Subclinical: an infection not detectable by usual means in one species but can be lethal to other species when transmitted to them.
- 7.1.11 Quarantine: isolation of an animal to prevent it from spreading or contracting disease and to allow it time to acclimate to new surroundings.
- 7.1.12 Vaccine: preparation of attenuated (weakened) or killed disease-producing viruses or microorganisms (or of substances extracted from them) administered by mouth or by injection to induce active immunity to the specific disease.