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Fiscal year: 2022

**UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE**

**Annual Report of Research Facility
Column E Explanation**

(TYPE OR PRINT)

This information is required by law (7 U.S.C. 2143 and 9 C.F.R. §2.36). Failure to report according to the regulations can result in an order to cease and desist.

1. REGISTRATION NUMBER

74-G-0002

2. Research Facility Headquarters address

USDA-ARS Knippling-Bushland US Livestock Insects Research Laboratory
2700 Fredericksburg Road
Kerrville, TX 78028

3. Number of animals used in the study.

102

4. Species (common name) of animals used in the study.

cattle

5. Explain the procedure producing pain and distress.

Young healthy cattle are used to propagate ticks and other insects for studying novel modalities of insect control. To minimize grooming behaviors that could disrupt propagating insects, the cattle are stanchioned in covered barns for up to several weeks. The stanchion limits the backward movement of the animal's head but does not interfere with the animal's ability to rise, lie down, or otherwise move freely within the stanchion's sides. Every animal undergoes an acclimation process prior to being held in the stanchion. Animals that cannot be successfully acclimated are not used in this activity. Stanchioned animals also always have full visual and auditory contact with other cattle and receive positive forms of enrichment (e.g., hand brushing, food treats, soothing music, hydrotherapy, etc.) to minimize added stress that can occur during confinement. Stanchioning and enrichment protocols are routinely reviewed and approved by the IACUC.

6. Provide the scientific justification for not providing the appropriate anesthetics, analgesics, or tranquilizing drugs during procedures where the animal experienced accompanying pain or distress greater than momentary or slight.

In our experience, most cattle do not need supplemental analgesics or anesthetics while stanchioned, and these agents may complicate or confound efforts to raise insects and/or the efficacy of test articles that are being evaluated for insect control. Most cattle adapt quickly to stanchioning and rarely develop stress because of the daily enrichment protocols that include companion stanchioning (animals are never housed in isolation), soothing music in the barns, daily hand-brushing, hand feeding of special treats, and joint hydrotherapy.

7. What, if any, Federal regulations require this procedure? Cite the agency, the Code of Federal Regulations (CFR) title number, and the specific section number (e.g., APHIS, 9 CFR 113, 102):

Agency

NA

CFR

NA