Comparison of two electroejaculation methods in rams
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Introduction
A goal of the sheep producer is to select rams with the ability to impregnate most of the available females early in the breeding season. When collecting semen from a ram by electroejaculation, the dogma is that it is necessary to use a different stimulation technique than that described for bulls. The objective of this study was to evaluate two electroejaculation techniques for collecting semen samples in rams. Our hypothesis was that the “bull method” of electroejaculation used to collect semen from a ram would yield results similar to the traditional “ram method”.

Methods
Suffolk and Dorset rams averaging 2 years old used in this study were part of a local flock. All were collected using a lubricated ram probe inserted into the ram’s rectum with the electrodes facing ventrally and a Pulsator IV® electroejaculator (Lane Manufacturing, Denver, CO). Rams (n=48) were electroejaculated using either the “bull” method (n=24) or the “ram” method (n=24). For the “bull method”, a pre-set program function was used that ran until a semen sample was collected. With the “ram method”, downward pressure was also applied with the probe around the area corresponding to the accessory sex glands and massaged for three to four seconds during the rest period between stimulations. Then the probe was held stationary over the same area while a steady electrical stimulation was applied for seven seconds. This method was continued until a semen sample was collected. Samples were evaluated for motility and morphology using the guidelines set by the Society for Theriogenology. The Mann-Whitney test was used to evaluate the impact of these methods on response time and amplitude of stimulus required for the rams to ejaculate. The effect of method used on classification was evaluated using a Fisher's exact test. Statistical tests were performed using R (version 3.0.2) and significance was defined as p<0.05.

Results
There was significant difference in the time required for rams to ejaculate using the different methods. The “ram method” required an average of 45 (95% CI 15, 70) seconds longer to produce an ejaculate than with the “bull” method. There was no significant difference in the amplitude of electrical stimulation required between methods or between how the animal was classified (unsatisfactory or satisfactory). There were no “deferred” or “exceptional” classifications in either group of rams. Age and breed had no significant effect on classification, either alone or in combination with either method.

Discussion
Based on this particular group of rams, the “ram method” or “bull method” produced similar results with respect to efficacy of the method to produce a semen sample and quality of the samples collected when performing a breeding soundness examination.

Keywords: Ram, semen collection, breeding soundness examination, electroejaculation