The Effects of Pulsed Electro-Magnetic Fields on Bovine Semen Phase II

Miles, Avery (School: Doland High School)

This experiment was conducted to see the effects of a low level of intensity from pulsed electro-magnetic fields on bovine semen samples' could increase longevity. There were three trials per each bull conducted using five, ten, and fifteen minute increments. Semen samples were analyzed upon thawing and set on the Mini Tube HT 300 heating system for an hour. After an hour, motility, progressive motility, and morphology was analyzed. An average for Monte Cristo's seamen samples motility rate went from a 48.87 to a 32.26 with the application of pulsing for five, ten, and fifteen minutes. An average for Monte Cristo's seamen samples progressive motility rate went from a 39.153 to a 24.6 with the application of pulsing for five, ten, and fifteen minutes. An average for Monte Cristo's seamen samples morphology count went from a 92.93 to a 91.03 with the application of pulsing for five, ten, and fifteen minutes. Consecutive trials were also conducted with Dakota Thunder seamen samples. An average for Dakota Thunder's motility rate went from a 40.82 to a 26.01 with the application of pulsing for five, ten, and fifteen minutes. An average for Dakota Thunder's progressive motility rate went from a 33.44 to a 19.75 with the application of pulsing for five, ten, and fifteen minutes. An average for Dakota Thunder's morphology count went from a 92.04 to a 91.16 with the application of pulsing for five, ten, and fifteen minutes. It was concluded that the Pulse EQX PEMF machine didn't have a significant effect on the bovine semen's longevity.

Awards Won: