

Increased Conception Rates by Regulating Temperature of Semen

Beckman, Bailey (School: Danville Junior/Senior High School)

My family owns a beef cattle farm and I am looking forward to working in the agriculture industry, especially cattle. The purpose of this study is to determine whether using a heat protector for the semen inseminator will help increase the conception rate of cattle. Knowing that the most efficient way to keep the semen vital will benefit the farmer knowing that they have a better birth rate. My hypothesis is that by using the heat insulator to keep the semen at a constant temperature will allow for a better chance for conception. I think that the local everyday farmer as well as larger producers would use this information in the future, if my hypothesis is correct, giving the animals a better conception rate. I will construct an insulated pouch to keep the semen at a constant temperature prior to the insemination of the cow. I constructed a thermal pouch on the inside of a scrub top to place the AI tool prior to insemination. I measured the temperature under the arm and then took a motility count of the semen. I then tested an insulated pouch and took both measurements as in the first test. Finally, I tested the shirt with the insulated sleeve and measured both temperature and motility rate. From my research I determined that the insulated pouch kept both the temperature constant and increased the motility rate for the semen.