
Abstract: The Virginia Master Cattlemen program has the goal to provide beef producers with essential knowledge in areas of beef production. Every year, beef producers from VA and neighboring states participate in this comprehensive 14-hour long program. During the 2021 program, we performed an online survey with participants addressing their reproductive management practices. We have obtained data from 133 participants, of which 67.7% indicated their operations have a defined breeding season. Of those, 41.1% have reported the length of the breeding season to be less than 70 days. In addition, 64.6% of participants indicated that at least 40% of their cows will calve during the first 21 days of their calving season. As far as seasonality, 50.9% of participants reported to have both a fall and spring breeding seasons, whereas 24% and 25% of participants reported to only hold their breeding season in the fall, and spring, respectively. Furthermore, only 35% of participants indicated that they collect body condition scores of their herds on a regular basis. In regards to natural service, 84.8% of participants reported to have a bull:cow ratio of 1:25 cows or greater during the breeding season; however only 50% of participants reported performing a breeding soundness exam prior to the breeding season. Finally, pregnancy diagnostics was the most commonly adopted reproductive technology, with 80% of participants indicating to perform pregnancy diagnosis every year, followed by 55% participants adopting artificial insemination, and 45% adoption of estrus synchronization. The least adopted reproductive technologies were embryo transfer with 9%, and sexed semen with only 10% of participants indicating use of those technologies. Contrasting our data with the 2017 USDA NAHMS Cow-Calf Study, participants of the VA Master Cattlemen program have a greater adoption of reproductive technologies than the average cattlemen in the USA.

Keywords: adoption, reproductive management, reproductive technologies

PSX-B-18 Can a Smartphone be Used for Daily Field Measurements? Bruno Biagioli, Lucas de Souza, Illys De Sousa, UNESP

Abstract: The popularity of smartphones is undeniable in nearly all facets of society, and their use is worldwide spread, the objective of this abstract is to compare two smartphones and some apps to commercial equipment. The study was performed in Campinas, São Paulo, Brazil using GPS, light, and sound sensors, from two smartphones. There were 5 apps tested for each smartphone sensor, and specific methodology for each one, for GPS was used a known length running track, for light and decibel meters was used commercial equipment. For GPS, there was no statistical difference (P< 0.05) between the type of mobile phone and the app tested and there was also no statistical difference (P< 0.05) for the use or non-use of the internet during the measurements. For the decibel meter, different noise levels were tested, and there was a difference between the levels, which was expected. At each noise level, there were statistical differences (P< 0.05) between smartphone type, internet use, and the apps tested. In this summary, it will not be possible to show all these results. For the light meter, there was a significant difference between the application and the lux level, regardless of the type of smartphone. At 300 lux the applications were the same as the control. At 600 lux only the "Light meter" (My Mobile Tools developer) app had results equal to the control. At 1000 lux measurements, all applications were different from the control. The internet and lux interaction were the same for the averages of the 300 and 600 lux levels, with 1000 lux the use of the internet favored the readings. The use of cell phones can be a cheap and practical alternative for daily measurements on rural properties, to ensure the sustainability of the systems and labor health.

Keywords: decibel meter, GPS, light meter