FIELD DAY REPORT - 1992

Texas A&M University Agricultural Research and Extension Center at Overton

Texas Agricultural Experiment Station
Texas Agricultural Extension Service

Overton, Texas

April 30, 1992

Research Center Technical Report 92-1

ULTRASONOGRAPHY AS A MANAGEMENT TOOL FOR PREGNANCY DETERMINATION IN SIKA DEER AND ROCKY MOUNTAIN ELK

S. T. Willard and R. D. Randel

Background. Deer farming has progressively grown into an industry in Texas as well as elsewhere in the United States and around the world. Venison and seed stock production have become the focus in deer production systems due to an increasing consumer demand for leaner alternative red meat sources and a need for more diversified agriculture to compliment current livestock production schemes. Deer producers, however, require information concerning the reproductive status of their herd from which herd strategies may be formulated. Ultrasonography provides a means from which producers can make management decisions based on the pregnancy status of their herds. The objective of the current study was to evaluate the effectiveness of ultrasonography for pregnancy detection in sika deer and Rocky Mountain elk as well as its use as a management tool in farming systems.

Research Findings. Transrectal ultrasonography was utilized at two separate deer farms with two different species of cervidae.

FARM A: Eighty-six sika does in Ingram, TX, were placed with 2 American silk bucks, hybrid elk X sika males, in August 1991. Does remained with the buck until January 23, 1992 when ultrasonography was performed. Of the 86 does, 42 were pregnant, 42 were open and 2 were not tested due to infections caused by penile punctures during mating. Ultrasonography was successful for determining pregnancy in sika does. Pregnancies were detected as early as 25 days postbreeding. The hybrid silk males are considerably larger than the pure sika does and had never been fertility tested. Therefore, the 50% pregnancy rate at the time of pregnancy testing may have been due to poor buck fertility or the inability of the male to successfully breed some does due to differences in body size. Following ultrasonography, open does were separated from pregnant does and placed with 3 pure sika bucks for the remainder of the breeding season. Pregnancy determination in this group of sika does gave the deer producer information from which management decisions could be made based on pregnancy rates at the time of pregnancy testing using ultrasound.

FARM B: Twenty-five Rocky Mountain elk cows in Winona, TX, had been with several young males and one bull elk since the beginning of the rutting season. Ultrasonography was performed on March 5, 1992, two weeks after the bull had shed his antlers. Of the 25 elk cows, 16 were pregnant and 9 were open resulting in a 64% pregnancy rate at the time of the ultrasound.

All open cows, as determined by ultrasound, were also palpated rectally to confirm ultrasound results. Open cows were separated from pregnant cows following ultrasonography which gave these purebreed elk breeders the information necessary to selectively cull their herd based on the pregnancy status of individuals at the end of the breeding season.

Application. Transrectal ultrasonography was found to be an effective tool for on the farm pregnancy determination in sika deer and elk. Rectal palpation is not possible in sika deer and may cause some trauma to a pregnancy in elk. Ultrasound provides a quick, immediate result regarding an individual doe or cow's pregnancy status. In the present study, ultrasonography provided the deer producers with a pre-calving view of their herd's reproductive status. These producers were able to utilize buck rotation based on the pregnancy status of does or selectively cull open individuals. Management decisions can be made directly following the ultrasound which may be economically beneficial to the producer.

Acknowledgements. We would like to thank David Hughes of Game Ranching, Inc., Ingram TX and Phyllis Glazer and Dave Pardee of Blazing Saddles Ranch, Winona, TX for the use of their animals and handling facilities.