

Livestock Research Briefs and Cattle Growers' Short Course



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was injected IM as time of implantation.

On day of implant removal, four vasectomized rams equipped with marking harnesses were joined with the ewes for detection of estrus. Little estrual activity was observed until 48 hours following implant removal when 92% of the ewes receiving the 1.5 mg implant were marked. Among ewes receiving a 3.0 mg implant, 80% were marked at 48 hours. The use of estradiol valerate in conjunction with the implant appeared to delay onset of estrus with 48% of the 1.5 mg + EV ewes and 46% of the 3.0 mg + EV in estrus at 48 hours, respectively. By 72 hours following implant removal, 100% of the 1.5 mg implant ewes had been observed in estrus. Among the ewes implanted with 3.0 mg of Norgestomet, 88% were in estrus within 72 hours. Ewes receiving a 1.5 mg implant + EV had 80% in estrus by 72 hours. Among ewes receiving a 3.0 mg implant + EV, 92% were in estrus within 72 hours.

Results of this trial indicate that a 1.5 mg Norgestomet ear implant will suffice to synchronize estrous in ewes. A 3 mg implant will also synchronize efficiently with slightly fewer ewes in estrus at 48 hours. An IM injection of 0.5 ml estradiol valerate was found to delay estrus and does not appear to be of benefit in synchronizing ewes.

LAPAROSCOPIC EMBRYO TRANSFER IN SHEEP

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Harvesting of embryos from outstanding ewes mated with outstanding rams offers the sheep producer a method to make rapid genetic improvement. However, size of the ewe has required recovery of embryos to be done by surgical means, which is a highly technical procedure requiring surgical skill and involving some risk to the ewe. Transfer of embryos to recipient ewes has also been done utilizing a surgical approach. Research at NMSU has been conducted the past two years to investigate the feasibility of ovine embryo transfer via a laparoscopic approach, which is essentially non-surgical. This procedure does require considerable skill and knowledge of anatomy, yet is far less complicated than the surgical method and involves less risk to the ewe. During 1987 and 1988, embryos were transferred to a total of 39 fine-wool ewes using the laparoscopic approach where the uterus is visualized by the insertion of an endoscope through the abdominal wall. Transfer of embryos is made directly to the uterine horn employing a pipette also inserted via a cannula through the abdominal wall. The procedure requires less than 10 minutes when done by a skilled technician. No surgery or sutures are required and post-surgical stress is avoided. Successful maintenance of pregnancy by this method was 50% in 1988 and 56% in 1989, which compares favorably to results obtained by surgical procedures.