

A Demonstration of the Laparoscopic Artificial Insemination Procedure

Martin R. Dally is one of the few persons in the U.S. capable of performing an AI procedure referred to as Laparoscopic AI. He works out of U.C. – Davis, where he teaches the procedure and runs an independent company, Super Sire Ltd. Although not a veterinarian, he displays a high degree of skill. He travels around the country by appointment, but generally works in the Western States including Idaho, Colorado and California.

Using frozen semen for the purpose of improving flock genetics, the Laparoscopic procedure was first used in Australia around 1982 to improve conception rates. He strives for a least a 65% success rate, but can achieve as high as 85%. This compares with Cervical AI conception rates using fresh or frozen semen of 25 - 55% success.

The ewes that are selected for the AI procedure are given a shot of CD&T as well as a vacation 30 days prior. In addition, if parasites are suspected, either Ivermectin or Safeguard is used about 45 days prior.

On the day of demonstration, frozen semen was used. The technician had selected the semen. He traveled to Australia to locate Rams that would produce the desired genetics. On this day, he was using ¼ cc straws (At \$60 per straw). It is preferable to select ewes that have given birth at least once before. This ensures the nurturing process instinct after the AI lambs are born.

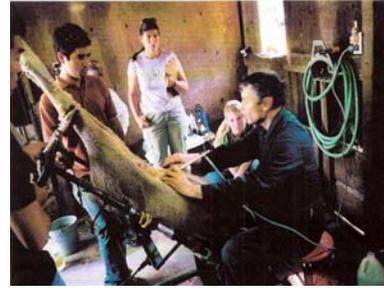
In addition, the ewes are kept off feed and water for at least 24 hours prior to the procedure. This ensures the Rumen and bladder are empty, as a puncture to either would have serious complications.

The selected ewes are first given a hormone to hasten conception rate approximately two weeks before by inserting a sponge into the vagina. The hormone given is progesterone. This prevents the ewe from coming in Estrus.

The selected ewes are gathered into a holding pen for the procedure to begin.



Ewes in holding area prior to procedure



A view of the holding cradle

The animal is then brought to the cradle and locked into position. At the incision site, she is shorn, and ben amine is applied, following by cleaning with an alcohol solution. She is tiled head down to an 85-degree angle. This moves organs away from the surgical area.



Two small puncture wounds are then created into the uterine and the uterine horns are located by endoscope. When properly located, the semen is then inserted via a straw. The apparatus is then removed, an antibiotic spray is administered, and a clip applied for bleeding control.



The event is over, having taken less than 5 minutes. Usually, she is up and about immediately. She should be monitored for the first 19 days, as this is the most important time to make sure she has returned to normal activity and all stressful conditions have been resolved.

The purpose of this program is to enhance genetic improvements in a rapid way. By selection, the producer is able to obtain immediate results, rather than through generations of effort. It is apparent that this is something a novice would not undertake, given the cost and the equipment required. But it does give us a better sense of the technology being developed in this industry.
