## **Ovine Laparoscopic**

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take less than 10 minutes. Most ewes stand as soon as they are released from the cradle and suffer no after effects. As with any surgical technique, there can be complications. But these are rare and usually are minor.

Pregnancy rates vary depending on the breed, the season and the semen quality. Highly fertile ewes under excellent management and bred in season can experience pregnancy rates as high as 80%, although more typical ranges are from 40 to 70 percent in season.

These kinds of pregnancy rates make this procedure very practical for valuable animals and open up the possibility of using imported frozen semen from some of the most valuable males in the world.

Another assisted reproductive technique that is gaining in popularity with small ruminant breeders is embryo transfer.

Embryo transfer greatly increases the potential number of offspring that a single, valuable female can produce in a year.

This can be of great economic benefit to producers and also can help propagate valuable genetics on the female side.

For this procedure, the donor animal's estrous

cycle and the estrous cycle of a group of recipient (surrogate) females are synchronized hormonally. Additionally, the donor animal is given hormones that make her ovulate a very large number of eggs (sometimes more than 10 each cycle). The donor is bred either naturally or laparoscopically at a set time.

Several days after the breeding, the donor ewe is placed under anesthesia. A surgical incision is made in her abdomen and her uterus is exteriorized. A small incision is made in the uterus and a tube is threaded into the uterine lumen. Flush media is injected through the catheter and collected.

Hopefully, this media rinses the embryos out of the uterus. The media is searched under a microscope and embryos are identified. The incision is sutured closed and the ewe recovers from the anesthetic. Any resulting embryos can be frozen for long term storage or they can be immediately transferred into a synchronized recipient.

For the actual embryo transfer, the recipient ewe is sedated and an appropriate number of embryos are placed into her uterus with the help of the laparoscope. The recipient ewe then carries the pregnancy for the donor ewe.

As many as 15 embryos can be recovered from a single flush, although more typically the number ranges between five and ten.

