Embryo Transfer Services of SA
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EMBRYO TRANSFER IN SHEEP AND GOATS

Requirements

- Healthy stock in good condition. Ewes/does with bad feet and unsound udders should be discarded.
- Good Facilities including fencing.
- Good nutrition for the duration of the program.
- Ewes/does should be ear tagged or branded.
- Lambs/Kids to be weaned at least one month prior to starting the program.

Facilities

- Surgical area. This should be clean, dust free, well lit with power, and clean water available. An area of a shearing shed is often suitable.
- Embryo Handling Area. This also should be clean, dust and draught free with power available.
- Holding pens for donors and recipients.
- Preparation area for recipients.
- Recovery area for donors and recipients.

Nutrition

Supplementary feeding of lupins 100g/head/day for the donors and recipients for 2 or 3 weeks prior to the program is recommended. However donors and recipients should not be fat. Make sure any mineral deficiencies have been corrected.

Wethers are treated with testosterone eg., Banrot 2x2ml injections 2 weeks apart to act as teasers and run at 4% with the female flock.

Shear and complete general husbandry for all animals prior to the program.

The ET Program

Donors and recipients have their heat cycles synchronised with CIDRS. These must be inserted with careful attention to hygiene. CIDR must be inserted in a clean, dust free area.

Lubricate the applicator by placing it in a disinfectant solution.

Insert the CIDR into the rear end of the applicator with the string hanging free.

Carefully insert the applicator 10 cm into the vagina.

After each insertion the applicator should be placed in mild disinfectant solution.

CIDRS are inserted for 11 to 21 days according to the program.

Donors are treated with superovulatory drugs over a few days and have their CIDRS removed to allow a synchronous heat.

Recipients have their CIDRS removed 12 hours before the donor.

If a CIDR can not be found then record that animal for examination at a later stage.

Recipients are also injected with P.M.S.G. at the time of CIDR withdrawal. The P.M.S.G. comes in a freeze dried form and is made up by diluting with sterile water.

The dose of P.M.S.G. is usually 400 iu.

Heat detection then begins using wethers fitted with Sire Sine harnesses, with most donors and recipients coming on heat over the next few days.

Donors are then hand mated every 12 hours while on heat or artificially inseminated (poor results with goats with frozen semen) according to the program. CIDRS are generally reinserted 2 days after AI until embryo collection.

At least 12 hours before embryo collection donors and recipients should be taken off feed and water.

Embryos are collected from the donors 8 days after donor CIDR pull.

Embryos are evaluated and then transferred 1 or 2 at a time to selected recipients. The recipients have their reproductive tract checked with a laparoscope just prior to embryo transfer.

Good quality embryos can be split and then both halves will be transferred to the one recipient. After surgery animals are penned in clean warm area overnight to recover fully from the surgery before being turned out into a clean sheltered paddock the next day.

It is important to minimise stress, as stress can have a big impact on conception rates particularly with goats.

Average conception rates are 60% for whole embryos and 50% for demi embryos.

Average collection rates vary enormously but are usually around 6 embryos per sheep donor & 8-10 per goat donor.