

Oocytes are retrieved from donor cows or heifers via ovum pickup, which consists of a vacuum pump system and an imaging system (normally, ultrasound equipment), combined with an aspiration needle that is inserted into the ovary to recover oocytes from follicles, mainly on the ovaries' surface layer.



Once all follicles are aspirated from the ovaries, the fluid containing oocytes is taken to a laboratory and a stereomicroscope is used to identify and grade the oocytes.



After selection, the oocytes are placed in a petri dish with IVM media for 24 hours (day -1).

- After maturation, oocyte fertilization is performed with selected semen from one or several sires, depending on the number of oocytes and number of embryos desired. During this process, sperm are concentrated and capacitated, and subsequently placed with a pool of oocytes in droplets (IVF; day 0).
- After fertilization occurs, cleavage is calculated by counting how many oocytes became fertilized.
- Non-fertilized structures are removed and zygotes are transferred to IVC (day 3)



At the end of the process (day 7), embryos are graded, based on the International Embryo Transfer Society protocol, according to stage of development and morphology, and are transferred into synchronized recipients.

- Surplus embryos are typically vitrified or frozen for future use.
- Alternatively, embryos can be transported on day 6 and arrive at the farm in a mini incubator. These embryos are graded at their final destination to ensure viability and are transferred into recipients within 24 hours.