



MAY 2025 DAIRY NEWSLETTER

Kirkton Veterinary Clinic's 2024 Embryo Transfer and OPU/IVF Data

Conventional Embryo Transfer		
Number of Donors Flushed	629	
Number of Transferrable Embryos Produced	4292	
Average Embryos per Flush	6.82	
Donor Demographics		
Dairy Donors	87%	
Beef Donors	13%	
Semen Demographics – Dairy		
Conventional Semen	31%	7.9 embryos/flush
Sexed Semen	69%	6.0 embryos/flush
Semen Demographics – Beef		
Conventional Semen	96%	8.4 embryos/flush

Ovum Pick-Up (OPU) / In Vitro Fertilization (IVF)	
Number of OPU Collections	420
Total Oocytes Collected	7408
Average Oocytes per Collection	17.64
Total Transferrable Embryos Produced	2662
Average Embryos per OPU Cycle	6.34
Donor Demographics	
Dairy Donors	71%
Beef Donors	29%
Semen Demographics – Dairy	
Conventional Semen	23%
Sexed Semen	77%
Semen Demographics – Beef	
Conventional Semen	78%
Sexed Semen	22%

Total number of embryos exported in 2024: **531**

Country	Number
Australia	115
Northern Ireland	107
United Kingdom	45
Japan	41
Korea	36
Portugal	33
New Zealand	28
Spain	26
Germany	21
USA	19
Switzerland	16
Denmark	15
Ireland	15
Holland	10
Italy	4

Trends we are seeing:

- 1) Slight decline in the number of conventional embryo transfer produced embryos exported:
 - a. Implementation of stricter donor and sire/semen requirements to be able to qualify for export. These requirements are country specific and add cost and steps to the process. Recently, the EU and New Zealand implemented challenging restrictions, however we have systems in place to make the process run smoothly. We expect to see more of these sorts of restrictions introduced/modified in the future.
 - b. World milk price was below average for the first half of 2024 = less disposable income for embryo purchases.
 - c. The continuous shift from conventional embryo transfer to OPU/IVF, as per #4 below.

Something to think about – are the genetics in other countries “catching up” to Canadian genetics? This could be a result of previous embryo exports and readily available modern sires/semen globally.

- 2) Sexed Semen:
 - a. Quality of sexed semen continues to develop/improve resulting in better flush results and more heifer calves!
 - b. Most sires are now available with sex-sorted semen.
- 3) Recipient Costs:
 - a. With the continued increase in replacement costs and the decrease in availability of replacements, it may become cost prohibitive to purchase females to use as recipients. If non-dairy replacement calves and cull cow prices remain strong, then purchasing recipients is still a possibility. However, using a producer’s own replacements is also still a viable option.

- 4) Shift from conventional embryo transfer (ET) to ovum pick-up (OPU)/in vitro fertilization (IVF) continues:
- a. As OPU/IVF technologies continue to develop and results continue to improve, the trend is to move towards OPU/IVF. Although OPU/IVF is more costly, the ability to collect donors every 2 weeks results in rapid genetic gains. Globally, approximately 80% of bovine embryos are produced through OPU/IVF.
 - b. OPU/IVF offers the ability to use less doses of expensive semen per cycle compared to ET.
 - c. Pregnant donors can be collected, allowing producers to keep their donors in production and continue to harvest genetics at the same time!

As a reminder, we have purebred beef embryos in inventory for the following scenarios:

- 1. Problem breeders
- 2. Higher pregnancy rate than AI during periods of heat stress
- 3. Purebred beef calves bring a premium when sold

Beef embryos are \$100/embryo