

## DYNAMICS OF EXPORTING KIKONUI® SEMEN AND EMBRYOS

All exports are controlled by the import health protocol conditions set by the importing country's government. They are contained in an established document that sets out preliminary donor and farm health tests, guarantees about status of various diseases in New Zealand and on farm, quarantine requirements, and conditions for collection, processing and exporting semen and embryos. Inevitably such details are complex and can require considerable time to negotiate and agree between the authorities concerned. That all has significant costs.

If an agreed protocol exists then export process is relatively easy, but if not, there is not only cost but perhaps significant time involved in establishing a new one.

Despatch of frozen semen and embryos is by airfreight in a tank holding liquid nitrogen. Customers can either buy a tank or hire one. It may be needed for subsequent storage.

As collected quantity of semen or embryos is usually significant, we often need a reasonably large order from one customer, or a grouped order from several customers in the same country. We can sometime work to establish group orders.

Insurance to cover transport and storage is the responsibility of buyers

Any costs incurred above will be met by the importer.

### SEMEN

We collect only from proven bucks with suitable parentage that have met our performance standards. Physical collection is relatively straightforward and semen yield is usually high. Semen is tested and approved for viability and fit for purpose, and frozen in 0.25cc straws.

We do not normally hold stores of semen because we believe that succeeding generations of bucks will be better than earlier ones, and do not want to provide less than premium genetics. Consequently we need specific orders to justify collection.

### EMBRYOS

Embryos are often the easiest method of shipping genetics as the processes used can reduce disease risks, and reduce health requirements. However that can be balanced by the collection dynamics.

We never know in advance how many exportable embryos will be collected from a donor doe, and the yield can range for 0-35 in our experience over many years. Customers also want a mix of genetics so do not want all embryos by one sire. Consequently we have to put up a sufficiently large number of does mated to several bucks to ensure adequate embryo numbers to meet an order. For example, a recent collection used 12 does of which one produced no embryos, and one produced 33 by one buck. Total collected for export was 140. We have to work on likely averages that needs a reasonable number of donors and bucks to create a sufficient sample for that arithmetic to work satisfactorily for the customer.

Customers have the advantage that we collect only from top does because not all embryos are suitable for freezing and export. However they are suitable for fresh implant at collection time into our own recipients, so obviously we would not waste that opportunity on lower quality does.