## Marketing Genetics

(Continued from Page A30)

And then, the embryos don't sell themselves, and the flushing businesses generally aren't in the business of marketing embryos for clients — they're busy enough flushing for all purposes.

Kirby said that they research a purchase before they make it and they follow up.

"It takes a lot of phone work," he said. "You got to let people know what you got."

Of course, it would appear that the most profit from paying for an expensive female to flush and using top-demand semen, would be to keep the embryos and resulting heifer calves.

But that can also tie up much working capital and reduce immediate available cash to the point that immediate bills can't be paid

esily.

On the other hand, investing the capital and selling the frozen embryos can result in a fairly quick armaround on investment.

In addition to the purchase price of a flush-cow and semen, the vetrinarian's costs for flushing, palnating, cleaning, grading and freezing embryos, there is an outlay for testing of the dam to achieve an international health certificate and other tests that different countries may require.

The expenses are real, but after the 30 days needed to get the flush cow's health tests, and then the 30 days for oversees shipping, those selling frozen embryos can expect a return on investment by as early as 60 days from time of flush.

According to Horsts, return on investment is usually within 90



On the left, Kirby Horst stands with Nelson Troutman who goes over some of his helfers and cows as possible recipients of lesser quality fertilized embryos, while veterinarian Bea McGrath checks for readiness to accept an embryo.

days

The act of flushing is interesting, in that the womb is irrigated with sterile saline solution and the fluid aspirated into a filter. The filter resembles a small screw lid jar and has a fine mesh screen inside.

The flow of the filter drain tube is kept so that a reservior of fluid remains in the jar, so that the eggs are captured but not dried out.

Once the initial flushing procedure is completed, the filter jar containing the last of the flushing fluid and potential embryos is taken to a lab.

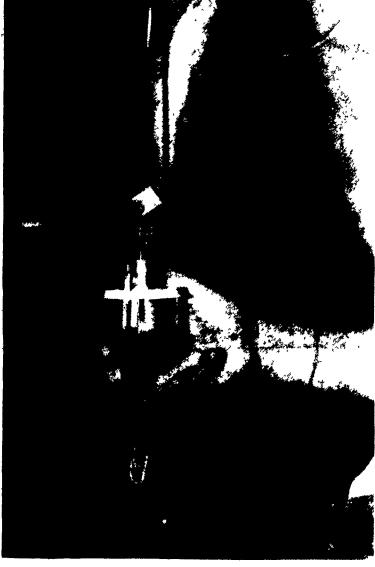
Next Generation uses a portable lab van, which was under vehicle repair the day the Horsts had flushed. Instead, Kirby allowed the use of his barn office to serve as a temporary laboratory.

The flush fluid is flushed into a petri dish then examined with a 100-power disecting microscope.

Underneath the microscope, the technician looks for embryos. They are separated, graded, and rinsed in three different solutions: an ovum culture medium without calcium or magnesium, trypsin to clean the outside of the egg (the zona pellucida), and finally in an ovum culture medium with serum added.

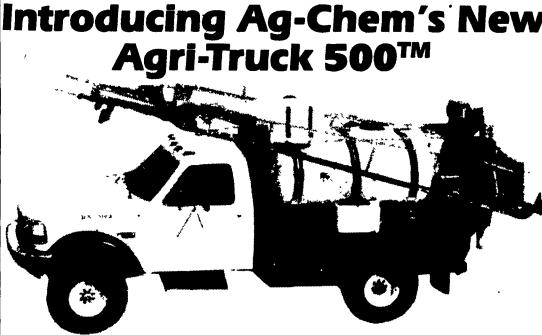
(The exact number of rinsings depends on where the embryos are headed. For export, the embryos are rinsed 12 times.)

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A sterile saline solution flows by gravity into the uterus where eggs are flushed and captured in this filter device.

This series of small vials contain embryos and is used to wash them in various solutions, as required by the different countries to where the embryos are to be exported.



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