

Jamaica Welcomes First Brahman Embryo Transfer calves

Dr. Michael Motta

The development of four (4) native tropical cattle breeds in Jamaica during the 20th century has been a significant achievement. A collaborative embryo transfer (ET) project with Lincoln University Missouri, USA was initiated in mid 1980's. This project introduced ET to Jamaica with moderate success. The first calf born to ET was a Jamaica Hope with a surrogate Red Poll dam.

A collaborative ET project between WINDALCO and the Veterinary Service Department (VSD) of the Ministry of Agriculture began in March 2008. Only local expertise was used in this project. Several calves were produced from three (3) breeds namely Jamaica Hope (JH), Jamaica Black (JB) & Jamaica Red Poll (JRP). Although attempts were made to produce ET calves from Jamaica Brahman (JBrah) donors no calves resulted.

In January of 2016 for the first time, four (4) Jamaica Brahman calves were produced by ET. A set of female twins born to a JH surrogate and two males born to a JRP and JB surrogate respectively. Unfortunately, one of the twin calves was stillborn. Work currently being done with Jamaica Brahman is a collaborative project between Dr the Honorable Karl Wellington, a renowned animal geneticists/cattle breeder, and Dr Michael Motta, a veterinarian. More Brahman calves are expected in July of this year and freezing of embryos is presently being done. Indeed, the development of local competence in ET with cattle has attained a moderate level of success with our four (4) native breeds.

With regard to comparative medicine, work done locally by Professor Frederick and his team at the Hugh Wynter Fertility Unit (HWFMU) produces babies by *in vitro* fertilization. This technique involves fertilization of the ovum (egg) outside the uterus and the resulting embryo placed in the uterus for implantation and development into a foetus.

Although *in vitro* fertilization is practiced in bovine ET, work currently being done uses the *in vivo* technique of fertilization where the semen is artificially inseminated (AI) into the body of the uterus of the donor. Embryos are flushed from the uterus seven (7) days later and viable embryos implanted in the uterus of the surrogate. The surrogate carries the calf to term and raises the calf as her own up to the time of weaning.

There is an excellent potential for the expanded use of ET in the cattle industry locally. Genetic conservation of our four (4) tropical breeds is critical. Multiplication of the best of each breed through ET could secure rapid improvement of the breeds. With the growing challenges associated with the live export of cattle, the technology of ET offers opportunities to be exploited in the export of our cattle breeds across international borders.

PHOTOGRAPHS BELOW

Embryo Transfer Brahman Calves



Jamaica Hope Surrogate with Brahman ET female calf



Jamaica Black Surrogate with Brahman ET male calf



Jamaica Red Surrogate with Brahman ET male calf



Jamaica Black and Hope Surrogates with three ET Brahman calves (2 males & 1 Female)



Jamaica Black Surrogate with Brahman ET male calf



Jamaica Red Surrogate with Brahman ET male calf

