



FIJI'S FIRST BATCH OF EMBRYOS PRODUCED LOCALLY



The Australian Veterinarian Dr Doug Watson flushing embryos from the donor cow at Sigatoka Research Station

The Ministry of Agriculture and Waterways has achieved a significant milestone by locally producing the embryos to boost elite cattle breeds in Fiji.

The Managing Director of Australian Reproductive Technologies, Mr. Simon Walton who is leading the research team on improving Fiji's dairy and beef industry by implementing the Embryo Transfer Technology program, said that 7th June, 2024 should go down in Fiji's history books as the very first cows that were produced from the embryo transfer technology back in 2018 and 2019, were used to make embryos locally through the Multiple Ovulation Embryo Transfer (MOET) process.

Mr. Walton expressed his deep gratitude in being part of the team in this historic achievement, crediting the entire Animal Health & Production team.

"This wouldn't be possible without the great leadership of the Livestock Research Section staff."

"For our first attempt, we decided to perform MOET on a limited number of elite Brown Swiss

and Senepol females, resulting in the selection of six donors, two Brown Swiss and four Senepol cows," he said.

"We induced multiple ovulations in the cows using hormones, which caused them to produce and release many eggs. The eggs were inseminated using either a bull through natural mating or artificial insemination, which led to the formation of embryos. We left these embryos to develop inside the cow's reproductive tract for seven days before flushing them out," explained Mr Walton.

He said on average, they expected the cows to produce around five embryos each because the process of MOET allows the production of many embryos from one cow.

"Normally, a cow gives birth to one calf per year in a standard reproduction process. However, in this scenario, we have been able to collect five to eight embryos from a single cow," said Mr Walton.

Through this procedure, the research team with the help of the Australian Veterinarian, Dr Doug Watson has succeeded in flushing

18 embryos from six cows.

"The embryos are currently stored in the liquid nitrogen tank for long-term preservation until their future use, either in embryo transfer or as a backup for our valuable genetics," said Mr Walton.

Mr Walton added that these embryos will eventually be transferred to other cows with the expected pregnancy rate of 50 percent resulting in nine calves from a single production.

"A highly productive cow has the potential to produce 20 calves per year by performing this procedure four to six times annually. It's a method to replicate elite genetics on a large scale, enabling the Ministry of Agriculture to expand its numbers and nucleus herd program. This also enables in distribution of those genetics to the private sector."

Now that Fiji can produce embryos, he said we no longer have to rely on other countries for access to those elite genetics. However, to avoid inbreeding, we need to bring in new genetic material from other countries to maintain genetic diversity within our herd.

DRAINAGE BOARD TO SOON COMMENCE WITH WORKS



L-R - Deputy Secretary Agriculture Development - Dr Tekini Nakidakida, Chairman of Western Drainage Board - Mr Vinod Kumar, Chairman of Northern Drainage Board - Mr Gyan Chand, Chairman of Central Drainage Board - Mr Semi Matalau, Permanent Secretary for Agriculture and Waterways - Dr. Andrew Tukana and Director Waterways - Mr Marau Vuli after the signing of MoU at the Ministry's HQ in Raiwaqa

The Ministry of Agriculture and Waterways signed the Drainage Board Agreement on Monday 10 June, which will see the deployment of around FJD\$3.4million to the three Drainage Board Committee that was appointed in April this year in the Central, Western and Northern Divisions.

Agriculture and Waterways Permanent Secretary, Dr. Andrew

Tukana said that the signing marks a pivotal moment in the collective efforts to enhance sustainable water management and agricultural productivity in our region.

"I would like to acknowledge the invaluable contribution of the three Drainage Board Chairman as their expertise, dedication and tireless efforts will certainly be instrumental in steering the Drainage Board

into the future. The work you do is vital in ensuring that our water management systems are efficient, resilient and capable of supporting the needs of our farmers and communities," said Dr. Tukana.

"The signing of this agreement symbolizes more than just a contractual commitment. It represents a unified approach to tackling the challenges posed by

water management and climate change. By joining forces, we are not only securing the future of our agricultural sector but also safeguarding the livelihoods of countless individuals who depend on it."

Director for Waterways, Marau Vuli said that effective drainage systems are the backbone of successful agriculture.

"They protect our lands from flooding, ensure optimal water use and enhance soil health. With this agreement, we are laying the groundwork for a brighter more sustainable future where our farmers can thrive and our communities can flourish. As we move forward, let us remain steadfast in our dedication to innovation, sustainability and collaboration. Together we will create a resilient agricultural landscape that can withstand the tests of time and nature," said Mr. Vuli.

Central Division Drainage Board Chairman, Semi Matalau says that there is a great demand for work to be carried out.

"We have been visiting the communities in the divisions and hearing the plight of farmers with

regards to drainage problems which has affected their crop production over the years. Today's signing marks the start of the work and we ask the farmers to be rest assured that we will now get to work once funds are released to our respective divisions," explained Mr. Matalau.

Chairman for the West Drainage Board, Vinod Kumar is encouraging farmers to contact them or visit their office in Lautoka if they need to raise their issues.

"Talk to us so that we are able to come around and assess the various drainage and irrigation works that need to be carried out."

North Drainage Board Chairman, Gyan Chand says farmers faced a lot of hardships when the Drainage Board was dis-established by the previous administration.

"We thank the Ministry of Agriculture and Waterways for believing in us. We now have our work cut out for us and we hope to achieve our goals which is to ultimately grow agriculture in the years to come," said Mr. Chand.

The respective Drainage Board members were all selected in April of this year and will soon begin work with the deployment of funds.

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