

11 November 2025

Zelka Linda Grammer
Chair
GE Free Tai Tokerau

By email: linda.grammer@gmail.com

Dear Linda

Official Information Act Request (PFR Ref. OIA.25.006)

We write to respond to your request for information on 10 October 2025. Your request was for the following:

We understand the relevant ERMA # is ERMA200223 (ERMA is now the EPA)

<https://www.epa.govt.nz/assets/FileAPI/hsno-ar/APP204212/APP204212-Application-Appendix-2.-Reassessment-of-ERMA200223.pdf>

Can you please provide for us documentation/ specific details of

-any benefit gained from this specific transgenic experimentation (over the last two decades)

Deaths/ animal mortality rates/ gross deformities

including

-how many cows died or were killed/ euthanized

-how many goat died or were killed/ euthanized

-how many sheep died or were killed/ euthanized

- the dollar figure of funds spent (including but not limited to NZ taxpayer dollars used) on this particular AgResearch experiment

-details of any biosecurity breaches by AgResearch, including but not limited to disposal of the transgenic carcasses (animals) ERMA200223

CLONING

-details of AgResearchs cloning programme

-how many animals (cows) were killed/ euthanized

-gross deformities, mortality rates

-the dollar figure of the cloning programme

-details of any biosecurity breaches by AgResearch, including but not limited to disposal of the cloned animal carcasses

We set out the information you have requested against your questions below.

-any benefit gained from this specific transgenic experimentation (over the last two decades)

The principal benefit gained from the work under ERMA200223 has been the enhancement of scientific understanding and knowledge. This is demonstrated through the more than 100 journal articles that have been published from the work. The following is a snapshot of these:

- Huang B.; Li T.; Alonso-Gonzalez L.; Gorre R.; Keatley S.; Green A.; Turner P.; Kallingappa P.K.; Verma V.; Oback B. A virus-free poly-promoter vector induces pluripotency in quiescent bovine cells under chemically defined conditions of dual kinase inhibition, 2011, PLoS ONE, 10.1371/journal.pone.0024501

- Brophy B.; Smolenski G.; Wheeler T.; Wells D.; L'Huillier P.; Laible G. Cloned transgenic cattle produce milk with higher levels of β -casein and κ -casein, 2003, Nature Biotechnology, 10.1038/nbt783
- Berg D.K.; Smith C.S.; Pearton D.J.; Wells D.N.; Broadhurst R.; Donnison M.; Pfeffer P.L. Trophectoderm Lineage Determination in Cattle, 2011, Developmental Cell, 10.1016/j.devcel.2011.01.003
- Javed A.; Wagner S.; McCracken J.; Wells D.N.; Laible G. Targeted microRNA expression in dairy cattle directs production of β -lactoglobulin-free, high-casein milk, 2012, Proceedings of the National Academy of Sciences of the United States of America, 10.1073/pnas.1210057109
- Alonso-González L.; Couldrey C.; Meinhardt M.W.; Cole S.A.; Wells D.N.; Laible G. Primary transgenic bovine cells and their rejuvenated cloned equivalents show transgene-specific epigenetic differences, 2012, PLoS ONE, 10.1371/journal.pone.0035619
- Van Leeuwen J.; Berg D.K.; Smith C.S.; Wells D.N.; Pfeffer P.L. Specific epiblast loss and hypoblast impairment in cattle embryos sensitized to survival signalling by ubiquitous overexpression of the proapoptotic gene BAD, 2014, PLoS ONE, 10.1371/journal.pone.0096843
- Couldrey C.; Wells D.N. DNA Methylation at a Bovine Alpha Satellite I Repeat CpG Site during Development following Fertilization and Somatic Cell Nuclear Transfer, 2013, PLoS ONE, 10.1371/journal.pone.0055153

Deaths/ animal mortality rates/ gross deformities including

-how many cows died or were killed/ euthanized

-how many goat died or were killed/ euthanized

-how many sheep died or were killed/ euthanized

Data on animal numbers for each species, including mortality and euthanasia rates, any significant deformities and other animal welfare matters are set out in AgResearch's annual reports to ERMA and the EPA. These are publicly available on the EPA website under the page for the ERMA200223 approval, at <https://www.epa.govt.nz/database-search/hsno-application-register/view/ERMA200223/>.

- the dollar figure of funds spent (including but not limited to NZ taxpayer dollars used) on this particular AgResearch experiment

We have assumed you had intended that we include our transgenic work over the past two decades total (ERMA200223 itself was granted in 2010, but our transgenic work precedes this). The total of expenditure on transgenic work from 2005 to 2025 is \$26,238,000 (plus GST), based on the accounting records of AgResearch that we hold. Please note there may be errors and omissions owing to the passage of time, including the departures of key research staff who were involved in this work.

-details of any biosecurity breaches by AgResearch, including but not limited to disposal of the transgenic carcasses (animals) ERMA200223

There have been no biosecurity breaches in relation to ERMA200223. All animal carcasses have been disposed using the EPA-approved method of offal holes within the containment facility.

CLONING

-details of AgResearchs cloning programme

AgResearch's cloning work utilised somatic cell nuclear transfer, the same methodology used for the transgenic animal work. It was carried out within the animal containment facility used for AgResearch's transgenic animal work.

-how many animals (cows) were killed/ euthanized

-gross deformities, mortality rates

Based on the information we have been able to locate, we believe the following table identifies the numbers of cattle involved and their summarised cause of death, which indicates any underlying health issues which contributed to their deaths.

Cause of death:

	At birth	0-2 hr	2-24 hrs	1d - 1w	1 wk - 1m	1 - 3m	3 -6 m	6m - 1y	1-2y	2-3y	3y +	
Anaemia	0	0	0	0	0	0	0	0	1	0	0	1
Bloat						1	1	1			0	3
Chronic lameness/Euth									1		1	2
Clostridial										1		1
Musculoskeletal deformity/Euth	1	1	1		1		1		1			6
DIU	4											4
Dystocia	3											3
Gastroenteritis			1	5	1	2						9
Generalised infection				2	2							4
Grain overload										1		1
Haemorrhage			1	1								2
Heart failure	2						1					3
Kidney related							1	1	1			3
Lung infection						1						1
Misadventure									2			2
Neonatal respiratory distress		2										2
No diagnosis	5	1						1				7
Lungworms								1				1
Ryegrass staggers/Euth									1	1		2
Spinal fracture	2	2	3	1								8
Deaths	17	6	6	9	4	4	4	4	7	3	1	65

From our records, a further 68 animals were born for which we have no indication of underlying health issues, and which would have been either euthanised during the course of the research or on the closing of the Ruakura containment facility. This is the best information we have been able to locate from the AgResearch records of the time, but as elsewhere, it may not be a complete record owing to the passage of time.

-the dollar figure of the cloning programme

The cattle cloning work was not a separate programme of work isolated from the transgenic work. We have identified \$18,100,000 (plus GST) of project costs which related to cattle work during which cloning was undertaken. The majority of these costs were included in the figure quoted above for transgenic work. There were cloning-specific production and disposal costs that we could identify of \$43,000 (plus GST) which were not included in the above transgenic work total. Please note there may be errors and omissions owing to the passage of time, including the departures of key research staff who were involved in this work.

-details of any biosecurity breaches by AgResearch, including but not limited to disposal of the cloned animal carcasses

There were no biosecurity breaches in relation to the cloning work. All animal carcasses have been disposed using the EPA-approved method of offal holes within the containment facility.

You have the right to seek a review by the Ombudsman in relation to you request and our response. Information about how to make a complaint is available at www.ombudsman.parliament.nz or freephone 0800 802 602.

Yours sincerely,

Nick Barraclough
Chief Legal Counsel