

HOW 3D GENETICS USED VYTELLE TO IMPROVE FEED EFFICIENCY, PREGNANCY RATES, AND BEEF VALUE



Joe Grose, General Manager

3D GENETICS
DISCIPLINED DATA-DRIVEN



ABOUT 3D GENETICS

Based in New South Wales, Australia, 3D Genetics is a top source of male Wagyu genetics providing approximately 15% of the industry's bull power. They've been around since 1997, and pride themselves on utilizing the most up to date technologies and work with scientists to ensure that the data used to drive their genetic selection is objective rather than subjective.

3D Genetics' challenge: A need for stronger pregnancy rates, faster herd growth, improved feed efficiency, and better beef quality.

How Vytelle helped: Using both Vytelle SENSE™ and Vytelle ADVANCE™ technology, 3D Genetics optimized its herd and gained feed efficiency (and associated cost savings), while also producing more valuable beef.

THE PROBLEM

3D Genetics wanted to increase pregnancy rates and grow their herd faster. They also wanted to breed cattle that would grow fast, calve easily, raise a good calf, rebreed well, and produce quality beef with high marbling, large rib eyes and increased retail beef yield that would increase value in the supply chain. But they had struggled to find an IVF company in Australia that produced strong results.

On top of their breeding goals, 3D Genetics has been working to improve feed efficiency, save money and be a better steward of the environment for twelve years now.

THE SOLUTION

3D Genetics partnered with Vytelle to use two of its products:

Vytelle SENSE™ Vytelle's individual animal data capture system collects feed intake and in-pen weight measurements to identify elite-performing animals to boost genetic selection choices. Low-contact devices collect key data — with no stress on the animal.

Vytelle ADVANCE™ Using the most modern *in vitro* fertilization (IVF) technique available, Vytelle multiplies genetics from elite-performing animals to reduce uncertainty and help producers optimize herds.

THE RESULTS

Thanks to the partnership with Vytelle, 3D Genetics was able to unlock:

Improved feed efficiency: Using the Vytelle SENSE technology, 3D Genetics was able to determine there were many animals that could eat 10-15% less — and still maintain the same kilogram output. 3D Genetics has collected more feed intake phenotypes than any other breeder in Australia. Internal trials at 3D Genetics, reducing feeding periods by 150 days, have shown promising results with resultant marbling similar to Industry average.

“The long-fed Angus world and Wagyu world would benefit hugely by using the Vytelle SENSE feed intake technology,” Joe Grose, 3D Genetics General Manager, stated.

More valuable meat: The average Fullblood Wagyu animal finished in Australia has 28% intramuscular fat and 72% muscle in its ribeye. But 3D Genetics' animals now average 43% intramuscular fat and 57% muscle.

Using Vytelle, 3D Genetics has been selecting for high marbling cattle that are also feed efficient. This introduces cost savings, while still increasing beef quality.

“That's been a great find for us using the Vytelle SENSE hardware,” Grose said. “We're now getting animals that actually have much higher retail beef yield.”

Major cost savings: Feed is one of the biggest costs for any cattle producer. Any dollar amount you can save per head, multiplied across an entire herd, adds up quickly. Through

Vytelle SENSE, 3D Genetics has been able to identify and select for the most feed efficient animals — which helps producers save money in the long run.

“If you've got a \$2,500 feed bill, and you can trim 10% off that bill simply by genetic selection, and if you're feeding 3,000 to 4,000 head of cattle and can save a couple hundred dollars a head, it's a massive saving,” Grose said. “If you combine that with a more rapidly growing animal with an ability to finish much earlier on a shorter feeding regime, those savings can be doubled or tripled.”

Strong pregnancy rates: In its first year using Vytelle ADVANCE, 3D Genetics put in 204 fresh Vytelle IVF embryos, alongside 195 frozen MOET (Multiple Ovulation Embryo Transfer) embryos, in order to compare the two methods.

A 35-day pregnancy test showed that 3D Genetics achieved a 65% pregnancy rate from the Vytelle embryos, compared to 66% from the MOET ones — “we were super excited about that,” Grose said.

“There's no doubt Vytelle's IVF technology is a world apart from what's been happening in Australia,” Grose said. “That's why we've come back for our second year.”



METRICS FROM 3D GENETICS-VYTELLE PARTNERSHIP

Vytelle ADVANCE

- Conception rates: 60-65% for fresh embryos, 50-55% for frozen
- 207 A-Grade embryos from 42 donors

Vytelle SENSE

- Number of Head Tested with Vytelle SENSE: approaching 5,000 animals
- Average RFI Score: -0.2 3D Genetics EBV
- Average Feed Cost Savings Per Year: \$70 AUD per animal
- Increased AUSMEAT Marble Score by 2.5 scores
- Increased Carcass Weight by 57 pounds
- Improved RFI by 1.32 pounds on an as fed basis
- After 12 years of selection compared to similar liveweight animals:
 - Average reduction of feed per day on an as-fed basis of 1.32 pounds
 - 50% increase in marbling

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