



Impact of Peroxsil® on *Rumen Health*

CLINICAL RUMEN SAFETY ASSESSEMENT

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PEROXSIL® (DIOXIDANE) — DIFFERENT BY DESIGN

Peroxsil® is a purpose-developed formulation that sets it apart from conventional hydrogen peroxide products. It combines HOOH with a proprietary stabilisation system designed specifically for biological water disinfection and biosecurity applications.

Unlike conventional commodity hydrogen peroxide, Peroxsil® is formulated to provide controlled stability and consistent antimicrobial performance in water, on surfaces and in biological environments.

Dioxidane has natural antimicrobial properties, acting against bacteria, fungi and viruses by interacting with their genetic material and

disrupting their ability to replicate. This helps reduce microbial contamination and biofilm, making Peroxsil® a powerful tool for water hygiene and biosecurity. The result is a highly effective, biodegradable and environmentally responsible disinfectant designed for real-world biological and water-disinfection applications.

Peroxsil® is a purpose-formulated disinfection solution — not simply a bottle of commodity hydrogen peroxide. Its proprietary stabilisation technology, performance characteristics and intended application are fundamentally different.

PEROXSIL® – ENGINEERED FOR EFFECTIVE WATER DISINFECTION AND BIOSECURITY.

Dr Dave Midgley (BVSc)

Clinical Field Note
12 August 2026



THE QUESTION

Peroxsil® (Dioxidane) is an oxidising water sanitiser. Because it is intended to reduce microorganisms in drinking water, an important practical question for feedlot veterinarians is whether treated water could adversely affect rumen function, feed intake or water intake. This was observed clinically in a commercial feedlot pen comparison at Mockford Feedlot, Gauteng, under the guidance of Dr Dave Midgley.

THE TRIAL

WHAT WAS WATCHED	1	2	3
Peroxsil treated cattle compared with an untreated control group.	OBSERVATION	PEROXSIL® TREATED	CONTROL GROUP
	95 Cattle	35 Cattle	60 Cattle
DUNG-PAT SCORE		No difference	No difference
RUMINATION		No difference	No difference
CLINICAL DISEASES		No difference	No difference

The treated cattle received Peroxsil® sanitised drinking water from 9 February 2026 until the end of the first week of July 2026, while the concurrent control pen did not. Both groups were inspected daily.

Feed, Water and Growth

The cattle continued to eat, drink and grow. Because the pens differed in size and breed, performance was considered relative to live weight rather than raw kilograms.

FEED & WATER INTAKE	1	2	3	4
Average daily intake per animal - Peroxsil® treated vs control	MEASURE	PEROXSIL® TREATED	CONTROL GROUP	DIFFERENCE
	FEED INTAKE	16.77 kg/head/day	21.05 kg/head/day	20.3% lower
	WATER INTAKE	20.10 L/head/day	19.02 L/head/day	5.7% higher

The treated cattle drank slightly more water. Intake was not suppressed.

Growth Relative to Live Weight

Both groups grew inside the yards normal 0.4-0.5% of live weight band.

GROWTH RELATIVE TO LIVE WEIGHT	1	2	3
	FEEDLOT TARGET	PEROXSIL® TREATED	CONTROL GROUP
	0.4 - 0.5%	0.43%	0.45%

Water Hygiene

Maintained drinking behaviour, with improved water hygiene.

WATER HYGIENE	1	2
E.COLI PLATE COUNT	BEFORE TREATMENT	AFTER TREATMENT
	>10 000	0

Cattle continued to drink the sanitised water.

THE CONCLUSION

NO CLINICAL EVIDENCE OF ADVERSE RUMEN FUNCTION WAS FOUND.

Dung consistency, rumination and recorded illness did not differ from the control pen. Feed and water intakes were maintained. Growth as a percentage of live weight stayed inside the feedlot target band. On the observations that were made, Peroxsil® treated drinking water was clinically safe for rumen function in these cattle.

Clinical field note – rumen safety assessed on farm.
Not a rumen- microbiome study!

WHAT THE FIELD OBSERVATIONS SHOWED	RUMINATION	NO DIFFERENCE
	DUNG CONSISTENCY	NO DIFFERENCE
	FEED & WATER INTAKE	MAINTAINED
	GROWTH	WITHIN TARGET RANGE