



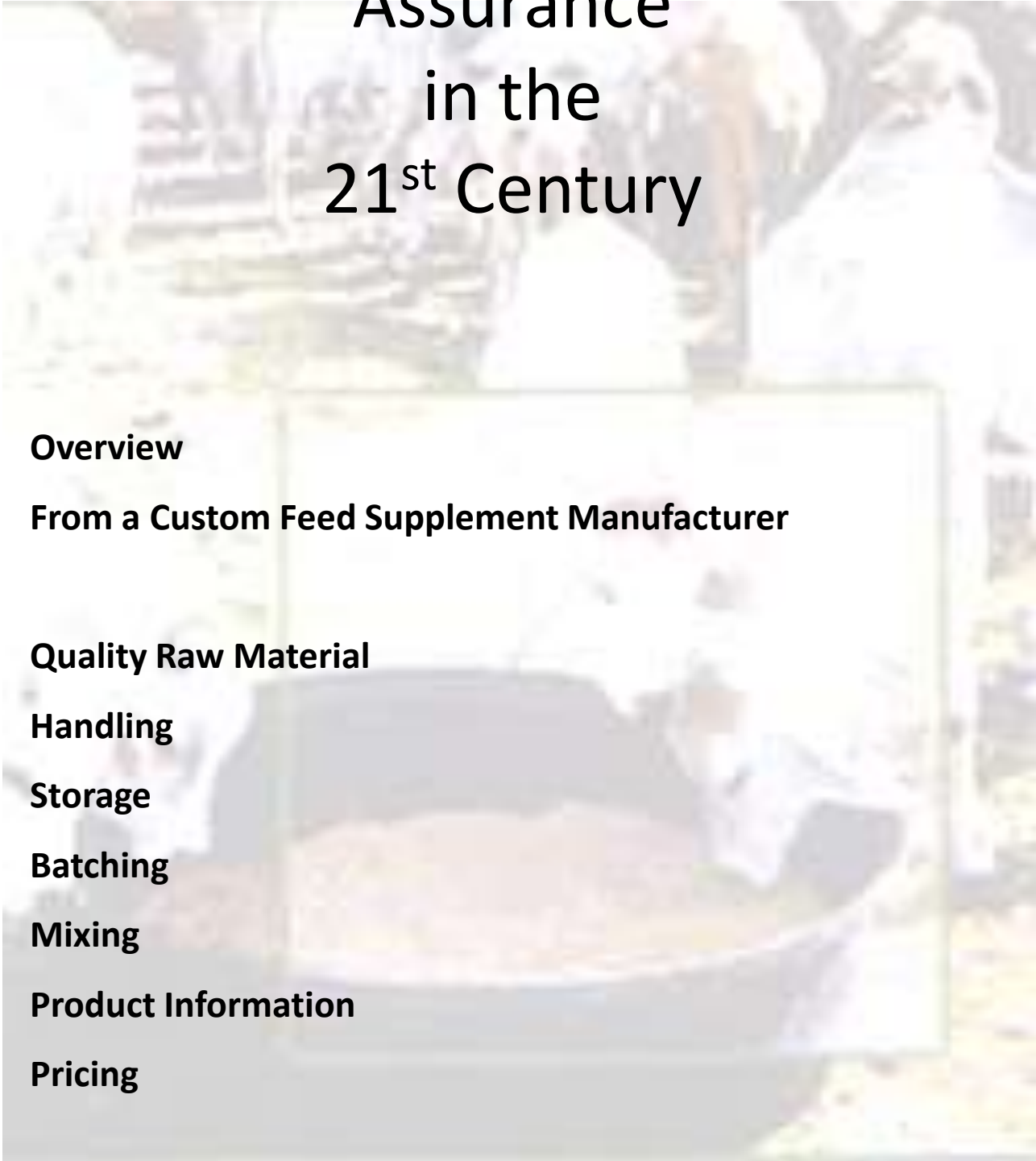
Overview on Manufacturing of Beef Cattle Supplement

Causeway Townsville

by

Peter McHugh

Quality Feed Assurance in the 21st Century



Overview

From a Custom Feed Supplement Manufacturer

Quality Raw Material

Handling

Storage

Batching

Mixing

Product Information

Pricing



Causeway Produce Agency Cattle Supplement Factory

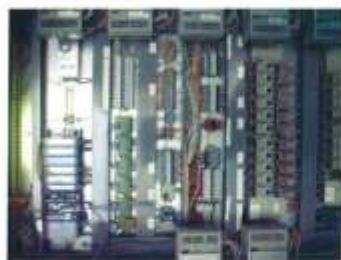
**QUALITY
Cattle Lick
Guaranteed!**

4729 0666

Causeway Produce Townsville



**TOTALLY COMMITTED TO
QUALITY AND TRUE VALUE**



Only our factory will
provide all of the
following

**CONTAMINATION
CONTROL**

- Quality raw material handling
- Process control technology
- Seven bin weighing & dispensing plant
- One micro weighing system
- Computer verified weighing
- Detailed automated production records



Provided with each *custom mix* order

- Exact analysis sheets reporting
- Exact raw material weight reporting



TRACEABILITY

**BE TOTALLY ASSURED OF RECEIVING
WHAT YOUR \$ HAS PAID FOR**









7 Computerised Batch Bins

Urea

Cotton Seed Meal

Lime

Kynofos

Gran Am

Copra Meal

Salt



Description of machinery



Pallet wrapper

CAUSEWAY PRODUCE AGENCY

1-3 Doyle Crt, Stuart, Q 4811

PO Box 221, Wulguru, Q 4811

PH: 07 4729 0666

FAX: 07 4729 0777

Ration Name:

Custom Breeder Mix

Feed	RATION		CPE	UDP	ME	Ca	P	N	S
	kg	%	gm	gm	MJ	gm	gm	gm	gm
Urea	125.000	25.0	359375	0	0	0	0	57500	0
Kynofos 21	120.000	24.0	0	0	0	19451	24896	0	1035
Gran-Am	50.000	10.0	62494	0	0	0	0	9999	11880
Cottonseed meal 43%	50.000	10.0	21384	12830	530	88	559	3450	207
Salt	95.000	19.0	0	0	0	0	0	0	0
Limestone	50.000	10.0	0	0	0	18900	20	0	0
CPA Trace Min	10.000	2.0	0	0	0	0	0	0	0
Analysis on an "as is" basis	500.000	100.0	88.7	2.6	1.1	7.7	5.1	14.2	2.62
Analysis on a dry matter basis	---	---	90.3	2.6	1.1	7.8	5.2	14.4	2.7
	kg	%	%CPE	%UDP	MJ/kg	%Ca	%P	%N	%S

Dry matter: 98%

Urea equivalent: 29.3%

Ca:P ratio 1.5:1

N:S ratio 5.4:1

The concentrate dry matter also includes:

MINIMUM DAILY INTAKE : 150.0 gm/head/day
 Dry matter intake : 147.3 gm/head/day
 Met Energy (ME) : 0.2 MJ/head/day
 CP + CPE : 133.0 gm/head/day
 RDP : 129.1 gm/head/day
 By-pass protein (UDP) : 3.8 gm/head/day
 Calcium : 11.5 gm/head/day
 Phosphorus : 7.6 gm/head/day
 Sulphur : 3.9 gm/head/day
 Fat : 0.1 gm/head/day
 Salt : 28.5 gm/head/day
 Urea equivalent : 44.0 gm/head/day
 Cost/head/day : 12.5 cents

Fat : 0 %
 Salt : 19 %
 Cobalt : 8 mg/kg
 Copper : 822 mg/kg
 Iodine : 4 mg/kg
 Iron : 1808 mg/kg
 Selenium : 8 mg/kg
 Zinc : 2449 mg/kg
 Vitamin A : 0 IU/gm
 Vitamin D : 0 mg/kg
 Vitamin E : 1 mg/kg
 Rumen Modifier (Monensin) : 0 mg/kg

Date : 18 May 2009

Cost of 1 kg CPE: 93.7 cents

Cost of 1 kg P: \$16.31

Cost of 1 MJ Energy: 78.4 cents

CAUTION - This CUSTOM LICK contains urea which is poisonous if consumed in excessive amounts.

Mixtures should be kept dry. <<<>>> Ensure a plentiful supply of roughage is available.

Use caution when feeding to starving stock. <<<>>> This Custom Lick is suitable for cattle only.

CPE = Crude Protein Equivalent RDP = Rumen Degradable Protein

ME = Metabolizable Energy P = Phosphorus Ca = Calcium S = Sulphur

Invoice number - 217419

Tonnes - 24.00

Feedcalc Ver: 11.6c - Roger Chaffins, Bundaberg.

**QUALITY
Cattle Lick
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4729 0666

Causeway Produce Townsville



Stage Report

No. of Batches	48	Formulation Code	BESTBRMG
Order ID	466	Formulation Version	1
Job ID	5992	Formulation Name	

Batch Size %	100.00	48	Job Number
	100.00	0	Customer Name
	100.00	0	
Start Time	19/05/2009	3:21:38PM	Flush Required
Finish Time	20/05/2009	11:24:16AM	
Destination Bins			

Raw Commodity

Code	Name	Rqd Amt (Kg)	Act Amt (Kg)		Yield (%)
1001	Urea	6000.00	6001.10	0.00	✓ 100.02
1002	Kynofos	5760.00	5759.70	0.00	✓ 99.99
1003	Gran Am	2400.00	2400.30	0.00	✓ 100.01
1004	Cotton Seed Meal	2400.00	2400.80	0.00	✓ 100.03
1005	Salt	4560.00	4560.90	0.00	✓ 100.02
1006	Lime	2400.00	2402.00	0.00	✓ 100.08
	Total	23,520.00	23,524.80		100.02

Micro Ingredients

Code	Name	Rqd Amt (Kg)	Act Amt (Kg)		Yield (%)
2010	CPA Mineral Mix	480.00	479.81	0.00	✓ 99.96
	Total	480.00	479.81		99.96

Total	24,000.00	24,004.61	100.02
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OK ✓
R-c

Nutrition Sheets

Raw Material Price Variation

25%	Urea	\$13.25
24%	Kynofos	\$36.00
10%	Gran-Am	\$ 2.80
10%	Cottonseed Meal	\$ 4.50
19%	Salt	\$12.16
10%	Lime	\$ 4.00
2%	Trace Mineral	<u>Nil</u>
	Total	\$72.71
Less	Kynofos	<u>\$36.00</u>
		<u>\$36.71</u>

BEC

FEED SOLUTIONS



BEC FEED SOLUTIONS

Servicing the Australian Stockfeed Industry

Quality Products

Reliable Service

Leave Nothing To Chance

PRODUCT GUIDE



BEC Feed Solutions • 50 & 66 Antimony Street,
Carole Park Qld 4300
PO Box 475, Goodna Queensland 4300, Australia •
Telephone: +61 7 3723 9800 • Fax: +61 7 3271 3080
Website: www.becfeedsolutions.com.au
ABN 36 010 345 150



Safety/Environment

"Ridley AgriProducts is committed to providing a safe and sustainable working environment for everybody"

OHS & Environmental Management Systems

Occupational health and safety (OHS) and environmental management procedures have been developed to assist all levels within the company in implementing safety systems in-line with Ridley's policy and core value of providing a safe and sustainable working environment for everybody. Our management system and procedures have been developed and written to meet the requirements of AS4801 and AS14001. A program of a combination of both internal and external auditing of our management system assures our compliance and continuous improvement.

Ridley also recognises that the farms and locations to which we deliver our products may at times present risks to the health and safety of our delivery drivers and company representatives. Ridley is obligated to ensure that the risks to health and safety of its employees while on our customer's premises are minimised with the co-operation of our customers. [Hazard Checklists](#) are used to ensure that all foreseeable safety hazards are identified.



As a corporate citizen and a major employer in many communities, Ridley recognises its responsibilities to those communities and to the environment that surrounds our plants and sites. Our commitment to environmental best practice in all our operations is clearly articulated in the company's Environmental Policy. Ridley encourages an open relationship with our neighbours and welcomes comments and communication about environmental concerns within our communities.

Ridley AgriProducts is a signatory to the National Packaging Covenant (NPC). <http://www.deh.gov.au/settlements/waste/covenant/>

Policies

[Occupational Health and Safety Policy](#)

[Environmental Policy](#)

Links

Government OHS Authorities:

Office of the Australian Safety and Compensation Council – www.ascc.gov.au

WorkCover NSW – www.workcover.nsw.gov.au

Victorian WorkCover Authority – www.workcover.vic.gov.au

Workplace Health & Safety Queensland – www.dir.qld.gov.au

WorkSafe WA – www.safetyline.wa.gov.au

SafeWork SA – www.safework.sa.gov.au

Government Environmental Authorities:

Federal Department of Environment and Heritage – www.deh.gov.au

Department of Environment and Conservation NSW – www.environment.nsw.gov.au

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QUALITY STATEMENT

Livestock Nutrition Technologies Pty Ltd is committed to the manufacture and market of quality products.

We declare that the Blocks and Loose Mixes as listed in our Price List conform to MRL Standards.

This is specified in the Commonwealth Department of Human Services and Health document "Maximum residue limits of agricultural and veterinary chemicals and associated substances", and "Maximum residue limits for pesticides in animal feed commodities" published by the

Australian Government Publishing Service, Canberra, (now under the auspices of the Australian Pesticides Veterinary Medicines Authority, (APVMA), Canberra) and amend from time to time in the Government Gazette of the Commonwealth of Australia.

In addition these products are manufactured under a Quality System certified as complying with ISO 9001: 2000 by an accredited certification body.

We also declare these Blocks and Loose Mixes are suitable for intended use.



All the products are placed in the quarantine area until the quality control inspection clears them for distribution.

Livestock Nutrition Technologies Pty. Ltd.

Animal & Livestock Nutrition Supplementation Molasses Lick Blocks
LNT, 381 Woolcock Street, P O Box 7938, GARBUTT, Townsville, Qld. 4814

FREEPHONE: 1800 811 613, Ph: 07 4779 2401, Fax 07 4725 1443

Email: nutrition@LNT.net.au

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Quality System

En
Co

ISO9001:2000 LNT
Standards

KYNOFOS™ 21



Are you having fertility problems with your cattle?

KYNOFOS™ 21 can help with its rich source of Phosphorus and Calcium

Features and Benefits:

- Improves skeletal growth
 - Stops bone chewing
 - Improves calving rate
- Enhances milk production and fertility
 - Highly bioavailable

Why is Kynofos better than DCP?

Kynofos contains Monocalcium Phosphate (MCP) and Dicalcium Phosphate dihydrate (DCP) in the ratio of approx 3:1

MCP has superior water solubility to DCP. This makes the Phosphorus in Kynofos (MDCP) more bioavailable

Ruminal availability of Phosphorus is 61.5% from DCP and 87.6% from MDCP (*Phosphorus: Ruminal availability and effects on digestion*, Witt, K.E. & Owens, F.N., 1983 J Anim Sci 56:4:930-937)

Recommended for use in concentrates, compound feeds, mineral feeds and free choice supplements for ruminants.

Total Phosphorus (P) 21%

Citric acid soluble P (as % of total P) 97%

Water soluble P (as % of total P) 75%

Calcium 16%

Magnesium 1.5%

Free Moisture 2%

pH 3.5 - 4.5



*BEC Feed Solutions are the sole Australian and NZ distributor for Kynofos™ 21

Ph: 07 3723 9800

www.becfeedsolutions.com.au



**KK Animal
Nutrition**

A KEMIRA GrowHow[®]
COMPANY

KYNOFOS 21
(REGISTRATION NUMBER V 2851)

Composition (Typical)

Total Phosphorus (P)	21%
Citric Acid soluble P (as a % of total P)	97%
Water soluble P (as a % of total P)	75%
Calcium	16%
Magnesium	1.5%
Free Moisture	2%
pH	3.5-4.5

BATCH NUMBER
PRODUCTION DATE

24.02.2009

(NB. The production date/batch number is the date of manufacture. Product has a three (3) year expiry date)

1050kg

CAUSEWAY PRODUCE AGENCY
P O BOX 119 HERMIT PARK
STUART QLD
AUSTRALIA 4811

Date : 01/02/08

Attention : PETER MCHUGH

Fax to : 0747-255236

Specifications for this product code were recently revised.
These specifications replace those supplied on 19/03/03.

Code : MODICA22

Desc : MONO-DI CALCIUM PHOSPHATE MIN

Phosphorus (%)	min 21.0
Calcium, Ca (%)	min 17.0
Fluorine, F (%)	max 0.18
Cadmium, Cd (mg/kg)	max 8
Arsenic, As (ppm)	max 15
Lead, Pb (mg/kg)	max 20
Water (%)	max 4.0
Between 20 - 150 mesh (%)	min 90.0

TYPICAL VALUES NOT ALWAYS TESTED

Relative solubility of P, in ammonium citrate, Petermann test (%)	min 98.0	-
Solubility in water (%)	50.0 - 60.0	-
Solubility of P, in citric acid (%)	98.0 - 99.0	-

Current revision number : 7
Reason : Added water.

Revised on : 01/08/07

DISCLAIMER

As the ordinary or otherwise use(s) of this product is outside the control of Redox Pty. Ltd., no representation or warranty, expressed or implied, is made as to the effect(s) of such use(s), (including damage or injury), or the results obtained. Redox Pty. Ltd. warranty is limited to that provided (if any) by the manufacturer to the standard of the material and its adherence to these above specifications. Redox Pty. Ltd. expressly disclaims responsibility as to the ordinary or otherwise use(s). Furthermore, nothing contained herein should be considered as a recommendation by Redox Pty. Ltd. as to the fitness for any use. The liability of Redox Pty. Ltd is limited to the value of the goods and does not include any consequential losses.

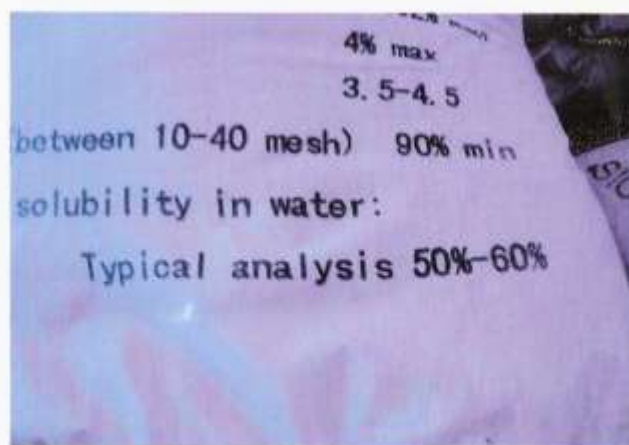
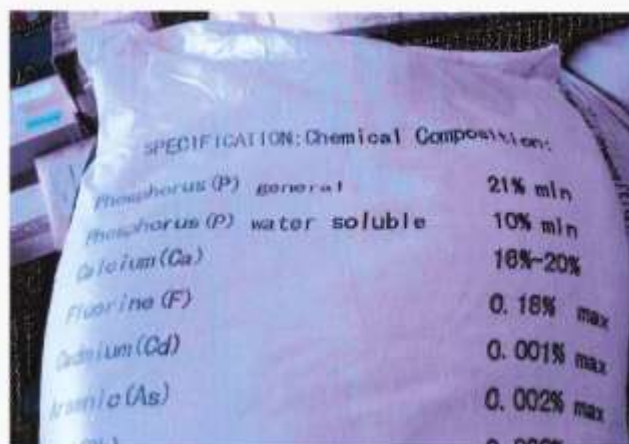
007441 17:09:04 01 Feb 2008 SHAYNE

Authorised by : Damien Barrett B.Sc
Quality Assurance Manager

Form 2122 rev 3



CHINA



Phosphorus Analysis Variation MDCP

Kynofos

21%

75%

25%

75%

16%

1.5%

2%

3.5 – 4.5%

97%

10 mg/kg

.2%

10 mg/kg

Total Phosphorus
Mono Calcium % assume
DCP%

Water Soluble

Calcium

Magnesium

Free moisture

PH

Citric Acid Soluble

Cadium

Fluorine

Arsenic

China

21%

50%

50%

50/60%

17%

?

4%

?

98/99%

8 mg/kg

.18%

15 mg/kg



CATTLE MEALS

WEANER, STEER, HEIFER & BULL

Causeway Produce has been supplying the cattle feed industry throughout Northern Queensland and Central Australia since 1971. Our three quality cattle meals enjoy a high reputation throughout this entire area. Causeway provides 16%, 18% and a 20% cattle meal. A highly valued **WEANER MEAL** for over 15 years in the yard or paddock. The varying amount of protein in these meals make Causeway cattle meals suitable for all types of cattle.

BENEFITS OF SUPPLEMENTARY FEEDING OF CATTLE

Supplementary feeding improves the weight gain and performance of young cattle grazing dry pastures and therefore yields better returns.

SPECIAL FEATURES OF THE CAUSEWAY CATTLE MEALS

- They contain a variety of palatable ingredients generously covered in molasses and prepared in a meal form.
- All three meals contain the essential nutrients necessary to maximize body frame, carcass composition and beef production.
- **Does not contain urea.** Urea can be toxic to cattle if it is over-consumed.
- Contain **natural protein** (rather than urea) that can be used more efficiently by younger cattle.
- They contain monensin sodium to prevent coccidiosis and to improve feed efficiency and growth.

Feeding Recommendations

All Causeway Cattle Meals are designed to be fed with hay or pasture. (Dry matter must be available at all times) Quality of hay or pasture will assist greatly on quantity of meal fed, making sure all animals have ample intake of dry matter before starting meal feeding programs.

Slowly introduce meal gradually over a period of time. When possible draft cattle to size and feed separately from the dominant line to assist with shy feeders. Paddock feeding move meal troughs away from water points once cattle have established intake. This will encourage dry matter intake.

	Cattle Weight	Feed Intake
Causeway Cattle Meal 16%	300 kg plus	1 - 1.5% of Body weight
Causeway Cattle Meal 18%	200 – 300 kg	1 - 1.5% of Body weight
Causeway Cattle Meal 20%	Up to 200 kg	1 - 1.5% of Body weight

Please note: These feeding rates should only be used as a guide. Pasture quality and animal condition will determine the level of feeding. Adjust feed intake to achieve the required growth and body condition.

Nutritional Analysis

Causeway 16%/18%/20% Cattle Meal Analysis

Minimum Crude Protein	16%/18%/20%	Minimum Calcium	1.0%
Maximum Crude Fibre	14%	Minimum Phosphorus	0.6%



Minimum Added Trace Minerals 16%/18%/20%

Cobalt	Copper	Iron	Iodine	Manganese	Selenium	Zinc
0.5mg/kg	12mg/kg	50mg/kg	0.5mg/kg	40mg/kg	0.1mg/kg	40mg/kg

Added Vitamins 16%/18%/20%

Vitamin A	Vitamin D3	Vitamin E
10KIU/kg	2000IU/kg	25mg/kg

Ingredients

Causeway Cattle Meals are formulated from a selection of the following ingredients: Barley, wheat, sorghum, bran and pollard, cottonseed meal, copra meal, soybean meal, canola meal, vegetable oil, molasses, limestone, dicalcium phosphate, salt, sodium bicarbonate, monensin sodium and a Beef Vitamin and Mineral Premix.

Warnings

Do not feed the Causeway Cattle Meals to starving stock.

Do not feed to dogs, horses or any other equines, as it may be fatal.

Feed only to cattle.

Introduce cattle gradually over a 2/4 wk period.

THIS FEED DOES NOT CONTAIN RESTRICTED ANIMAL MATERIAL

Endorsements

All our clients have had excellent results over a long period of feeding with Causeway meal. Many who are happy to endorse our Cattle meal lines. Evan Acton Millungera Station, David Carter Wyangarie Station, Guy Keats Bow Park Station, Gibson Family Chudleigh Park Station, Blacklock Family Haddington Station, Rondel Droughtmaster Stud Anrod Station.

Marketed & Distributed by



CAUSEWAY PRODUCE AGENCY
QUALITY GUARANTEED

Merchandising
250 Charters Towers Rd
Hermit Park Qld 4814
Ph (07) 4725 3111

Factory/Admin
1-3 McHugh Court,
Stuart, Qld 4811
Ph (07) 4729 0666

Julia Creek Branch
32 Burke Street,
Julia Creek, Qld 4823
Ph (07) 4746 7666

Hughenden Agency
25 Brodie Street,
Hughenden, Qld 4821
Ph (07) 4741 0000

Manufactured by RIVERINA (AUSTRALIA) PTY. LTD.
18 Nestor Drive, Meadowbrook, QLD, 4133



Why Feed Phosphate?

Maintenance & Development Of Your Beef Herd

- ☐ Vital to animal nutrition
- ☐ Plays a major metabolic role and has more physiological functions than any other element towards

Skeletal
Tissue
Growth

Appetite
Feed Utilization
Fertility

BE AWARE OF THE ACTUAL QUALITY AND PERCENTAGE YOU RECEIVE

Phosphate types can be as low as 40% to a high 85% availability

Product	P	Ca	Comment
Mono Sodium Phosphate	25	0	High bioavailability - cost?
Calcium Phosphates			
MCP - Monohydrate	22	16	Widely used - high bioavailability
MCP - Anhydrous	25	17	Less widely used - bioavailability?
MDCP - Hydrate	21	18	Widely used - high bioavailability
DCP - Anhydrate	20	28	Less common - bioavailability
TCP - (Anhydrous)			Seldom used - poor bioavailability
DFP - (Deflourinated Rock P)	18.5	34	Mainly poultry feed - bioavailability?

**Do you need your supplement tested?
Read on...**



Symbio Alliance
for quality assurance and guidance.

*Have confidence in the quality of your supplement
and ensure that you are receiving the right
percentages paid for.*

Contact Symbio Alliance and speak with their in-house nutritionist, Elizabeth Owens, about testing options relevant to your operation.

Tests include:

- ✓ Validation of formulation – quantify amount of phosphorus, urea, micro minerals and other additives in supplements.
- ✓ Heavy metal and residue analysis – avoid contamination of your cattle. Have raw materials screened for heavy metals and residues
- ✓ Faecal NIRS – Using manure samples to predict deficiencies in pastures.

Contact: Liz Owens 07 3340 5702 Mobile 0400 705 644
Email eowens@symbioalliance.com.au

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