

Biofos®

High Quality Phosphorus for Cattle

Wet season supplementation generates significant economic returns for graziers running cattle in the phosphorus deficient regions of northern Australia. In late 2008, during a period of record high phosphorus prices, MLA modelling estimated that the price of phosphorus supplements could triple before response to supplementation became uneconomic.

Biofos®

Biofos® is chemically defined as a mono-calcium phosphate. It is mined and refined in the USA by Mosaic and has been imported into northern Australia by Ridley AgriProducts for many years for use in stockfeed, loose lick and blocks. Mono (MCP) and mono-dicalcium phosphates (MDCP) are the most biologically available phosphates on the commercial market. Whilst dicalcium (DCP), tricalcium (TCP) and rock phosphates are cheaper per tonne, they are less available for absorption by the animal. Mosaic is certified by the American Feed Ingredients Association to be classified as "Safe Feed/Safe Food". This certification ensures that Biofos® are not contaminated with animal by-products, toxins, excessive heavy metals, and are safe for animal consumption.

Biofos® - Australian R&D

Over the last 5 years, Ridley has invested significant research dollars into demonstrating the application of Biofos® in the northern Australian beef industry, including financial and technical support in MLA funded projects.

These projects have included the recently completed research trial at Brunchilly, which investigated the effect of wet or dry season P supplementation on cow fertility in association with the use of the faecal P : dietary CP (P:N) and faecal P : dietary dry matter digestibility (P:DMD) as a diagnostic tool to indicate P status of animals under field conditions. The final report for the Brunchilly trial is due for release in late 2013.

Biofos® was also the source of phosphorus fed in a phosphorus depletion trial at the University of Queensland, Gatton, during 2011. In this trial, steers housed in individual pens were fed diets replicating those consumed by cattle during the wet season, whereby phosphorus was included at different levels. Those steers consuming phosphorus deficient diets had noticeably lower feed intake and consequently lower live weight gain after 6 weeks. Highly conservative estimates from the data suggest a minimum 0.5 kg/d difference in deficient versus adequate phosphorus diets, the equivalent of 30 -50 kg additional liveweight over the wet season.

Between 2009 and 2012 Ridley has also been working with the University of Queensland on developing a reliable laboratory test for determining the availability of phosphorus in ruminants. This is an important development because currently available tests do not properly replicate the acid environment and retention time in the abomasum of cattle. This research has demonstrated that Biofos® has the same availability to cattle as Kynophos®, which is often sold as being the highest quality MDCP on the market.

Conclusion

Domestically, Biofos is now the most tested phosphorus source available to cattle producers in northern Australia and has set the benchmark for other phosphorus sources to meet.

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Available from your local rural agent

distributed by



For further information on Biofos® or on the phosphorus research referred to above, please contact:

- Ridley AgriProducts Townsville on (07) 4759 0700 or e-mail Townsville.Sales@ridley.com.au; or
- Ridley AgriProducts Technical Manager (Beef and Sheep), Matthew Callaghan on 0429 899 622 or e-mail matthew.callaghan@ridley.com.au

Biofos®

Monocalcium Phosphate for Animal and Poultry Feed

Biofos is a feed grade monocalcium phosphate. It is produced by reacting calcium carbonate with wet process defluorinated phosphoric acid. It is a source of highly available phosphorus (P) and calcium (Ca) that will help meet animal and poultry requirements for these essential nutrients.

Benefits:

- Biofos is high in phosphorus content. Its guaranteed minimum 21% P provides flexibility and economy in formulations.
- Biofos means high biological availability. Its monocalcium phosphate content and high solubility ensure its superior biological value.
- Biofos has a narrow calcium to phosphorus ratio.
- Biofos's outstanding physical qualities provide for ease of handling and uniform dispersion in mixed feeds and minerals.
- Biofos provides maximum economy per unit of biologically available phosphorus.
- Biofos is available as bulk in vessel or container, and in 25kg, 50kg, and 1 mt poly bags.

Feed Label Information:

When adding Biofos to feeds, "calcium phosphate," "monocalcium phosphate" or "defluorinated phosphate" should appear on the feed label. Monocalcium phosphate is an ingredient listed as "Generally Recognized as Safe" (GRAS) by the Food and Drug Administration.

Specifications

GUARANTEED ANALYSIS	%
Calcium (Ca), Max.	18
Calcium (Ca), Min.	15
Phosphorus (P), Min.	21
Fluorine (F), Max.	0.21

TYPICAL CHEMICAL ANALYSIS	%
Calcium	15.7
Phosphorus	21.1
Fluorine	0.16

PHYSICAL CHARACTERISTICS	
Bulk density (loose):	59 lb/ft ³ (945 kg/m ³)
Bulk density (packed):	63 lb/ft ³ (1,010 kg/m ³)
Moisture:	1.5%

TYPICAL SIEVE ANALYSIS (TYLER)	%
Passing 12 Mesh	99
Passing 16 Mesh	88
Passing 20 Mesh	73
Passing 100 Mesh	1



Mosaic Feed Ingredients
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All Mosaic feed related facilities are Safe Feed/ Safe Food Certified by the American Feed Industry Association (AFIA).