



Feed
Ingredients

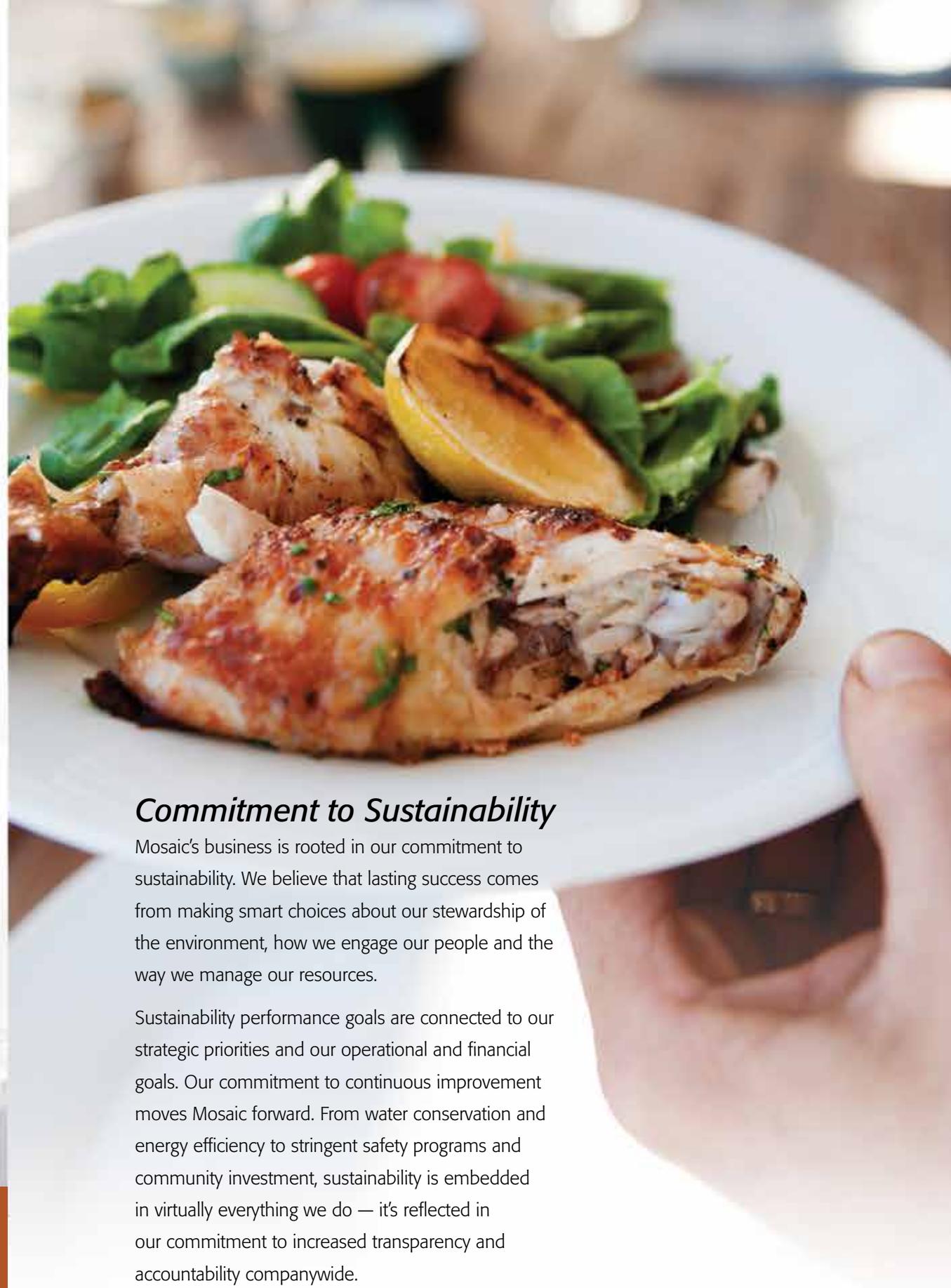
SAFE FOOD STARTS WITH SAFE FEED



Safe Feed: *The Cornerstone of the Food Chain*

Feed quality affects the health of animals, people and the environment, so the origin and composition of feed ingredients are paramount.

With Mosaic Feed Ingredients, you know what your animals are getting and where it comes from. You get a consistent, reliable supply and safe, traceable, high quality products from an innovative, responsible U.S.-based company.



Commitment to Sustainability

Mosaic's business is rooted in our commitment to sustainability. We believe that lasting success comes from making smart choices about our stewardship of the environment, how we engage our people and the way we manage our resources.

Sustainability performance goals are connected to our strategic priorities and our operational and financial goals. Our commitment to continuous improvement moves Mosaic forward. From water conservation and energy efficiency to stringent safety programs and community investment, sustainability is embedded in virtually everything we do — it's reflected in our commitment to increased transparency and accountability companywide.

Helping the World Grow the Food It Needs

As the largest combined producer of potash and phosphate, Mosaic is a crucial part of solving the challenge of feeding a growing world. We engage in every phase of crop and feed ingredient development, from the mining of resources to the production of crop nutrients, feed and industrial products for customers around the globe. Our facilities include:

- Distribution facilities in 11 countries, serving customers in over 30 countries.
- Port terminals, warehouses and blending and bagging facilities in 10 countries.
- Five potash production facilities.
- 16 phosphate rock mines and plants.

Mosaic's Global Footprint





Why Minerals?

Minerals are essential for life, health, reproduction and longevity. They play a critical role in a well-balanced nutrition program. Receiving proper mineral nutrition enables animals and poultry to reach their full genetic potential.

Previous and current research consistently demonstrates the importance of phosphorus (P), calcium (Ca), sodium (Na), potassium (K), magnesium (Mg) and sulfur (S) in animal and poultry nutrition. However, these minerals must be balanced correctly to optimize performance.

In animals and poultry, minerals:

- Are essential for every cell in the body.
- Aid in development and maintenance of the skeletal system.
- Perform critical functions in almost every biochemical reaction in the body.
- Function as a major component of nucleic acids and thus genetic transmission and cellular metabolism.
- Influence feed intake and are essential for micro-organisms in the rumen.
- Help produce and metabolize energy and protein.
- Assist in maintaining acid-base balance.
- Play an important role in optimizing feed efficiency, production and reproduction.
- Help with overcoming disease and weather-related stress.
- Enhance efficacy of enzymes and amino acids.





Biofos®

Monocalcium Phosphate for Animal and Poultry Feed

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

As the 40-year industry benchmark for high-quality phosphate, Biofos has achieved global acceptance for use in all species. It features a high concentration of phosphorus with a 21% guaranteed minimum.

Biofos is highly soluble and 100% bioavailable. Its outstanding physical qualities provide for ease of handling and uniform dispersion in mixed feeds and minerals.

GUARANTEED ANALYSIS	%
Phosphorus (P), min	21
Calcium (Ca), max	18
Calcium (Ca), min	15
Fluorine (F), max	0.21

TYPICAL CHEMICAL ANALYSIS*	%
Phosphorus (P)	21.15
Calcium (Ca)	15.67
Fluorine (F)	0.16

* Trace mineral profile is available upon request.



Monocalcium Phosphate for Animal and Poultry Feed

Nexfos® is a granulated feed-grade monocalcium phosphate introduced in 2011. It is a source of highly available phosphorus (P), calcium (Ca) and sodium (Na) that helps meet animal and poultry requirements for essential nutrients. And it's the first innovation in feed-grade phosphate in 40 years.

The unique Nexfos formulation offers increased efficiency, enhanced bioavailability and a higher sustainable concentration of phosphate. Field trials show Nexfos enhances throughput, reduces die wear and improves energy efficiencies. Nexfos reduces purchasing, storing and handling costs when compared to other mineral supplements.

Nexfos provides flexibility and economy in formulations. With 19% P, it is high in phosphorus content and features a narrow calcium to phosphorus ratio. It offers high biological availability due to its monocalcium and dicalcium phosphate content and high solubility.

Nexfos displays outstanding physical qualities, providing for ease of handling and uniform dispersion in mixed feeds and minerals. And it provides maximum economy per unit of biologically available phosphorus.

TYPICAL CHEMICAL ANALYSIS

	%
Phosphorus (P), min	19
Calcium (Ca), min	15
Calcium (Ca), max	18
Sodium (Na), min	4
Sodium (Na), max	5
Fluorine (F), max	0.19



Dyna-K[®]

Feed-Grade Potassium Chloride

Dyna-K[®] is a feed-grade potassium chloride. It is a source of highly available potassium (K) and chloride (Cl) that helps meet pet, livestock and poultry requirements for these essential nutrients.

This product is a rich source of potassium in readily available chloride form. It provides vital potassium, which is essential for maximum activity of rumen microbes. Potassium is essential for animals to maintain homeostasis and the health of cells at a cellular level.

Dyna-K furnishes the supplemental potassium needed in formulas where forages and oilmeals are replaced with more economical ingredients that may be low in potassium.

GUARANTEED ANALYSIS	%
Potassium (K), min	49.5

TYPICAL CHEMICAL ANALYSIS	%
Potassium Chloride (KCl)	95.3
Potassium (K)	50.0
Chloride (Cl)	46.4



Dynamate[®]

Feed-Grade Potassium Magnesium Sulfate

Dynamate[®] is a feed-grade mineral consisting of the sulfate form of potassium and magnesium. It is a source of highly available sulfur (S), potassium (K) and magnesium (Mg). It is slowly soluble, thereby supplying sulfur, potassium and magnesium at a controlled rate for optimum use by rumen microbes.

Dynamate's sulfur is utilized by rumen bacteria to produce essential amino acids. High energy rations containing non-protein nitrogen sources are inadequate in sulfur from natural sources. The product's sulfate may spare excess methionine in poultry rations, reducing costs without impairing feed performance.

The potassium in Dynamate is essential for maximum activity of the rumen microbial population and for optimum metabolism of every cell in the body. It promotes optimum feed intake and performance when added to rations which are borderline or deficient in potassium.

Dynamate also provides magnesium, which is essential to meet an animal's requirement for growth, production and reproduction. Modern high-energy rations do not contain the levels of magnesium present in feeds containing considerable amounts of forages.

GUARANTEED ANALYSIS	%	TYPICAL CHEMICAL ANALYSIS	%
Potassium (K), min	18	Potassium (K)	18
Magnesium (Mg), min	11	Magnesium (Mg)	11.5
Sulfur (S), min	22	Sulfur (S)	22.5



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Ingredients

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