



Making good growing better

Nature Safe Fertilizers For Organic Farming

Raising yields, quality and return on investment

Organic farming is growing rapidly, with consumers increasingly eager to buy organic products. At Nature Safe, we're pleased to be a part of this development with natural organic fertilizers that increase soil health and crop yields, reduce disease, improve quality and raise farmers' return-on-investment.

Manufactured from animal proteins, Nature Safe offers high nitrogen, slow release fertilizers in dry pelleted and dry flowable formulations to meet your agronomic or economic fertility challenges. With many OMRI (Organic Materials Review Institute) listed formulations, Nature Safe products are allowed under National Organic Program (NOP) guidelines, validating its unrestricted use in the production of organic certified crops.



LGMA Compliant Products
Available on Request



NUTRIENTS

DARLING
INGREDIENTS

NATURE SAFE PRODUCT FORMULATIONS

Nature Safe has the ability to custom formulate NOP compliant formulations to desired specifications. Minimum order required.

Product	Lbs. N/Ton	Nitrogen Breakdown	Secondary Elements		Amino Acid Content
3-3-3 Liquid Fertilizer Corn steep liquor	10 lbs/Gallon	Ammoniacal W.S.N.	0.10% 2.90%		
3-3-5 Liquid Fertilizer Corn steep liquor and sulfate of potash	10 lbs/Gallon	Ammoniacal W.S.N.	0.10% 2.90%		
5-6-6 Starter Fertilizer Meat and bone meal, blood meal and langbeinite Fine (SGN 130-140)	100	Ammoniacal W.I.N. W.S.N.	0.20% 4.50% 0.30%	Calcium Magnesium Sulfur	5.00% 1.50% 4.00%
7-7-7 Dry Flowable Powder Corn steep liquor Dry Flowable Powder	140	Ammoniacal W.S.N.	0.50% 6.50%		31.2% 40.6%
7-12-0 Fertilizer for Organic Production Meat and bone meal and blood meal Coarse (SGN 220-230)	140	Ammoniacal W.I.N. W.S.N.	0.30% 5.90% 0.80%	Calcium	10.00% 42.2%
8-3-5 Stress Guard Fertilizer Feather meal, meat and bone meal, blood meal and langbeinite Fine (SGN 130-140), Coarse (SGN 220-230)	160	Ammoniacal W.I.N. W.S.N.	0.20% 7.20% 0.60%	Calcium Magnesium Sulfur	3.00% 2.20% 4.00% 49.9%
8-5-5 Fertilizer for Organic Production Feather meal, meat and bone meal, blood meal and sulfate of potash Pelleted (EST. 5/32" X 1/4" - 1/2")	160	Ammoniacal W.I.N. W.S.N.	0.30% 6.80% 0.90%	Calcium Sulfur	4.50% 1.00% 50.1%
8-8-4 Fertilizer for Organic Production Meat and bone meal, feather meal, blood meal, sulfate of potash Pelleted (EST. 5/32" X 1/4" - 1/2")	160	Ammoniacal W.I.N. W.S.N.	0.46% 6.28% 1.26%	Calcium Sulfur	8.00% 1.00% 50.1%
9-6-1 Fertilizer for Organic Production Meat and bone meal, blood meal and feather meal Pelleted (EST. 5/32" X 1/4" - 1/2"), Unpelleted	180	Ammoniacal W.I.N. W.S.N.	0.20% 7.00% 1.80%	Calcium	5.00% 53.8%
10-2-8 All Season Fertilizer Feather meal, meat and bone meal, blood meal, and sulfate of potash Fine (SGN 130-140), Coarse (SGN 220-230)	200	Ammoniacal W.I.N. W.S.N.	0.25% 9.00% 0.75%	Calcium Sulfur	1.80% 3.00% 60.3%
13-0-0 Fertilizer for Organic Production Feather meal, meat meal and blood meal Coarse (SGN 220-230), Pelleted (EST. 5/32" X 1/4" - 1/2")	260	Ammoniacal W.I.N. W.S.N.	0.19% 12.04% 0.77%		75.4%
15-0-1 Hi-Sol Nitrogen Porcine blood meal Dry Flowable Powder	300 lbs./ton 200 lbs.soluble N/ton	Ammoniacal W.I.N. W.S.N.	0.01% 5.21% 9.78%	Iron	0.20% 89.5%

To learn more, visit naturesafe.com

Why amino acids matter

An organic fertilizer's nutrient value and release characteristics are determined by the amino acid and related protein content of the ingredients and their digestibility. Nature Safe has up to 89% available amino acids derived from meat, blood, bone and feather meals.

Nature Safe's nutrition is contained in the proteins derived from animal cells. Amino acids are the building blocks of proteins. High amino acid content means more nutrition is available per unit of fertilizer. Plus, amino acids render minerals in a chelated form that plants can easily absorb. Protein availability promotes beneficial microbe populations to expand. As microbes go through their life cycle, they make complex minerals available to the plant.

	Manure-Based 5-2-4	Nature Safe 15-0-1
Total Amino Acids	12.25%	89.47%

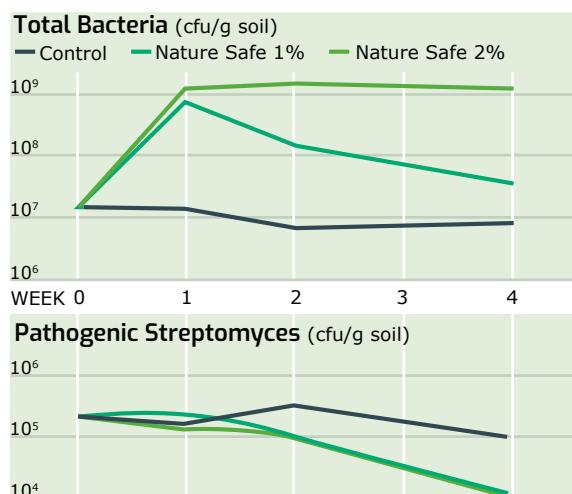


Influence of Nature Safe on the microbiology of soil

Test Conducted By: Agriculture and Agri-food Canada, Pest Management Research Center, Dr. George Lazarovitz

Test Results: Both concentrations of Nature Safe caused the total bacterial population to increase from about 30 million to a billion bacteria/g soil. It was also observed that pathogenic Streptomyces populations decreased from about 300,000 to below 10,000 bacteria/g soil and reduced the germination of V. dahliae MS to almost zero.

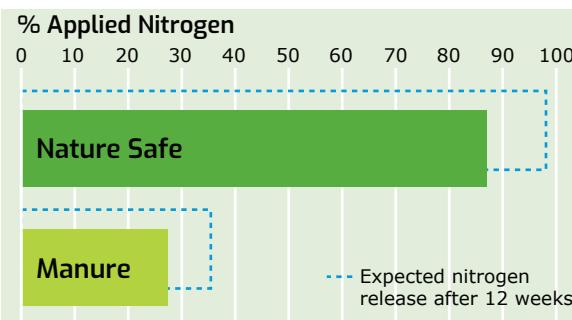
Conclusion: Nature Safe increased the total bacterial population in the soil while decreasing the populations of two pathogens.



Nutrient availability

Research Conducted By: North Carolina State University, Dr. Charles Peacock

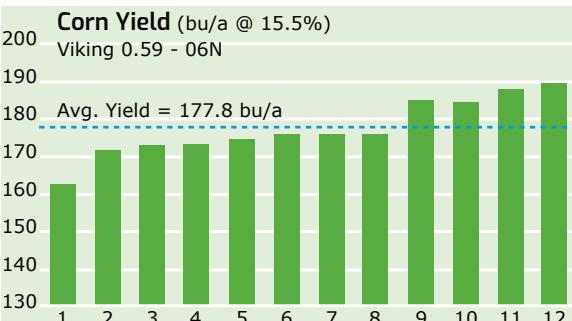
Conclusion: On average, over the two year study, 85% of the nitrogen in Nature Safe released in a 10 week period versus less than 30% for the manure product. If this study were extended to 12 weeks, it is expected that nearly all of Nature Safe's nitrogen would have released.



Impact on corn yield

Research Conducted By: Organic Research Program, Dr. Joel Gruver and Andy Clayton

Conclusion: Nature Safe 13-0-0 provided a good return on investment in three corn experiments. Unlike other sources of N such as manures and legume cover crops, **Nature Safe has a consistent composition and well established high level (>80%) of N availability.**



Application rates

For best results, Nature Safe should be used at the recommended rates based on specific crop needs. Listed below is the amount of Nature Safe needed to deliver the corresponding pounds of nitrogen per acre.

Formulation	25 lbs.	N 50 lbs.	N 100 lbs.	N 150 lbs. N
5-6-6	500 lbs.	1,000 lbs.	2,000 lbs.	3,000 lbs.
7-7-7	357 lbs.	714 lbs.	1,429 lbs.	2,143 lbs.
7-12-0	357 lbs.	714 lbs.	1,429 lbs.	2,143 lbs.
8-3-5	312 lbs.	625 lbs.	1,250 lbs.	1,875 lbs.
8-5-5	312 lbs.	625 lbs.	1,250 lbs.	1,875 lbs.
8-8-4	312 lbs.	625 lbs.	1,250 lbs.	1,875 lbs.
9-6-1	278 lbs.	556 lbs.	1,111 lbs.	1,667 lbs.
10-2-8	250 lbs.	500 lbs.	1,000 lbs.	1,500 lbs.
13-0-0	193 lbs.	385 lbs.	769 lbs.	1,154 lbs.
15-0-1	167 lbs.	333 lbs.	667 lbs.	1,000 lbs.

Bulk density

Bulk density weights are approximations. There is a modest amount of variability.

Formulation	Lbs./Cubic Ft.
5-6-6 F	50.0
7-7-7 DF	41.3
7-12-0 C	42.0
8-3-5 F	45.3
8-3-5 C	44.0
8-5-5 P	51.0
8-8-4 P	51.0
9-6-1 P	45.0
9-6-1 U	43.0
10-2-8 F	41.6
10-2-8 C	42.0
13-0-0 C	39.0
13-0-0 P	38.0
15-0-1 DF	24.4



Benefits of Nature Safe Organic Fertilizer

- Provides a balance of N-P-K, calcium, sulfur, magnesium, iron, trace minerals, and micronutrients.
- Reduces the need for frequent applications and maximizes fertility efficiency.
- Complete and predictable release of nutrients.
- Controlled release granules deliver a balanced feed that will not leach. The water insoluble nitrogen will slowly release for 8-12 weeks.
- Beneficial microorganisms break down organic matter making nutrients available to the plant.
- Will not burn young plants or tender roots.
- Can be drilled, broadcast, or used in top dress.
- Adds organic matter to soil and is an organic source of nutrients.
- Improves soil structure and allows oxygen and moisture to penetrate the soil impacting overall water management effectiveness.
- Long-term applications will not result in excess phosphorus levels in the soil.
- Accelerates the release of manure-derived nutrients.
- Extremely low salt and moisture content.

For more information about our products, please contact us:
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FERTILIZERS

NUTRIENTS

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