

Application Rates & Timing

KaPre AG is suitable for use on all crops.

New Plantings: Apply 6 – 12 ounces of KaPre AG per acre before and/or at planting. If possible, apply every 2 – 4 weeks during the growing season.

Perennial Crops: Apply 6 – 12 ounces of KaPre AG per acre at or just prior to emergence. Apply every 2 – 4 weeks during the growing season.



Other Products by Performance Nutrition

KaPre® Soil Amendments and Fertilizers

KaPre 11-2-3 + 1% Ca • KaPre 9-2-3+1%Ca • KaPre Activ8 • KaPre AG • KaPre AminoCal25 • KaPre ExAlt • KaPre RemED8 • KaPre VermaCal-G • KaPre Germin8 • KaPre Embella

Krystal Klear® Chelated Micronutrient Solutions

Krystal Klear Agra Mix • Krystal Klear Agra Mix 2 • Krystal Klear Crop Mix • Krystal Klear Turf Mix • Krystal Klear Arbor Mix • Krystal Klear ResQ • Krystal Klear B • Krystal Klear Cu • Krystal Klear Fe • Krystal Klear Mn • Krystal Klear Zn

LidoQuest® Patented Fertilizer Solutions

LidoQuest Mn • LidoQuest Zn • LidoQuest 15-8-4 • LidoQuest 18-3-6 • LidoQuest 6-6-12 • LidoQuest 30-0-0 • LidoQuest 30-0-0SR • LidoQuest 15-3-7

NutriSmart® Patented Eco-Fertilizer and E-Z to Apply Humate Granules

NutriSmart 0-5-0 • NutriSmart-B 0-0-0

Nutrol® EPA Registered Fungicide, Tank Buffer and PK Fertilizer

Nutrol 0-50-32

Pennamin® Amino Acid Complexed Micronutrients

Pennamin Ca • Pennamin Ca+Mg • Pennamin Cu • Pennamin Fe • Pennamin Fe+Mn • Pennamin High-K • Pennamin Mg • Pennamin Mn • Pennamin Zn • Pennamin Driver-LC • Pennamin Driver-P

Prudent® Patent Pending Phosphite Fertilizers

Prudent 42 CW • Prudent 44 • Prudent • PrudentPlus • PrudentReady

Vibrant® Patented Premium Foliar Fertilizer Solutions

Vibrant Blue • Vibrant Gold • Vibrant Green • Vibrant Red

Humates and Worm Castings

FulvaGrow® Fulvic Acid • FulvaGrow® 20X Concentrated Fulvic Acid • HumaGrow N.S.C. Leonardite • VermaPlex® Worm Casting Extract • Black Castings®

Z.One® Natural Zeolite Soil Amendments and “Eco-Stations”

Z.One • Z.One VermActant



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KaPre™ | **AG**

revitalizes **OVERWORKED SOIL**

enhances **NUTRIENT UPTAKE**

nourishes **SOIL MICROBES**

KaPre AG Soil Amendment and Surfactant is formulated specifically to rejuvenate over-worked, low-CEC soils, as well as soils with diminished soil microbial populations.

KaPre AG contains natural components – *humic acids, beneficial microbes, OMRI listed worm casting extract, enzymes, yucca and amino acids* - that contribute to healthy soil and a vigorous ecosystem.

KaPre AG applications improve soil structure, CEC's, composition, porosity, water-holding capacity and vitality, activate, nourish & increases beneficial soil microbe populations, as well as, enhance the plant's root development, germination rates and stress tolerance. As a result, yield and revenues per acre increase significantly.

KaPre AG

Case Study: *Replicated In Furrow Corn Trials*

Year Tested	Treatment	Rate per Acre	Yield Bushel/Acre	Treatment Advantage		
				Bushels	% increase	U\$/Acre
2009	MaxGrow®	12.8 ounces	193.1	+3.9	2.1%	+\$15.60
	Prozyme®	12.8 ounces	191.0	+1.8	1.0%	+\$7.20
	KaPre® AG	8 ounces	196.6	+7.4	3.9%	+\$29.60
	MaxGrow & Prozyme	12.8 oz. MG & 12.8 oz. P	197.0	+7.8	4.1%	+\$31.20
	KaPre AG & MaxGrow	12.8 oz. MG & 8 oz. AG	202.5	+13.3	7.0%	+\$53.20
	No Treatment:		189.2			
Prior Year's Performance						
2008	MaxGrow in Furrow	12.8 ounces	161.3	+5.6	3.6%	\$28.00
	MaxGrow 2 x 2	12.8 ounces	159.7	+4.0	2.6%	+\$20.00
	No Treatment:		155.7			
2 hybrids · tested at 6 locations · 3 replications per test						

KaPre AG is rich in fulvic acid!

Fulvic acid:

- Transports metabolic substances directly to metabolic sites
- Forms metal chelates and carries trace minerals from the surface of plant into plant tissue, facilitated by its low molecular weight
- Is very chemically reactive because of its high oxygen content
- Has more than twice the exchange capacity of humic acid
- Enhances root initiation and increases root growth
- Increases carbohydrate production which in turn feed microorganisms in the rhizosphere
- Increases germination rates
- Increases production of ATP
- Increases chlorophyll development within the leaves



KaPre AG contains both endomycorrhizal and ectomycorrhizal fungi!

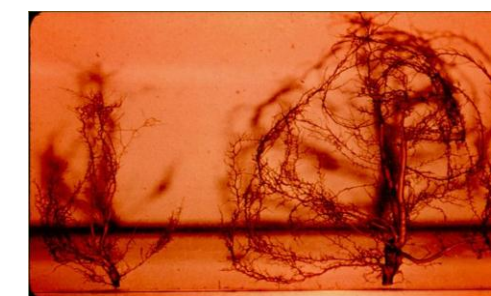
Mycorrhizae fungi have a symbiotic relationship with plant roots. The fungi colonize the host plant's roots, either intracellularly (*endomycorrhizal*) or extracellularly (*ectomycorrhizal*). The hyphae of ectomycorrhizal fungi do not penetrate individual cells within the root, while the hyphae of endomycorrhizal fungi penetrate the cell wall.

Mycorrhizae contribute to overall plant health, and, are an important component of soil life and soil chemistry. The absence of mycorrhizal fungi can also slow plant growth.

- Mycorrhizae improve the plant's mineral and water absorption capabilities.
- Mycorrhizae provide access to phosphorus sources and make them available to the plants.
- Mycorrhizal mycelia are much smaller in diameter than the smallest root, and thus can explore a greater volume of soil, providing a larger surface area for absorption.
- Mycorrhizae are especially beneficial for the plant grown in nutrient-poor soils.
- Mycorrhizal plants are often more resistant to diseases and are also more resistant to the effects of drought.
- Plants grown in sterile soils often perform poorly without the addition of mycorrhizal fungi to colonize the plant roots and aid in the uptake of soil mineral nutrients.
- Mycorrhizae improve root growth, plant growth and yield.
- Mycorrhizae reduce transplant shock and improve drought stress tolerance.



Comparison of growth of mycorrhizal (L) vs. non-mycorrhizal seedlings



Roots without mycorrhizae (left) vs. Roots with mycorrhizae (right).

KaPre AG contains Beneficial Microorganisms!

KaPre AG Soil Amendment contains viable colonies of beneficial microbes and enzymes. These microorganisms and by-products help correct soil conditions – hydrophobicity, low microbial populations and diversity, poor structure, etc.

KaPre AG microbial populations include:

- *Azotobacter paspali* to naturally fix nitrogen from the atmosphere into plant available nitrogen.
- *Azospirillum lipoferum* to naturally fix nitrogen from the atmosphere into plant available nitrogen.
- *Glomus mosseae* (mycorrhizae) which act as extensions of the plant roots to help them absorb more water and nutrients from the soil.
- *Bacillus Megaterium* which supports plant health.