

ProVia AP21™

Amino Acid/Peptide Biostimulant and Crop Stress Aid

Harness the Power of Plant Protein!



Increases Crop Stress Tolerance and Recovery

ProVia AP21 mitigates crop stress and speeds crop stress recovery. The bio-active peptide and amino acids stimulate cell growth and cell strength making the plant and roots stronger, more resistant to stress. Provia AP21 acts as a catalyst for enzyme production activating the plants own defense enzyme production.



Improves Plant Nutrition and Nitrogen Uptake

ProVia AP21 is a natural chelating agent that stimulates plant growth by improving nutritional uptake and assimilation of macro and micro nutrients. It can also enhance the uptake of important minerals such as calcium, magnesium and phosphorus. The biologically active peptides in Provia AP21 also enhance the production of chlorophyll and photosynthesis which improves carbon draw down while providing food and energy for the plant to grow.



High Carbon Formula Activates Soil Microbiome

ProVia AP21 has a high carbon formula that provides food and energy for soil microbes. A healthy microbiome is the key to nutrient cycling process. Active soil microbes are critical for decomposing organic residues and recycling soil nutrients. It is also important in the suppression of pests and pathogens.

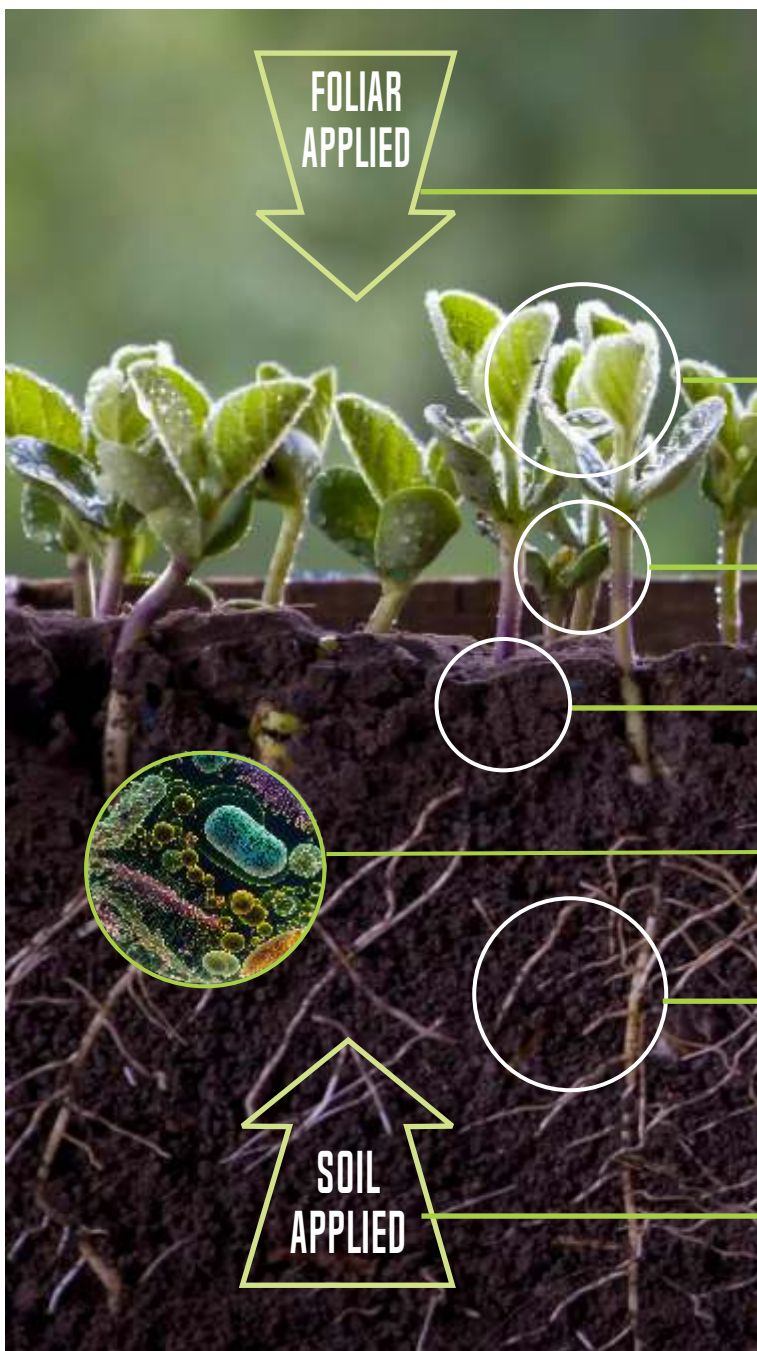
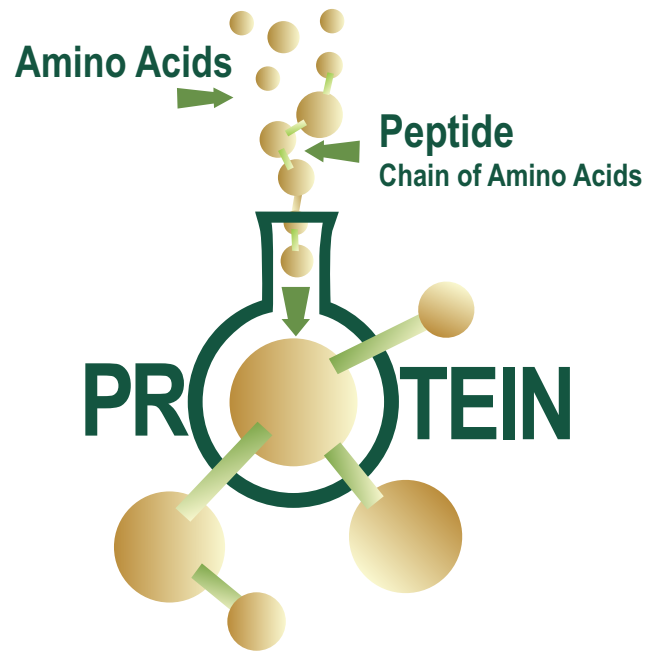
The biostimulant tank mix additive that improves the effectiveness of fertilization and crop protection programs.



5% Organic Nitrogen

Bio-active Peptides and Amino Acids Play a Key Role in Plant Development, Plant Defense and Soil Health

- STRUCTURE: Construct different cellular structures
- TRANSPORT: Carry nutrients and minerals
- PROTECTION: Against abiotic and biotic stresses
- DEFENSE: Protect plants from pathogens & stress
- ABSORPTION: Helps in the absorption and utilization of nutrients
- RECEPTORS: Membrane proteins that respond to chemical messengers
- MESSENGERS: Growth regulators, precursors to hormones and enzymes
- STORAGE: Provide nourishment in early development of plant parts



Bio-active peptides of amino acids are absorbed through the cuticle, epidermal cells and stomata

- Improving photo synthetic activity and chlorophyll production
- Improving stomata development and function
- Allow quick nutrient absorption into leaf

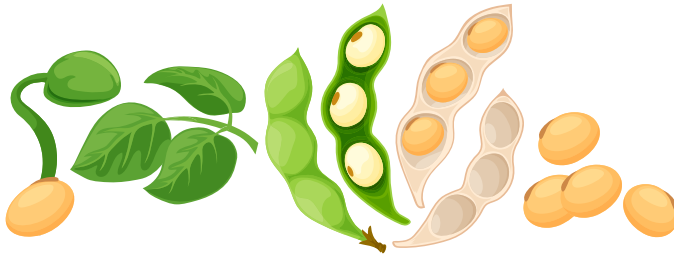
- Aiding in the development of vascular tissues
- Providing a catalyst for enzyme production
- Increasing stress response enzymes

- Increasing soil respiration and fertility pathways
- Improving nutrient availability and uptake

- Providing carbohydrates that stimulate soil microbe activity and degradation of organic matter
- Improving nutrient transport and assimilation

- Increasing root hair and root growth
- Improving roots ability to absorb nutrients
- Acting as a natural chelating agent
- Increasing nitrate reductase - the key enzyme for nitrogen assimilation into plant

Roots take up organic nitrogen compounds such as bio-active amino acids as peptide chains via membrane transporters into root cells



From seedtime to harvest the amino acids and peptides make up plant protein and play a key role in the production of all crops.

ProVia AP21

An enzymatically hydrolyzed organic nitrogen based nutrient and biostimulant. It is derived from plant protein peptides and L- amino acids.

Increases Crop Stress Tolerance and Recovery

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Improves Plant Nutrition and Nitrogen Uptake

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High Carbon Formula Activates Soil Microbiome

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Carbohydrates are metabolized into glucose, which serves as a direct source of energy for most all soil microorganisms. They supply carbon sources for microbial activities that contribute to mineral nutrient production in soil.

Carbohydrates improve nutrient efficiency, photosynthesis, and stress tolerance by enhancing the symbiotic relationship between plants and soil.

ProVia AP21 has a high carbon formula that delivers a fresh pool of carbohydrates to stimulate microbe growth and activity.

The plant and the microbes become so close that the microbes actually live inside the plant! This association of microbes and roots often benefits both organisms. The plant gives the microbes food, such as carbohydrates and amino acids, and the microbes give the plant minerals, vitamins, nitrogen, and amino acids.



ProVia AP21



Harness the Power of Plant Protein!

N-P-K
5-0-0

OMRI
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For Organic Use

PROVIA AP21 is a microbial enzymatic hydrolyzed organic nitrogen based nutrient and bio-stimulant derived from bio-active plant peptides that contain 21 L- amino acids. It is produced with a proprietary process which preserves the short chain peptides of amino acids.

PROVIA AP21 is a unique plant based supplement blend and bio-stimulant concentrate. It is formulated to enhance plant nutrition and stimulate plant growth.

PROVIA AP21 is made using organic ingredients derived from plant protein and constitutes a natural source of nitrogen.

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- **MITIGATES CROP STRESS AND SPEEDS HERBICIDE STRESS RECOVERY**
 - **A CATALYST FOR PRODUCTION OF PLANT DEFENSE ENZYME PRODUCTION**
 - **STIMULATES ROOT AND PLANT GROWTH AND IMPROVES CHELATION OF MICRO NUTRIENTS**
 - **HIGH CARBON FORMULA STIMULATES AND FEEDS SOIL MICROBIOME**
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APPLICATION:

PROVIA AP21 can be mixed with liquid fertilizer and added to pesticide applications or foliar applied as a stand alone organic bio-stimulant fertilizer.

PROVIA AP21 is recommended for all crop foliage and can be soil applied. Recommended for all agronomics crops, vegetables, fruits, tree fruits, nurseries, greenhouse, turf, ornamentals industrial hemp and cannabis.

Field Crops: General application- tank mix - 16-20 oz./acre

- Corn- Add to starter mix - In-furrow and 2x2. Add to side dress to improve performance and nutrient uptake (Can be added with Fungicides and Herbicides) (pre-mix test is recommended)
- Soybean- Apply as a foliar at 4-5 leaf stage. Apply 16-20 oz./acre with herbicide as a stress aid
- Wheat/Rye/Alfalfa/Grasses 16-20 oz./acre as a foliar
- Vegetables- Potato/Sugar Beet, etc.) 16-20 oz./acre as a foliar, and as a nutritional supplement each time you spray at 8-10 oz. /acre rate to improve performance and nutrient uptake
- Viticulture and Cane Berries 16-20 oz./acre as a foliar, add as a nutritional supplement each time you spray at 6-8 oz. /acre rate
- Horticulture/Greenhouse applications: 8-10 oz. in 2-5 gal. spray solution. Apply as a foliar. Mix 6-8 oz. with 2 gal. of water and add to irrigation solution (early, mid and late season)
- Turf Grass/Lawn: 20-24 oz. per acres

HOW AND WHEN TO APPLY:

- Apply ProVia AP21 directly on seed and soil with or as a starter fertilizer, or on crop foliage
- Applying early on plants at 4 leaf stage is best for maximum root development and triggering maximum plant bio-stimulation
- Can be applied at vegetative stage before bud-set and pre-flowering for higher Nitrogen needs, increased total nutrient uptake and induce a systemic response for plants protection to abiotic stresses
- Can be applied at early reproductive stages to meet Nitrogen demand and trigger plant defensive enzymes
- Recommended to split seasonal rates if applying multiple times during the season to stay within suggested rates, i.e., corn 16oz. in-furrow, 16oz. foliar
- Use alone or in combination with most plant nutrients, fungicides, and herbicides. Always perform a jar test before mixing in field tank

GUARANTEED ANALYSIS

Total Soluble(N) 5% Derived from 100% plant based amino acids and peptides

Non plant food inert ingredients 95%

Information regarding the contents and levels of metals in this product is available
@ <http://www.aapfc.org/metals.htm>

NUVIA
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and Environmental Applications

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