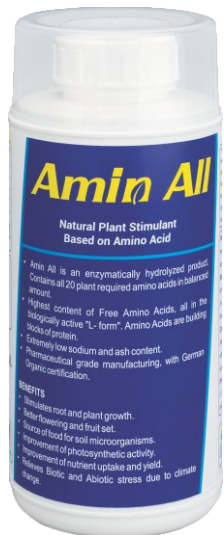


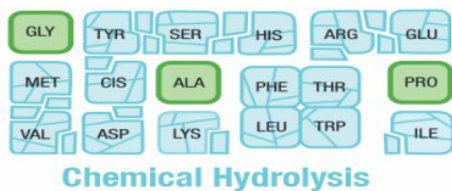
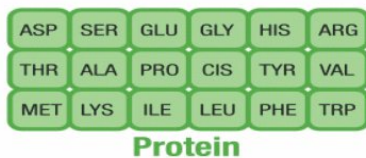
Amin All



Natural Plant Stimulant based on Amino Acids.



- Amin All is an enzymatically hydrolyzed product. Contains all 20 plant required amino acids in a balanced amount.
- The highest content of Free Amino Acids, all in the biologically active "L- form".
- Extremely low sodium and ash content.
- Pharmaceutical grade manufacturing, with American and German Organic certification



Pharmaceutical-grade enzymatic hydrolysis produces a consistent output of high concentration, biologically-active amino acids

AMIN ALL SPECIFICATIONS* (With Independent Lab Certification):

Contents	w/w
Total L- α Amino Acids	31.44%
Dry matter	44 -45%
Total Nitrogen	5.4%
Organic Carbon	20%
Chloride	0.05%
Sodium	1.4%
Free L- α Amino Acids	21%
Organic matter	40%
Organic Nitrogen	5.4%
Ash	<5.5%
pH	5.2-5.8
Density (g/ml)	1.10 ± 0.05

The product contains all biologically Active free amino acids: ASP, SER, GLU, GLY, HIS, ARG, THR, ALA, PRO, CYS, TYR, VAL, MET, LYS, ILE, LEU, PHE, TRP, GLN, ASN.



INPUT:
National Organic
Program NOP



What are amino acids?:

- Amino acids are the building blocks of all proteins. Proteins are formed by a sequence of Amino Acids. Amino acids have two isomers which are dextrorotatory (D) and laevorotatory (L). D-Amino Acids are not recognized by the enzymatic locus and therefore cannot participate in protein synthesis in plants. L-amino acids should be in the form of Free Amino Acids or in the form of small peptides for them to be absorbed by plants. Large molecules with a high molecular weight cannot be absorbed and further used by plants. There are 20 protein amino acids.

Why are amino acids important for plants?

- Plants can synthesize all the amino acids. Amino acids are required by plants throughout all their growing stages.

Amino acids are important in the following functions.

- The starting points for the synthesis of cellular molecules including vitamins, nucleotides, chlorophyll, enzymes, proteins, etc.
- They have an important nutritional function during germination, during the synthesis of proteins (enzymes and structural proteins, etc); in the formation of phytohormones such as auxins, ethylene, polyamines, porfirines etc.
- Regulation of the water balance especially when plants are under stressful conditions.
- Amino acids also act as chelating molecules of essential nutrients for normal development of the plant.

Why is it important to supplement amino acids to plants?

- Under optimum growing conditions, plants synthesize their own L-amino acids through thousands of chemical reactions and by significant use of energy. However, when growing under stressful conditions, plants decrease or stop the synthesis of carbohydrates and consequently the production of L-amino acids. Instead, plants have to hydrolyze or break down structural proteins to obtain the required L-amino acids. These activities require extraordinary use of energy by plants and contribute to the reduction of root mass and the quality of plants.
- The synthesis of amino acids is costly for plants concerning the energy requirement. This energy expense is especially important in the moments when the plant physiology is not optimum. Studies have proved that Amino Acids can directly or indirectly influence the physiological activities of the plant.

Effects on Plants

- **Stress Resistance** – High temperature, low humidity, frost, pest attacks, hailstorms and floods have negative effects on metabolism with the corresponding reduction in crop quality and quantity. The applications of amino acids before, during and after the stress conditions supply plants with amino acids which are directly related to stress physiology and thus have to prevent and recovering effects.
- **Effect Of Photosynthesis**– Plants synthesize carbohydrates by photosynthesis, and chlorophyll is responsible for the absorption of light energy. A low photosynthesis rate implies a slow growth leading to the death of plants. Glycine and Glutamic acid are fundamental metabolites in the process of formation of vegetable tissue and chlorophyll synthesis. These amino acids help to increase chlorophyll concentration in plant leading to a higher degree of photosynthesis. This makes crop lush green.
- **Amino Acids and Phytohormones** – Amino Acids are precursors or activators of phytohormones and growth substances. L-Methionine is the precursor of ethylene and growth factor such as Spermine and Spermidine, which are synthesized from 5- Adenosylemethionine. L-Tryptophan is a precursor for auxin synthesis. L-Arginine induces synthesis of flower and fruit-related hormones.
- **Pollination and Fruit Formation** – L-Lysine, L-Methionine, and L-Glutamic Acid are essential amino acids for pollination. These amino acids increase the pollen germination and are responsible for the length of the pollen tube.
- **Equilibrium of Soil Flora** – The equilibrium of microbial flora of the agriculture soil is a basic question for good mineralization of the organic matter and also for a good soil structure and fertility around the roots. L-Methionine is a precursor of growth factors that stabilize the cell walls of the microbial flora. Amino Acids supplied to plant by incorporating them into the soil helps in improving the microflora of the soil thereby facilitating the assimilation of nutrients.

General

- L-Proline and Hydroxyl – Proline acts mainly on the hydro balance of plant, strengthening the cellular walls in such a way that they increase resistance to unfavourable climatic conditions.
- L-Alanine, L-Valine and L-Leucine improve quality of fruits.
- L-Histidine helps in proper ripening of fruits

AMIN ALL - For Foliar and Fertigation use in all crops.

- Foliar Application: 2 ml/Liter of water OR 1.0 Liter /Acre
- Fertigation /Drench: 1-1.5 Liter/ Acre

SHAKE WELL BEFORE USE.

Tank mixing/co-application: Always carry out "Jar test" before mixing Amin All with other products. Co-application is entirely at the risk of the end-users.

Caution: Do not exceed the appropriate application rate. Do not spray under hot and bright days. Avoid contact with skin and eyes. Always Use PPE. Do not empty into drains and waterways. Dispose of empty container in a safe way.

Storage: This product is stable under ordinary temperature. Do not expose to direct sunlight or high temperature (above 30° C). Once Opened, Use the container fully. Keep away from food, drink, animal feedstuff and children



Manufactured by:
AMINOCORE DEUTSCHLAND GMBH,
Germany



Imported, Packed & Marketed by:
Eco Agro Sciences LLP
Pune



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