AMINO ACIDS &
GROWER’S SECRET NITROGEN™

Growers Secret Nitrogen™ is a readily available plant food source containing high levels of amino acids to increase growth and vitality of growing plants.

- The application of Grower’s Secret Nitrogen, before, during and after stress conditions supplies the plants with readily available substances to reduce stress and promote plant health.
- Growers Secret Nitrogen is highly soluble and may be mixed with other fertilizers and organic or conventional amendments.
- Growers Secret Nitrogen contains 17 of 20 of amino acids.
- Amino acids form short polymer chains called peptides or longer chains either called polypeptides or proteins.
- Amino Acids are effective chelating agents and activate phyto-hormones.

Under adverse environmental conditions such as cool/cold or hot temperatures and drought, biological systems do not generally function optimally and may not be able to meet plant needs for nitrogen and amino acids. During these severe environmental conditions plant systems are also negatively affected and stressed making it difficult to build amino acids.

Amino acids are utilized by microbes and plants for growth and development and are instrumental for minimizing environmental stress when they are provided to the plant before or after a stress situation. Also, amino acids are quickly absorbed through the stomata of plants and are then available for use by plants to support the development of protein or biological systems. So, by applying amino acid nitrogen to your crops you are making available the building blocks needed for plant growth, yield and quality and support of many plant processes. The plants will be poised with an amino acid boost to resume growth and function.

Not all amino acid based products are created equal. So, be careful. Not all are water soluble. Not all amino acids products can be applied in-season to crops when they need the nitrogen and nitrogen is not easily available from other sources.

Use Grower’s Secret amino acid products GS Nitrogen 12-0-0 (OMRI and CDFA listed) and GS Nitrogen 15-0-0 to reduce plant stress or bring plants back from stress. Grower’s Secret Nitrogen is a smart choice for use on your crops.
GSN 12-0-0 Amino Acid Analysis:

- **Alanine 3.76%**: Improves quality of fruits.
- **Arginine 4.06%**: Induces synthesis of flower and fruit related hormones. Plays an important role in cell division.
- **Aspartic 3.96%**: By transamination gives rise to the rest of the amino acids.
- **Cystine 2.09%**: Plays a crucial role in protein structure and in protein-folding pathways and are the building blocks of all proteins.
- **Glutamine 6.72%**: Are fundamental metabolites in the process of formation of vegetable tissue and chlorophyll synthesis. They help to increase chlorophyll concentration in the plant leading to higher degrees of photosynthesis. This makes crops lusher green. It is also known to be a very effective chelating agent. The process of transamination gives rise to the rest of the amino acids plants need for growth. Glutamine is also involved in pollination by increasing pollen germination and the length of the pollen tube.
- **Glycine 5.78%**: Is known to be very effective chelating agents.
- **Histidine 0.40%**: Helps in proper ripening of fruits.
- **Isoleucine 2.87%**: Plays an important role in plant development. It is one of the branched chain amino acids that are essential substrates for protein synthesis in all organisms.
- **Leucine 4.57%**: Improves quality of fruit.
- **Lysine 1.09%**: Are essential for pollination. They increase the pollen germination and the length of the pollen tube.
- **Methionine 0.24%**: A precursor growth factor that stabilizes the cell walls of the microbial flora. It is also essential for pollination by increasing pollen germination and the length of the pollen tube.
- **Phenylalanine 2.98%**: Phenylalanine is the starting compound used in the flavonoid biosynthesis.
- **Proline 7.46%**: Supports pollen germination and the increase in pollen tube length of the tube.
- **Serine 5.33%**: Precursor to several amino acids.
- **Threonine 7.57%**: Regulates carbon flow towards methionine in plants.
- **Tyrosine 1.16%**: Plays an important role in photosynthesis.
- **Valine 5.38%**: Improves quality of fruit.

**TOTAL AMINO ACID 65.42%**

Appearance: Yellow Tan Powder
Odor: Soy
Solubility: 99.9%+ 13-0329

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