

# AMINOFORCE™

## PLANT BASED PROTEIN HYDROLYSATE



### DESCRIPTION

AMINOFORCE™ is a plant-based protein hydrolysate that contains a full complement of L-amino acids as well as bioactive peptides to support plant metabolism.

### KEY BENEFITS

- Derived from natural plant sources
- Contains a full complement of L-amino acids
- Supplies bioactive plant peptides
- Reduces the influence of abiotic stress conditions
- Supports flowering and fruit set
- Highly miscible formulation
- Easy to use and apply

### CONTAINS

(N% - P% - K% - S%)

( 1 - 0 - 0 - 0 )

N

- 1.2 % W/V

Plant Based Protein Hydrolysate produced by a mild enzymatic extraction process.



### POSITIONING AND FUNCTIONS

AMINOFORCE™ is a plant-based protein hydrolysate product that contains a full complement of L-amino acids and bioactive peptides to support plant metabolism. Plant-based protein hydrolysates are much more effective biostimulants for plant growth compared to animal-based protein sources. This is due to post-translational modifications of plant-based amino acids, peptides, and proteins, which differentiate these components from bacterial, fungal, or animal amino acids, peptides, and proteins. Therefore, plants respond much more favorably to the application of plant-based amino acids compared to animal-based products.

Amino acids are critical components of every metabolic process in plants. They are the fundamental building blocks of proteins and enzymes and are the sole form of nitrogen transported in the phloem. Amino acids are found in two different forms, L and D, depending on the molecular orientation of the functional group. L-amino acids are used by plants and animals, while D-amino acids are used by bacteria and fungi. Therefore, the application of the correct orientation of amino acids is critical to ensure a positive plant response.

During the production of animal-based protein hydrolysates, harsh chemical treatments and high temperatures are generally used to produce the extract. This causes the orientation of these amino acids to change from L to D. AMINOFORCE™ is produced via a mild enzymatic process, which ensures all amino acids present are in the L form, ensuring high biological activity.

Peptides are short chains of amino acids that play a functional role in regulating various plant physiological processes, including vegetative and reproductive growth, environmental stress responses, as well as serving as signaling molecules for symbiotic soil microbiology. Peptide-based hormonal signaling has been shown in recent years to regulate gene expression and cause changes in various parameters and processes, including cell size and number, fertilization, plant responses to nutrient availability, and defense against pathogens.

AMINOFORCE™ is a stable, plant-based L-amino acid and bioactive peptide protein hydrolysate produced via a mild enzymatic process. It is suitable for use on all crop plants to support metabolism, enhance defense against abiotic stress factors, and support growth during challenging phenological stages of development.

AMINOFORCE™ is suitable for all crops and agricultural application methods and is highly miscible with various NPK and micronutrient fertilizers.

**REGION**  
NEW ZEALAND

**TYPE**  
Liquid

**APPLICATION**  
Foliar

**PACKAGING**  
20L, 200L, 1000L

### CROPS

-  Grains
-  Vegetables
-  Potatoes
-  Fruit and nut trees
-  Sugar cane
-  Pastures

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### CONTAINS

N

Nitrogen is an essential macronutrient for plant activity since it is a key component of amino acids, which are the building blocks of plant proteins and enzymes. The chlorophyll molecule also contains nitrogen, which assists the plant in absorbing solar energy through photosynthesis, resulting in greater plant growth and crop output. Nitrogen is also necessary throughout the pre-bloom, fruit set and fruit drop stages, and is essential for reproductive growth and development.

