





# LIQUI-PLEX<sup>®</sup> BONDER<sup>WP</sup> 10-0-0

*A balanced supply of amino acids for crop nutrition.*

Poor plant nutrition, depleted soils and herbicide stress can have a major impact on crop health and productivity and as a result, come at a high cost. Derived from yeast extract, LIQUI-PLEX BONDER from Alltech Crop Science uses the inherent complexing nature of amino acids to optimize nutrient bioavailability to the plant. Amino acid complexing leaves no synthetic residues in the soil and foliar application allows for rapid uptake and utilization in response to soil depletion and herbicide stress.

Amino acid complexing technology in an easy-to-use wettable powder form. Complexing with amino acids can improve the bioavailability of fertilizers and minerals in tank mixes, and provide a natural source of nitrogen and carbon.



-  Yeast-derived amino acids are a natural source of nitrogen and carbon
-  Complexing with amino acids improves bioavailability of fertilizers and minerals.
-  Amino acids are an environmentally friendly alternative to synthetic chelating agents.
-  Amino acid supplementation can aid recovery from herbicide stress.

## GUARANTEED ANALYSIS

Total Nitrogen (N) ..... 10.0%

*Derived from amino acids including Alanine, Arganine, Aspartic acid, Cysteine, Glutamic acid, Histidine, Isoleusine, Leusine, Lysine, Methionine, Phenylalanine, Proline, Serine, Threonine, Tryptophan, Tyrosine, Valine*

## RECOMMENDED USAGE

Apply 0.5 lbs per acre, or more as recommended.

Since this is a wettable powder, it should be added to a tank mix first. Making sure to use agitation. While filling mixing tank to 50% final carrier volume, add recommended rate of LIQUI-PLEX BONDER WP slowly to ensure adequate time for product to go into solution.

***Always perform compatibility testing when tank mixing with other chemicals.***



Alltech is a global leader in biotechnology whose mission is to improve the health and performance of people, animals, and plants through natural nutrition and scientific innovation.



Alltech is the largest producer and processor of yeast in the world through facilities such as its yeast fermentation plant in São Pedro do Ivaí, Brazil.

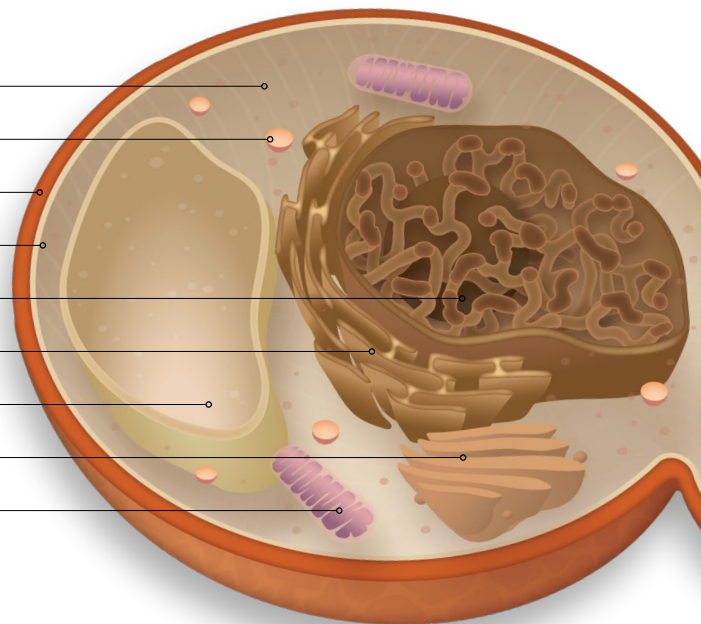
# Yeast extracts and crop nutrition

The yeast cell has many valuable uses when it comes to crop production. Yeast extracts—the interior contents of the cell—are rich in a wide variety of amino acids, which can complex with trace minerals for improved nutrient bioavailability.

*Concentrated yeast extract has a rich brown color and a sweet, molasses-like scent.*



Cytoplasm  
 Peroxisome  
 Outer cell wall  
 Inner cell wall  
 Cell nucleus  
 Endoplasmic reticulum  
 Vacuole  
 Golgi complex  
 Mitochondrion



## What are amino acids?

### Building Blocks of Proteins

Amino acids are organic molecules that link with one another to form long polypeptide chains, which in turn form the various kinds of proteins present in all living organisms.

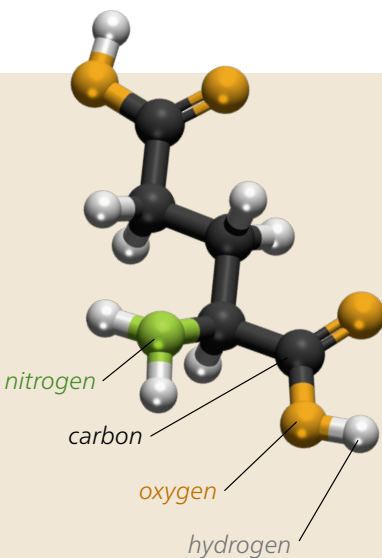
Plants must synthesize a continuous supply of the 22 proteinogenic (protein-forming) amino acids in order to properly grow and develop.

### Complexing agents

Amino acids can also serve as an excellent organic complexing agent, binding with positively charged ions such as Mg and Ca to deliver these micronutrients in a highly bioavailable, environmentally friendly form. As a result, these water soluble complexed minerals can be quickly and easily absorbed, translocated and metabolized by plants.

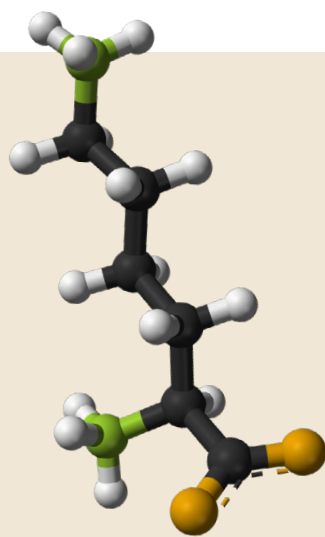
### Biological source of N and C

In addition to delivering critical micronutrients, every amino acid molecule also contains nitrogen and carbon molecules. Consequently, amino acids are commonly used to supplement or replace other nitrogen or carbon sources applied to soils and plants.



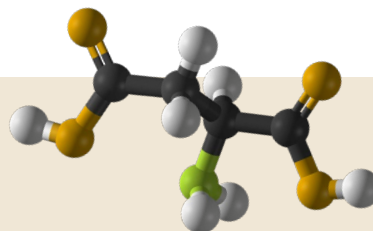
#### GLUTAMIC ACID

*Critical for plant metabolism, nutrient transport and chlorophyll biosynthesis.*



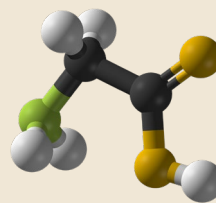
#### LYSINE

*Important plant nitrogen reserve, aids in chlorophyll activation, stomata regulation and pollen development.*



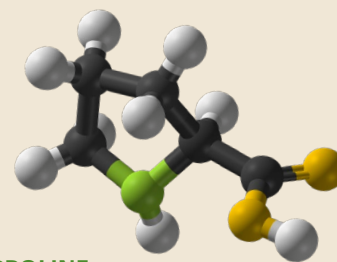
#### ASPARTIC ACID

*Nitrogen source, essential for synthesis of other amino acids, important during early growth stages.*



#### GLYCINE

*High complexing power, aids in photosynthesis, precursor of chlorophyll.*



#### PROLINE

*Associated with resistance to fungal infection, essential for overcoming stresses such as drought, temperature extremes and salinity.*

## Key amino acids in plants

Contact your local Alltech Crop Science specialist for more information.

**Alltech**<sup>®</sup>  
 CROP SCIENCE

@Alltech  
 Alltech Naturally  
 AlltechCropScience.com