

## INTRODUCTION

**Plant nutrition** is a process whereby plants produce their own food

### 1. **carbon nutrition** through photosynthesis

Process: Photosynthesis. Leaves capture carbon dioxide

- Source : Light energy is used to combine water and CO<sub>2</sub> to produce organic matter (sugars)

- Location : Chloroplasts, which contain chlorophyll, in plant cells.

**2. Mineral nutrition** · Process: Roots absorb water and mineral salts dissolved in the soil. Major elements: Nitrogen (N), phosphorus (P) and potassium (K), which are often the most likely to be lacking in the soil.

**Consequences of imbalance:** A lack of nutrients can lead to lower yields and quality, while an excess can burn the roots and dry out the leaves.

### 3. **Importance of balanced nutrition**

Growth and health: Adequate nutrition is fundamental for growth, photosynthesis, disease resistance and stress tolerance.

Crop quality: Nutritional balance can affect the flavour, texture and nutritional value of fruit and vegetables.

### **Fertilizer production Organic and organo-mineral fertilizers,**

as well as organic soil amendments, are manufactured from three types of raw materials of animal or plant origin, sourced from nearby supply sites:

Livestock effluents: manure (sheep, cattle, goats, horses, poultry).

Co-products from the agricultural and food industries (fruit pulp, coffee grounds, vegetable oil cake, etc.).

Protein-rich animal co-products (meat and bone meal, blood meal,

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feathers and down, hooves and horns, hides, etc.).

Organo-mineral fertilizers also use mineral raw materials of natural origin derived from rock or a chemical process.

All these raw materials, rich in nitrogen, phosphorus, potassium, and carbon, are important for plant growth and soil.

Thanks to their carbon content, organic and organo-mineral fertilizers also play a key role in soil biodiversity and vitality, creating an environment conducive to the development of bacteria, fungi, and soil fauna (earthworms, etc.).

Preserving soil heritage for future generations is an intrinsic part of the role of organic fertilization.