

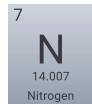


Using hydroponic
fertilizer in soil

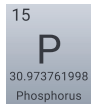
Complete nutrients...

Fertilizer are plant food. Mineral nutrients are composed of minerals that can be directly assimilated by plants. Organic fertilizer, on the other hand, are made up of various organic materials that must be broken down by micro-organisms (Trichoderma fungi, for example) before they can be assimilated by plants. In both cases, Terra Aquatica nutrients contain all the elements necessary for plant growth. These elements include :

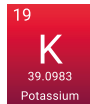
Macro-elements (required in large quantities)



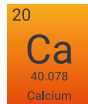
Nitrogen



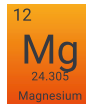
Phosphorus



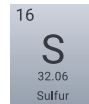
Potassium



Calcium



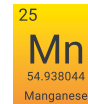
Magnesium



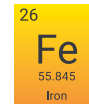
Sulfur

Secondary elements

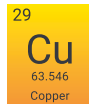
Trace elements (required in small quantities)



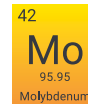
Manganese



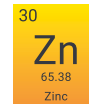
Iron



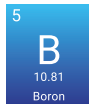
Copper



Molybdenum



Zinc



Boron

This classification is based on plant necessities.

As very small quantities of trace elements are needed, and they are very expensive, it is often assumed that the soil contains enough to meet plant needs. This is why conventional fertilizer do not contain trace elements. However, soil is a living, variable medium, and does not always contain all the trace elements required.

Composition of a conventional fertilizer



Composition of a hydroponic fertilizer



The use of hydroponic fertilizer ensures that all plant needs are met.

... Easy to use

Dosing and ratio between bottles

Hydroponic fertilizer are accompanied by recommendation charts.

These tables are intended as a guide, enabling beginners to start growing easily and without risk. They are designed for plants with a growth period and a flowering period. *

*For all other cases,
consult our table
"All plants

	 1st roots	 1st true leaves	 Growing	 Preflowering	 Flowering	Final Part® Ripening 4mL/L	Flash Clean® Cleaning 2mL/L
				Flush			
TriPart Grow	0,2mL/L	0,6mL/L	1,5mL/L	1,5mL/L	0,7mL/L		
TriPart Micro	0,2mL/L	0,6mL/L	1 mL/L	1,5mL/L	1,4mL/L		
TriPart Bloom	0,2mL/L	0,6mL/L	0,5mL/L	1 mL/L	2,1mL/L		
EC (mS)	0,2-0,5	0,6-1,0	1,1-1,6	1,4-1,8	1,3-1,7	1,3-2,0	-

These recommendations apply to pot culture.

	 1st roots	 1st true leaves	 Growing	 Preflowering	 Flowering	Ripening	Cleaning
Pro Organic Grow	0,25mL/L	0,5mL/L	2mL/L	1mL/L	-	-	-
Pro Organic Bloom	0,25mL/L	0,5mL/L	-	1mL/L	2mL/L	2mL/L	-

In the ground, in the garden or in the field, use organic fertilizer to enrich the soil's life and strengthen its resilience. Mineral nutrients can be used sparingly if necessary.

If you're not familiar with electroconductivity (EC), you need to increase fertilizer doses very gradually and watch for signs of stress. As soon as the first signs of stress appear (dark green leaves, bent tips, etc.), dilute the solution.

Note: it is possible to modify the ratios between bottles to meet specific needs, such as adding more phosphorus (i.e. more Bloom).

For powder fertilizers such as DryPart® , it is important to always dissolve the product in a sufficient quantity of water. Recommended dosages should be considered as the maximum solubility of the product. If too much product is added to a small quantity of water, the elements will react with each other and no longer be available to the plants.



Frequency of use

In soil, fertilizers are added during watering. The frequency of watering with fertilizers depends above all on the composition of the potting soil used. If the potting soil is already fertilized, you'll only need to apply fertilizers every second or third watering.

If, on the other hand, the potting soil is a Light Mix, very lightly fertilized, then fertilizers can be added at every watering.

Chemical information	
pH (H ₂ O):	6
Conductivity (mS/m):
Fertilizer:	organic fertilizer NPK 6-3-4 at 5Kg/m ³ organic amendment NPK 4-3-2 at 1Kg/m ³
Physical information	



If plants seem to be suffering from salinity stress, it is necessary to measure the EC of the drainage water. If it is higher than the EC supplied, there is an accumulation of nutrients in the substrate. In this case, the substrate should be cleaned with FlashClean and watered until it is well drained. The drainage rate for fertilizer sprays varies according to the potting soil used.

Recognizing growth stages



rooting phase

First rooting phase :

Keep T.A. light-mix moist and warm.

Water daily until saturation (beginning of drainage) with a very light nutrient solution, EC 0.4 to 0.6, preferably by fine surface sprinkling or by soaking to mid-height of containers so as not to move seeds or cuttings during root set.



1st roots

First roots (barely visible in soil) and cotyledons :

Keep EC low until the first true leaves have developed.

When a seed germinates, the first one or two leaves to appear are the cotyledons. There is either a single cotyledon or two, depending on the species. In the vast majority of pot-grown species, there are two cotyledons; they appear at the same time and have a singular appearance, which does not resemble the plant's leaves.



1st true leaves

First true leaves :

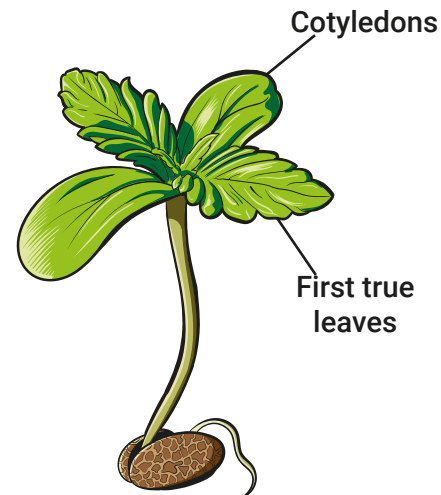
The first true leaf is the one that appears a few days after the cotyledons appear, resembling the leaf of the adult plant.



Growing

Growth :

Starts when the plant has several true leaves.





Preflowering

Preflowering :

It starts when the lights turn to 12/12, and ends when the first flowers appear. For autoflowers, more careful observation of the plants is required. The stems start to grow slightly Z-shaped about two weeks before the first flowers appear. This is when the pre-flowering dosage should be applied.



Flowering

Flowering

FinalPart® can be used to create a nitrogen deficiency and induce senescence in the plant. The plant will then put all its energy into the flowers, resulting in a cannabinoid-concentrated flower. FinalPart® can be used in soil for around 15 days, at a dosage of 4 ml FinalPart® per liter of water.

FlashClean® and FinalPart® can also be combined. FlashClean® helps FinalPart® to develop its full potential. Before applying FinalPart®, FlashClean® rids the substrate of residual nitrogen deposits and other mineral salts. After FinalPart®, a rinse with FlashClean® cleans the substrate one last time and gives your harvest a flavor boost.



... alone or in combination with other products

Microorganisms and Silicate

In hydroponics, we often recommend avoiding the use of Silicate® with micro-organisms. Silicate is a silica powder used to strengthen plants. It is the powder in general that is toxic to micro-organisms, not the silica. In water, the powder can easily come into contact with micro-organisms, which is why it is generally recommended not to use Silicate directly, but to dissolve it before adding it to the tank where the micro-organisms live. In soil, the risk of microorganisms coming into contact with the powder is much lower, so it can be used without worry.



How to use Silicate ?

Silicate can be used at the base of the collar or powdered over the substrate. Successive waterings will dissolve the powder, making it accessible to the roots.

You can also use the powder on an aerial part of the plant to dry it out in the event of excessive humidity, or at the very beginning of a fungal disease to prevent its spread (this solution is not miraculous, so use it early on).

Biostimulants

All biostimulants can be used in soil. Biostimulants that stimulate soil life are particularly interesting, such as Humic and Root Booster.



Empowering nature



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