



Know Your Roots

WHY ARE MY PLANTS' ROOTS SO IMPORTANT?

Your plants' roots are responsible for absorbing water and nutrients, which your plants need for healthy growth and development. From the roots, water and nutrients are transported up to the leaves. The leaves then produce dissolved sugars and other substances, which are pumped back down to the roots. These sugars supply the energy that your plants' roots need to grow. If any of the sugar is not used, the roots will store it as starch. Your plants' roots and their capacity to store starch determine how well a plant will grow and how much the plant will yield.

HOW CAN I TELL IF MY PLANTS' ROOTS ARE HEALTHY?

Your plants' roots should look crisp and white, with plenty of root hairs. If the roots develop brown tips or general browning, the problem is usually a lack of oxygen. As a consequence, infection is likely to follow.

There are a number of factors that affect the health of roots:

- Growing space

Never grow in pots that are too small or your plants' roots will become overcrowded and circle in on themselves. If overcrowding occurs, it will adversely affect the amount of nutrients and water that the roots can absorb, reducing potential yield.

- Oxygen

Your plants' roots use oxygen to convert sugar to energy and to transfer nutrients. The older parts of the roots towards the stem absorb oxygen and release carbon dioxide. It's important not to keep this part of the root system constantly wet. The bottom section can be kept constantly wet, provided that the water is well oxygenated.

There are a number of products on the market that will provide the roots of your plants with extra oxygen. The most popular being air stones with an air pump.





VITALINK

Plant Nutrition

- Temperature

You should try to keep the temperature around the roots of your plants constant and warm. The roots are very active in the dark period. Aim for a day and night temperature of 20 °C. Roots in a warm dark period (20 °C) develop much better than those in a cool dark period (15 °C).

- Irrigation

Irrigation is important for your plants' growth. The less energy the roots have to use to absorb water and nutrients from their surrounding area, the more they have to grow and transport nutrients throughout the plant. Ninety nine per cent of the water taken in by your plants is transpired out through the leaves. If the roots are unable to extract water from their surroundings, your plants will suffer as a result and wilt.

- Bacteria and Fungi

Not all bacteria and fungi are detrimental to plant health. In fact, some are not only beneficial but essential! Nutrient additives, VitaLink BioPlus and VitaLink BioPac contain beneficial bacteria and fungi that help to encourage plant growth and protect against disease.

For more information on VitaLink Professional Plant Nutrition, please go to www.vitalink.eu

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