Green appreciation

Home growers have been known to ponder the following: why is it that despite optimal conditions in climate and care, some plants just do not achieve top performance? While others that seem to be oblivious to their environment, can reach super harvests? Even the same climatic conditions and care levels applied to different rooms seem to achieve different ends.

What precise degree of communication exists among plants is not known, but it has been proven that plants are aware of the existence and nature of their neighbours.

It seems there are not only various standards of measure of importance, but also that the total sum of all influences surrounding the plants as well as the standard within the plant itself, all play a role within what the harvest will turn out like. This translates to mean that each individual seedling comes equipped with its own unique energy level, which explains why some plants just grow better than others despite the same levels of care. The individuality in plants can be lessened somewhat with cloning, as clones are derived from the same basis and therefore have a common genetic background. Yet even then, one clone can fall over while its neighbour is rapidly shooting upwards.

Within this article we attempt to explain why one plant can achieve greatness while another just shrivels.

Plants thrive on harmony.

Harmony is defined as finding balance within a specific scheme. Harmony in our lives means a friendly secure association with our fellow beings plus doing things that make us feel pleasure and satisfaction. In order to feel harmony, a certain amount of good health and self-confidence is required, which in turn makes it possible to feel pleasure. In this way you can even enjoy your job!

Harmony in plants is actually not much different. A plant has simply got to grow. They grow under all basic circumstances, whether they are well cared for or not.

Fine hairs on the roots are continually replaced otherwise the flow of water and nourishment would be impaired. (See part 1-3) With root growth, the dimensions of the root network increase and longer passageways are needed for the efficient transportation of water and nutrients to the top of the plant and to bring the sweet, energy giving growth juices back to the roots. (See 11 and 12)
This energy stream is an active transport system that also requires energy to operate. With greater growth in the roots, the plant's energy is also taken up by the care it must give to its roots. This in turn compels the plant to keep growing upward, sprouting new leafs and producing the necessary photosynthesis to keep up energy levels.

Highly evolved plants are differentiated. That means that they possess differing parts that each have a specific function. This saves on the transportation.

Roots - form the doors to the depths of the earth for the plant, but cannot produce photosynthesis.
Stalks - form the main transportation lines and give stability to the structure, but have little or no metabolic ability.
Leafs - do the photosynthesis but cannot perform root functions.

Within unicellular plants like algae, these functions are all inherent within one cell and that saves a great deal of transporting. Highly evolved plants on the other hand are extremely complex. Some parts of the plant have to be sustained (the roots as consumer) by other parts of the plant (leafs as producer). This implies that plants can recognise where they have an energy loss and which elements are needed for repairs. This means that a permanent exchange of information must be taking place inside the plant. The question therefore is, is there some sort of switching station, within the plant's system that primarily co-ordinates this function? The collective functioning of the parts that equals an individual plant is only guaranteed when there is a harmonious flow between all the different organs. In addition, not only is there a need for communication within, but also for communication with others.

The parts of plants that cannot integrate in the system and can no longer contribute to the whole unit are no longer cared for and are soon cast out from the energy stream. For example, twigs that are left over after a trimming and no longer possess potential growing tips are no longer able to form new shoots or leaves and branches. Before they get sacrificed though, the collective plant redeems minerals such as magnesium and other trace elements out of the leaf green.

Communication within individual plants is often superseded by the need for communication within the environments. By this I do not only mean obvious signs such as yellowed or wilted leafs that indicate that the plant needs extra care. Here I refer more to the research which shows that plants are able to either send signals into the environment or release specific odours that attract or repel insects which are useful to relieving ailments caused by parasites. This has been verified as a fact after research was carried out on a number of plant species and it would seem that scientists are in general agreement that this occurs among all vegetative life to one degree or another. A clear example of this phenomenon can be seen when a plant that is covered in mites is placed in a garden. Plants that are situated close by will very soon start sending out alarm signals and producing insect enticing odours. In this way the adjoining plants help the sick one to recover quickly. The alarm signal of the one is greatly increased by the volume of the others.

To what degree or depth, plants can communicate with each other, is not known, but it's known for sure that plants are aware of the nature and proximity of their neighbours. Some plants even develop phobias to other plants and will simply not grow well in such an environment. Other plants are known to do exceptionally well when sharing the earth with another that is favoured. In fact there have been a load of books written on this very subject. Roses apparently make it quite clear which influences from other plants they favour and which of those they do not like.

Striving for balance in a chaotic world.
Every living individual strives to stay in balance within the ever rapidly changing world. This is known as homeostasis or loosely translated, as ' having the same law of growth'. Striving to achieve a level of harmony within an ecosystem, despite constantly changing influences is an essential law of the jungle. Perhaps even the will to live? It is often said that if a plant is sturdy on it's feet, it can take a bit of push and shove too. And that is precisely what life's all about.

Good transport roadways are essential for optimal functioning. An active but energy consuming transportation system regulates the energy input within the collective plant. Energy is pumped in the desired direction and roadways are constantly being built. Maintenance and expansion are much easier to achieve if the plant already contains a high energy level. By comparison, think of a city council that retains an amount over from the year's budget. Perhaps then they can afford to build some more traffic circles for the city. However, if at the end of the year, the city council is in debt, then they can only afford the utmost necessary roadworks. And that is precisely what can happen in the plants world too.

Every kind of plant has a predetermined or preprogrammed pattern of required life conditions. This ensures that waterplants, soilplants and desertplants can exist. (Also epiphytes, parasites and carnivorous plants.)

Water plants do not require transpiration. They can exist without roots or only use roots to anchor themselves. Leaf pores are also unnecessary because water, oxygen and carbon dioxides are absorbed directly from the surface and released back into it. Which in turn saves a great deal of energy in transportation.

Plants that grow on land differentiate themselves by their water requirements. Hygrophytes are water loving plants and bear a lot of similarity to plants that live in the water. Xerophytes are found on the other end of the scale in that they thrive in places with a lot of direct sunlight. In between these two extremes are an uncountable number of varieties.

Hemp plants most definitely do not possess the characteristics of a water plant.
Rather, they display an inclination toward dryer places. Originally, hemp only grew at extremely high altitudes, where it could find strong winds and plenty of direct ultra violet rays. Water is scarcer there, as the ground does not retain ifves are quite hairy, even to the stalks. Having hairy leafs is an efficient way to halt transpiration. Transpiration is the loss of water through evaporation. Leaf pores find themselves within grooves on the leaf and the areas where transpiration takes place are therefore wind free. The finger form of the leafs contributes to the movement of air close to the plant without causing too much turbulence to the structure. And then last but most definitely not least, there is the production of resin! Resin protects the flowers from drying out.

Despite these facts about the plant's physiognomy, many dope growers tend to treat their plants as if they were water plants. In the absence of a definite timetable of wet and dry periods, these plants miss out on an essential balancing factor. They require an environment that suits their predetermined genetic programming.