Natural fertilizers

Most of the nitrogen, normally given at the start of a cultivation cycle, is rinsed out and therefore not taken up by the plant. Additionally, high-salinity fertilizers kill the bacteria that boost the retention of fertilizers and minerals in the soil. Natural fertilizers (like OPF) are therefore highly recommended rather than artificial fertilizers. With OPF, the plant, as well as the soil, will be able to benefit from the highest mineral intake possible.

Defence strengtheners

We expect our plants to perform like top-class athletes, and to do this within a short period of time. This is why optimum nutrition is essential. Although the plant's roots take up most of the nutrients, its leaves are able to absorb most minerals faster. In nature, foliar fertilization by means of dissolved organic matter is a normal phenomenon. Applying foliar fertilizer (Natural Green / PreTect) is therefore a good way to ensure an optimum balance in the absorption of magnesium and calcium.

Water management

The guidelines described above will heighten the soil's capacity to retain water, while ensuring that it contains enough oxygen. The recovery of the soil will cause larger soil aggregates to be formed, allowing water to be more easily stored in the soil and excess water to be more easily drained off. You will notice that your soil will be less sensitive to drought.

For more information and advice, please contact our crop advisers or your dealer/distributor. You will also find a lot of information about the cultivation of various crops on our website www.phc.eu, as well as a variety of product sheets for downloading.

PHC
Plant Health Cure

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Cultivation program for agriculture

For profitable and sustainable cultivation

PHC
Plant Health Cure

We Grow Soil.

PHC cultivation programs are developed specifically to improve the health of soil, plants, humans and animals, while simultaneously fixing more CO_2 in the soil.

Organic plant feed is more than simply the sum of various minerals. The health of our plants depends largely on the condition of the soil in which they grow.

The majority of plant diseases can easily be prevented by ensuring healthy soil, good growing conditions and a root zone colonized with mycorrhizae.

This programme will allow you to considerably reduce the pathogen pressure on your crops while simultaneously improving both quality and yield of the harvest.

Introduction

Our advice is not the same for all crops. The basic principle behind this programme is to improve soil biology, which is so important to plant growth.

Problems caused by infection generally originate in the soil, and the extent of the infection depends on the crop's susceptibility to pathogens and the force of the infection.

The best way to eliminate infections of Phoma, Fusarium, Pythium, silver scurf or black spot is by restricting these pathogens' capacity for growth. This can be done by using chemical agents, in which case the pathogens are combated only partially. However, making these pathogens compete for space in a natural manner makes it possible to achieve a far more effective and long-lasting result.

> **"Problems with nematodes arise from a serious deficiency of fungi in the soil"**

The PHC programmes are based on the principle that the space pathogens want should be taken up by beneficial fungi and bacteria, which also has a positive impact on the growth and development of the plant and therefore also on the harvest and storage of the crop. Better for the soil, the grower and the crop!

The key to the approach is in the soil

To achieve a pathogen-free crop it is necessary to switch exclusively to shallow tillage. This shallow tillage may not go deeper than 12-15 cm.

A dose of 600 kg Biovin Granular can be administered during or after soil preparation. This product contributes to healthy soil biology, leading to a higher oxygen content in the soil. As a result, there is less space left for anaerobic pathogens like Fusarium to grow.

Using artificial fertilizers for many years in succession will destroy the humus fraction in the soil. Compost can initiate the formation of humus, but the added nitrogen will ensure that organic matter is quickly transformed into CO_2, thus preventing the formation of humus.

The fulvic acid in Biovin Granular boosts the production of humus. The natural chelating effect helps the bacteria and mycorrhizal fungi to loosen the fertilizers in the soil by soaking solubilizing and subsequently making them accessible to the plants.

Soil improvement

soil improvement

The tillage and fertilizing methods commonly used today, as well as our use of pesticides, have increased the soil's susceptibility to compaction and waterlogging.

An excess of potassium chloride is causing soil particles to become increasingly small and obstructing the organic matter/mineral interface. The product of all this is an oxygen-poor environment: an ideal breeding ground for anaerobic soil pathogens like Fusarium, Phoma and silver scurf.

When traditional cultivation methods are used, soil life has to be restored every year. Additionally, with every new crop, the roots of your plants will have to make a renewed effort to penetrate deeply enough into the soil. If the soil is tilled only shallowly, it is easy for roots to continue growing in the channels left behind by the last crop's roots.

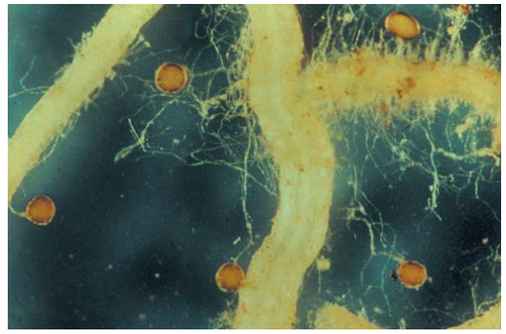
PHC recommends applying useful root bacteria and fungi (e.g. Biovin Granular, MooR) to make sure that every crop is off to a healthy start.

Optimizing rhizosphere

optimizing rhizosphere

By their very nature, most arable crops are highly dependent on mycorrhizal fungi. In exchange for sugars derived from the roots mycorrhizae take up water and minerals from places that roots can never reach. The uptake capacity of the plants is easily increased by sevenfold. This facilitates a cultivation system that requires less irrigation and creates more space for oxygen. In addition, the fine network of mycorrhizal threads (hyphae) ensures that no space is left for pathogenic fungi to develop.

Traditional agricultural methods have greatly reduced the presence of mycorrhizal fungi in agricultural soils. PHC is the only company in Europe to supply a mixture of two or four types of mycorrhizal fungi in the form of pure and pathogen-free spores (the seeds of fungi are called spores). It is always important to administer the mycorrhizal spores (e.g. Mycorgran or VA-PWI) directly beneath the seeds or seedlings.
Additionally, PHC recommends applying good bacteria immediately during or after sowing or transplanting to ensure that there are sufficient quantities of beneficial bacteria around the roots in the first weeks of development for good uptake and growth.



Mycorrhizal fungi

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