DeruNed bv

DeruNed develops and supplies natural crop protection products for professional horticulture.

Using 100% natural ingredients such as enzymes, amino acids and plant extracts, DeruNed formulates effective preparations that feed and protect your crop. These natural products are suitable for use in combination with chemical and biological crop protection products.

To develop a high quality product, DeruNed works together with several independent research centres.

DeruNed products are available from your horticultural supplier. If you have any questions after reading this information you can contact our product team.

Biopak provides a healthy root environment for your crop

What is Biopak?

Biopak is a natural product based on carefully selected micro-organisms and growth promoters. With ingredients such as amino acids, vitamins, sugars and soil bacteria, Biopak promotes a heal-thy root environment and creates the optimal growth conditions for your crop. This makes Biopak ideally suited for restoring a soil environ-ment that has been disrupted, but it is also very suitable for stimulating the root environment of your crop.

How does PHC Biopak work?

Good crop care begins with the soil. Every soil naturally contains many micro-organisms in the form of bacteria and fungi. In a biologically healthy soil, useful bacteria and fungi predominate over pathogenic organisms. However this natural balance can be entirely unbalanced, for example through the frequent use of chemicals or fertiliser, and through monocultures.

Bacteria protect the plant

You can restore the natural balance in the soil environment with the aid of the active micro-organisms and growth promoters in Biopak. Biopak contains various kinds of bacteria for that purpose. These bacteria protect the plant. They compete for space and food with patho-genic organisms and in doing so lower the infection pressure.

Biopak also contains nitrogen fixing and phosphate dissolving bacteria. These bac-teria provide the plant with nitrates and phosphates. Another type of bacteria in Biopak is a Bacillus subtilus type, which protects the plant against pathogenic organisms.

Finally, Biopak is especially suitable to stimulate the root environment. Administering Biopak immediately after (steam) sterilisation rapidly produces a great diversity of micro-organisms that stimulate the root growth of your crop.

Using Biopak

Biopak is broadly applicable, for both vegetables and flowers in greenhouses and outside, in soil or on a substrate. Biopak can be used throughout the year (mix with irrigation water). Biopak can be used along with most common agricultural chemicals. Consult DeruNed for free advice on dosage where agricultural chemicals are in frequent use. However Biopak should not be combined with the fertiliser.

First mix Biopak with a small quantity of (warm) water, and then add the rest of the water to the mix. The solution may not be combined with the fertiliser in the dosage tank, but can be given along with measured doses of EC. The Biopak solution should be used within 12 hours of adding the water.

Dosage:
Start dose: 200 gram (2 packets) per 1,000 m².
Where initial growth is poor, or for sensitive crops: optionally 100 grams per 1,000 m² after one week.

Maintenance dose: 1 packet per 1,000 m², repeat every four weeks. The dosage depends, among other factors, on crop sensitivity and infection pressure. An extra dose may be given where there is a higher infection pressure. It is not possible to give an overdose of Biopak.

Application with Savitan or Modicell
Biopak is regularly used in combination with DeruNed's natural products Savitan and Modicell. Add the required quantity of Savitan or Modicell to the final Biopak solution just before use.

Storing Biopak
Store Biopak in a cool, dry and dark place. Opened packets of Biopak can only be stored for a few days. Sealed and undamaged packets can be kept for at least one year, if they are stored in a cool, dark and dry place.

The Bacillus species

Many bacteria can not survive in extreme conditions. The Bacillus species are an exception. This type of bacteria can produce spores that live through extreme conditions.

Many types of Bacillus live around the root of the plant. There they can feed on root secretions. The plant gets protection and nutrition in exchange. The Bacillus gives protection by secreting compounds that inhibit the growth of other bacteria and fungi. It has even been suggested in the scientific literature that the materials produced by the Bacillus also influence the plant above the ground. The plant appears to be able to incorporate substances produced by these bacteria. These substances can also give protection above ground.

Bacillus can increase the amount of fixed nitrogen in the immediate environment. The bacteria do this by transforming gaseous nitrogen from the air into nitrates that can be directly absorbed by the plant. Moreover, Bacillus frees up phosphates that are bound to soil particles. This last characteristic of the Bacillus makes a considerable contribution to the nutrition and protection the plant requires.

DERUNEDBV
NATUURLIJKE GEWASBESCHERMING

Biopak

Contributes to a healthy root environment

EN