

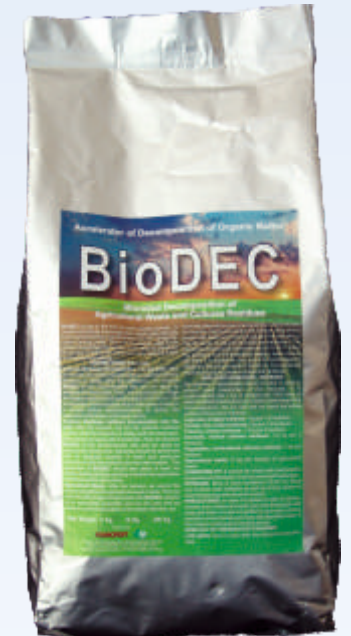
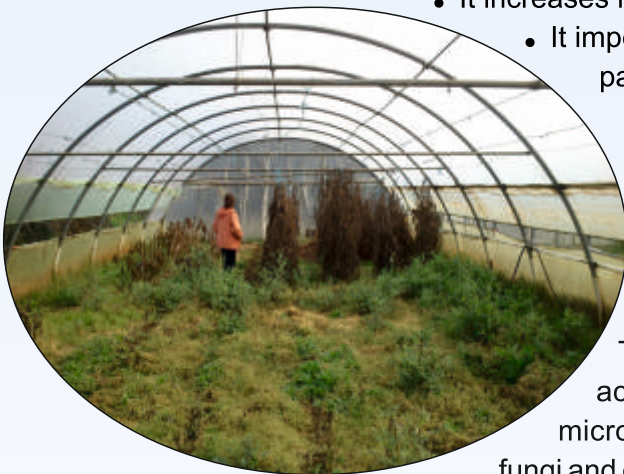
BioDEC

Microbial Decomposition of Agricultural Waste and Cultures Residues

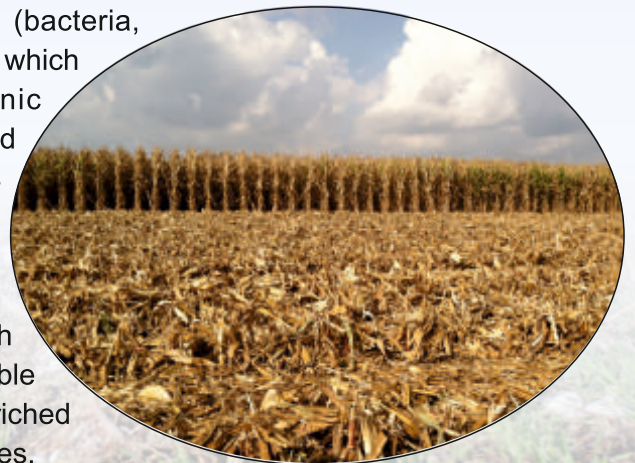
BioDEC is an enhancer of organic matter decomposition in form of water soluble powder. It contains beneficial microorganisms which exist naturally in the environment at a concentration of 1×10^{12} cfu/kg (cfu: colony forming units) and decompose the organic matter contained in the agricultural waste and in the remains of cultures (such as cereals, forages, industrial crops, legumes, biofuel crops, aromatic plants, horticultural crops etc) which are not easily degradable. This way it is possible to establish the next crop to the field after a short time interval. The microorganisms of **BioDEC** exist in the product at a biologically inactive state. After the dilution of the product in water the microorganisms become active and they start multiplying.

PROPERTIES

- It accelerates the composting process of agricultural wastes
- It decreases the set-aside time
- It restores soil fertility
- It increases the organic matter of soil
- It increases the availability of soil nutrients
- It improves the structure and the physicochemical soil properties
- It decreases the salinity and the acidity of the soil
- It increases nitrogen fixation
- It impedes the growth of pathogenic fungi and bacteria and creates a suitable environment for the growth of healthy plants



The **circle of nutrients** in the nature is achieved by the activity of aerobic and anaerobic microorganisms (bacteria, fungi and oomycetes) which degrade the complex organic matter releasing in the soil simpler organic compounds and mineral elements, through a process known as “MINERALIZATION” or “DECOMPOSITION”. The activity of these specific micro-organisms, is owed to their ability to produce lytic enzymes, such as cellulases, chitinases, pectinases, lignin lytic enzymes, proteinases etc, which decompose the organic matter. As a result, readily assimilable nutrients become available to the plants and the soil is enriched with organic matter, which improves its structure and properties.



APPLICATION METHODS

Cultures Residues (incorporation into the soil): After the harvest, we cut the cultures residues partially (with the thresher) or totally (with the destroyer), we dissolve **BioDEC** at the recommended rate and we apply by spraying the whole area. Then, we incorporate by tillage the organic matter into the soil at a depth of 30-50 cm. The incorporation of the residues should take place at least 2-4 months before planting-seeding or before the application of fertilizers of the next culture.

Cultures Residues (without incorporation into the soil): After the harvest, we cut the cultures residues partially (with the thresher) or totally (with the destroyer). Alternatively we spray with a herbicide. Then we dissolve **BioDEC** at the recommended rate and we apply by spraying the whole area. Spraying should be performed with an adequate quantity of water and particular assiduity so that the residues are very well soaked. The application of **BioDEC** should take place at least 3-5 months before planting-seeding or before the application of fertilizers of the next culture.

Agricultural Waste: After the harvest, we uproot the culture and gather the agricultural waste in piles. Then we soak the piles of agricultural waste with **BioDEC** solution at an appropriate proportion and we mix well until we achieve a perfect maceration of the waste. After this, we cover the piles with a cover and we let them still for at least 2-4 months. During this period the residues piles should be wet with water and mixed at regular time intervals so that the levels of required humidity are maintained. The process is enhanced at a temperature of >15-20°C. When this period is over the processed waste is taken back to the field, it is spread all over and it is incorporated by tillage into the soil at a depth of 30-50 cm. The processed residues should not come in contact with fertilizers.



DOSAGES

We dissolve in appropriate volume of water in order to ensure good maceration of the residues. It is recommended that 1 kg of molasse per 1000 litres of water is added to the solution for a faster awakening of the microorganisms. We stir well and we spray the whole surface of the culture residues.

Legumes, forages residues: 1 kg per 1-2 hectares

Cereals, rice, maize residues: 2 kg per 1-2 hectares

Tobacco, cotton residues: 1-2 kg per 2 hectares

Aromatic, biofuel cultures residues: 1-2 kg per 2 hectares

Vegetables, horticultural cultures residues: 1 kg per hectare

Agricultural waste: 2 kg per hectare of agricultural waste



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