

E R G O F I T O I N A C T I O N

Give Nature What Nature Wants

White Fly and all Hemipterans



ERGOFITO

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WHITEFLY:

Whiteflies are small hemipterans that typically feed on the undersides of plant leaves. They comprise the family Aleyrodidae, the only member of the superfamily Aleyrodidae. More than 1550 species have been described.

The ability of whiteflies to carry and spread disease is the widest impact they have had on global food production. In the tropics and subtropics, whiteflies have become one of the most serious crop protection problems. Economic losses are estimated in the hundreds of millions of dollars.

While several species of whitefly cause crop losses through direct feeding, a species complex, or group of whiteflies in the genus *Bemisia* are important in the transmission of plant diseases. *Bemisia tabaci* and *B. argentifolii*, transmit African cassava mosaic, bean golden mosaic, bean dwarf mosaic, bean calico mosaic, tomato yellow leaf curl, tomato mottle, and other Begomoviruses, in the family Geminiviridae.

The worldwide spread of emerging biotypes, such as *B. tabaci* biotype B, also known as, '*B. argentifolii*', and a new biotype Q, continue to cause severe crop losses which will likely continue to increase, resulting in higher pesticide use on many crops (tomatoes, beans, cassava, cotton, cucurbits, potatoes, sweet potatoes).

How Ergofito helps plants combat plant sicknesses?

The multiplication of the beneficial bacteria acts in an antagonistic and repressive way towards the phytopathogenic micro-organisms, particularly present in soils lacking humus.

The mechanism of this antagonistic/repressive action towards the phytopathogenic micro-organisms can be summarized as follows:

- Micro parasitism: Occurs when the lyses of the cell of fungi and pathogen mildew or nematodes through enzymatic activity are attacked.
- Soil sanitation: Occurs with the entry of toxic metabolites for the pathogen microorganisms, such as phenols, tannins, chlorogenic acid and auxins (biochemical resistance)
- Food competition: This action takes place by the new microorganisms devouring the existing food source present in the soil by the new microorganisms, which they subtract from the pathogens.
- Strengthening of the threshold resistance: Promote the structural thickening of the tissues of the epicuticular layers of protection of the leaves and roots that impede penetration into the plant.

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The mechanism:

The stimulation of the bacterial activity allows the beneficial (**Ergofito**) microorganisms to occupy spaces in the plant and the surrounding soil in a complex series of physical, chemical and biological reactions that act against the agent that cause plant diseases.

- Reduction of the spaces, which are normally occupied by pathogens.
- Creation of bi-logical antagonistic control of pathogens
- Accentuation in the reaction of the plant's immune system
- Stimulation of the production Phytoalexin

ERGOFITO ACTION IN PREVENTIVE AND CURATIVE SITUATIONS:

- More efficient defense against parasitic insects due to the plant strengthening.
- Fungal preventive action to confront the infections due to Mycogone and Verticillium
- Rot control in seedbeds caused by Pythium & Phytophthora.
- Basal rot control of vegetable crops, agricultural and ornamental due to Phycomycete and Rizoctomia, Sclerotium, Sclerotinia, Botrytis etc.
- Reduction in the incidence of vascular diseases responsible for the withering caused by Fusarium and Verticillum.
- Preventive and curative action in the arboreal cultures (orchards, urban greenery, citrus etc.) as well as forestal fragrances towards the responsible agents for branch cancer (Nectria, Cytospora, Phopsis etc.). Also towards radical attacks due to Basidiomycetes (Armillaria, Fomes, Stereum, etc.) It will also protect pruning cuts from been penetrated by pathogenic fungi.

ERGOFITO APPLICATION:

Agricultural land has generally been abused by years of chemical fertilization. With time the humus in the soil mineralizes curtailing the ability of the plant to be healthy.

Without humus, the plant immune system cannot develop; therefore the plant is prone to all attacks, parasitic, insects, fungal etc.

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FIRST APPLICATION (ONCE A YEAR):

Bio Agent	Quantity	Area
Ergostart Bio	125 Kg	Per Hectare

The above is applied with sufficient water, generally diluted 1:50, 1Kg of product with 50 liters of water. **Ergostart Bio** will immediately start decomposing all inert organic matter into plant food.

More important it will de-mineralize any accumulation in the rhizosphere that is and has suffocated the soil.

It will start by converting all of the above into humus, thus rejuvenating tired soils and allow normal and healthy roots development.

The above is a once a year application. It is recommended to apply it one month prior planting.

WEEKLY APPLICATION UNTIL THE PROBLEM IS SOLVED:

Ergofito Hemipterans is applied once a week until the problem is solved, which is generally four applications in total.

Bio Agent	Quantity	Area
Ergofito Hemipterans	6 Kg	Per Hectare

The above application is foliar. The 6 Kg of **Ergofito Hemipterans** is mixed with 100 liters of water. It is then sprayed on the plants, ensuring that the product is applied under and on the leaves.

The above operation is repeated once a week until the total disappearance of all white flies and hemipterans



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