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

GIVE NATURE WHAT NATURE WANTS

Phytophtora

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Phytophthora, “destruction”; (“the plant-destroyer”) is a genus of plant-damaging Oomycetes (water molds), whose member species are capable of causing enormous economic losses on crops worldwide, as well as environmental damage in natural ecosystems.

The cell wall of Phytophthora is made up of cellulose. The genus was first described by Heinrich Anton de Bary in 1875. Approximately 100 species have been described, although 100-500 undiscovered Phytophthora species are estimated to exist.

Preamble:

It is important to apply a natural biological and cultural control to obtain stable long lasting results. In the short term, many chemicals available on the market will work. Humans, as an example cannot sustain a healthy life on medicine alone, a healthy diet is vital. Plants are no different.

Symptoms description:

In plants, Phytophthora causes leaves to turn yellow, first by turning pale green then yellow, which indicates that the leaves will soon fall off when the sickness is more advanced. The plant’s general degradation becomes evident even as it manifests itself differently from plant to plant based on the stage of infection.

For example, Excessive flowering during or out of season, stumped vegetation, reduced feeder roots volume.

Irrigation water, rains and mechanical implements transport the infection agents Zoospores.

Fungicides:

The available fungicides which are specifically manufactured to combat Phytophthora do not manage on their own to efficiently control the sickness in its broad sense as they do not address the plant’s internal defense mechanism.

Signs that the sickness is increasing its resistance to such fungicides are more and more evident and frequent.

The use of certain fungicides in nurseries masks the presence of the pathogen and helps the diffusion of fungicide resistant Phytophthora.

Preventive measures:

Improve the drainage to avoid water logging, hence roots asphyxiation.

Ensure that all plants from the nursery have been certified Phytophthora free.

Integral biological remediation:

Many aspects can influence the positive outcome of a remediation plan related to Phytophthora.

Many fields used for plant cultivation have characteristics, (that can be modified) which facilitate the reproduction and the aggressively of the said pathogen.

The level of soil management, particularly fertilization and irrigation are decisive factors in the remediation of infected fields.

The margin of error when a Phytophthora infection occurs is very narrow.

Wrong irrigation during the hottest months, can cause plant stress conditions resulting in growth reduction and reduces the chance of recovery.

The assimilation and mobility of the nutrition substances are altered by the sickness: some converge around the roots, others remain blocked in the branches and the stem (or trunk). A fertilization plan that does not take in consideration the presence of the sickness and its mechanism will be a waste of money and time.

Therefore it is vital to follow a philosophy of integrated defence to counter the problem.

Ergofito offers such a program by using ONLY the natural group of bacteria and enzymes formulated by nature for such eventualities.

Application protocol:

First application:

Product	Quantity	When
Ergostart Bio	150 Kg per Hectare	Immediately

Mix the above with 5000 liters of water and apply via irrigation. **Ergostart Bio** will set off the bacteriological life and compete with Phytophthora limiting it in its development and virulence.

This is a radical application.

Second application:

Product	Quantity	When
Ergofito Defence	3 Kg per Hectare	10 Days after first application
Ergofito Stim	1 Kg per Hectare	With the above
Ergofito Cu/Zn	6 Kg per Hectare	With the above
Ergofito Mix P	24 Kg per Hectare	With the above

Mix each of the tabled products with sufficient water per Kg of **Ergofito** product and apply via foliar spray. If not possible apply via irrigation.

Third Application:

Product	Quantity	When
Ergofito Defence	3 Kg per Hectare	10 Days after second application
Ergofito Stim	1 Kg per Hectare	With the above
Ergofito Cu/Zn	6 Kg per Hectare	With the above
Ergofito Mix P	24 Kg per Hectare	With the above

Mix each of the tabled products with sufficient water per Kg of **Ergofito** product and apply via foliar spray. If not possible apply via irrigation

Fourth Application:

Product	Quantity	When
Ergofito Defence	3 Kg per Hectare	10 Days after third application
Ergofito Stim	1 Kg per Hectare	With the above
Ergofito Cu/Zn	6 Kg per Hectare	With the above
Ergofito Mix P	24 Kg per Hectare	With the above

Mix each of the tabled products with sufficient water per Kg of **Ergofito** product and apply via foliar spray. If not possible apply via irrigation

Conclusion:

By applying the above natural biological remediation, the plants will receive all the required nutrients and minerals to strengthen its defensive mechanism to fight primarily Phytophthora but all other sicknesses as well.

Production and quality of the crop will increase.

(*Refer to Ergofito documentation for further information).*

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