
TRYPTONITE
BioActivator of auxins metabolism
Ask us
what it can do
for your cereals.
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Bioactivator of auxin metabolism

What is

► Unmatched effectiveness

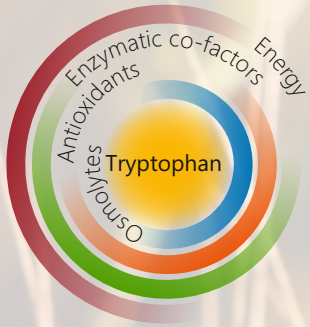
An innovative formulation that amplifies the biosynthesis of auxins in plants starting from their natural precursor L-Tryptophan (3,5%).
The secret of its efficiency lies in the combination of its components.

► **Energy** for biosynthesis and auxin-related metabolic processes.

► **Antioxidants** to keep all cellular organs at the maximum level of effectiveness.

► **Enzymatic co-factors** to accelerate and increase the performance of biosynthetic processes.

► **Osmolytes** to ensure water balance and the flow of nutrients and metabolites in all parts of the plant.



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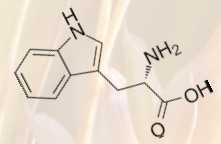
What is



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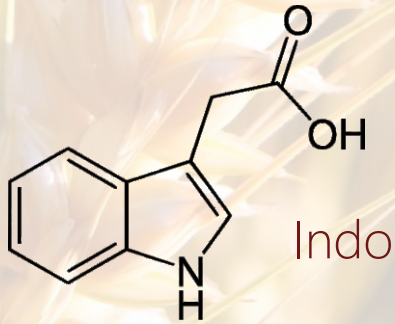
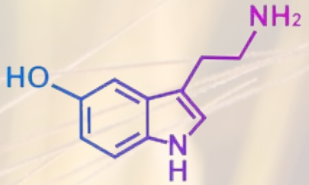
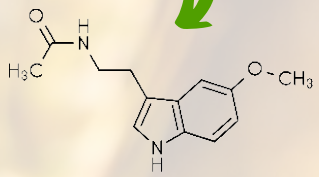


Indol Acetic Acid
Auxin

Indole-3-acetic acid (IAA), the major natural auxin in higher plants, has profound effects on plant growth and development. There are numerous plants processes in which auxins are involved.



Serotonin



Melatonin

In plants, melatonin acts in the reduction of oxidative stress, promotes germination and seed growth, improving resistance to environmental stress, stimulates the immune system and modulates circadian rhythms. Melatonin also in the regulation of the stomatal opening.

Serotonin plays an important role in plant growth and development, including functions of chronoregulation and modulation of reproductive development, control of root and shoot organogenesis, maintenance of plant tissues, delay of senescence, and responses to biotic and abiotic stresses.

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What it can do for your cereals

Improves tillering and the balance of the culms

- Stimulates tillering.
- Improve the development of secondary culms.

Increases and improves fertilization

- Increases the transport of Boron and Calcium.
- Improve pollen germination.
- Protects pollen tube and ovary.
- Activate cell multiplication processes.

Increases spike lenght and seeds per spike

- stimulate the growth of flower components;
- stimulate cell division
- stimulate cell distension;

Increases dry matter accumulation

- Increases absorption and accumulation of K, Ca, Mg and B.
- Increases carbohydrates and protein biosynthesis.
- Increases the biosynthesis of antioxidants.
- Increases the efficiency of the transport of nutrients and sugars towards the seeds.

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What it can do for your cereals

Increases resistance to thermal and water stress

- Regulates cellular water balance.
- Modulates the stomatal opening.
- Activates antioxidant enzymes SOD, CAT, POD, APX.
- Activates membrane-protecting enzymes.
- Increases water absorption capacity.

Increases tolerance to salinity and heavy metals

- Reduces the absorption and accumulation of Na+ and Cl-.
- Prevents lipid peroxidation of membranes.
- Activates antioxidant enzymes.
- Increases the expulsion of heavy metals and exchange with K, Ca, Mg.
- Reduces the synthesis of Abscisic Acid.

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Expected results

- **More culms per square meter**
- **More seeds per spike**
- **Greater specific weight of the seeds** (kg/hl)

at the end...

■ **More yield**

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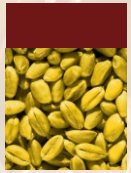
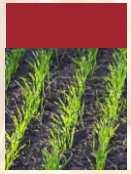
When to apply



Seed coating

Goal: **stimulate the development of the root system and seedlings.**

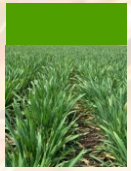
Application rate: **2 L/seeds ton**



Pre-tillering (BBCH 15-20)

Goal: **stimulate tillering and uniformity of culms.**

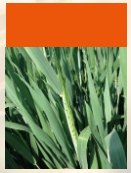
Application rate: **0,7 L/ha**



Beginning of stem elongation (BBCH 30-33)

Goal: **leaf development, resistance to lodging.**

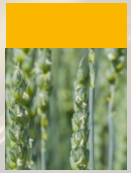
Application rate: **0,7 L/ha**



Booting (BBCH 41-45)

Goal: **development of floral organs, increase resistance to water stress.**

Application rate: **0,7 L/ha**



Begin of flowering (BBCH 61-65)

Goal: **fertilization, increase grain fill, flag leaf efficiency.**

Application rate: **0,7 L/ha**

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Field trials results

Wheat (Triticum durum)
Variety: Odisseo
Place: Santa Maria Nuova (Ancona) - Italy
Year: 2023
Research center: Agridaeus R&D

	Yield	Grain specific weight
Control	**4,40** t/ha	**75** kg/hl
TRYPTONITE	**5,10** t/ha **+15,9** %	**81** kg/hl **+8,0** %

Applications

1) **0,7 L/ha** at BBCH 39/41 in association with herbicides.

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Field trials results

Wheat (Triticum aestivum)
Variety: **Albagran**
Place: **Marzano (Lodi) - Italy**
Year: **2023**
Research center: **Agricola 2000 Scarl**
Sowing: **8th November 2022**
Harvesting: **10th July 2023**

	Chlorophyll content (SPAD)*	Yield
Control	**24,5**	**7,02** t/ha
TRYPTONITE	**28,0** **+14,3** %	**7,55** t/ha **+7,5** %

Applications

1) **0,7 L/ha** at BBCH 24 in association with herbicides.
2) **0,7 L/ha** at BBCH 39 in association with fungicides.

* Measurement dated 11th May 2023

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BioAttivatore del metabolismo delle auxine

Field trials results

Wheat (Triticum aestivum)
Variety: **Bologna**
Place: **Longastrino (Ferrara) - Italy**
Year: **2022/2023**
Research center: **Agridaeus R&D**

	Yield
Control	**6,0** t/ha
TRYPTONITE	**6,3** t/ha **+5,0** %

Applications

1) 2 L/t seeds coating.

Control

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Field trials results

Rice

Variety: **Guadiamar**
Place: **Arguedas (Navarra) - Spain**
Year: **2022**
Research center: **Agridaeus R&D**
Sowing: **16th May 2022**
Harvesting: **8th October 2022**

	Yield	Profit
Control	**7,32** t/ha	**3321** €/ha
TRYPTONITE	**7,96** t/ha **+8,8** %	**3612** €/ha **+291** €/ha

Applications

1) **0,5 L/ha** at 3a/4a leaf.
2) **0,5 L/ha** 15 day after the first application.
3) **0,5 L/ha** at beginning of panicle emergence.

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