



**PRODUCT INFO
& DATASHEET**

SICO DYNATEC DC

NPK 26-0-0 + 32 SO₃ + TE

POWERFUL - FAST AND LASTING

02/2024

1. INTRODUCTION

SICO DYNATEC DC is the most advanced and powerful nitrogen fertilizer on the market. As a result of combining the most advanced innovations in fertilizer efficiency, SICO DYNATEC DC contains nutrients protected by *Polycoat technology* and nutrients activated by *Enzym active technology*. These technologies complement its robust chemical composition, optimizing its ability to deliver all its nutrients quickly, potently and lastingly.

2. TECHNICAL CHARACTERISTICS

* POLYCOAT Technology

The Polycoat technology based on the action of a polymer that coats the fertilizer granules, protects nitric and ammoniacal nitrogen from leaching losses, as well as the rest of the nutrients, ensuring immediate availability for absorption by plants. The polymer is biodegradable and easily absorbs soil moisture, turning into a gel that surrounds and protects all nutrients, including nitric nitrogen.

The polymer works progressively to regulate the release of nutrients, minimizing leaching losses and reducing salinity after the granules have dissolved.

Polycoat technology allows an efficient use of key nutrients and consequently higher yields and better quality.

* ENZYM ACTIV Technology

The Enzym active technology is unique and exclusive in the enzyme activation process and maximizes the use of nitrogen and other nutrients.

In soil, Enzym active accelerates mineralization and nutrient release:

- Acts as an enzymatic activator of the carbon and nitrogen cycles.
- Enzym active directly activates enzyme activity related to nitrogen metabolism.
- Enzym active indirectly increases the enzymatic activity of soil phosphatases, thus promoting greater use of organic phosphorus.
- Promotes better and faster mineralization of organic matter from stubble and plant residues, activating the nutrient cycle.

In plants, Enzym active maximizes the efficiency of nitrogenous nutrition and, by being absorbed, improves the general nutritional status of the crop:

- Acts as an enzyme activator of nitrogenous metabolism, including protein, stimulating photosynthesis; the Krebs cycle; amino acid synthesis and proteins; the production of phytohormones.

* CERTIFICATE OF ANALYSIS	%		%
Total nitrogen (N)	25	Boron (B)	0.01
Ammoniacal Nitrogen (NH ₄ -N)	18.75	Zinc (Zn)	0.1
Nitric Nitrogen (NO ₃ -N)	6.25	Manganese (Mn)	0.1
Sulphur (SO ₃)	32	Molybdenum (Mo)	0.001

The composition described may change without prior notice. Always check packaging specifications. These fertilisers must be incorporated into the soil before starting a new crop cycle. When applied to the surface, their dissolution must be guaranteed by the local conditions of precipitation or irrigation.

3. APPLICATION DOSES

CROP	kg/ha	CROP	kg/ha
Sugar beet	300 a 500	Pastures	200 a 400
Winter cereals	200 a 400	Pome fruit	250 a 400
Rapeseed	200 a 400	Tomato (industry)	150 a 250
Fodder	200 a 400	Vine	100 a 200
Vegetables in general	250 a 750	Eucalyptus*	200 a 300
Corn	500 a 750	Lawn	20 a 40
Olive grove	200 a 400		

*After each cut.

The doses mentioned are indicative. It is advisable to adjust the amount of fertilizer to be applied depending on the results of a soil analysis.

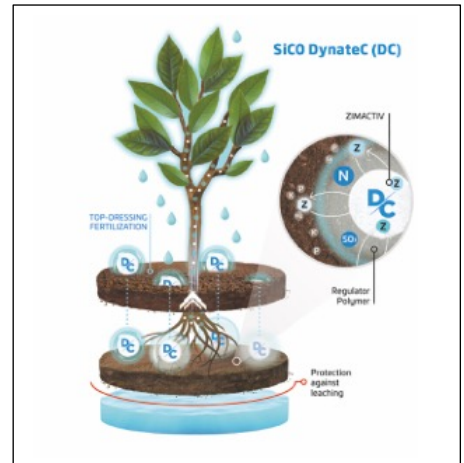
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4. ADVANTAGES

- Nitrogen protected by a biodegradable regulatory polymer
- Lower leaching losses
- Maximum efficiency in the use of nitrogen
- Promotes the synthesis of amino acids and proteins
- Increases the production of phytohormones
- Stimulates photosynthesis
- Accelerates the processes of mineralization of organic matter and release of nutrients in the soil
- Proven increases in yields and crop quality



FAST, POWERFUL and LASTING

The crystalline structure of SICO DYNATEC DC made up of ammonium nitrate with a high content of integrated soluble nitrogen, ensures a high rate of solubilization of the granule in the soil, requiring less moisture than other nitrogen fertilizers, a characteristic that significantly improves the effectiveness of top-dressing fertilization.

When SICO DYNATEC DC granules are dissolved in the soil, their molecules do not break or form new chemical bonds, thus, ammoniacal nitrogen is always transformed into nitric in the presence of sulfur, ensuring a continuous supply of nitrogen and sulfur to be absorbed together by the roots of the plants, favoring a fertilization of greater quality and efficiency.

The proportion between nitric and ammoniacal nitrogen is ideal to ensure an immediate effect of the nitric part after application and to expect a longer response from the ammoniacal part.

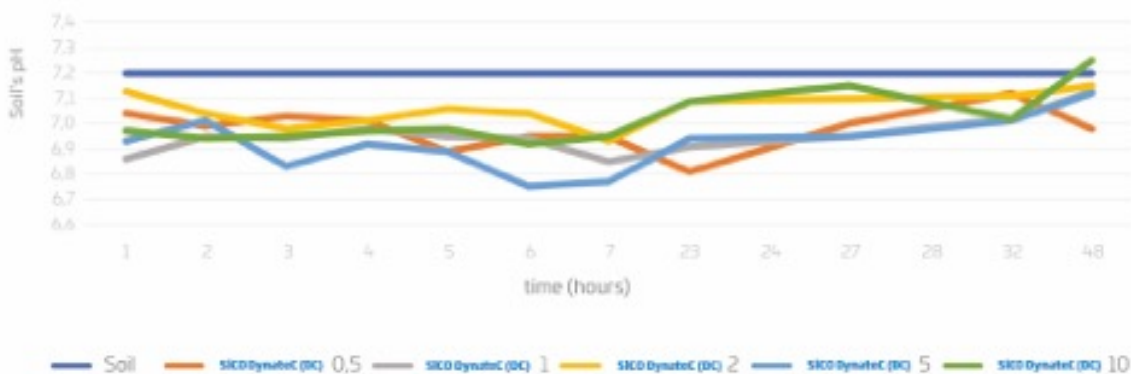
BENEFICIAL EFFECTS OF SICO DYNATEC DC

100% of the sulfur present in SICO DYNATEC DC is soluble in water and, as such, can be assimilated by crops. This unique solubility has beneficial effects:

- Soluble sulfur, once dissolved in the soil, can displace calcium (Ca^{2+}) from the acrylic-humic complex, generating a slight acidification in the soil surrounding the granule.
- In this way, the pH of the area close to the granule is reduced for a few days, helping to solubilize elements that may be retained in the soil due to the pH effect.

This effect is temporary as can be seen in the following graph:

Evolution of soil's pH with different doses of SICO DynateC (DC)



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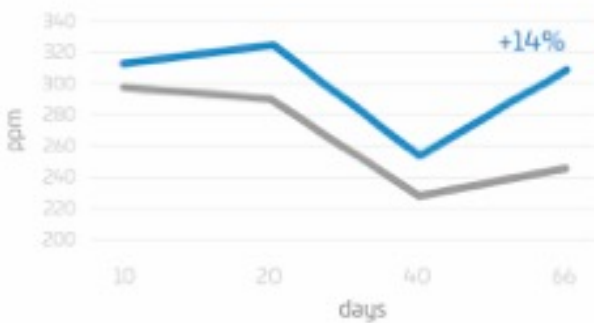
- For years, sulfur (S) levels in agricultural soils have decreased considerably, therefore, the application of sulfur is necessary to achieve maximum efficiency of the applied nitrogen fertilizer, since it has been shown that the lack of sulfur in the soil decreases the efficiency of nitrogen supplied as fertilizer.
- The acidification of the soil around the granule causes a reduction in the bacterial activity responsible for nitrification, increasing the residence time of this nitrogen in the soil, which increases the probability that it can be absorbed by the plants. This effect is synergistic with the effect of *Polycoat technology* and increases the efficiency of SICO DYNATEC DC.
- By being 100% soluble, we guarantee that nitrogen assimilation will always occur together with sulfur, favoring higher quality and efficient fertilization.

ADVANTAGES OF SULFUR INSIDE PLANTS:

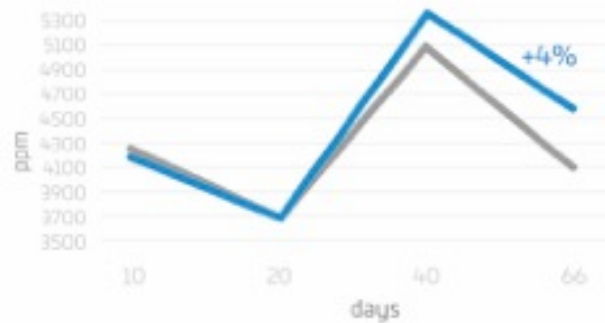
- It is part of proteins, mainly cysteine and methionine;
- Plants absorb nitrogen in nitric form, but in this form, they cannot use it to make other compounds such as amino acids or proteins, for this reason they must transform it into nitrite thanks to the enzyme nitrate reductase, whose chemical base is sulfur and molybdenum, elements that are contained in the fertilizer;
- Precursor of biomolecules of great interest such as vitamins;
- It is part of defensive compounds, such as photochelatin, that block heavy metals or glucosinolates that repel pathogens.

TRIALS OF SOLUBILITY AND AVAILABILITY OF NUTRIENTS IN THE PRESENCE OF SUPPLIED SULFUR BY SICO DYNATEC DC

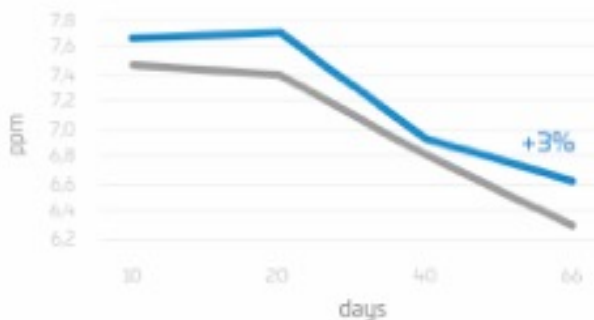
Soil Magnesium solubilization in the presence of SICO DynateC (DC)



Soil Calcium solubilization in the presence of SICO DynateC (DC)



Soil Phosphorus solubilization in the presence of SICO DynateC (DC)



— soils with SICO DynateC (DC)
— soils without fertilization

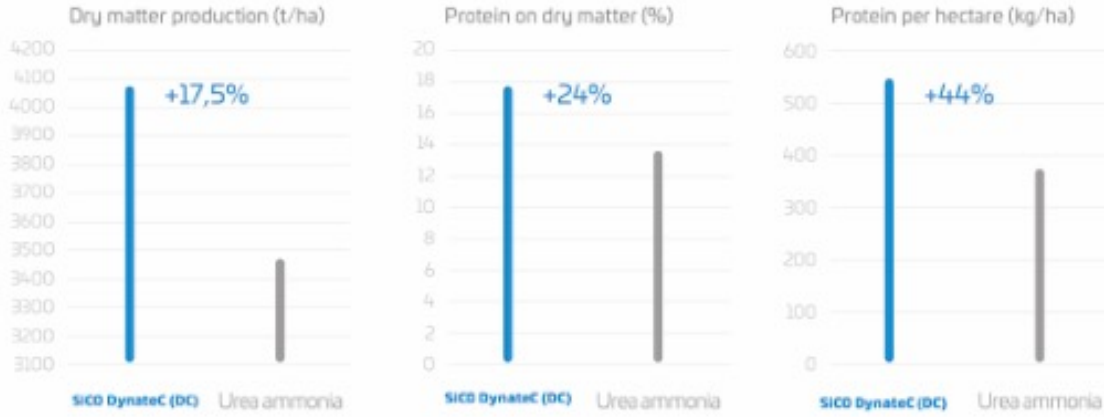
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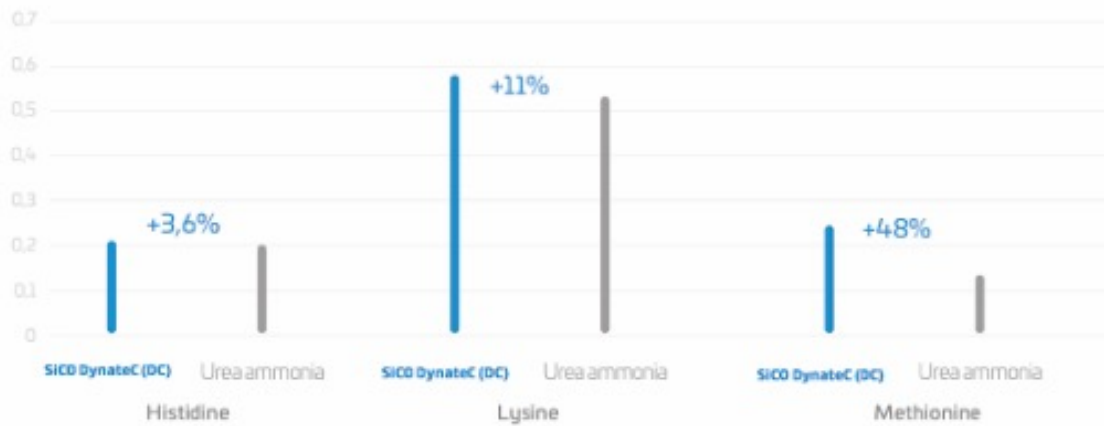
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PROVEN RESULTS OF SICO DYNATEC DC IN FIELD TRIALS

Trials of SICO DYNATEC DC in top-dressing fertilization in annual meadow.



Trials of **SICO Dynatec (DC)** in top-dressing fertilization in Annual Meadow.
Amino acid content



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WHEAT



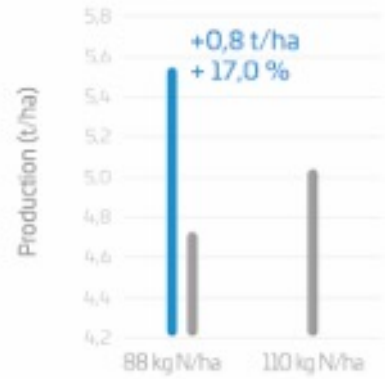
Castilla y Leon



WHEAT



Medina del Campo



CORN



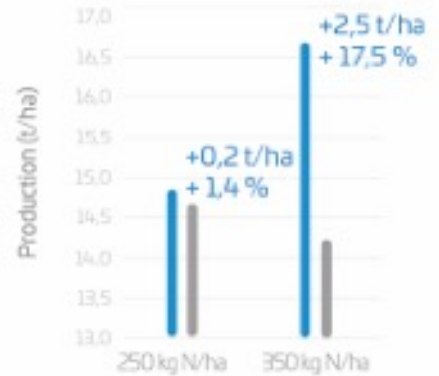
León



CORN



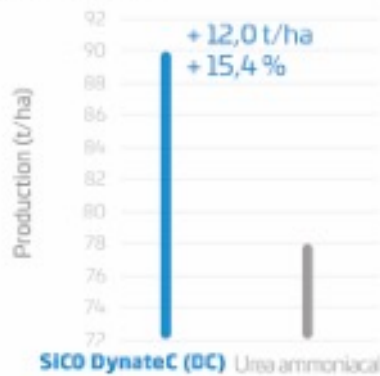
Mondego



ONION



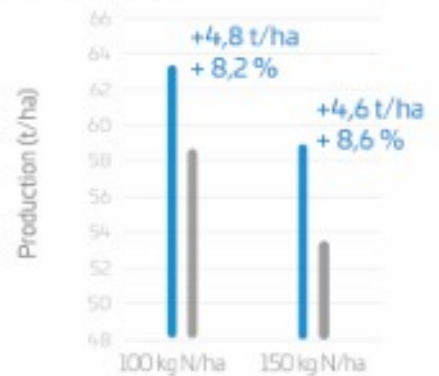
Castilla la Mancha



POTATO



Medina del Campo



— SICO DynateC (DC)
— Nitric-ammoniacal control

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