



FERTILIA fertilisation technology 2015

Nutrient management of arable crops

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regarding to the prize!***



Dear Partner,



Fertilia Ltd, the hungarian manufacturer of unique composed fertilisers since more than 2 decades ago of their foundation take a long way. On this way the main strategic goal was to satisfy the Partners expertly.

In order to attain this goal we initiate such values like predictable, conservative company management, business integrity, dynamic adaptation to changing circumstances, continuous investment and development and constant innovation-oriented thinking.

This publication of Fertilia Ltd. offers **complete technology solutions for fall basic and spring top dressing and foliage fertilisation of arable crops with wide ranges and self-manufactured products.**

We believe that **you are a professional** farmer who committed towards to the up-to-date agronomic opportunities, cost-effective, rational fertilisation!

You might ask the question, **what is the conscious decision** in the ever intensifying market competition and increasing supply? How to achieve the appointed goals: the safe harvest and the maximum profit?

In the catalog these questions will be answered and give useful tips to your daily activity. We hope, that besides the conscious management we can contribute your professional decision in the field of nutrient managment!

Péter Simon

CEO

Fertilia Ltd.

A stylized, handwritten signature in black ink, consisting of a large 'P' and 'S' followed by a horizontal line.

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As the Hungarian expert of arable crop nutrient management we ensure for our customers with the plant specific and unique composed fertilisers, that just such as and as much nutrients are supplied which are mandatory for the plants.

Fertilia fertilisation technology

The Fertilia fertilisation technology involves our self-developed fertilisers, which were adapted to the Hungarian growing conditions as well as our Rizotec Program and Gramix Plusz Program which are based on soil lab testing and customized advisory.

The Rizotec Program and the Gramix Plusz Program take into consideration the needs of the plant and the Hungarian soil conditions, thus provides unique, complex nutrient supply solutions!

The subservient NPK composition and kg/ha dose is determined by our advisory software based on soil lab testing and the factors which effect the nutrient uptake (soil structure, irrigation, forecrop, etc.) as well as the results of the balanced nutrient supply.

The advantage of **Rizotec Program** and **Gramix Plusz Program**, that it determines smaller fertiliser amount to maintain the optimal phosphorus and potassium level of the soil and also provides solution for microelement replace.

Beyond the recommendation of the fertilisation technology our system covers the manufacturing and logistics process of fertilisers as well.

Our fertiliser offer covers the most effective and customizable Rizodyne soil activator contained unique composed and plant specific **Rizotec NPK** combinations, the **Gramix NPK Plusz** and **Gramix NPK** fertiliser families, the **UMG MICRO** microgranulated starter fertilisers, the liquid **FertiSol** solutions and the solid **MASSulfix** nitrogen top dressing fertilisers as well.



Rizodyne

soil activator



The latest innovation of Fertilia Ltd. is the **Rizodyne soil activator**, which improves the **soil life by its organic components**. By its special **organic agents increases the biological activity of the soil in vicinity of the germinating seed**.

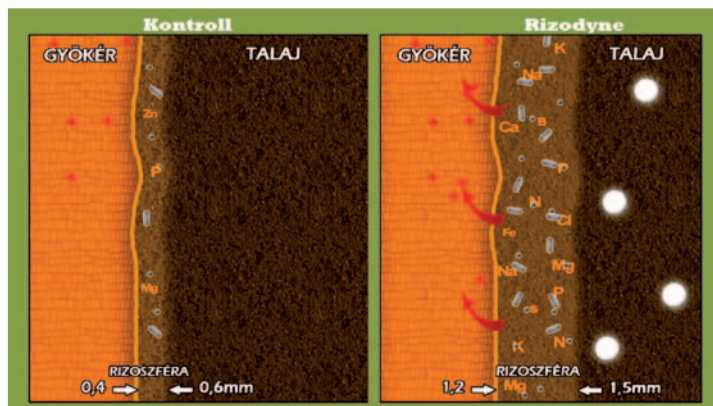
With Rizodyne application nutrient sources are supplied into the soil. It contains organic materials – amino acids, proteins, sugars, organic acids and vitamins – that's why the reproduction of soil living organisms are faster. **The soil fertility is strengthened by the enhanced rizosphere effect and the increased active layer around the root with higher microbe number. Thus the nutrient uptake of the plant is easier and much more faster.**

The result:

- ✓ increased yield because of strengthened, developed root mass
- ✓ higher tolerance against pests
- ✓ increased drought and cold tolerance
- ✓ more efficient nutrition uptake
- ✓ the inner quality of crops is better



Rizosphere effect:



The **Rizodyne soil activator** promote the absorption of microelements, besides the complex forming amino acids and sugars contains organic sulphur containing EDDHSA- zink chelate compound as well, whereby improves the intensity of zink and sulphur incorporation into the plant tissues during initial growth.

Rizodyne with its soil activator organic material agents improves significantly the full scope of mineral agents – the efficiency of NPK macro-, Ca, Mg, S meso- and microelements **containing Rizotec NPK fertilisers and UMG MICRO microgranulated starter fertilisers.**

Our experiments proves, that in vicinity of corn root the microbial activity was **444 times** more compared to the control in the first period of the growth.

Unique composed Rizotec NPK



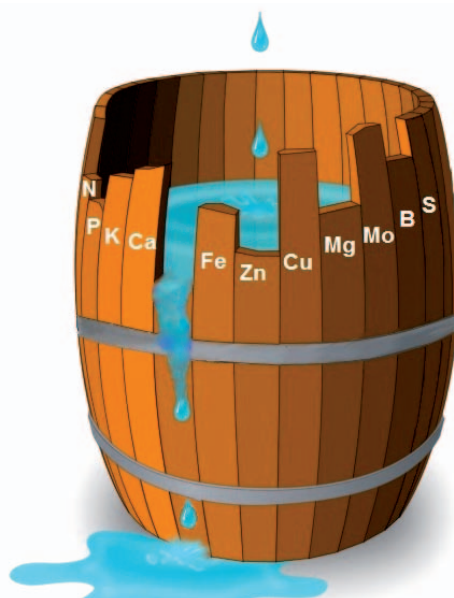
The unique **Rizotec NPK** fall basic and spring starter fertilisers was developed by the Rizotec advisory Program with **unique composition** and organic material contained **Rizodyne soil activator**.

After soil sampling and soil lab testing a personalized nutrient management advisory is provided, where the **unique and customized Rizotec NPK** is composed then we manufacture, pack and transport to the given location.

"We are in stable partnership with Fertilia for 5 years. In maize cultivation based on soil lab testing we choose the unique composed Fertilia fertilisers, because we believe in the resonable nutrient managment. We see, that the unique and quality fertilisers improve the production efficieny." Attila Tóth and his son Patrik Tóth, Tápiógyörgye

The Rizotec Program and the Rizotec NPK has no extra costs for you!

The unique composed, customizable Rizotec NPK is an economical fertiliser, why by its application the most effective and most appropriate fertiliser solution is choosen by a cost-effective way.



	Rizotec NPK	gramix NPK plusz	Other premium NPK	Complex NPK fertilisers	Conventional, blended NPK fertilisers	Mono fertilisers
Unique, optimal agent rate, flexibility	✓	✓	×	×	✓	✓
Meso-, microelement content	✓	✓	✓	×	×	×
Microelements in organic chelated form	✓	×	×	×	×	×
Soil activator content	✓	×	×	×	×	×
Excelent dispersion	✓	✓	✓	✓	×	✓
One time application (no extra costs, no treading)	✓	✓	✓	✓	✓	×
Guaranteed quality (dust and clot free)	✓	✓	✓	✓	×	×

How the Rizotec NPK contributes your success?

- ✓ **With its unique combination**, which takes into consideration the soil nutrient supplier capacity to promote the efficiency of the farmland.
- ✓ **With its flexible meso- and microelement content** ensures the harmonious nutrient replace, which has positive effect on crop yield and quality.
- ✓ With its standalone **Rizodyne soil activator** content the biological activity of the soil is improved, thus ensures more effective nutrient uptake.
- ✓ **Contains the microelements partly in chelated and partly in complex form** to ensure easier utilization.
- ✓ The **assorted raw materials** and **standalone manufacture technology** guarantee the excellent quality of **Rizotec NPK**. It results smooth dispersion, therefore ensures the development of uniform plant stand.
- ✓ With its **flexibility** it can be adapted to all technology, thus it is utilizable as basic and starter fertiliser as well.
- ✓ The **high added value coupled with excellent price/value ratio**, thus secure the optimal consumption of fertilisation budget. As a result you can reach the best achievement on the given field.
- ✓ **Environmentally sound**, because just such and only agents are spreaded, which are satisfy the demand of the crop and soil – no excessive environment pollution – and ensure the longterm productivity of your field.

Up to 2 tons

Plant specific Rizotec NPK



If soil lab testing results are not present, we suggest the application of **plant specific Rizodyne containing Rizotec NPK fertiliser family**, which is adapted

to the Hungarian cultivation conditions and the needs of the cultivated crop.



"We manage the cultivation of 2000 ha. We have good experience about the Fertilia plant specific fertilisers. We apply them in cultivation of sunflower and maize. I could compare the products with different fertiliser products, and the difference was spectacular. Thus I recommend the products of Fertilia to all."

– Gyula Soltész, Naki Mezőgazdasági Zrt.

It is subservient to ensure the microelement demand of the cultivated crop at the time of basic fertilisation.





Microelement deficiency symptoms in arable crop cultures:

The **iron** takes part in the plant respiration, metabolism, photosynthesis and protein forming processes. In case of iron deficiency the chlorophyll content of the plant decrease and the protein synthesis is inhibited.

The **boron** is an essential microelement, which has multifaceted role. Subserve the uptake of nutrients (in the nitrogen and phosphorus metabolism), has a key role in the transportation and cumulation of carbohydrates and other assimilates (e.g.: starch) and in the formation of root mass and vascular tissues as well as in the flower and crop formation. Several cultivated crop react intensively on boron deficiency.

Manganese is the enzyme activator of the plant metabolism. Plays an essential role in the protein synthesis, in the citric acid cycle and in the photosynthesis. The deficiency is signaled by the necrotic young leaves.

Copper as the component of the enzymes takes part in the electron transport and in the respiratory metabolism. Copper plays important role in the protein synthesis and in the carbohydrate metabolism. The well copper supply decrease the quantitative and qualitative loss of the yield.

Zinc is also essential for the living organisms, regulates the operation of the plant enzymes. The zinc deficiency results inhibited plant growth, early leaf chlorosis and early drop of flowers. Besides the quantitative yield loss the inner content of the crops are also become lower.

Molybdenum is also essential for the plants. The molybdenum content of the crops are low, rarely exceeded the 1 mg/kg dry matter value. If the molybdenum supply is insufficient the chlorophyll content decreases and the photosynthesis became inhibited.

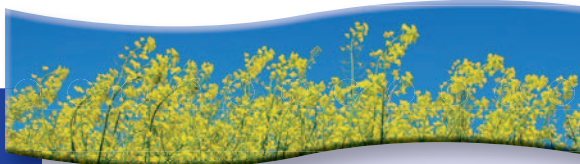
Fall basic fertilisation **of rape with plant** **specific Rizotec NPK**



Advantages of application:

- Ensure harmonic nutrients, why besides the N, P, K macroelements contain meso- and microelements as well.
- The wide ranges of differently composed N-P-K products allows to choose the best suitable composition for the cultivation area.
- Both the macro-, meso- and microelement components of the fertilizers adjust the cultivated crop differentiated nutrient demand.
- The microelement supplement increases the plant resistance against the diseases and improve the qualitative characteristics.
- The organic material content of the Rizodyne soil activator contribute to maintain the soil life activity and efficiently break down the remained biomass in the soil.

Plant specific composition for fall basic fertilisation of rape:



Rizotec NPK 8-18-24

+ 1,3 S + 1,8 CaO + 0,6 MgO + 0,1 B + 0,03 Zn + 0,05 Mn + 0,02 Fe + 0,07 Cu + *organic chelate* + *Rizodyne*

Rizotec NPK 10-20-20

+ 1 S + 1,6 CaO + 0,8 MgO + 0,1 B + 0,03 Zn
+ 0,05 Mn + 0,02 Fe + 0,07 Cu + *organic chelate*
+ *Rizodyne*

Rizotec NPK 8-15-25

+ 1,3 S + 2 CaO + 0,5 MgO + 0,1 B + 0,03 Zn + 0,05 Mn + 0,02 Fe + 0,07 Cu + *organic chelate* + *Rizodyne*

Rizotec NPK 12-12-18

+ 1,8 S + 3,5 CaO + 1,5 MgO + 0,1 B + 0,03 Zn
+ 0,05 Mn + 0,02 Fe + 0,07 Cu + *organic chelate*
+ *Rizodyne*



APPLICATION TECHNOLOGY

For fall basic fertilisation of rape potassium over-weighted **Rizotec NPK** compositions with **300-400 kg/ha** dose is recommended on medium nutrient supplied field.

At the time of the selection of composition besides the phosphorus and potassium take into consideration the amount of nitrogen necessity for the breakdown of the crop residues which remained from the forecrop.

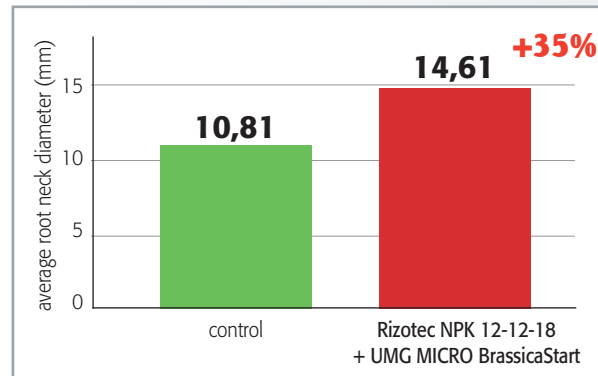
The necessary fertiliser quantity must be adjusted to the soil capability and to its nutrient content.

With **boron supplemented Rizotec NPK** the rooting of the rape can be promoted in fall.

Rape experiment

Szent István University Faculty of Mechanical Engineering

Average root neck diameter was measured in rape, Pusztaszentgyörgy



Well in humus, in phosphorus and potassium very well, in zink poorly, in manganese and copper well supplied field was the experiment set up.

Plant specific Rizotec NPK 12-12-18 with 220 kg/ha dose and UMG MICRO BrassicaStart with 20 kg/ha dose was applied. 87 days after sowing the **root neck diameter was 35% higher** than the control plot.

Fall basic fertilisation of wheat with **Rizotec NPK**



Plant specific compositions for fall fertilisations of eared cereals:

Rizotec NPK 8-20-24

+ 1,2 S + 1,7 CaO + 0,5 MgO + 0,07 Cu + 0,05 Mn
+ 0,03 Zn + 0,02 Fe + 0,01 B + *organic chelate* +
Rizodyne

Rizotec NPK 10-18-18

+ 2,2 S + 3 CaO + 0,8 MgO + 0,07 Cu + 0,05 Mn
+ 0,03 Zn + 0,02 Fe + 0,01 B + *organic chelate* +
Rizodyne

Rizotec NPK 12-18-12

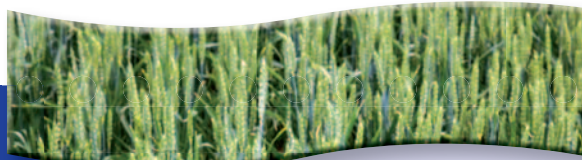
+ 2 S + 3,6 CaO + 1,2 MgO + 0,07 Cu + 0,05 Mn
+ 0,03 Zn + 0,02 Fe + 0,01 B + *organic chelate* +
Rizodyne

Rizotec NPK 10-15-12

+ 3,5 S + 4,8 CaO + 1,2 MgO + 0,07 Cu + 0,05 Mn
+ 0,03 Zn + 0,02 Fe + 0,01 B + *organic chelate* +
Rizodyne

Cereals are very sensitive to copper deficiency. The symptoms can appear after tillering. The ears can whiten, the number of frivolous grains increases, which causes decreased yield.

With the application of **copper supplemented Rizotec NPK** fertilisers the deficiency symptoms and yield loss may be eliminated.



APPLICATION TECHNOLOGY

On medium nutrient supplied field for basic fertilisation of eared cereals phosphorus over-weight **Rizotec NPK** fertilisation with **300-400 kg/ha** dose is recommended.

At the time of the selection of composition besides the phosphorus and potassium take into consideration the amount of nitrogen necessity for the breakdown of the crop residues remained from the forecrop.

The necessary fertiliser quantity must be adjusted to the soil capability and to its nutrient content.

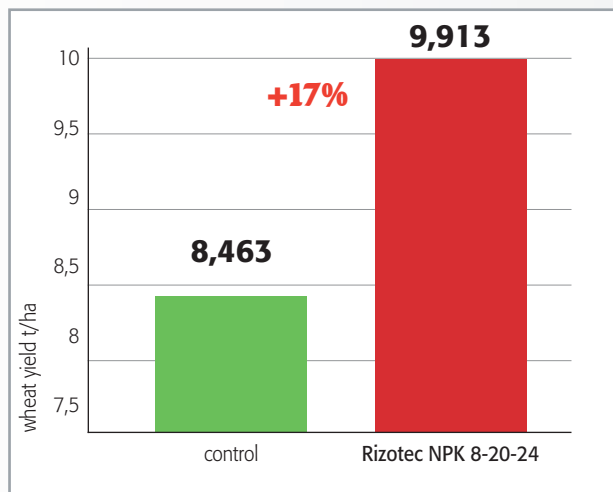
With boron supplemented Rizotec NPK the yield and qualitative loss can be eliminated.



Wheat experiment

Szent István University Faculty of Mechanical Engineering

Wheat harvest results, Pusztaszentgyörgy



In nitrogen, phosphorus and potassium moderately, in zinc poorly, in copper and manganese properly supplied field was the experiment set up.

The plant specific **Rizotec NPK 8-20-24** with 200 kg/ha dose at the same time of sowing was applied. **The productivity of the treated plot was 17% higher** then the control.

Fall basic fertilisation of maize with Rizotec NPK



Plant specific compositions for maize fall basic fertilisation:

Rizotec NPK 0-11-25

+ 6 S + 6 CaO + 0,04 Fe + 0,1 Zn + 0,05 Mn
+ 0,05 Cu + organic chelate + Rizodyne

Rizotec NPK 0-8-36

+ 4 S + 3 CaO + 0,04 Fe + 0,1 Zn + 0,05 Mn
+ 0,05 Cu + organic chelate + Rizodyne

Rizotec NPK 5-22-30

+ 0,04 Fe + 0,1 Zn + 0,05 Mn + 0,05 Cu
+ organic chelate + Rizodyne



APPLICATION TECHNOLOGY

For fertilisation of maize just phosphorus and potassium contained **Rizotec PK** with 200-400 kg/ha dose is recommended. In case of large root and crop residues incorporation nitrogen contained potassium overweighted **Rizotec NPK** is suggested with **200-400 kg/ha** dose.

For maize fertilisation composed fall basic fertilisers not only contain the macroelements, but also the harmonic meso- and microelements for the plant need as well as the self-developed Rizodyne soil activator.



Fall basic fertilisation of sunflower with Rizotec NPK



Plant specific compositions fo fall fertilisation of sunflower:

Rizotec NPK 0-11-25

+ 6 S + 6 CaO + 0,03 Fe + 0,07 Zn + 0,04 Mn
+ 0,04 Cu + 0,1 B + organic chelate + Rizodyne

Rizotec NPK 0-8-36

+ 4 S + 3 CaO + 0,03 Fe + 0,07 Zn + 0,04 Mn
+ 0,04 Cu + 0,1 B + organic chelate + Rizodyne

Rizotec NPK 5-23-30

+ 0,03 Fe + 0,07 Zn + 0,04 Mn + 0,04 Cu + 0,1 B
+ organic chelate + Rizodyne

APPLICATION TECHNOLOGY

For fertilisation of sunflower just phosphorus and potassium contained **Rizotec PK** with 200-400 kg/ha dose is recommended. In case of large root and crop residues incorporation nitrogen contained potassium overweighted **Rizotec NPK** is suggested with **200-400 kg/ha** dose.

For sunflower fertilisation composed fall basic fertilisers not only contain the macroelements, but also the harmonic meso- an microelements for the plant need as well as the self-developed Rizodyne soil activator.



Spring starter fertilisation of maize with plant specific Rizotec NPK



The **Rizotec NPK** fertiliser family not just as fall basic fertilisers but **as spring starter fertiliser scope well** between the up-to-date agrotechnical elements.

Advantage of application:

- Its meso- and microelement content takes into consideration the crop sensitivity on these elements through its plant specific composition.
- With its application close to the root, fresh fertiliser effect is provided.
- With its root intensifier effect the drought stress tolerance of the plants are improved.
- Contains the nutrients in well soluble and readily available form.
- Its Rizodyne soil activator content revitalizing the soil life and increases the efficiency of fertiliser.



Plant specific compositions for starter fertilisation of maize:

Rizotec NPK 15-25-5

+ 2 MgO + 3 CaO + 6 S + 0,1 Zn + 0,05 Mn
+ 0,05 Cu + *organic chelate* + *Rizodyne*

Rizotec NPK 10-15-20

+ 1 MgO + 3 CaO + 7 S + 0,1 Zn + 0,05 Mn
+ 0,05 Cu + *organic chelate* + *Rizodyne*

Rizotec NPK 5-15-28

+ 1 MgO + 3 CaO + 3 S + 0,1 Zn + 0,05 Mn
+ 0,05 Cu + *organic chelate* + *Rizodyne*

Rizotec NP 20-12

+ 3 MgO + 5 CaO + 6 S + 0,1 Zn + 0,05 Mn
+ 0,05 Cu + *organic chelate* + *Rizodyne*

Rizotec NP 15-30

+ 1 MgO + 3 CaO + 7 S + 0,1 Zn + 0,05 Mn
+ 0,05 Cu + *organic chelate* + *Rizodyne*

The maize is zinc demanding plant, react quickly on zinc deficiency: the inhibited phenological growth appear immediately.

If no remedy in time, the yield loss can be from few up to 80-100% as well.

The **zinc microelement contained Rizotec NPK** fertiliser application can avoid the decrease of the growth vigor which caused by the reason of phosphorus overweight of the P-Zn antagonism.

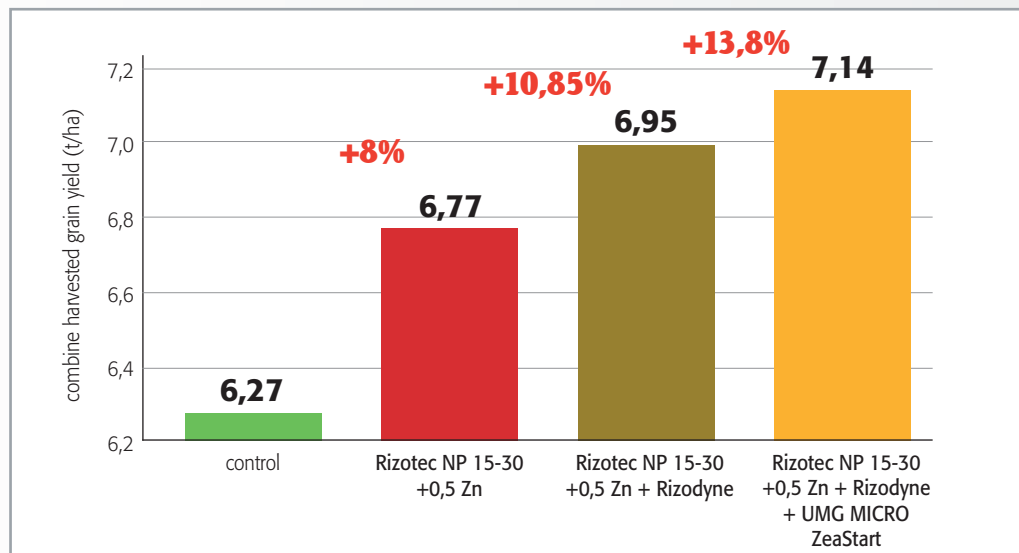
APPLICATION TECHNOLOGY

For maize starter fertilisation at the same time with sowing to vicinity of the seed can be applied with meso- and microelement supplemented phosphorus overweighted **Rizotec NP** or potassium overweighted **Rizotec NPK** with **150-200 kg/ha** dose is recommended.

Maize experiment

Agricultural Institute of Hungarian Academy of Sciences in Martonvásár

Maize starter fertilisation experiment, Martonvásár



The experiment field in phosphorus moderately and in zinc nearly supplied.

When Rizotec NP 15-30 + 0,5 Zn + Rizodyne + UMG Micro ZeaStart was applied the combine harvested grain yield was 13,8% higher than the control.

Spring starter fertilisation of sunflower with Rizotec NPK



Plant specific compositions for
sunflower starter fertilisation:

Rizotec NPK 5-18-25

+ 4 MgO + 1 CaO + 3 S + 0,1 B + 0,03 Mn + 0,05 Zn
+ 0,03 Cu + 0,02 Fe + *organic chelate* + *Rizodyne*

Rizotec NP 12-20

+ 6 MgO + 3 CaO + 11 S + 0,1 B + 0,03 Mn + 0,05
Zn + 0,03 Cu + 0,02 Fe + *organic chelate* + *Rizodyne*



The deficiency of boron microelement leads to the lack of flowering, deformed plates and frivolous crops in case of sunflower.

The **boron supplemented Rizotec NPK** fertilisers support the rooting and fruiting.



APPLICATION TECHNOLOGY

For sunflower starter fertilisation at the same time with sowing to vicinity of the seed can be applied with meso- and microelement supplemented phosphorus overweighted **Rizotec NP** or potassium overweighted **Rizotec NPK** with **150-200 kg/ha** dose.

"I cultivate 300 hectares. We use starter fertilisers of Fertilia in culture of maize and sunflower. The initial growth was excellent, specially in maize cultivation we experienced more developed and more beautiful plants then the neighbouring fields. I think, that the plant specific Fertilia fertilisers have good quality and can be dispersed well. Fertilia Ltd. is a very innovative partner, we are always open to try out their new products."

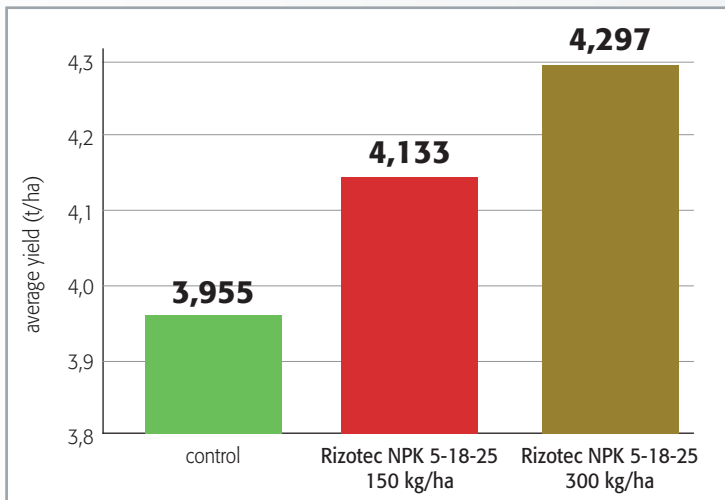
– Imre Réti, Bajna



Sunflower experiment

Károly Róbert University Fleischmann Rudolf Institute

Sunflower starter fertilisation experiment, Kompolt



The experiment was set up on tightly bounded brown forest soil, supplied with phosphorus and potassium moderately and with zinc rarely.

The **plant specific Rizotec NPK 5-18-25** was applied with 150 kg/ha and 300 kg/ha dose. The application of Rizotec NPK 5-18-25 with dosage of 300 kg/ha **resulted 8,6% higher yield** then the control plot.

Unique composed Gramix NPK Plusz



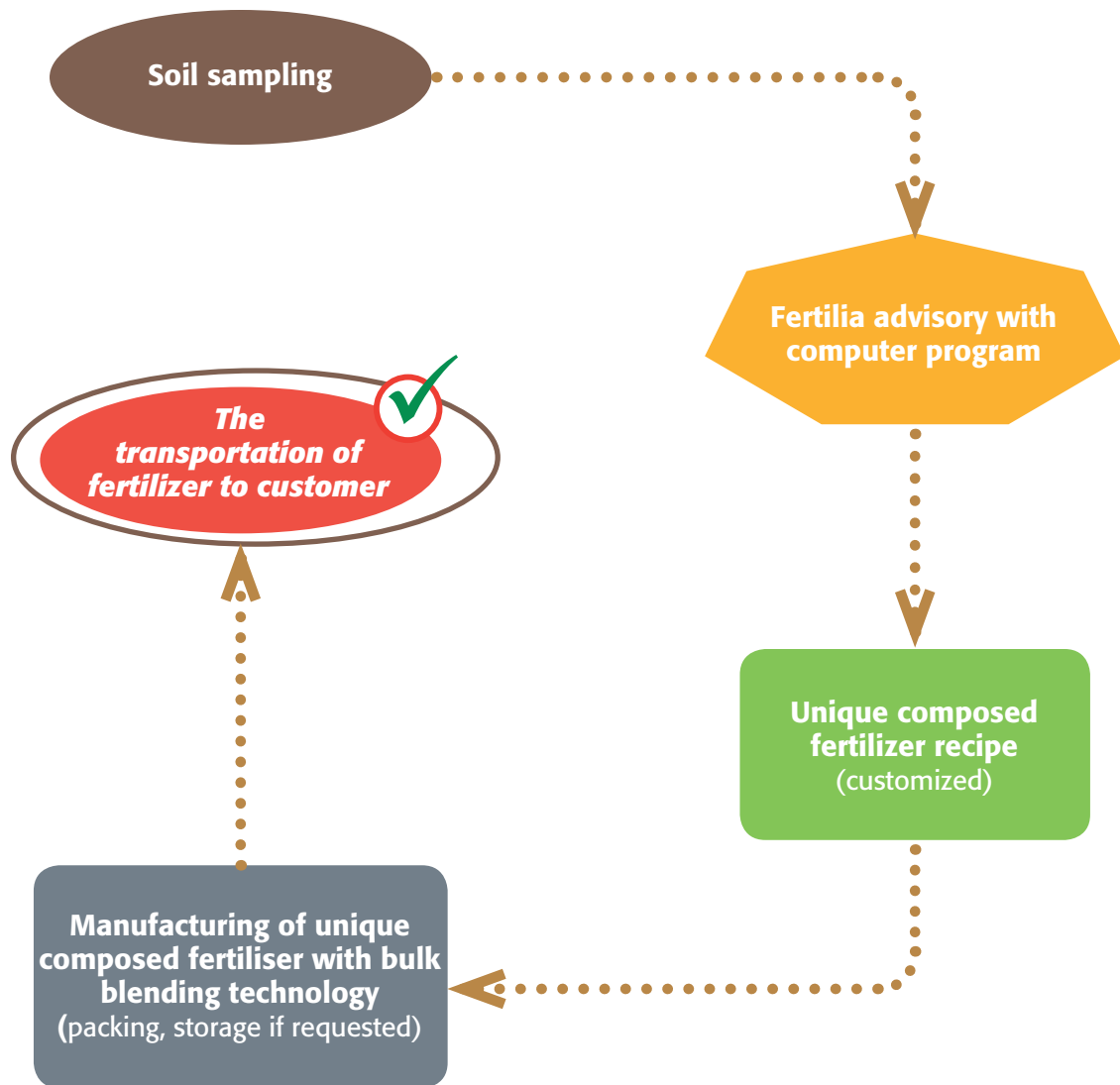
The unique composed **Gramix NPK Plusz** fall basic and spring starter fertilisers based on soil lab testing results is determined by Gramix Plusz Program for the customers.

	Rizotec NPK	gramix NPK plusz	Other premium NPK	Complex NPK fertilisers	Conventional, blended NPK fertilisers	Mono fertilisers
Unique, optimal agent rate, flexibility	✓	✓	×	×	✓	✓
Meso-, microelement content	✓	✓	✓	×	×	×
Microelements in organic chelated form	✓	×	×	×	×	×
Soil activator content	✓	×	×	×	×	×
Excelent dispersion	✓	✓	✓	✓	×	✓
One time application (no extra costs, no treading)	✓	✓	✓	✓	✓	×
Guaranteed quality (dust and clot free)	✓	✓	✓	✓	×	×

What is the advantage of the unique composed Gramix NPK Plusz fertilisers against the other fertilisers?

- ✓ **Unique composition** based on the soil capability and the needs of the plant.
- ✓ **Can be adapted to all kind of agricultural technology** as basic and starter fertiliser.
- ✓ **Flexible meso- and microelement content**, which proves the harmonic nutrient supply.
- ✓ **Environmentally sound, economical** fertiliser.
- ✓ **The assorted raw materials and standalon bulk blending technology** guarantee the excellent dust free quality and well dispersion of **Gramix NPK Plusz** fertilisers.

Flow chart of the manufacturing of unique composed fertilisers



Gramix NPK Plusz



Advantages of application:

- The Gramix NPK Plusz fertiliser compositions ensure complete and harmonic nutrient supply.
- Besides the macroelement content the meso- and microelement content was determined and formed regarding to the plant demand.
- With the application of Gramix NPK Plusz fertilisers the formation of deficiency symptoms may be avoided and promotes the maize, sunflower, wheat and rape healthy development and the increase of the yield.

Rape compositions:

GRAMIX NPK Plusz 7-20-30

+ 0,5 MgO + 0,7 CaO + 0,1 B + 0,03 Zn
+ 0,03 Mn + 0,01 Cu + 0,01 Fe

GRAMIX NPK Plusz 9-18-24

+ 6,3 S + 0,8 MgO + 1,1 CaO + 0,1 B

GRAMIX NPS Plusz 22-5

+ 8,2 S + 2,2 MgO + 3,3 CaO + 0,3 B

Wheat and barley compositions:

GRAMIX NPK Plusz 8-21-21

+ 5 S + 1 CaO + 0,02 B + 0,03 Zn + 0,03 Mn
+ 0,01 Cu + 0,01 Fe

GRAMIX NPK Plusz 8-24-24

+ 2,6 S + 0,02 B + 0,03 Zn + 0,03 Mn
+ 0,01 Cu + 0,01 Fe

GRAMIX NP Plusz 25-6

+ 4 MgO + 6 CaO + 0,02 B + 0,03 Zn
+ 0,03 Mn + 0,01 Cu + 0,01 Fe

APPLICATION TECHNOLOGY

The Gramix NPK Plusz application as basic fertilisation for eared cereals and winter oilseed rape with **300-400 kg/ha** dose is recommended.



Maize compositions:

GRAMIX NPK Plusz 7-10-32

+ 1,0 S + 0,9 MgO + 2,2 CaO + 0,02 B
+ 0,1 Zn + 0,03 Mn + 0,01 Cu + 0,01 Fe

GRAMIX NP Plusz 20-25

+ 2,3 MgO + 3,5 CaO + 0,02 B + 0,1 Zn
+ 0,03 Mn + 0,01 Cu + 0,01 Fe

Sunflower compositions:

GRAMIX NPK Plusz 6-12-24

+ 3,2 S + 0,8 MgO + 4,1 CaO + 0,1 B
+ 0,03 Zn + 0,03 Mn + 0,01 Cu + 0,01 Fe

GRAMIX NPS Plusz 19-12

+ 6,2 S + 2 MgO + 4,3 CaO + 0,2 B + 0,03 Zn
+ 0,03 Mn + 0,01 Cu + 0,01 Fe

APPLICATION TECHNOLOGY

For spring starter fertilisation of maize and sunflower with dosage of **150-200 kg/ha** at the same time with sowing is recommended!

Advantages of application:

- Contains the N, P, K agents in optimal rate for the plants.
- Contains the nutrients in well soluble and readily available form, thus can be utilized as basic and starter fertiliser.
- Uniform particle size (in 98% between 1-6 mm), adequate strengthed homogeneous granulates.
- Dust free, non hygroscopic fertilisers with max. 1% humidity.
- Good dispersion.

Basic fertilisers for general use:

GRAMIX NPK 5-20-20

+ 4 S + MgO + CaO

GRAMIX NPK 10-20-10

+ 4 S + MgO + CaO

GRAMIX NPK 10-15-12

+ 4 S + 2 MgO + 4 CaO

GRAMIX NPK 12-12-18

+ 2 S + 2 MgO + 5 CaO

GRAMIX NPK 10-18-10

+ 7 S + MgO + 3 CaO

GRAMIX NPK 8-21-21

+ 2 S + MgO + CaO

GRAMIX NPK 0-10-30

+ 6 S

GRAMIX NPK 8-20-30

+ MgO + CaO

GRAMIX NPK 8-24-24

+ 2 S + MgO + CaO

GRAMIX NPK 7-10-32

+ 2 S MgO + CaO

Basic fertilizers for general use:

GRAMIX NPK 6-12-24

+ 4 S + MgO + CaO

GRAMIX NPK 6-26-30

GRAMIX NPK 9-18-24

+ 2 S + MgO + CaO

GRAMIX NP 19-26

+ MgO + CaO

GRAMIX NP 20-20

+ MgO + CaO

GRAMIX NPS 12-20

+ 5S + MgO + CaO

GRAMIX NPS 20-12

+ 2 S + MgO + CaO

GRAMIX NPS 9-24

+ 7 S + MgO + CaO

GRAMIX NPK 15-15-15

+ 2 S + MgO + CaO

APPLICATION TECHNOLOGY

In all arable and horticultural crop cultures can be utilized with **200-400 kg/ha** dose.

Its agent are well soluble, thus in case of proper precipitation can be utilized in spring likewise with dosage of **200-400 kg/ha**.



UMG MICRO *microgranulated starter fertilizer*



The **UMG MICRO** starter fertilizer family is the new generation of microgranules, which are through their complex agent content and Rizodyne soil activator content- mineral nitrogen, phosphorus, enzymes, organic chelate and organic sulphur-ensure dynamic germination and initial growth.

The outstandingly favourable agrotechnical effect of the **UMG MICRO** starter fertilisers is evidenced by the fact that the germination and initial growth of the plant occurs with “explosive” speed.

The result:

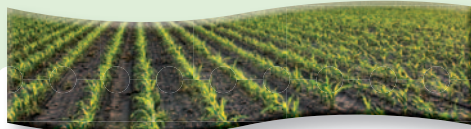
- ✓ a well developed, strong, healthy, homogenous crop stand
- ✓ energetic, voluminous roots
- ✓ advanced phenological state
- ✓ good tolerance to drought and stress
- ✓ **high resistance to diseases (fusarium)**
- ✓ **soon “outgrows the teeth of pests”**
- ✓ better exploitation of nutrients in the soil
- ✓ the cultivated plant is the winner in the “vegetation race”



The Rizodyne soil activator contained **UMG MICRO** product family plant specific members was developed for the main arable crop cultures considering their nutrient demand.

UMG MICRO ZeaStart

7 N + 32 P₂O₅ + 1 K₂O + 2,4 S + 4 Zn + 0,4 Fe



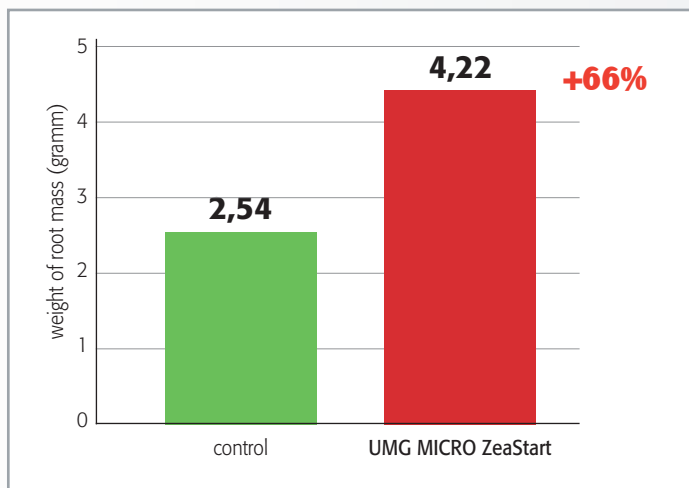
APPLICATION TECHNOLOGY

The **UMG MICRO ZeaStart** is recommended to *maize cultivation* with the dosage: **10-20 kg/ha**

Maize root mass experiment

Szent István University Plant Protection Institut

Maize root mass development experiment, Gödöllő, 20th June 2013 (wet root mass, 4-5 leaf stage)



In case when **UMG MICRO ZeaStart** was applied with 20 kg/ha dose at the same time with sowing the **maize produced 66% higher root mass** than the control plot.



Root mass of **UMG MICRO ZeaStart** treated plot



Root mass of control plot

"We used UMG MICRO ZeaStart on moderately bounded, eroded heterogenous field this year. With the dispersion we are totally satisfied and the starter fertiliser also looks well. The germination was powerful and homogeneous, at 5-6 leaf stage when the root mass was explored, the difference between the control and the treated plot convinced us." – Zsolt Waszner, Somberek

UMG MICRO HeliaStart

6 N + 28 P₂O₅ + 3 K₂O + 2,5 S + 1,6 MgO + 0,4 Fe
+ 0,9 B



APPLICATION TECHNOLOGY

The **UMG MICRO Helia Start** is recommended for *starter fertilisation of sunflower* at the same time with the sowing with dosage of **10-20 kg/ha.**

"We applied UMG MICRO HeliaStart on 30 hectares in sunflower cultivation with dosage of 15 kg/ha. The result what we got speak for themselves: From the control plot we harvested average 4,25 t/ha and from the plot, which was treated with UMG MICRO Helia Start 4,8 t/ha. Thus our extra income was higher." – Szabolcs Tóth, Dalmand Mezőgazdasági Zrt.



UMG MICRO TriticaStart

7 N + 30 P₂O₅ + 2 K₂O + 2 S + 0,3 Fe + 0,7 Zn
+ 0,7 Mn + 0,8 Cu + 0,3 B

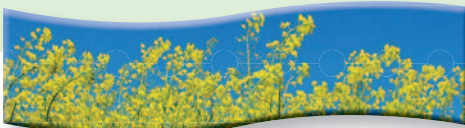


APPLICATION TECHNOLOGY

The **UMG MICRO TriticaStart** is recommended for *cultivation of eared cereals* at the same time with sowing with **20-40 kg/ha** dose.

UMG MICRO BrassicaStart

7 N + 30 P₂O₅ + 1 K₂O + 0,5 Mg + 4,7 S
+ 0,4 Zn + 0,5 B



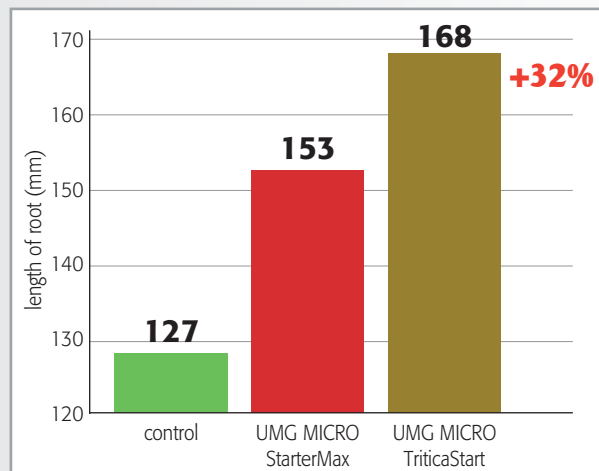
APPLICATION TECHNOLOGY

The **UMG MICRO BrassicaStart** is recommended to apply at the same time of *winter oilseed rape* sowing with **20-40 kg/ha** dose.

Wheat experiment

Szent István University Faculty of
Mechanical Engineering

Wheat experiment, Gyugy,
7th December 2012



The microgranules were applied at the same time with the sowing. The **UMG Micro StarterMAX** with dosage: 30 kg/ha increased the root length with 20,5%, while the **UMG MICRO TriticaStart** applied with 30 kg/ha dose **increased it with 32%** than the control.



UMG MICRO StarterMax

The **UMG MICRO** product family **StarterMax** members recommended for general use, have a very high macro- and microelement content and outstandingly favourable price-value ratio.

UMG MICRO StarterMax

$10\text{ N} + 46\text{ P}_2\text{O}_5 + 2\text{ Zn} + 1\text{ Fe}$

UMG MICRO StarterMax2

$8\text{ N} + 35\text{ P}_2\text{O}_5 + 2\text{ Zn} + 1\text{ Fe}$



APPLICATION TECHNOLOGY

The recommended application of **UMG MICRO StarterMax** in case of arable crops – is **10-20 kg/ha** and **20-40 kg/ha** – and in horticulture (orchards, grapes, vegetable crops) – **20-30 kg/ha** – at the same time with the sowing.

The **UMG MICRO** starter fertilisers can be applied at the same time with the sowing with microgranulated spreader kits, which are mounted on the sowing machine.

All the products of the UMG MICRO family has **equable particle size** (between 0,5 and 1 mm), **dust free, and well dispersable**.





Check out our video on our Youtube channel about the usefulness of microgranules, the application possibilities in fall and in spring, the manufacture processes and customer reviews!

You  Youtube Fertilia fertilisers

We promote the customers in the application of the microstarter products both in the spring and in the fall in case of demand, the company supports units!

FertiSol a solution nitrogen fertiliser family supplemented with meso- and microelements.

AGENT CONTENT (w/w%):

Product	Nitrogen (N)	Phosphorus (P ₂ O ₅)	Calcium (Ca)	Magnesium (Mg)	Sulphur (S)	Sulphur (SO ₃)	Zinc (Zn)	Copper (Cu)	Boron (B)
Fertisol 28	28								
Fertisol 21 + 0,3 Cu + 0,15 S	21				0,15	0,375		0,3	
Fertisol 24 + 0,3 Ca + 0,15 Mg + 0,2 S	24		0,3	0,15	0,2	0,5			
Fertisol 17 + 2 P + 0,2 Cu + 0,1 S	17	2			0,1	0,25		0,2	
Fertisol 24 + 3 S	24				3	7,5			
Fertisol 21 + 0,3 B	21								0,3
Fertisol 24 + 0,5 Zn + 0,26 S	24				0,26	0,65	0,5		
FertiSol Celludone*	21								

* with organic material supplement

The nitrogen content of the solution made up by ammonium, nitrate and amide nitrogen in 1:1:2 ratio. The copper, zinc and boron microelements present in amine complex and the sulphur in sulphate form.

Packing, storage: The products are transported by tankers to the partners. Stainless steel, plastic tanks are most appropriate for storage.



APPLICATION TECHNOLOGY

As basic, supplementary (foliar and irrigation manure) and top dressing in all kind of crop culture. In case of arable crops **50-400 kg/ha** dose is recommended in one time.

For stem demolition with **50-250 kg/ha** dose when cultures remain large residues.



Common benefit of Fertiliser family application:

- Owing to the three nitrogen form (amide, ammonium, nitrate) the effect of the products are **not just fast but also lasting**.
- During the vegetation period **support continuously the nitrogen supply** for the plants.
- Around 20% of its agent content **utilized immediately** through the leaves, and the rest gets fast to the roots.
- Due to the homogeneity of the product the **application is the most equable**, the result is the better dispersion figure.
- **Every drop is utilized**, bounded fast to the soil colloids and not escapes.
- Through its solution consistency the nutrients present in dissolved form, thus in case of dry weather conditions **affect faster than the solid fertilizers**.
- Its **application is economical**, because the price per unit of active substances is the lowest.
- **Environmentally sound**, no storage and dispersion loss because the movement of the product happens in a close system.
- **The work simplifies**: its application can be connected with the plant protection at one time.

Fertisol 28



High nitrogen containing solution fertiliser.
EC fertiliser

AGENT CONTENT (w/w%):

Total nitrogen (N): 28
Ammonium nitrogen (NH₄): 7
Nitrate nitrogen (NO₃): 7
Amide nitrogen (NH₂): 14

Advantages of application:

Higher nitrogen agent can be spread than the well known CAN 27%, specifically lower agent and technology costs.

APPLICATION TECHNOLOGY

crop culture	method of application	time of application	dose (kg/ha)
Eared cereals	Top dressing – I.	end of winter, early spring, tillering	150–250
	Top dressing – II.	stem elongation	150–250
	Top dressing – III.	before blooming, emergence of flag leaf	50–100
Rape	Top dressing – I.	end of winter, early spring	150–350
	Top dressing – II.	rosetta emergence, stem elongation	100–150
Sunflower	Spring basic fertilisation	before sowing incorporated to the soil	150–250
Maize	Spring basic fertilisation	before sowing incorporated to the soil	200–400
	Top dressing	at the same time with cultivator or spraying with nozzles	100–150

Fertisol 21 + 0,3 Cu + 0,15 S



Nitrogen solution fertiliser with copper supplement.
EC fertiliser.

AGENT CONTENT (w/w%):

Total nitrogen (N): 21

Ammonium nitrogen (NH_4): 5,25

Nitrate nitrogen (NO_3): 5,25

Amide nitrogen (NH_2): 10,5

Copper (Cu): 0,3

Sulphur (S/ SO_3): 0,15/0,375

APPLICATION TECHNOLOGY

Recommended for wheat and eared cereals culture.

	time of application	dose (kg/ha)
Top dressing – I.	end of winter, early spring, tillering	150–300
Top dressing – II.	stem elongation	150–300

Advantages of application:

- 1 ton contain 3 kg copper and 1,5 kg sulphur besides the 210 kg nitrogen. Specifically the most economical copper source.
- Readily available, its effective copper-amine-complex formula maintain the protein and gluten content of the product.
- Suitable to satisfy the copper demand of the eared cereal crops, primarily of the wheat.
- With the lowest recommended dose the copper demand of the wheat is guaranteed for an average yield (specific copper demand: 12 g/1 ton wheat)
- The eared cereals are very sensitive to the copper deficiency. The symptoms can appear after tillering. The ears can whiten, the number of frivolous grains increases, which causes decreased yield.

The following symptoms disappear:

- ✓ whitening of leaves,
- ✓ narrow, curled leaves,
- ✓ languorous plants,
- ✓ whitening of spikes, shallowed ears,
- ✓ in case of serious copper deficiency the flowering and crop formation can be canceled, which causes yield loss.



Fertisol 17 + 2 P + 0,2 Cu + 0,1 S



Phosphorus containing nitrogen solution fertiliser with copper supplement. EC fertiliser.

AGENT CONTENT (w/w%):

Total nitrogen (N): 17
Ammonium nitrogen (NH₄): 4,25
Nitrate nitrogen (NO₃): 4,25
Amide nitrogen (NH₂): 8,5
Phosphorus (P₂O₅): 2
Copper (Cu): 0,2
Sulphur (S/SO₃): 0,1/0,25

Advantages of application:

- 1 ton contains 20 kg phosphorus, 2 kg copper and 1,5 kg sulphur besides the 170 kg nitrogen.
- Its well soluble phosphorus content has key role in the development of the root mass and at the time of tillering.
- Its copper content subserve the copper demand of the wheat. (specific copper demand: 12 g/1 ton wheat)
- Readily available, its effective copper-amine-complex formula maintain the protein and gluten content of the product.

APPLICATION TECHNOLOGY

Mainly suggested for top dressing of wheat and eared cereals when the stand at the end of the winter has undeveloped root mass because of the unfavourable weather conditions.

time of application	dose (kg/ha)
end of winter, early spring, tillering	150–300

The following symptoms disappear:

- ✓ whitening of leaves,
- ✓ narrow, curled leaves,
- ✓ languorous plants,
- ✓ whitening of spikes, shal-
lowed ears,
- ✓ the sulphur content of the
FertiSol increase the qual-
ity of the wheat because the
quality properties of the wheat
flour show close relation with the sul-
phur content.



Fertisol 24 + 0,3 Ca + 0,15 Mg + 0,2 S



Nitrogen solution fertiliser with magnesium and calcium supplement. EC fertiliser.

AGENT CONTENT (w/w%):

Total nitrogen (N): 24

Ammonium nitrogen (NH_4): 6

Nitrate nitrogen (NO_3): 6

Amide nitrogen (NH_2): 12

Calcium (Ca): 0,3

Magnesium (Mg): 0,15

Sulphur (S/ SO_3): 0,2/0,5

APPLICATION TECHNOLOGY

Suggested primarily for top dressing of eared cereals and wheat to improve the quality.

time of application	dose (kg/ha)
before blooming, emergence of flag leaf	70–150

Advantages of application:

- 1 ton contain 3 kg calcium, 1,5 kg magnesium and 2 kg sulphur beside the 240 kg nitrogen.
- The magnesium has key role at the time of grain filling, thus its application has impact on quality improvement.
- Furthermore magnesium increases the photosynthetic activity of the plant and improves the formation of dry matter. Maintain the carbohydrate formation and the protein synthesis.
- Calcium has impact on the stem strength, thus the wheat not fall down if the calcium supply is appropriate.



Fertisol 24 + 3 S



High sulphur contained nitrogen solution fertiliser.
EC fertiliser.

AGENT CONTENT (w/w%):

Total nitrogen (N): 24
Ammonium nitrogen (NH_4): 6
Nitrate nitrogen (NO_3): 6
Amide nitrogen (NH_2): 12
Sulphur (S/SO_3): 3/7,5

APPLICATION TECHNOLOGY

Its application is suggested primarily for rape and sunflower cultivation.

time of application	dose (kg/ha)
end of winter, early spring	200–400

Advantages of application:

- 1 ton contain 30 kg sulphur and 240 kg nitrogen
- The appropriate sulphur supply increases the green mass, stimulate the vegetative growth and improves the chlorophyll content of the plant. Furthermore the sulphur enhance the nutrient uptake.
- The present of the sulphur increases the nitrogen uptake as well as the quality of the wheat because the quality properties of the wheat flour show close relation with the sulphur content.
- The sulphur demand of the rape is very high. In case of sulphur deficiency the stress tolerance of the plants decreases, and fungal diseases appear. Due to the lack of sulphur the number of the kids also decreases.



Fertisol 21 + 0,3 B



Nitrogen contained solution fertiliser with boron supplement. EC fertiliser.

AGENT CONTENT (w/w%):

Total nitrogen (N): 21

Ammonium nitrogen (NH_4): 5,25

Nitrate nitrogen (NO_3): 5,25

Amide nitrogen (NH_2): 10,5

Boron (B): 0,3

APPLICATION TECHNOLOGY

Suggested primarily for the cultivation of rape and sunflower to increase the fertility.

time of application	dose (kg/ha)
rosetta emergence, stem elongation	100–150

Advantages of application:

- 1 ton contain 3 kg of boron, beside the 210 kg nitrogen. The product contain the boron in ethanol-amine complex, thus the absorption through the leaves are two times faster than the borate anion form.
- The boron is essential microelement, which has multifaceted role. Subserve the uptake of nutrients (in the nitrogen and phosphorus metabolism), has a key role in the transportation and cumulation of carbohydrates and other assimilates (e.g.: starch) and in the formation of root mass and vascular tissues as well in the flower and crop formation. Several cultivated crop react intensively on boron deficiency.

Rape is boron demanded plant, its boron uptake depending on the size of the crop adds up 300-400 g/ha, which can be ensured by top dressing.

The boron deficiency in rape results weak root and kid development, which causes yield loss and quality deterioration.



Fertisol 24 + 0,5 Zn + 0,26 S



Nitrogen solution fertiliser zinc supplement.
EC fertiliser.

AGENT CONTENT (w/w%):

Total nitrogen (N): 24
Ammonium nitrogen (NH₄): 6
Nitrate nitrogen (NO₃): 6
Amide nitrogen (NH₂): 12
Zinc (Zn): 0,5
Boron (S/SO₃): 0,26/0,65

APPLICATION TECHNOLOGY

Basic solution fertiliser for maize cultivation.

time of application	dose (kg/ha)
before sowing incorporated to the soil	250–500
at the same time with cultivator or spraying with nozzles	100–200

Advantages of application:

- It contains the two most important element for maize, the nitrogen and zinc in combination on specifically low cost.
- The zinc present in amine complex in the product, which prevent the fast bounding in the soil. Because of the solution consistency the nitrogen and zinc can be utilized immediately at the time of the initial growth.
- If the product is applied in the appropriate dose it ensure the optimal growth during the vegetation period.
- In organic material poorly supplied fields, on sandy fields the sulphur can be limitation factor in cultivation of maize, thus the sulphur content of the solution has positive effect.

The maize is zinc demanding plant, react quickly on zinc deficiency: the inhibited phenological growth appear immediately. Also the irregularity of generative growth appears. In case of serious zinc deficiency the flowering can be delayed or can be canceled. Furthermore the cobs become dwarf, deformed and incomplete. If no remedy in time, the yield loss can be from few up to 80-100% as well.

FertiSol Celludone



Nitrogen solution fertiliser with organic material supplement.

AGENT CONTENT (w/w%):

Total nitrogen (N): 21

Ammonium nitrogen (NH_4): 5,25

Nitrate nitrogen (NO_3): 5,25

Amide nitrogen (NH_2): 10,5

Organic nitrogen: 1

Potassium: 2,1

CaO: 0,28

Organic material: 14

(amino acids, proteins, vitamins)

Advantages of application:

- Eliminates the pentosane effect which is present at the stem breaking.
- The product besides the nitrogen content contains such compounds, which subserve as a media for the microorganisms on the residues and helps the breakdown process.

APPLICATION TECHNOLOGY

As basic fertiliser in fall- spraying before plowing, for stem breaking with 50-100 liter/ha dose after cultures leaving large residues behind.

In case of stubble breaking the fertiliser dose is determined by the root and stem residues. Usually 8-10 kg N/1 ton of root + stem residue/ha.

For plants with smaller root and stem (rape, wheat) the suggested dose is 50-100 liter/ha. For plants with bigger root and stem (corn, sunflower) the suggested dose is 100-200 liter/ha.

for wheat – 15 kg N/ha, namely 60 liter/ ha FertiSol 21 Celludone

for maize – 33 kg N/ha, namely 140 liter/ ha FertiSol 21 Celludone

for sunflower – 52 kg N/ha, namely 200 liter/ ha FertiSol 21 Celludone

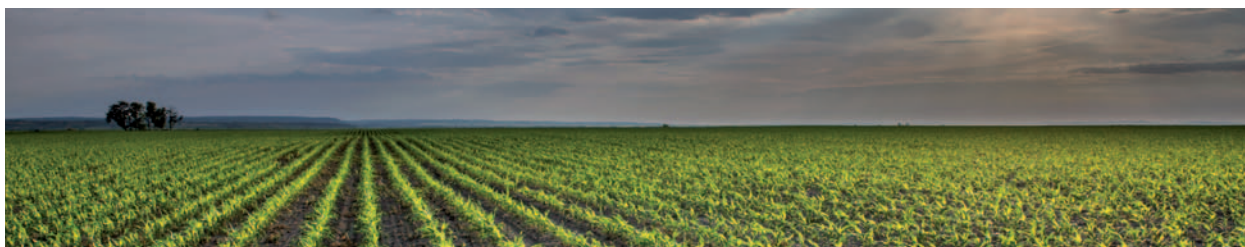


Decay mechanism of plant residues

- ✓ The microorganisms of the soil break down the cellulose, hemicellulose, starch, lignine, and pektin containing plant residues with the help of different enzymes.
- ✓ Basically these microorganisms take up the organic sulphur and inorganic materials, which are necessary for their life functions from the soil. When high organic material are supplied to the soil, which are not necessary for the reproduction of soil living microorganisms the balance is disrupted.
- ✓ In the initial phase of the breakdown the microorganisms covers their nutrient demand from the soil. Immobilize them temporarily, decreases the available nitrogen source for the plants. This is the so called pentosan effect, when the C/N ratio increases above 30/1.



*"In Spring 2013 we won the 1st price of the Hungarian Maize Competition. Which plot we won after soil lab testing we applied unique composed Gramix NPK Plusz fertiliser and UMG MICRO ZeaStart at the same time with sowing, the top dressing was made with **FertiSol** at the time of sowing and interrow works."*
– Ferenc Kardos, Kardos Farm Kft., Hajdúböszörmény



The **MASSulfix** is a meso and microelement supplemented nitrogen basic and top dressing fertiliser family.

AGENT CONTENT (w/w%):

Denomination	Nitrogen			S	SO ₃	B
	Total N	N-NH ₄	N-NO ₃			
Sulphur supplemented solid nitrogen fertiliser family						
MASSulfix 24 N-12 S (+ MgO, CaO)	24	17	7	12	30	0
MASSulfix 24 N-12 S (+ MgO, CaO) + 0,2 B	24	17	7	12	30	0,2
MASSulfix 25 N-5 S (+ MgO, CaO)	25	15	10	5	12,5	0
MASSulfix 25 N-5 S (+ MgO, CaO) + 0,2 B	25	15	10	5	12,5	0,2

In the MASSulfix fertilisers the form of the nitrogen is the fast-acting ammonium and the low-acting nitrate nitrogen. The magnesium containing members of the product family contains the magnesium and

the calcium in carbonate sulfate form. The sulphur content of the MASSulfix products ensured by the well absorbed sulphate form and the boron by the borate form.

Packing, storage:

- in 700–1000 kg BB
- 50 kg PE bags
- bulk

Store in a dry, sheltered place protected from sunlight.



APPLICATION TECHNOLOGY

Primarily suggested to apply for rape and wheat cultivation for sulphur supplementation at the same time with nitrogen spreading. Besides these crops, the products also suggested for sulphur, boron and magnesium demanding cultures.

crop culture	method of application	time of application	dose (kg/ha)
Rape	Top dressing – I.	end of winter, early spring	250–450
Eared cereals	Top dressing – I.	end of winter, early spring, tillering	200–350
Maize	Spring basic fertilisation	before sowing incorporated to the soil	350–650
Sunflower	Spring basic fertilisation	before sowing incorporated to the soil	100–300
Vegetable crops, potatoes, sugar beat	Basic fertilisation	before sowing incorporated to the soil	200–300
Cabbages	Basic fertilisation	before seating incorporated to the soil	170–200
Onion and leguminous plants	Basic fertilisation	before sowing incorporated to the soil	150–200
Orchads	Top dressing – I.	end of winter, early spring	250–350

The recommended dosage for informational purposes, taking into account the nutrient content of the soil, the yield and the possibility of combining with other fertilisers.



Advantages of application:

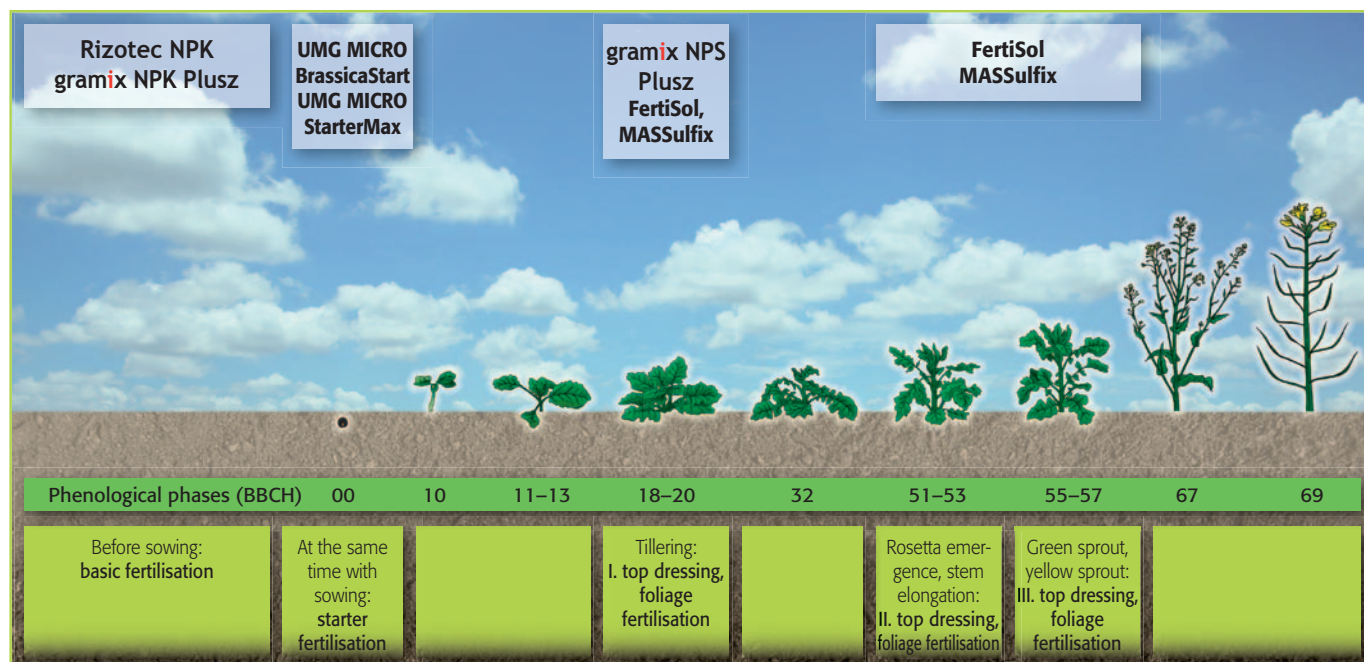
- **brings plus force** to the plants,
- its application **increases the plant tolerance** against **diseases** and **pests**,
- ensures the readily available nitrate form for the plants, while the ammonium form provides longer-acting nitrogen form,
- the presence of the sulphur increases the nitrogen uptake,
- its sulphur content improves the quality of the wheat
- the appropriate sulphur supply **increases the green mass**, stimulate the vegetative growth and improves the **chlorophyll content** of the plant,
- the mineral dolomite gives the calcium and magnesium content which **have beneficial effect on the soil structure** and increases its pH, thus the productivity is improving,
- the magnesium increases the dry matter formation, maintain the carbohydrate formation and the protein synthesis,
- The boron **subserve the uptake of nutrients** (in the nitrogen and phosphorus metabolism), has a key role in the transportation and cumulation of carbohydrates and other assimilated (e.g.: starch) and in the formation of root mass and vascular tissues as well as in the flower and crop formation.





Rape technology advise

Suggested fertilisers for cultivation of rape

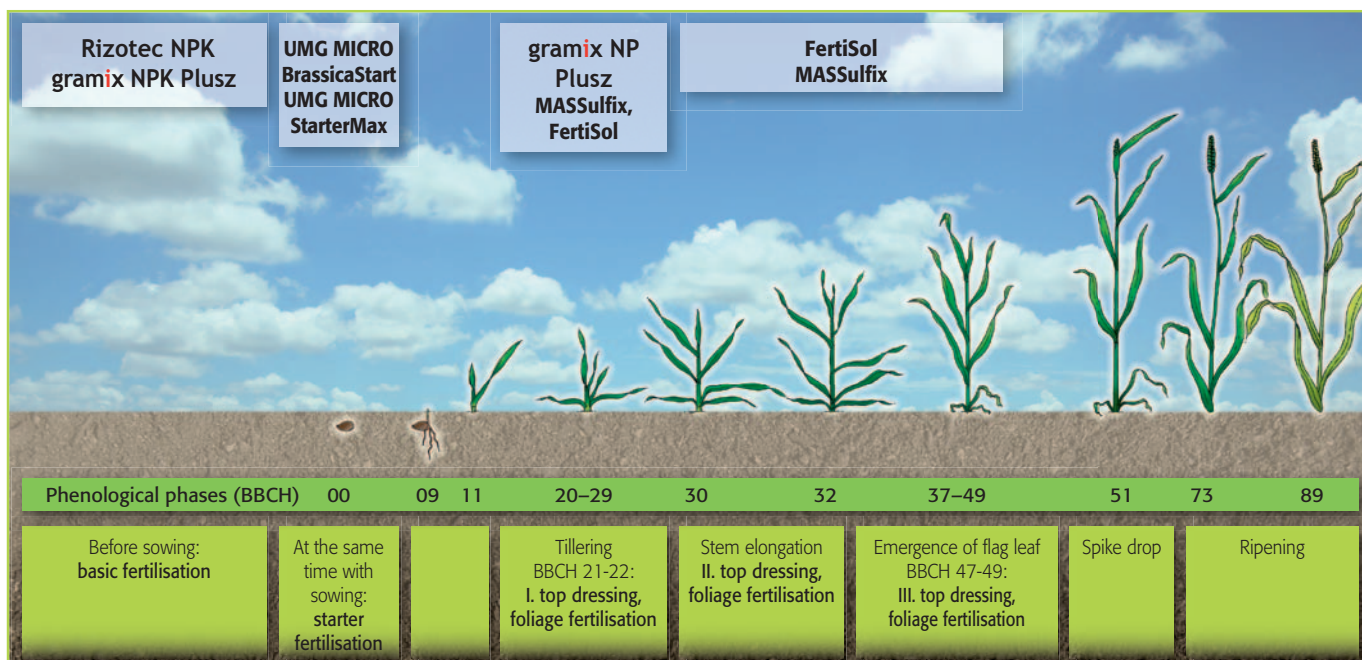


- Basic fertilisation with Rizotec NPK p. 12.
- Basic fertilisation with Gramix NPK Plusz p. 24.
- Starter fertilisation with UMG MICRO p. 31-32.
- I. top dressing, foliage fertilisation with Gramix NPS Plusz. p. 24.
- I., II. and III. 1.2.3. top dressing, foliage fertilisation ... with FertiSol p. 36., 40., 41., 43.
- I., II. and III. 1.2.3. top dressing, foliage fertilisation ... with MASSulfix p. 45., 46.

Cereals technology advise



Suggested fertilisers for cultivation of wheat

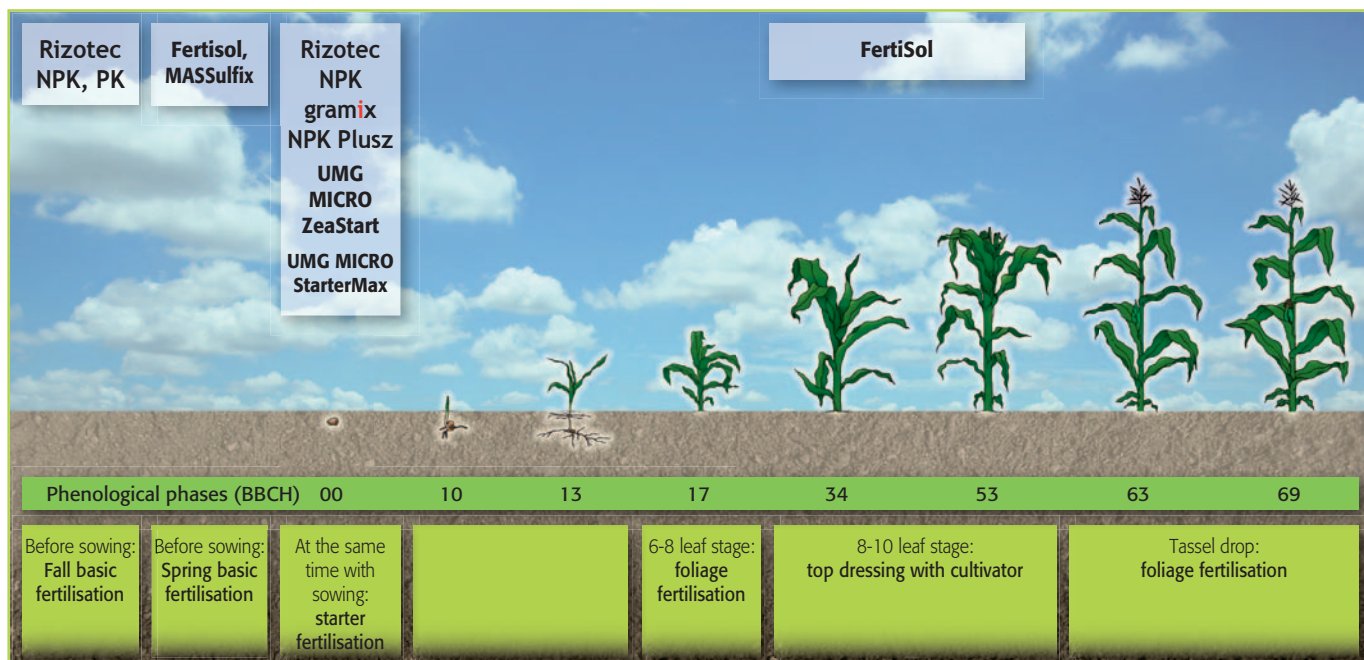


- Basic fertilisationwith Rizotec NPK p. 14.
- Basic fertilisationwith Gramix NPK Plusz . p. 24.
- Starter fertilisationwith UMG MICRO p. 31-32.
- I. top dressing, foliage fertilisationwith Gramix NP Plusz . . p. 24.
- I., II. and III. 1.2.5. top dressing, foliage fertilisation . . .with FertiSol p. 36., 37., 38., 39., 43.
- I., II. and III. 1.2.5. top dressing, foliage fertilisation . . .with MASSulfix p. 45., 46.



Maize technology advise

Suggested fertilisers for cultivation of maize

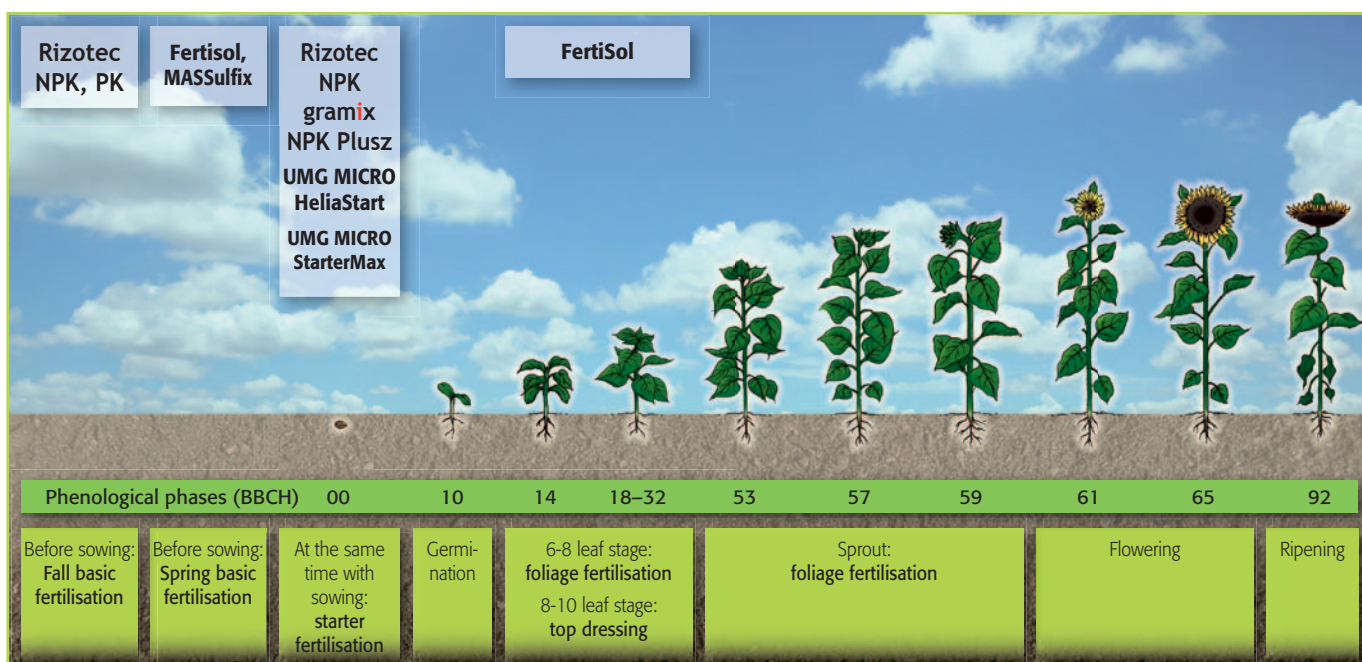


- Fall basic fertilisation with Rizotec NPK p. 16.
- Spring basic fertilisation with Fertisol p. 36., 42., 43.
- Spring basic fertilisation with MASSulfix p. 45., 46.
- Starter fertilisation with Rizotec NPK p. 18.
- Starter fertilisation with Gramix NPK Plusz p. 25.
- Starter fertilisation with UMG MICRO p. 29., 32.
- Top dressing with FertiSol p. 36., 42.

Sunflower technology advise



Suggested fertilisers for cultivation of sunflower



- Fall basic fertilisation with Rizotec NPK p. 17.
- Spring basic fertilisation with FertiSol p. 36., 40., 43.
- Spring basic fertilisation with MASSulfix p. 45., 46.
- Starter fertilisation with Rizotec NPK p. 20.
- Starter fertilisation with Gramix NPK Plusz p. 25.
- Starter fertilisation with UMG MICRO p. 30., 32.
- Top dressing, foliage fertilisation with FertiSol p. 41.

Notes

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Fertilia fertilisers

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Buy Hungarian product!



Warehouses/sites:

- ENYING Tel.: 22/572-059
- MÁNDOK Mobil: 30/695-5445
- NAGYSZÉNÁS Mobil: 30/631-5210

Advisory network:

Győr–Moson–Sopron county	Tel.: 20/385-0660	Pest county	Tel.: 30/377-5658
Komárom–Esztergom county	Tel.: 30/576-2828	Bács-Kiskun county	Tel.: 30/576-2884
Vas county	Tel.: 30/552-5941	Nógrád county	Tel.: 30/650-2012
Veszprém county	Tel.: 30/852-7504	Heves county	Tel.: 30/650-2012
Fejér county	Tel.: 30/335-6147	Jász-Nagykun-Szolnok county	Tel.: 20/385-0662
Enying surrounding	Tel.: 30/321-5828	Csongrád county	Tel.: 20/385-0935
Zala county	Tel.: 30/552-5941	Borsod-Abaúj-Zemplén county	Tel.: 20/385-1231
Somogy county	Tel.: 30/552-5938	Szabolcs-Szatmár-Bereg county	Tel.: 30/561-7318
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Baranya county	Tel.: 20/385-1297	Békés county	North: Tel.: 30/631-5672 South: Tel.: 30/384-6538

Advisory information line: 30/566-5386

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