Nitrogen-phosphate fertilizers
Nitrogen straight fertilizers
Nitrophoska® S
ENTEC®
Nitrophoska®/Nitrophos®
Nitrogen-sulphur fertilizers
Nitrogen-phosphate fertilizers
Nitrogen straight fertilizers
THE PRODUCT RANGE

The comprehensive ENTEC®-product range offers the right solution for all types of farms and is easily integrated into existing fertilizer systems.

ENTECl 13+10+20(+0+3): For all agricultural cultures with an increased requirement for potash.

ENTECl 20+10+10(+0+3): Universal fertiliser, where there is an increased need for nitrogen and a diminished phosphate and potash requirement.

ENTECl 24+8+7(+0+2): For all agricultural crops in the framework of crop rotation fertilization.

ENTECl 25+15: For all crops if potash fertilization is separate. The side-dressing for corn.

ENTECl 26(+13S): The fertilizer when nitrogen and sulphur need to be supplied. For separate phosphate and potash fertilization in the single-nutrient and PK-fertilization system, when using livestock manure, for additional fertilization measures.

ENTECl perfect 14+7+17(+2+9): V-formula for crops with higher demands for N and K.

ENTECl special 12+12+17(+2+8): For crops with balanced requirements for N, P and K.

<table>
<thead>
<tr>
<th>Products</th>
<th>Nitrogen (N)</th>
<th>Phosphate (P₂O₅)</th>
<th>Potassium oxide (K₂O)</th>
<th>Magnesium oxide (MgO)</th>
<th>Sulphur (S)</th>
<th>Boron (B)</th>
<th>Zinc (Zn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENTECl 13+10+20(+0+3)</td>
<td>13%</td>
<td>10%</td>
<td>20%</td>
<td>–</td>
<td>3%</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>ENTECl 20+10+10(+0+3)</td>
<td>20%</td>
<td>10%</td>
<td>10%</td>
<td>–</td>
<td>3%</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>ENTECl 24+8+7(+0+2)</td>
<td>24%</td>
<td>8%</td>
<td>7%</td>
<td>2%</td>
<td>–</td>
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<td>–</td>
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<tr>
<td>ENTECl 25+15</td>
<td>25%</td>
<td>15%</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>ENTECl 26(+13S)</td>
<td>26%</td>
<td>–</td>
<td>–</td>
<td>13%</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>ENTECl perfect 14+7+17(+2+9)</td>
<td>14%</td>
<td>17%</td>
<td>7%</td>
<td>2%</td>
<td>9%</td>
<td>0.02%</td>
<td>0.01%</td>
</tr>
<tr>
<td>ENTECl special 12+12+17(+2+8)</td>
<td>12%</td>
<td>12%</td>
<td>17%</td>
<td>2%</td>
<td>8%</td>
<td>0.02%</td>
<td>0.01%</td>
</tr>
</tbody>
</table>
Properties
ENTEC® fertilizers are nitrogenous mineral fertilizers containing the ammonium stabilizer DMPP*. This slows down nitrification and "stabilizes" the ammonium nitrogen in the fertilizer in the soil. In addition to the stabilized ammonium nitrogen, ENTEC® always contains a proportion of nitrate for fast plant uptake. ENTEC® fertilizers are available in the form of nitrogen-sulfur fertilizers and as complex fertilizers on the basis of Nitrophos®/Nitrophoska®. All ENTEC® products are characterized by the high quality of their granule, which guarantees problem-free storage and precise application.

Effect
Ammonia-nitrogen is less mobile in the soil than nitrate. It is bound to the surface of clay and humus particles. This explains the slow, almost reserved availability of nitrogen and the uptake of ammonia by the roots, which proceeds steadily and consistently. Nitrogen in the form of nitrate, on the other hand, is dissolved in the liquid soil phase and is easily able to reach the plant roots. The uptake is via the soil solution, which is why nitrate works quickly, however it is more easily washed out of the rooting soil area by high rainfall. Unlike this, Ammonia-N stays longer in the rooting zone.

Both forms of nitrogen can be used by plants and it is favourable for plant growth if plants can be nourished with both forms of nitrogen. Due to the subsiding nitrification processes in the soil, however, all forms of nitrogen are converted relatively quickly into nitrate depending upon the soil conditions, so that the nourishment of plants with nitrogen mostly takes place via nitrate.

By the stabilization of the ammonia nitrogen with ENTEC® fertilizers, ammonia is no longer subject to rapid nitrification and plants are in a position to assimilate ammonia nitrogen over a longer period of time. This combined nitrate and ammonia nutrition is advantageous for plants – the efficiency of nitrogen fertilizers is thereby increased.
ENTEC® protects against nitrate shifting
With no or poor root penetration, the danger of nitrate shifting into lower soil levels exists. This applies primarily:
- To light soils,
- To soils without plant cover (e.g. during the cultivation break between two crops),
- In the case of still poorly developed plants (e.g. during juvenile development) and
- In the case of crops with widely sown seeds or plants (e.g. corn, beets, some species of vegetables, potatoes prior to row closure).

N-LOADS IN SEEPAGE WATER (SOIL DEPTH 140 CM)
WHEN USING AMMONIUM-STABILISED FERTILIZERS (KG N/HA)
(Source: Scheffer and Schäfer 2003; sandy soil)

The nutrients in ENTEC®
Nitrogen is present 30–50% as nitrate nitrogen and approx. 50%–70% as stabilised ammonium nitrogen and the case is similar with calcium ammonium nitrate. That is why ENTEC® works quickly and persistently. Gaseous nitrogen losses which occur, for example in the case of urea, are largely prevented.

Phosphate is completely solubilised and present 60%–80% in water-soluble form. This part ensures that young plants have a head-start when it comes to spring growth. The remainder of the phosphate is soluble in ammonium citrate and is available during later growth periods.

Potash is present in a water-soluble chloride or sulphate form that is available to plants. The potash supply ensured by applying nitrogen and phosphate in early spring improves efficiency.

Magnesium is present 80% in water-soluble form. This ensures that the plant’s current needs are met and, if the soil is well-supplied with magnesium, makes a contribution to maintenance application.

Sulphur is present in a moderately soluble sulphate form that is quickly available to the plant. The current sulphur requirement is covered and efficiency is improved.

SULPHUR INPUTS (KG S/HA) IN GERMANY
(Source: data from state environmental agencies)
On average, only approx. 5 to 6 kg S/ha is incorporated from the air.
ENTEC® – FOR FLEXIBLE LABOR MANAGEMENT

ENTEC® fertilizer systems allow you greater flexibility when planning the application of fertilizer: fertilizer application dates can be brought forward or together without having to reckon on lower yields. Farmers can better exploit the ability of the soil to be worked and periods of time when there is less work to do, while in more labor-intensive periods they can reduce the workload on their farms.

Work peaks can be broken and remedial costs due to off-schedule work avoided. Time becomes available for other agricultural work that has to be completed by specific deadlines or work that needs to be done in other areas, such as animal husbandry.

HUMAN LABOR REQUIREMENT IN DIFFERENT FERTILIZER SYSTEMS

An example: Farm size 600 ha: 20% sugar beet, 5% rapeseed, 65% winter cereals, 10% summer cereals. The diagram shows the benefits of an ENTEC®-fertilizer system as compared to conventional fertilization. The surface to which fertilizer is to be applied is reduced by about 40% in this example. No additional work is involved in the first application. The time devoted to fertilization measures from April to June is significantly reduced.

ENTEC® ACTION IS NOT DEPENDENT ON WEATHER CONDITIONS

The effect of nitrogen-fertilization always depends on the weather. As a result of climate change, more and more extreme weather events are occurring, which increases the uncertainty felt by farmers with regard to the application of fertilizer. ENTEC® helps to minimize the cultivation risk – regardless of the weather:

- Secure N-supply through early fertilization with subsequent dry conditions – especially during dry springs and early summers.
- Optimal N-supply when weather conditions are normal.
- Protection against surface run-off and leaching in wet years and when there are high levels of precipitation.

The early fertilization of crops with ENTEC® fertilizers ensures that nitrogen is supplied when it is needed over a longer period. The nitrogen in the fertilizer is protected against leaching and/or the effects of displacement. No detrimental overgrowth of crops occurs.

Trend for fluctuations in annual volumes of precipitation 1900–2000

During the past 100 years there have been changes in annual precipitation worldwide – on the one hand in the volume and on the other in its timing and distribution. Extreme weather events like heavy rains or hail will go on increasing in this context, which makes it ever more difficult to calculate how to organise work on a farm.

(Source: WMO, UNEP)
ENTEC® IMPROVES ROOT-EFFICIENCY

In principle, plants can absorb both nitrate nitrogen and ammonium nitrogen via their roots. The stabilisation of the ammonium nitrogen in ENTEC® enables the plants to absorb more ammonium. The side-effect: The pH value in the immediate area of the roots falls, regardless of the physiological lime effect of a nitrogen-fertilizer (lime consumption value).

This results in increased availability of nutrient compounds that are bound into the soil and are highly insoluble: For example, phosphates, which are bound to calcium and the trace nutrients manganese, copper, zinc, iron and boron. This effect persists for up to ten weeks after the fertilization date and, during critical growth phases, improves the supply of the plants with the aforementioned nutrients.

ENTEC® SECURES YIELDS

Numerous research findings obtained over many years under a variety of site conditions show that commercially attractive increases in yields can be achieved with ENTEC®-fertilizers, depending on the site conditions and type of crop.

TEST RESULTS IN VEGETABLE CULTIVATION
(Source: BASF agricultural centre etc.)

<table>
<thead>
<tr>
<th>Crop</th>
<th>Year</th>
<th>Number of tests</th>
<th>Yield (conv.) in t/ha</th>
<th>Yield (ENTEC®) in t/ha</th>
<th>Additional yield %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bunched carrots</td>
<td>2005</td>
<td>3</td>
<td>37.7</td>
<td>39.2</td>
<td>4.0</td>
</tr>
<tr>
<td>Rocket</td>
<td>2005</td>
<td>3</td>
<td>16.7</td>
<td>18.6</td>
<td>18.3</td>
</tr>
<tr>
<td>Lamb’s lettuce</td>
<td>1996–2002</td>
<td>16</td>
<td>6.0</td>
<td>9.0</td>
<td>49.4</td>
</tr>
<tr>
<td>Asparagus</td>
<td>2003–2004</td>
<td>1</td>
<td>6.6</td>
<td>7.8</td>
<td>18.2</td>
</tr>
<tr>
<td>Celery</td>
<td>1998–2000</td>
<td>6</td>
<td>70.3</td>
<td>73.7</td>
<td>4.8</td>
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<tr>
<td>Leeks</td>
<td>1998–2000</td>
<td>8</td>
<td>44.7</td>
<td>46.7</td>
<td>4.5</td>
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<tr>
<td>Chinese leaves</td>
<td>1999–2011</td>
<td>5</td>
<td>87.9</td>
<td>91.9</td>
<td>11.5</td>
</tr>
<tr>
<td>Lettuce</td>
<td>2001</td>
<td>3</td>
<td>45.4</td>
<td>48.9</td>
<td>7.7</td>
</tr>
</tbody>
</table>

TEST RESULTS FOR AGRICULTURAL CROPS
(Source: HLS Rottalmünster; DSV Saaten; LA Bayreuth; LA Wunsiedel; LAP Forchheim; Landwirtschaftskammer Niedersachsen; Lochow-Petkus; Sächsische Landesanstalt; TUM Weißenstephan; Roggenstein; VOGE Beindersheim; Lochow-Petkus; Res Naturae GmbH; HHG Triesdorf; Syngenta Brachstedt; BASF Oberding / Austria: Lagerhaus Geinberg; Kärntner Saatbau; Agrana Tulln)

<table>
<thead>
<tr>
<th>Crop</th>
<th>Year</th>
<th>Number of trials</th>
<th>Yield (conv.) in t/ha</th>
<th>Yield (ENTEC®) in t/ha</th>
<th>Additional yield %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potatoes</td>
<td>2004–2008</td>
<td>12</td>
<td>43.5</td>
<td>46.5</td>
<td>6.9</td>
</tr>
<tr>
<td>Sugar beet*</td>
<td>1997–2002</td>
<td>22</td>
<td>11.3</td>
<td>11.5</td>
<td>1.8</td>
</tr>
<tr>
<td>Winter rapeseed</td>
<td>2003–2006</td>
<td>25</td>
<td>4.2</td>
<td>4.5</td>
<td>6.3</td>
</tr>
<tr>
<td>Gram maize</td>
<td>1989–2007</td>
<td>16</td>
<td>11.1</td>
<td>11.6</td>
<td>4.8</td>
</tr>
<tr>
<td>Silo maize</td>
<td>2001–2005</td>
<td>14</td>
<td>15.2</td>
<td>15.9</td>
<td>4.5</td>
</tr>
<tr>
<td>Winter wheat</td>
<td>2000–2007</td>
<td>52</td>
<td>8.3</td>
<td>8.5</td>
<td>3.7</td>
</tr>
<tr>
<td>Winter barley</td>
<td>2003–2007</td>
<td>8</td>
<td>6.9</td>
<td>7.7</td>
<td>10.6</td>
</tr>
<tr>
<td>Summer barley**</td>
<td>2003–2005</td>
<td>8</td>
<td>4.3</td>
<td>5.2</td>
<td>22.3</td>
</tr>
</tbody>
</table>

* Calc. Sugar yield  ** Significant additional yield through higher availability of manganese conv. = conventional fertilization
THE ADVANTAGES AT A GLANCE

- Secures nitrogen supply, whatever the weather.
- Brings work management benefits through bringing nitrogen-fertilization forward or together.
- Ensures quality and yields.
- Better exploits efficiency thanks to adjusted nitrogen supply.
- Reduces leaching and shifting of nitrogen.
- Provides additional nitrate content for rapid start effect.
- Significantly cuts ammonia volatilisation losses.
- Ensures that the crops are supplied with sulphur.
- High grain quality guarantees problem-free storage and precise application.
- Significantly reduces greenhousegas emissions.

GENERAL NOTES ON APPLICATION

The composition and effect of ENTEC® simplifies the process of nitrogen-fertilization considerably: Operations can be combined without jeopardising the plant’s supply of nitrogen. Crops that with conventional fertilization require e.g. three sets of applications now only need two.

Examples

Winter cereals:
Reduction to two doses of fertilizer
1. At the start of vegetation, 50%–60% of the overall volume
2. At bolting (ES 32-37) 40%–50% of the overall volume

Summer cereals/malting barley:
One dose before or with sowing

Corn, beet:
One dose before or with sowing

Potatoes:
One dose before planting or heaping

Vegetables:
One dose at planting or after emergence

Rapeseed:
One dose at start of vegetation

Fruit cultivation and viniculture:
One dose in spring

The application recommendations for special and agricultural crops on the following pages are examples and are based on current knowledge. The volumes stated are expressed in kg N/ha. Depending on the site conditions (soil conditions, precipitation levels and ability to supply additional N), the volumes are based on our own experience and regional recommendations. The criteria for good professional practice (incl. N min) should be followed and applied during decision-making. When using NP and NPK fertilizers, the findings of soil analysis with regard to phosphates and potash are of great importance. ENTEC® fertilizers can be integrated into all forms of farming and fertilizer systems.
**ENTEC® FOR GRAPES**

Crop management in vineyards is optimised so that the best grapes can be harvested for the creation of high-quality wines. A high standard has already been attained with current cultivation methods for grapes. The challenge is now to maintain these standards by reducing the amount of work and protecting nutrients from the fertilizers against being leached.

The slow release of nitrate nitrogen from ENTEC® fertilizers when it is needed eliminates the risk of a high, uncontrolled supply of nitrogen even with a low level of nutrient extraction. ENTEC® NPK-fertilizers supply the plants with all the important nutrients harmoniously, in a way that is tailored to the special needs of grapes.

As the soil is often dry at the time the grapes require the nitrogen (blossoming–berry touch), the effect of fertilization measures at this point in time is difficult to evaluate. The key factor is optimally utilising the relatively small quantities of nitrogen applied in fertilizer.

With ENTEC®, fertilization already occurs during the 3rd to 6th leaf stage. Thus, the existing moisture in the soil can be used to dissolve the nutrients. The risk of nitrate being leached is reduced considerably when ENTEC® is used.

The grape is supplied optimally, in line with growth. After ENTEC® fertilization, additional fertilization is not needed with normal growth.

**ENTEC® FOR VEGETABLES**

Nowadays, consumers expect consistently ripened products of uniform quality. This is both a question of their appearance and the substances they contain. ENTEC®-fertilizers promote marketability and ensure high yields: The rapid start effect and the long-lasting supply of nitrogen through ammonium, in line with plant growth, result in compact, uniform plant development. This is accompanied by a uniform colouring and size of the harvested vegetables. The content of flavour-bearing elements, minerals and vitamins increases while the nitrate content decreases. The size of the N-doses is based on the requirements of the crop. The quantity of nitrogen already contained in the soil have to be deducted. The same also applies to the mineral nitrogen to be expected from the harvest residues of the previous crop.

Fertilization occurs during planting or after the growth of sown vegetables. While two doses are normal, ENTEC® can be applied in one dose.

**ENTEC® FOR FRUIT**

When cultivating fruit, a balanced and adequate supply of all nutrients to the plants is essential. Harvests with consistent sorting and colouring are required. With the mineral fertilizers from the ENTEC® product family, fertilized products meet these requirements: the high proportion of stabilised ammonium nitrogen guarantees yield and promotes quality. Nitrogen losses due to high levels of precipitation or frost-protective irrigation are reduced, while the efficiency of fertilizer application is increased. The nutrient requirement in the cultivation of pome and stone fruit is relatively low and, in most farms, lies between 40 and 80 kg N/ha. Normally, the required volume of fertilizer can be applied in a single dose shortly before blossoming. The properties of varieties, forms of cultivation and the fruit set too should be taken into consideration when measuring the volume of fertilizer and, in some cases, a second dose may make sense. As far as the supply of nitrogen is concerned, soft fruit has special requirements.
When cultivating sugar beet the goal is to achieve a high sugar content. The level of nitrogen fertilization is based on the optimal white sugar yield. Depending on the soil content and additional supply of nitrogen, the beets receive between 80 and 120 kg/N. The N-requirement is low during the first few weeks after sowing. Most nitrogen is not absorbed until row closure. The delayed delivery of nitrate from ENTEC®-fertilizers corresponds to the N-requirement of beets while no nitrogen losses need be feared.

ENTEC®-fertilizers are ideal for beets:
- Fast growth start thanks to appropriate proportion of nitrate.
- Better exploitation efficiency thanks to stabilised ammonium.
- Lower -amino-N-contents.
- Higher white sugar yield.

In the case of ENTEC®-fertilizers the entire N volume is spread shortly before or after sowing.

ENTEC®-fertilizers are especially beneficial to potatoes due to their active principle:
- Needs-based volumes of nitrogen are available.
- Reduced nitrate content in the tuber, improved storage life.

Thanks to the action principle of ENTEC®-fertilizers, the entire N-volume can be spread before or after planting or heaping in one dose into the row.

The level of nitrogen fertilization depends on the variety and intended use. Potatoes for human consumption, those for processing or starch potatoes have different requirements. Depending on the ability to supply the soil additionally, the recommended volume of nitrogen lies between 80 and 100 kg N/ha. The absorption of nitrogen is restrained at the start of growth. It only increases following the fourth week after the start of growth.

Applying ENTEC® makes it possible to:
- Local lowering of the pH value in the root area due to the absorption of ammonium improves the availability of phosphates and trace nutrients.
- Increased tolerance of scab through improved availability of manganese.
- No reduction in the starch content with increased yields.
- More marketable goods since there are fewer oversized or undersized potatoes.

### Application for Potatoes

**ENTEC®-System**

<table>
<thead>
<tr>
<th>kg N/ha</th>
<th>1st dose</th>
<th>2nd dose*</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1 – 8</td>
<td>10</td>
</tr>
<tr>
<td>11 – 19</td>
<td>40</td>
<td>85</td>
</tr>
<tr>
<td>85</td>
<td>97</td>
<td></td>
</tr>
</tbody>
</table>

### Application for Sugar Beet

**ENTEC®-System**

<table>
<thead>
<tr>
<th>kg N/ha</th>
<th>1st dose</th>
<th>2nd dose*</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>12</td>
<td>14</td>
<td>16</td>
</tr>
<tr>
<td>32</td>
<td>40</td>
<td></td>
</tr>
</tbody>
</table>

*Growth height 15 cm
ENTEC® FOR WINTER WHEAT

When cultivating wheat the challenge is to promote those properties specific to particular varieties that determine quality and yield (number of ears, number of grains, grain weight) through targeted crop management. There is no uniform crop management strategy. This is based on the intended increase in yield and the characteristics of the site. With ENTEC®-fertilizers, applied on their own or in combination with other straight nitrogen-fertilizers, there are a wide variety of interesting combinations which meet the demands of particular sites and the cultivation goal.

Additional benefits of the ENTEC®-fertilizer system:
- Fewer fertilization measures.
- Single dose for more effective farm management.
- Ensures the nitrogen effect in dry springs or early summers.
- Eliminates the weather condition risk.
- Nitrogen supply that is in line with plant growth without the risk of overgrowth of the plants.

When cultivating quality cereals targeted late fertilization is essential. It is recommended that CAN be additionally used in late fertilization.

ENTEC®-fertilizers – ideal for corn:
- The entire N-quantity can already be applied prior to sowing.
- Early fertilization supports juvenile development.
- The stabilization of the ammonium ensures that nitrogen remains in the root area.
- Ammonium is transformed into nitrate with a delay and is available during the main growth period.
- Sure to take effect even during dry periods at the time when it is needed most.
- Optimal supplement to livestock manure.

ENTEC®-systems
- During dry springs
- During dry early summers
- Single dose for more effective farm management (growth stage 25–29)

ENTEC®-fertilizers – ideal for corn:
- The entire N-quantity can already be applied prior to sowing.
- Early fertilization supports juvenile development.
- The stabilization of the ammonium ensures that nitrogen remains in the root area.
- Ammonium is transformed into nitrate with a delay and is available during the main growth period.
- Sure to take effect even during dry periods at the time when it is needed most.
- Optimal supplement to livestock manure.

APPLICATION FOR WINTER WHEAT

kg N/ha
<table>
<thead>
<tr>
<th>Usual distribution of N-doses</th>
<th>1st dose</th>
<th>2nd dose</th>
<th>3rd dose</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ENTEC®-systems
- Variant 1
- Variant 2, combined with organic fertilizer

APPLICATION FOR CORN

kg N/ha
<table>
<thead>
<tr>
<th>Usual distribution of N-doses</th>
<th>1st dose</th>
<th>2nd dose</th>
<th>3rd dose</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ENTEC®-systems
- ENTEC®-varieties
- ENTEC® 160–200
- Slurry etc.
- ENTEC® 60–100

EN, CAN
- 80–120
- 40–60

VS
- 0
- 5
- 11
- 13
- 14
- 16
- 17–32
- 34

* ENTEC® 25+15 for side-dressing
** ENTEC® for N-supplementation in organic fertilization

18 19
ENTEC® FOR WINTER RYE/WINTER BARLEY/TRITICALE

For winter rye, winter barley and triticale, the strategies for ENTEC®-fertilization are similar to those for winter wheat. Only the level of N-fertilization and the size of the individual doses have to be tailored to the needs of these varieties of cereals. The timing of the N-doses, taking into consideration the development stages of the plants, is the same. On soils with sufficient water capacity and yield expectations exceeding 80 dt/ha, the N-volume should be applied in two doses.

ENTEC® FOR SUMMER BARLEY/MALTING BARLEY

The control of nitrogen-fertilization plays a decisive role in obtaining good quality for malting barley and feed barley. Good quality malting barley is characterised by a high proportion of whole barley and a lower protein content. This can only be guaranteed by restrained nitrogen-fertilization, which ensures the lower protein content demanded by producers. The level of nitrogen-fertilization is within strict limits. The case is different with feed barley where a high protein content is desirable. Here higher N-volumes result in a higher yield with higher protein contents. Both cultivation goals can be achieved easily with ENTEC®.

APPLICATION FOR WINTER RYE/WINTER BARLEY/TRITICALE

<table>
<thead>
<tr>
<th>kg N/ha</th>
<th>Usual distribution of N-doses</th>
<th>ENTEC®-system</th>
<th>Dry springs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ENTEC®</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Spring dose</td>
<td>9</td>
<td>21–25</td>
</tr>
<tr>
<td></td>
<td>Bolting dose</td>
<td>31–40</td>
<td>59–71–92</td>
</tr>
<tr>
<td></td>
<td>Late fertilization</td>
<td>59</td>
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</table>

APPLICATION FOR SUMMER BARLEY/MALTING BARLEY

<table>
<thead>
<tr>
<th>kg N/ha</th>
<th>Usual distribution of N-doses</th>
<th>ENTEC®-system</th>
<th>1st dose</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ENTEC®</td>
<td></td>
<td>9–7</td>
</tr>
<tr>
<td></td>
<td>Dry springs</td>
<td></td>
<td>21–25</td>
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<td>ENTEC®</td>
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<td></td>
<td>KAS</td>
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<tr>
<td></td>
<td>Dry springs</td>
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* En Tec® for N-supplementation in organic fertilization
The growth of rapeseed commences very early in the spring. It can be rapid, depending on the temperatures. With fertilization it is necessary to ensure that at the start of vegetation enough nitrogen is offered to support this development. With conventional fertilizers the nitrogen-fertilization is split for rapeseed. The first dose is applied at the start of growth. After about 2–3 weeks a second dose is applied during elongation growth.

ENTEC® simplifies the application of fertilizer to rapeseed:
- Fertilizer in one dose at the start of growth.
- Ensures the supply of nitrogen and sulphur with one dose.
- Persistent unfavourable weather conditions do not affect further supply.
- The target yield is ensured by a single dose.
- Time becomes available for other work due to the fact that no second dose is needed.

APPLICATION FOR WINTER RAPESEED

<table>
<thead>
<tr>
<th>kg N/ha</th>
<th>1st dose</th>
<th>2nd dose</th>
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ENTEC® FOR WINTER RAPESEED

Our products are supplied in bulk, in bags or in big bags.