

## With Mivena fertilizers you can hear grass to grow

Mivena is a Dutch fertilizer producer operating for 10 years in more than 25 almost European countries. Since 2014, Adam-zahradnická a.s. has been the sole importer and distributor for the Czech Republic and Slovakia. Mivena is awarded a reasonable price of high-quality fertilisers, which, even at a lower annual provide plants with plenty of nutrients due to their effective action.

Controlled release fertilisers (CRF – Controlled Release Fertilizer) Mivena with its unique Duration® Technology can produce fertilisers with different efficiency lengths, namely 2-3 months, 3-4, 5-6, but even 8-9 months, suitable for basic fertilization of lawns (sports and golf courses, gardens, public greens). The controlled release of nutrients occurs thanks to a special resin coating only depending on the temperature, unlike other fertilisers coated by sulfur, for example, where this process significantly affects the amount of water. CRF Mivena fertilizers are therefore coated with resin, without additions to sulfur or metals. As several studies in recent years have shown, resins for the CRF production has unique characteristics in terms of efficiency of fertilisers. Its use works on the principle of osmosis: only a very small amount of moisture and releases nutrients (urea) inside the granule. The amount of nitrogen released is then dependent on the temperature. When the temperature is too low (e.g. 2 °C), the encased granules do not release any nutrients, the higher the temperature, the more nitrogen is released (up to a certain maximum limit) to fully cover the higher lawn needs.

### Granucote®

For 2015, Mivena offers four different crf fertilisers for grassland. The first is Granucote®, with round granules of 1 – 3 mm. Granucote® has a high percentage of encased higher than comparable products. There are more than 15 different types of this fertiliser available by default in effect from 2-3 months to 8-9 months. Because nitrogen is completely wrapped, the nutritional level of the fertilizer remains stable throughout the period of effectiveness. The initial fraction of nitrogen in Granucote® consists of nitrate and/or ammonia. This provides an optimal starting effect under all weather conditions. Potassium is 100% water soluble, so it can be used as much as possible by the lawn. Most types of this fertilizer contain important trace elements such as magnesium and iron. Granucote® high potassium content also contains manganese, which enhances the absorption of phosphorus, thereby increasing frost resistance and drought resistance. Granucote® is an ideal fertilizer for high-quality lawns designed primarily for golf fairways and sports lawns at a comparable price level.

### Granucote® Mini

Granucote® Mini technology and philosophy is the same as at Granucote®. The main difference is only minor granulation (0.5 up to 1.5 mm), which makes Granucote® mini fertiliser extremely suitable for tees, crossings and especially greens. Uniform the small size of the granules allows for even application even small doses. Due to production technology (Duration® Technology) resin coated fertilizers is the efficiency of the fertiliser regulated by the osmosis process. Amount of nitrogen released depending on the needs of the lawn, only the temperature determines. There are currently five different types of Granucote® Mini with an effect of 2-3 months or 3-4 months.

### Granupermanent®

Granupermanent CRF most economically advantageous fertilisers are Granupermanent- 18-7-15 2MgO 0.5Fe with 35% coated nitrogen available in efficiency of 2-3 and 3-4 months and Granupermanent-Universal fertiliser. Granupermanent-Universal is available in two types: 22-5-9 2MgO 1Fe (43% coated nitrogen, efficiency 2-3 and 3-4 months) and type 21-5-11 1MgO (31% coated nitrogen, efficiency 2-3 months). This fertilizer is designed primarily for lawns with higher mowing, such as sports lawns, fairways, (semi)roughs, parks, gardens, etc. Balanced types of this nitrogen-high fertiliser allow for use in relatively low application doses without the risk of burns.

## GreenStar®

In 2015, Mivena will introduce four specially developed types of CRF fertilizer suitable for sports lawns. The new fertilizer product line bears the name GreenStar. As with all CRF fertilisers from Mivena, efficiency is guaranteed by the use of Duration-technology, i.e. resin-encrusted urea. Covered nitrogen is 40-52% represented in GreenStar, depending on the type of fertiliser as well as the magnesium and iron content. The size of the granules is 1 - 4 mm, which is a suitable granulation for sports lawns. GreenStar's was already successfully launched in Germany in 2014 and will be available in other European countries from January 2015.

## Granuform®

For fine lawns, such as greens and tees, Mivena offers two types of slow-release fertilizer (SRF - Slow Release Fertilizer), which, thanks to the use of methylene urea (MU), has ensured long efficiency, namely Granusport Granuforms are available in five different types, each with a high degree of solubility at minimal disruption. A high proportion of MU guarantees effectiveness for up to 12 weeks and minimises the risk of burns. A uniform granulation of 0.5 - 1.0 mm and colour makes application easier. All types of fertilizer contain magnesium, and three of them also contain iron.

### Granusports®

Granusports" SRF is a range of highly soluble fertilisers developed based on the use of MU. This series is an attractive price and is ideal for larger areas with low-cut lawn, such as tees, greens and surroundings. Using 25% MU of the total amount of nitrogen ensures efficiency of 8-10 weeks. Granusports" fertilizers have a very quick effect after application and are therefore the perfect fertilizers for the start of the season. All six types of fertilizer in this series contain NPK and iron. Autumn fertiliser even has 6% iron, which is very effective at fighting with moss. The other five types of fertiliser also contain magnesium combined with iron, give the lawn a very nice and healthy colour. In addition to NPK, fertilizers also contain a set of trace elements that are so often missing from sand-based structures like greens. In a packet of trace elements, we find compounds of calcium, magnesium, sulfur, boron, copper, iron, manganese, molybdenum and zinc. Granulation of 0.5-1.3mm allows easy spreading of fertiliser even with it.

## Granusol®

In addition to CRF and SRF fertilizers, Mivena also produces a wide range of water-soluble fertilizers (WSF-Water Soluble Fertilizer) under the Granusol-WSF brand. The granules are a fertilizer completely soluble in water at temperatures above 80°C. It is made in the form of loose crystalline powder, which can be used for leaf nourishment. Most trace elements are in chelating form EDTA for ease of absorption and rapid efficiency. These fertilisers also contain trace elements. Nutrition of the lawn with trace elements in chelating form helps nutrient absorption even under adverse conditions. In addition, most variations of Granusol-infused contain MV 10, a package of vitamins that increases

the absorption of nutrients and trace elements in individual grass species. Due to its extremely high solubility, Granusol's can be mixed in a tank with almost all herbicides and fungicides, saving water and time.

For more information about Mivena fertilizers, visit [www.mivena.nl](http://www.mivena.nl) or contact representatives for CR and SR, ADAM - horticultural a.s

Zdeněk Kadrnožka, ADAM – zahradnická a.s.