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S L O W R E L E A S E T A B L E T S

for universal use



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Information

SICOMIX® - OUR LINE OF SLOW-RELEASE FERTILISERS IN TABLETS AND POWDER

SICOMIX® is a line of special complete high-nutrient chloride-free slow release fertilisers. Depending on the climate and the soil condition both manufactured forms - tablets and powder - are marked by a slow and pro-longed release of nutrients lasting for up to 18 months. The line of slow release fertilisers SICOMIX® is thus designated for fertilisation and supplemental fertilisation of a wide range of perennial and long-living cultures. In modern horticulture and forestry, slow-release fertilisers (SRFs) in tablets have proven **superior to conventional fast release fertilizers (FRFs)**.

The slow and gradual action of the SICOMIX® fertilisers is due to the decomposition of Ureaform (urea-formaldehyde, Methyleneurea) polycondensates in the soil as the principal source of nitrogen. Ureaform chains of different lengths exhibit various water solubilities; at least 50 to 70 percent of total nitrogen is available in water-insoluble form, depending on the fertiliser composition. Unlike with the conventional FRFs, the use of slow release fertilisers SICOMIX® **prevents undesirably high concentrations of nitrogen** in the soil at the beginning of fertilisation. Consequently, the nitrogen leaching from the soil does not increase.

An important feature of slow release fertilisers SICOMIX® is the content of sparingly soluble alkaline potassium-magnesium phosphate that guarantees a slow action of the other essential nutrients - phosphorus, potassium and magnesium - while having a positive effect on the pH of acidic soils.

The high nutrient content, the limited solubility and the absence of undesirable additives (e.g., chlorides) increase the number of possible applications of the slow release fertilisers SICOMIX®. Through all their qualities, they are **environmentally friendly**.

The slow release fertiliser tablets SICOMIX® bring about a number of advantages. Most importantly, the tablets are particularly well suited for fertilisation of plants with longer period of growth (perennial plants), especially at poorly accessible sites or where conventional methods of fertilisation cannot be used. The fertiliser tablets are ideal for separate fertilisation of each individual plant; they create a sufficient supply of nutrients in the soil or substrate without the risk of undesired increase in the soil concentration and losses due to leaching of the nutrients. The application is simple and targeted; it allows an accurate dosage of the nutrients, and reduces the unproductive fertilisation beyond the reach of the root systems.

The slow release fertiliser tablets SICOMIX® are applied into vessels or on loose soil. Standard fertilising tablets are available in the weights of 5, 10 and 15 grams, respectively. Fertiliser tablets of non-standard weights can be produced on request.

The slow release fertiliser tablets SICOMIX® are particularly suited for the planting of forest seedlings (especially on the areas affected by emissions or soil erosion), ornamental and fruit-bearing trees, bushes and flowers, vineyards, hopgardens, strawberry plants, raspberry, gooseberry and currant bushes, trees and bushes alongside roads, plants on recultivated areas, etc.

Start-fertilising efficiency is beneficial for the planting of tropical and subtropical species, e.g., coconut and oil palms, olivetrees, coffee, cocoa, tea, citruses, oranges, bananas, avocados, mangos, papayas, dates, eucalyptus, rubber, tung, shorea, tectona, pistachio, macadamia and cashew nuts, etc.

The use of slow release fertiliser tablets SICOMIX® leads to **considerable savings in time and labor**, and decreased need for supplemental fertilisations. The tedious and questionable blending of a substrate with conventional fertilisers is rendered unnecessary. Also important is the economic effect brought about by improved growth of seedlings, by shortening the flowering cycles and by wood increments.



The release of nutrients from slow release fertilisers SICOMIX® depends on the chemistry, biological activity and water regime of the soil, but also on the chemotropism of plants. The nutrients can be utilized during the course of multiple vegetation periods. Limited solubility of the nutrients and the high degree of their uptake by plants prevent their excessive dissolution into the soil and surface waters. The powdered form of SICOMIX® slow release fertilisers is especially well suited for the powdering applications to young seedlings in nurseries. Special forest and garden substrates can be made by blending the powdered SICOMIX® slow release fertilisers with peat.

The SICOMIX® slow release fertilisers have been thoroughly evaluated by chemical analysis and plant nutrition studies. Lab tests have shown a markedly lower solubility of all nutrients compared to standard FRF fertilisers. All tests conducted under different experimental conditions have clearly documented that the nutrients are released slowly from the slow release fertiliser tablets and powders, and confirmed that the application of SICOMIX® tablets secures a higher degree of nutrient utilisation and reduces losses due to retrogradation and washing out into ground waters. The full advantage of the environmental friendliness of the SICOMIX® tablets can be taken in regions affected by emissions or in regions serving as water supply sources.

Long-term examination of mechanical properties of the SICOMIX® slow release fertiliser tablets and powder has proved their dependable strength and minimum abrasive wear on storage under outdoor conditions. Growth tests, established by several prestigious institutions authorized to carry out testing of new types of fertilisers, showed that the SICOMIX® slow release fertilisers fully satisfy the requirements for stock and environmentally friendly fertilisers.

Fertiliser Applications

THE APPLICATION OF THE TABLETTED AND POWDERED FERTILISERS OF THE SICOMIX® LINE

1. The tabletted SICOMIX®fertilisers

The tabletted SICOMIX® fertilisers allow the spot application which, when carried out properly, guarantees a considerably better utilisation of the supplied nutrients compared to other complex fertilisers applied broadly. The release of the nutrients from SICOMIX® into the soil continues for a period of up to 18 months depending on the local climatic and pedological conditions. SICOMIX® can be successfully applied into free soil to newly established cultures (e.g., to 1-4 years old forest trees) and to seedlings in nurseries or in flower pots.

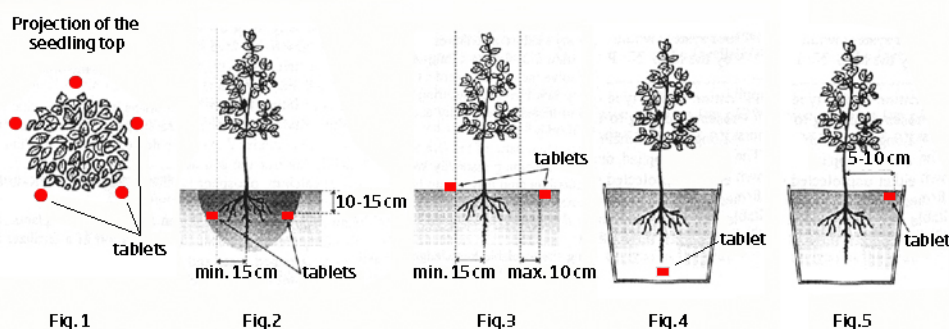
2. The application of the tabletted SICOMIX® fertilisers into free soil

The number of the SICOMIX® tablets (10-15 g each) applied to each seedling is 4-5 (Fig. 1). The distance of the tablets from the seedling stem corresponds to the perimeter of the seedling top projection onto the soil surface. The tablets should not be placed closer than 15 cm from the seedling stem. The distance should not exceed the perimeter of the seedling top projection by more than 10 cm. Depending on the local climatic, soil and technical conditions, the SICOMIX® tablets are either placed below the soil surface at the depth of the side roots at the edge of the planting hole, about 15 cm from the seedling stem (Fig. 2), or they are put directly onto the soil surface. The tablets can alternatively be worked in closely below the soil surface by stepping on them (Fig. 3). Root level application partially prevents undesirable co-fertilisation of weed.

3. The application of the tabletted SICOMIX®fertilisers in flower pots

Plantation fertilisation : The tablets are to be laid on a layer of soil under the root bundle (Fig. 4). If more tablets are applied, they are placed evenly around the girth of the root system. Recommended application - one tablet (5-10 g each) per 1 liter of soil.

Supplemental fertilisation : The tablets are to be placed evenly either onto the soil surface or just below the surface at the distance of 5-10 cm from the plant stem (Fig. 5). Recommended application - one tablet (5-10 g each) per 1 liter of soil.



4. The application of the powdered SICOMIX® fertilisers into free soil

The powdered SICOMIX® fertilisers are applied by powdering 200-400 g onto each square meter of the soil surface or, alternatively, they are placed just below the surface. Repeated application with a half portion (100-200 g/m²) is recommended in the following year. For the production of forest or garden substrates, at least 3 kg of the powdered fertiliser should be mixed with 1 m³ of peat and/or mould. The application of the powdered SICOMIX® fertilisers is **very popular in forest seedling fertilisation in nurseries**.

5. The period of application

The tabletted or powdered SICOMIX® fertilisers are applied during the spring and summer seasons until the end of July. The fertilisers are successfully applied to the seedlings during the spring time in the year of plantation or in the following year. Depending on the local conditions, the fertilisers are applied at the latest in the fall (September or October). The application of the SICOMIX® fertilisers onto snow is functionally inappropriate.

Professional Packagings

All fertilizer tablets (5, 10, 15 g sizes) are available in the following packagings:

- a) 20 kg polypropylene (PP) bags with polyethylene (PE) liner
- b) 10 kg cardboard boxes
- c) 5 kg plastic (PP) buckets with handle
- d) 1 kg plastic (PP) buckets with handle

All weights are net. Packagings are labeled in English, other language versions are made on request.

20 kg Packaging :

Woven PP bag with PE liner, sewn-closed. Label is stuck on the larger side of the bag or sewn into the seam seal. dimensions (W x H): 50 x 65 cm

10 kg Packaging :

White 5-layer cardboard box, heavy duty (100 kg capacity), with tape-sealed top and bottom. Label is stuck or printed on the larger size of the box. dimensions (L x W x H): 29.7 x 26.4 x 20.7 cm

5 kg Packaging :

Green and/or white PP bucket with a lid, elliptically shaped, equipped with a metal carrying handle. Label is stuck around the bucket perimeter. dimensions (Lmax x Wmax x H): 27.5 x 20 x 19 cm
For transportation, each bucket is placed into a tape-sealed 5-layer cardboard box.
dimensions of box (L x W x H): 29.7 x 26.4 x 20.7 cm

1 kg Packaging :

Green and/or white PP bucket with a lid equipped with a metal carrying handle. Label is stuck around the bucket perimeter. The lid is equipped with a breakaway locking tab. dimensions (W x H): 13.5 x 12 cm
For transportation, 5 buckets are placed into a tape-sealed 5-layer cardboard box.
dimensions of box (L x W x H): 39.5 x 28 x 13 cm



Standard Stowage

20 kg Packagings

- PP bags with PE liner
Total of 50 bags are stacked on a EUR pallet (800 x 1200 mm) in 7 layers, tied with 2 plastic straps and stretch wrapped.

net weight: 1000 kg
gross weight: 1030 kg
load height: 160 cm

10 kg Packagings

- up to 9 layers of cardboard boxes
Total of 108 boxes are stacked on a EUR pallet (800 x 1200 mm) in 9 layers, each containing 12 boxes. The layers are separated by cardboard inserts. Boxes on the pallet are tied with 2 plastic straps, shrink wrapped and then stretch wrapped.

net weight: 1080 kg
gross weight: 1170 kg
load height: 209 cm

5 kg Packagings

- Plastic buckets
Total of 80 buckets are stacked on a EUR pallet (800 x 1200 mm) in 5 layers, each containing 16 buckets. The layers are separated by cardboard inserts. The buckets on the pallet are shrink wrapped and then stretch wrapped.

net weight: 400 kg
gross weight: 450 kg
load height: 115 cm

1 kg Packagings

- Plastic buckets
Total of 400 buckets are stacked on a EUR pallet (800 x 1200 mm) in the following way: 5 buckets are placed into a tape-sealed 5-layer cardboard box (L x W x H = 39.5 x 28 x 13 cm). The boxes are stacked on the pallet in 10 layers, each containing 8 boxes. The layers are separated by cardboard inserts. The boxes on the pallet are tied with 2 plastic straps, shrink wrapped and then stretch wrapped.

net weight: 400 kg
gross weight: 480 kg
load height: 150 cm



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