



SEDOS[®]

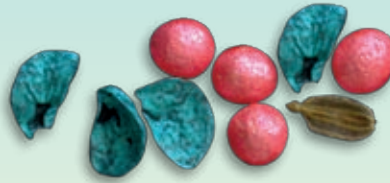


**[your gardening
starts here]**

About



Sedos



SEDOS s.r.o. was set up as a family business in 1992 and has been involved in professional seed treatment ever since. The company is based in the village of Krakovany, 8 kilometres (5 miles) from the spa town of Piešťany. SEDOS is currently the only company on the Slovak market producing pelleted seed and small packages of specially modified seed. We also manufacture a water-soluble film, primarily used as a seed carrier in the production of seed tape. Our seed tape design is unique, not just here in Slovakia but worldwide. SEDOS's small seed packages have been long established in Slovakia and can also be found on the market in the Czech Republic, Poland, Serbia and the Ukraine.

A few years ago we expanded our range to include the production of liquid and granular fertilisers, which we developed on the basis of our expertise and many years of experience in plant growth, development and nutrition. We use a similar pelleting method for the production of granular fertilisers as for the production of pelleted seed, to ensure gradual release of nutrients into the soil.

Here at SEDOS we are constantly searching for new ways to innovate and perfect our procedures and devices - factors which have a direct impact on the quality of the final product. We exhibit every year at specialist trade fairs and exhibitions and have received several awards, including the "Golden Sickle" (or „Zlatý Kosák“ - presented by the Slovak Minister of Agriculture for innovative developments in agriculture) for our range of slow-release granular fertilisers for flowers and lawns, and again for our precision-sowing system for seeds of various varieties of vegetables on a water-soluble film tape, and an Honourable Mention for our device for subsoil laying of seed tape. With our team of 12, led by the company's owners, who are graduates from the Slovak University of Agriculture in Nitra, SEDOS has become a by-word for dynamism, outstanding coordination and expertise.



Ing. Michal Sedlák, CSc.



Ing. Eva Sedláková, CSc.

We not only produce seed but also follow up with fully committed customer care, catering for wholesalers, garden supply retailers, garden centres and also agricultural cooperatives, (small and large-scale) market gardeners and vegetable growers and gardeners. We keep in daily contact with our customers by telephone (or mobile), fax, e-mail, and via our e-shop.

SEDOS is also heavily involved in the local community. We support local cultural and sporting events and groups such as Krakovany's Lusk folk ensemble, the Borovienska folk-music group, the local sports club and the Krakovany folk festival.

One of the purposes of this brochure is to draw your attention to new progressive methods in seed treatment, which will make your work more effective and simpler and move it on to a more professional level.

All of us here at SEDOS would like to take this opportunity to wish you every success with our products.



Technology



Seed grain treatment technology

Standard seed grain treatment comprises cleaning and grading seed according to size and, more rarely, dressing seed with a fungicide to protect against fungal diseases. Following certification the treated seed grain is packed into containers and supplied to the customer.

SEDOS does not produce standard seed grain and so our first step is highly targeted purchase of standard certified seed grain offering the highest quality parameters and excellent genetic potential. Our starting material consists of selected lots of seed grain following standard treatment, which we then process using a number of different techniques:



■ Drying pelleted seed



■ Coating seeds

1. Coating - is a process involving applying a thin protective layer to the surface of seed. Coating does not change the shape of the seed, but the surface is made firmer. The colour of the seed can be accentuated and it is covered with a substance offering protection against disease and pests, or a substance that promotes germination or provides nutrition to the resulting seedling.

2. Pelleting - is a technological process involving modifying the shape and surface of seed, thereby enabling maximum mechanised sowing using precision sowing systems. Following pelletting the seed takes on a regular, spherical or oval shape. The material used for pelletting is made up of an organic-mineral compound, which provides seed with essential micro-nutrients and the right pH environment. Fungicides (to protect against disease) and

insecticides (to protect against pests) can be incorporated into the pelletting. Coated seed by itself though is of little use to small-scale farmers, growers and gardeners, because there is no way to take advantage of the effect of pelleted seed and plant it at the right spacing without very expensive sowing equipment. That is where SEDOS comes in though, with our top-quality seed solution - seed tape.

3. Seed tape production involves embedding treated seed on a tape made of a water-soluble film. The distance between the seeds on the tape is calculated depending on the quality of the seed and specialist expertise and experience regarding the ideal spacing of plants in a crop, which is a key factor in achieving a large, high-quality yield. A number of different seed varieties or various granular substances for protection and promotion of plant germination and growth can also be placed on the seed tape.

To ensure the highest quality possible, we perform laboratory inspections of the germinative capacity of the seed whenever anything is modified and we only use seed lots that satisfy our internal standards for the production of our products. Our internal standards are 15 to 20% stricter than the EU's seed standards.



■ Seed tape production



■ Control of germination

Fertiliser production technology



■ Fertiliser production

Pelleting granular fertilisers

For a number of years now we have focused on fertilisers which release plant nutrients gradually over the course of the growing season. The specialist literature has confirmed to us the indisputable benefits these fertilisers can offer, in particularly improved efficacy and minimisation of nutrient losses. Plant nutrients can be made „controlled-release“ by creating a layer of a substance with low water-solubility on the surface of granules comprising one or more conventional fertiliser components. This has become the theoretical basis for production of pelleted granular fertilisers. The pelleting process now involves applying a layer of elemental sulphur and a layer of a hydrophobic polymer, acting as a membrane for the controlled diffusion of water and plant nutrients, to the fertiliser granule.

Liquid fertiliser production

Liquid fertiliser production methods are based on mixing the components according to licensed formulas. The main products produced are custom-blended liquid fertilisers for foliar application during the growing season. We offer straight fertilisers such as BorSedos or ZinkSedos, two-component fertilisers such as PKSedos, or compound fertilisers, such as NPKmikroSedos, MgSedos, ThioSedos, SedosKalcium, Sedospray for Lawns - spring formula and autumn formula.



Seed



Seed grain

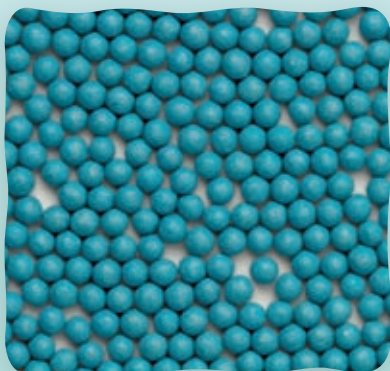
The seed of any plant variety is a pocket-sized miracle. It carries with it everything needed for the development of a new generation, including genetic information about what the plant will look like and the final product's yield potential and quality parameters. It also contains nutrients stored to sustain the sprout, before photosynthesis can take place. You cannot just go planting any old seed! We strive to choose the best quality seeds available and we use various treatment methods to ensure that every last drop of potential in the seed is brought to fruit. Thanks to the methods we use, every seed is a seed grain.



■ Standard seed



■ Coated seed



■ Pelleted seed

Our starting material is **certified standard seed grain**. This is treated using standard mechanical procedures, i.e. cleaning and calibration (grading into size categories). Generally speaking, nice big seeds with the characteristic shape offer better quality than small, poorly developed seeds. If we buy ungraded seed, we calibrate it here at SEDOS. By removing small, less-developed seeds, we ensure that we only use the highest-quality standard seed.

Coated seed is treated with a process called encrustation or coating, which involves applying a thin protective layer to the surface of the seed. The layer does not alter the shape of the seed and usually contains substances for protection against disease and pests which threaten germinating seeds and young seedlings. A colour pigment is also often added to the coating substance, thereby ensuring that the seed is clearly visible in the soil and allowing easy monitoring of planting quality. This seed variety is cost-effective because the seed's value is greatly increased at little expense.

Pelleted seed takes on a regular, spherical or oval shape following pelleting. The creation of a regular shape and equal-size seed are vital factors for ensuring reliable and fault-free operation of the precision-sowing seeders, which ensure the right spacing of the seed during planting. Crops planted by this means are not congested following emergence and the process also saves seed. The actual pellet coating can incorporate substances for protection against disease (fungicides) and against pests (insecticides) or other substances, e.g. germination stimulators and substances promoting improved rooting. Pelleted seed by itself though is of little use to small-scale farmers, growers and gardeners, because there is no way to take advantage of the effect of pelleted seed and plant it at the right spacing without very expensive sowing equipment. That is where SEDOS comes in though, with our top-quality seed solution - seed tape.



Seed tape



Seed tape



Seed tape, made from water-soluble film, is a state-of-the-art vegetable seed grain system designed for growers and farmers. Pelleted or standard seed grain, with high biological value, is positioned at regular intervals, ensuring adequate space for each plant, on a water-soluble tape of film, 8 mm wide. Water-soluble film is an ideal seed carrier. It is biodegradable in soil, non-toxic, and is harmless to human health and environmentally benign.

Seed tape allows simple, fast and very effective planting, whilst maintaining the correct sowing depth. This ensures optimum post-emergence crop structure and consequently the crop does not need to be thinned.

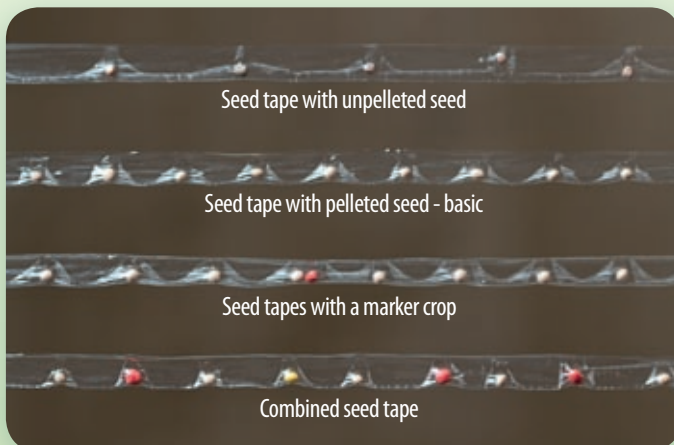
Seed tape is very easy to work with, whether laying it in the soil manually or using one of our special planting devices.

The seed tape can be 3, 5 or 10 m long and is wound onto a piece of firm card. This is wrapped in transparent film with identification information and comes in a coloured box with a description and instructions for use.

Seed tape is not only designed for gardeners. The SEVPA Profi seed tape device and the 1,000-metre seed tape reel can be used effectively in production greenhouses and on plots of land measuring up to 1 hectare (2.5 acres).



Basic types of seed tapes:



Seed tape with unpelleted seed

Seed tape with pelleted seed - basic

Seed tapes with a marker crop

Combined seed tape



Seed tape

SEDOS produces two primary types of seed tape:

seed tape for unpelleted seed, for very high-quality, unpelleted, predominantly hybrid vegetable seed. This category includes seed tape with different varieties of radish, early and late-season hybrid carrots, pre-germinated root parsley, spring onions and spinach,



and **seed tape for pelleted seed** - for calibrated, pelleted seed.



With the **basic range** of seed tape, the seed tape carries one seed variety. We aim to offer all commonly cultivated varieties of small-seed vegetable in this category (onions, beetroot, carrots, root parsley, leaf parsley, leeks, lettuce and cucumber).



Seed tapes with a marker crop can be very useful. A marker crop (radishes) can be added to the main crop, which is usually slowly to emerge (carrots or parsley). The marker crop germinates quickly, marking the rows, and allows early cultivation of the areas in between the rows, before the main crop has emerged. This category can include varieties of early and late carrots, parsley and poppies with a marker crop. Radishes, used to mark the rows, can be allowed to grow until they are ready for consumption and then harvested. They should be harvested when ready for consumption and not left in the crop.





With the **combined seed tape** a wide-ranging combination of plants can be planted at the same time, for harvesting at different times (carrots + radishes, carrots + onions, parsley + onions, green leaf lettuces + red leaf lettuces, carrots + radishes + lettuces, basil + lemon balm + marjoram, etc.). Combined seed tapes can be prepared according to the customer's requirements.



Seed in blister packs

Customers are very keen on seed supplied in blister packs, because they can see the seed they are buying in the transparent window. The product identification details, a description of the variety and growing instructions can be found on the back.

We also supply **Dutch seed** in blister packs. Dutch seed is not pelleted but offers outstanding quality and the available varieties offered are tried and trusted and suitable for growing in the Slovak Republic.

SEDOS supplies **pelleted vegetable seed** in blister packs. Because of their regular shape and size, they are much easier to plant than unpelleted seed and can also be planted using various types of Hobby seed planters.

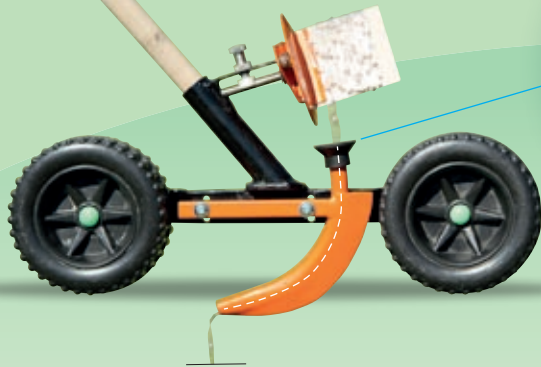


Planters



Seed tape planters

SEVYPA I - One-line planter designed for planting small packages seeding strips.



SEVYPA profi - One-line planter designed for planting large strip packing sowing up to 1500 m.



Thanks to our simple but effective seed tape planters, there is no need for gardeners and growers to fork out for expensive and complex precision planters. Our seed tape planters ensure precise and straight seed-distribution at the ideal planting depth and offer a new approach for laying seed on the seed bed. The coulter unit lays the seed tape along the bottom of the furrow, making it impossible for the top layer of dried-out soil to sprinkle down onto the seed bed. This means that the seed is planted in an environment offering the best possible moisture conditions, aiding emergence. The planter also comprises a compression wheel which completes incorporation of the seed tape into the soil. Working with the seeder is simple, precise and fast. No complicated settings are required for seed spacing in the row, because the seed is already correctly spaced for the relevant crop on the water-soluble tape.

Two new, improved seeders have now been launched: the **SEVYPA Hobby**, for sowing 3, 5, 10, 20, and 30-metre tapes; the **SEVYPA Profi**, for sowing 1000-metre seed tape coils on a drum. The seeder maintenance requirements are minimal (clean off soil after planting). Using SEVYPA seeders and seed tapes will ensure that your planting is high-quality and will simplify your work in the garden.



Granular fertilisers



SEDOSCOTE pelleted granular fertilisers

These fertilisers are composed of a granule core, comprising a concentrated straight or compound fertiliser, and a hydrophobic pellet coating, made from elemental sulphur, a polymer and wax. This pellet coating prevents the nutrients from leaching too easily into the soil solution and dissipating before the plants can use them. It is soil temperature rather than water that determines when the nutrients are released from the coated granule. SEDOS's fertiliser releases more nutrients as the temperature increases. This helps plants which tend to generally receive more light and grow more intensively as the temperature increases. Although this type of fertiliser may seem rather expensive at first sight, it actually works out to be very cost-effective. Using it will help to reduce the number of applications, ensure that plants receive a more even nutrient supply and increase nutrient efficiency.

We supply two primary varieties of pelleted granular fertilisers: **SedoScote for Flowers** and **Sedoscote for Lawns**. When growing flowers in various containers, all you have to do is mix the recommended dose of fertiliser in with the soil when planting and no extra fertilisation is required throughout the growing season (5-6 months). Slow-release pelleted fertiliser for lawns is attracting particular interest. Lawns produce large quantities of plant material and therefore require considerable amounts of nutrients, and nitrogen in particular. Nitrogen is the most mobile element in the soil; it quickly leaches away and stocks cannot be built up by fertilisation. Frequent fertilisation is therefore required when using standard fertilisers, but even then the lawn may not look as good as you would have liked. Slow-release pelleted fertiliser for



lawns can help resolve a multitude of nutrition-related problems. It only needs to be applied three times during the growing season: in the early spring, the summer and the autumn. The nutrient content in each dose is adapted to the needs of the lawn. Because it contains essential micro-nutrients in addition to the basic nutrients, your lawn will be deep-green, lush and well-nourished. The fertiliser is finely-granulated, meaning that the granules fall through the blades of grass easily and will not get collected during mowing. Uniform application is important and this can be achieved through the use of high-quality spreaders.



Liquid fertilisers



Liquid fertilisers



SEDO SPRAY - Lawn liquid fertilisers

are highly concentrated compound solution fertilisers with balanced levels of all the primary, secondary, and trace elements, ensuring full nutrition of your lawn during the growing season. They do not contain ballast substances causing salinisation of the soil. Unlike the vast majority of similar fertilisers, they are also a source of fast-acting magnesium and provide the required phosphoric component levels, ensuring the lush green colour of your lawn. They promote grass tillering, increase grass resistance to stress factors (lack of moisture, high air temperature) and increase turf density through improving the regenerative capacity of grass to trampling and mechanical damage. They also boost turf vitality and its ability to compete against invading weeds and mosses and increase resistance to fungal diseases. We supply two different types of this fertiliser: **Spring/Summer formula** and **Autumn formula**.



Our Sedospray fertilisers come in a plastic container with an applicator allowing direct connection to the irrigation hose via a quick-connector, meaning that lawns can be watered and fertilised at the same time. One container (0.95 litres) provides enough fertiliser for 300 - 500 m² of lawn and application takes approximately 10 - 15 minutes. The applicator and container can be re-used after filling up using the Sedospray refill.

SEDO SPRAY NPKmikro

is a multi-purpose, complex liquid fertiliser, containing primary and trace elements, a growth promoter and vitamin B1. It is primarily intended for supplementary foliar fertilisation in flowers, vegetables and fruit trees. It comes in a plastic container with an applicator, which can be attached to the irrigation hose via a quick-connector.

Other liquid fertilisers

These are designed for farmers and growers and come in 1,000 litre PE tanks or 20 litre canisters. BorSedos and NPKmikroSedos are also available in 0.5 litre and 1 litre small packages.

BorSedos 150, which contains **11% w/v B (150 g/litre)** is a boron solution concentrate, designed to provide nutrition to a wide range of plants.



MGSEDOS 14-0-0+5S+6.4MgO is a fast-acting nitrogen, magnesium and sulphur solution concentrate, primarily designed for foliar application for forced vegetables, small fruit and fruit trees and also for sugar beet, oilseed rape and cereals.

PKSedos (0-19.5-22.6) is a liquid, chloride-free, PK fertiliser.

It is ideal for all kinds of vegetables, ornamentals, fruit trees, vines, small fruit and field scale crops and helps to improve yield quality.

ThioSedos NS-500 (16-0-0 +23 S) is a liquid sulphurous-nitrogen concentrate, designed for foliar application, which in particular improves the quality of products cultivated.

NPKmikro SEDOS (12-10-12) is a multi-purpose, complex foliar fertiliser. It is mainly used as a spray or a fertiliser dressing. It can also be added to plant protection sprays, which significantly reduces post-application shock. It is ideal for use in vegetable production, horticulture, viticulture, hop-growing and ornamental horticulture.

SedosKalcium-160, containing **12% w/v CaO (167 g/litre)**, is a calcium concentrate designed to compensate for calcium and magnesium deficiency in plants and to improve the quality and yield of arable crops.

ZinkSedos is a liquid complex compound zinc concentrate, containing min. 5.0% w/v zinc (as Zn) in citrate form (**77 g Zn per litre**). Zinc is a component of vital enzymes in plants and activates many other enzymes. This consequently boosts the intensity of photosynthesis, increases the leaf area and ensures more intensive uptake of primary nutrients, which has a positive effect on yield size and quality.



Additional range



Additional range

We have consolidated our own range with products from other manufacturers, which either supplement our range well or simplify the work involved.

LIGNOCEL

LIGNOCEL is a natural, organic, compacted substrate (coconut bark chips) for cultivation of indoor, balcony and garden plants. The fibrous structure of the substrate helps to retain water and nutrients and maintains aeration. The structure and composition of this substrate create favourable conditions, ideal for microbial life. Lignocel can also be used as mulch or as a compost supplement. Lignocel has a neutral pH of 5.4 - 6.8, is environmentally benign and free from pathogenic organisms. Preparation of the substrate is very simple. One Lignocel brick soaked in 5 litres of water will expand to give 8-9 litres of substrate.



Fertiliser spreader

This is an extremely useful tool for uniform, manual spreading of granular fertilisers.



Multi-purpose tester

This provides a rough idea of soil pH, moisture and light conditions at the site.



Lignohumates

Lignohumates consist of a series of products in liquid and powder form, containing a mixture of humic and fulvic acids and their salts. They have a beneficial complex impact on plants, fostering development of the root system, improving the absorption and use of organic and industrial fertilisers, improving plant resistance to stress factors, promoting overall plant health and accelerating the regeneration of damaged crops, thereby increasing yield and improving the quality of the products harvested.

SEDOSKA

This is a very handy, useful tool for manual planting of seed tapes and small seeds. It is a tapered board, which can be used to create an ideal seed bed with a firm base and side walls which do not crumble in. It can also be used to rake over and compress the row once it has been planted. Information about recommended row spacings can be found on the side of the board.



Non-woven textiles

White non-woven textile is used to cover areas planted and seedlings. It increases soil temperature, prevents excessive evaporation from the soil, accelerates germination, emergence and maturation and protects plants against pests. Black non-woven textile is used as mulch, to prevent weed growth, increase soil temperature and reduce evaporation. Both are pervious to rainwater and irrigation water.



Customer services

Custom seed treatments, prepared to order:

- Coating - to prevent development of disease and pests in the earliest stages of plant growth and development
- Pelleting - for use with precision seeders
- Seed tapes - for the ideal crop layout

Hiring seed tape seeders. Gardeners and small to medium-scale farmers and vegetable growers can hire SEVYPA Hobby and SEVYPA Profi single-row seed tape seeders from us at SEDOS.

Shipment of goods to your outlets with short lead times.

Handling orders through the SEDOS e-shop.

Running the company outlet with a full range and major discounts, based at Krakovany 190.







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