



Funded by  
the European Union

**Gulôčka**  
občianske združenie



**2021-1-SK01-KA210-ADU-000029390 - Inclusion Cooperation Center Harmónia - Centrum  
spolupráce s inklúziou Harmónia**

“Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them”.



**Garden - Green studio**  
**Let's grow food together**



**Funded by  
the European Union**

**“Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them”.**

## **Let's grow food together**

Securing basic food sources is a topic that we have been focusing on in various areas recently.

It is very important for us to know how or who grew the vegetables, fruits, or even the eggs and meat we buy. In stores, a large group of shoppers began to focus on where food comes from. It is closely related to the environmental approach – the ecological footprint, or the distances our food has traveled to reach our table.

In this context, we can also talk about LOCALITY.

Do we know what we are eating? Where does food come from? How was it grown, prepared, processed?

And the best thing is when we can grow the individual species ourselves. In order for this work to be a joy for us, a small guide, a quick course, or a tool that you are holding in your hands will help us in this.

Not all the necessary information can be here. Growing plants hides many rules and professional laws.

We will try to select the most essential parts, according to which you will be able to take care of your beds and other places for cultivation in such a way that they will bring you benefit.

They are also types of how to do something more easily, or at least try it and then use it again with a better result.

Benefit, use, use are the important concepts that we should keep in mind in order to take care of any plot of land, or even a balcony or common space.

Harvesting is a very pleasant activity and leads us to joint activities while eating or processing the harvest. Food has always brought people together and brought them mutual exchange of opinions and experiences. It has disappeared a little from our habits and it will be nice to bring it back into our lives and especially into the lives of our children.

Therefore, we would like to wish you the best of luck at the end of these introductory lines

Bon appetite!



### **How to do it?**

All those who have not been involved in growing plants, gardening and farming in detail, or professionally, may feel that it is about sowing seeds or planting transplants and then it just grows.

Unfortunately, that is not the case. Everything has its own rules and procedures, so it is very appropriate that we follow them, so that our result will be as good as possible.

In this material, we will describe the important rules, but also the principles of management, which are essentially the oldest procedure, a way close to nature, which is the best for cultivated crops. And if it is suitable and excellent for plants, then of course the harvest will be the best for humans - clean, natural.

This practice and principles are called Permaculture and its principles and practices.

Based on these principles, it is important that we start observing and planning our possible space, at least in the short term.

This is especially important so that we don't experience the disappointment of failure, which can discourage us very quickly.

Our appetite and joy to learn new things and the effort to obtain plants and food by our own work often repay us with an interesting harvest.

### **What does it mean to observe?**

We need to check what our available space is.

When does the sun shine on him? When and how long is the shadow there? Even if there is a shadow, is there still diffused light?

When it rains, nothing prevents the plants from receiving the moisture? / doesn't the tree, the bushes cover them? / Or do we just have to water the plants?

Is it windy here? Is it impactful? Can we place a windbreak? Can we protect the plants so that the wind does not break them?

Do we have the possibility to grow even when it is freezing outside or low temperatures? Is there a foil plant, a greenhouse, a window sill?

### What does it mean to plan?

Any job requires planning. All the more so when we work with living material, which our plants are.

As a guide, we can use a table whose first letters describe the areas we need to be interested in:

A – animals

P – plants

E – events

S – structures

### **A - animals**

If it seems that we are not planning to keep any animals in the garden, then the content of this part of the planning is that all animal species belong to the group of "animals".

For example: butterflies, bees, lizards, moles, which ..... although we can also think about chickens, ducks, sheep.....

This means that our garden can be a place for pollinators - we will need them for our fruit vegetables, or even small fruits, or trees.

Other animal species are "helpers" in reducing the number of pests, they improve the structure of the soil, so we don't even have to register them, but their work for our benefit is important and we can use it.

We can also use the breeding of poultry or other useful animals in several ways, when we have the right information and prepare their breeding according to rules close to nature.

If you are interested in taking a closer look at the individual principles of permaculture, there are many internet links, courses, trainings and literature available for this.

It is now important for us to strive to use the "work" of animals - their natural activities - for our benefit.

Let me give you an example: the natural activity of chickens is to dig. With it, they look for animals that are found in the soil, garden beds, farmyard manure, compost. They can be pests for our plants - the mole and its eggs and larvae, the potato armyworm, ant colonies.

Reducing their number will make it easier for us to grow, because the plants will not be destroyed.

In addition, they mix the individual layers in the raked materials and thus more air enters the soil, which is necessary for the life of soil microorganisms and thus improves the quality of the soil.

At the same time, they exercise their natural activity, because it is a scavenging bird and it is their food - rather a food supplement.

Thus we could enumerate and describe all the species that we mentioned at the beginning. But that is not our task now, because for those who are interested in it, they can find information through keywords on the Internet or in courses.



Chickens



An insect hotel for pollinators

## **P – plants**

What kinds of plants do we want to grow?

What do we like best in our family?

Shall we try something else? Maybe just one year and then we'll see?

Do we know which plants are annual and which do not need to be sown or planted again?

Do we have suitable conditions for their cultivation? Do we know what the conditions are?

We need to ask ourselves these and many other questions in order to get an idea of what is important for our family, what we already know and what we still need to learn.

Obtaining information should not be left only to parents, we can also involve children in the search for information. They are often more skilled in working with computers, on the Internet and in searching for information, and at the same time we involve them in the joint activity of preparing and obtaining food for all of us.

They will certainly be much more pleased with their subsequent successes in cultivation, and it is possible that it will also motivate them to study, which they would not have thought about until now.

## **E – events**

Under the term event, we imagine activities that we like as a family, community, or even ourselves and individually. We like to carry them out, or we would like to carry them out, but we don't have the right conditions for it yet. Maybe we only had them in our plans and it is our dream to start making them happen.

Filling in the ZRUŠ table is actually like dreaming connected to reality, or vice versa - reality connected to dreaming.

We all want to achieve something, but it's amazing when our dreams connect to create a new level of activity that will be interesting and beneficial to our community.

When writing, we don't have to have a problem with the fact that some idea or dream is unrealizable. He may be unrealizable now, at this moment, under current conditions, but things change, we change them, so everything is just a matter of time and our activity to make our dreams come true.

As an example of an event, I will give:

- sitting in a cool place for pleasant conversations
- a place for children's creative play in the shade
- a place for sports activities for children and adults
- shared coffee, snacks
- work on the land
- provision of compost for cultivation
- irrigation and water for watering plants
- possibility to moisturize, bathe





## **S - structures**

Structures are very closely related to Events, which we described in the previous section. In order for the event planned by us to be realized, we have to prepare suitable material, technical and often human conditions for it.

So, in order not to talk about unrelated topics, let's choose at least some structures that are necessary for the implementation of the Events that we can plan.

### Sitting in the cool for pleasant conversations:

We need to think about a place on our property where at a certain time of the day we have a cool place created by a building, a tree. Here we can place a portable or permanently located table, benches. Or we have to create such a place with shade in the form of a pergola, parasol, or gazebo. Each part has different rules, technical and also financial conditions and we can choose. In this context, it is also advisable to think about financial possibilities and the ratio of durability and purchase price, because many single-use things, even if they are cheap, may not fulfill what we need.

In this context, we can also look around in the immediate vicinity to see if the shade of a tree in a nearby open space will not serve us well for a certain period of time, where it can serve several people if we also prepare it. We just have to find out if we can perhaps place the benches and the table in the place of our choice.

### A place for children's creative play in the shade:

It has very similar requirements as in the previous text. It is advisable to have a table, or maybe even just a mat on the floor, so that children can create and at the same time they can creatively complete the space themselves. The shade is a very important element, because in the case of sunny days, unpleasant health problems from overheating can occur.



### A place for sports activities for children and adults

It can be located in a sunny area, but it is important to think about the size of the space and the surface on which we will move. Also, whether we are talking about exercise activities in the spring, summer, autumn, or year-round.

### Shared coffee, snacks

It is also connected with a suitable table, benches. Facilities with water for washing dishes, drinking. Solving waste.

We can also think about ecological principles that we will not use plastic dishes, but compostable materials and dishes made of suitable reusable materials, unbreakable to be safe.

When eating, it is also necessary to think about possible flying insects in order to avoid food damage or insect bites.

### Work on the land

Each work is associated with the use of tools, which should be placed in one place, preferably with the possibility of sorting.

Keeping the tools in good technical condition will allow us to work even in different groups, when everyone knows how to take care of the tools. Therefore, it is advisable to use a hanging system on pallets or a small shelter.

### Provision of compost for planting

Compost is an important component of any garden. Also in the form of teaching, information and efforts to change thinking.

Every household produces leftovers from cleaning vegetables, coffee grounds, tea bags... / of course not leftovers from cooked food, meat scraps/, which we can use to create compost. In cities, these residues are called kitchen waste and their collection is done centrally. However, we do not have the resulting compost available, so it is better to know how to prepare it properly.

It is also a process that we need to learn and do correctly.

Compost is not a pile of rotting, smelly compressed material, but on the contrary, a pleasant-smelling material suitable for plant growth. At the same time, we know what is in it, and we can put together the individual types of nutrients from the added material.

/ eggshells – calcium, coffee grounds – minerals, tea – depending on whether they are herbs, but also Chinese, green are plants and their leaves /

The place and container for composting has rules that we need to adopt.

### Irrigation and water for watering plants

Water has recently become a great rarity. It is necessary to manage it properly. We also need to learn this and think about the procedure, materials and containers we will need for it.

We try to use as many physical laws as possible - gravity, elevation, slope and shape of the land. Whether we have the opportunity to use electricity or not. Accordingly, we can place the containers in the ground or on the highest or elevated place on the property.

We also have to think about the fact that our water will freeze in the winter, so that we don't ruin the technical parts, or that the barrel doesn't burst.

### Possibility to wet yourself, take a bath

The technical solution of creating a pond or a place for swimming is already a more complex and financially demanding matter.

But we can consider a garden shower connected to a longer hose, in which the water will be heated. It can also be a tank or a bag in which we have water in the sun and it will naturally heat up to the desired temperature. However, it is necessary to check that the temperature is not too high to avoid scalding.

An old bathtub that we found in the collection of raw materials or in the collection yard can also serve as a place for moistening.

After wetting, we can use the water to water the plants.

For watering, it is very appropriate that we think as much as possible about drip irrigation, which is placed near specific plants and there is no unnecessary waste of water.

Feel like these parts are unrelated to growing FOOD? The opposite is true. If we create a pleasant environment, then working on the land will be a pleasant bonus that will make us happy.



## Less is more

### At the beginning, let's set reasonable goals

Whatever work we are going to do, we need to proceed gradually and with balance.

It is better to set smaller goals at the beginning and not experience disappointment that would discourage us.

When growing plants, this applies several times over, because it is a living organism and has its own laws, requirements and rules that we must follow when growing them.

**BUT** - the result of growing the first harvest is the joy of excellent taste and our skill, which we achieved in **creating our food**.

Therefore, it is advisable to start with species that are not difficult to grow and whose harvest will please us in smaller and larger quantities.

In order for this to be the case, we will now guide you through the individual types of plants and the period that must be observed in order for our success to be as great as possible.

We usually start growing in the spring. So we will focus on this period and gradually move on to the next ones during the growing year.

In our conditions, we have only a few plants that we can collect in the green state in the garden even during the winter. We will also talk about them, how we can work towards them, so that they make us happy even in this period and thus enliven our table with food.



## Spring

Meteorologically, it is the period from March to June. But we can talk about spring vegetatively when the snow melts and we can sow the first seeds in the soil or plant bulbs.

In each part of Slovakia, it is in a different period, but we can help each other with technical conveniences - tools such as a steam room, a foil plant, a greenhouse. Or it will only be a film attached to the border, which will protect our plants from frost.

It is important that we choose species that tolerate the cold well in this still cold weather. To sow them, we chose a time when the soil was thawed to sow them and then cover them with additional protection.

The steam room has the property that, when set up correctly, it heats the roots of our plants from below and thus also overheats the soil in which our plants grow.

We will deal with the construction of the steam room in detail in other materials.

We can work even without it, if we wait for natural conditions without all-day frosts.

Species that are suitable for early spring:

- radishes
- salads
- onion from a larger plant / the diameter of a walnut and larger /
- peas

We do not pre-grow these species for transplants, but **sow them directly and plant them** on beds, in raised beds, in greenhouses. Peas only on beds and flower beds. The steam room has a low space for plant growth, so our peas would be crooked.

By placing these vegetables early on the beds and growing them, we will "outrun" the first pests, especially the leafhoppers, which can destroy our radish crop in the warmer season.

We try to harvest these plants gradually. We don't have to wait until the radish balls are bigger, we can eat them whole from the start, even with the leaves. In terms of taste, they are suitable for use in salads and on bread with butter, and at the same time, we will make room for other plants to form larger bolls much earlier.

If it happens that the weather is warm and the plants do not form bulbs even after 3-5 weeks, then we prefer to consume them in their green state. It may happen that the plant does not have suitable conditions for the formation of thickening. It would be a shame not to use these plants for your own benefit, because later they can flower and form seeds and their consumption will not be suitable.

But if we have a plant left on the bed that has formed a flower stalk and does not interfere with us, we let it form pods with seeds. We only need one or two plants, because there are a lot of pods and if they are young and green, they are very tasty and suitable for salads, as well as for direct consumption from the plant.



## Salad

We can collect continuously, mainly leafy species. In the case of species that form a head, we can plant individual plants in another space so that they have enough space to form a head. We can also achieve this by eating some plants in a row and thus creating space for the head.

When we observe the plants for a year and compare the information we write about here, the laws and biological characteristics will become clear to you, so that it will not be a problem to use them in cultivation.



Planting of transplants



Lettuce on a bed

## Onion

It is an interesting plant for beginners. We can plant it at home in a pot on the window, on the balcony, but also on the plot of land on a bed in the soil. The size of the seedlings can also be different and depends on their use and our consumption of the harvested crop.

We will create such a tool and sequence of planting and use:

- year-round for harvesting onion leaves - we plant onions for consumption of different sizes in a pot in a place with enough light, not in direct sunlight. The temperature is not important, it is suitable when the place is frost-free. We harvest gradually as the leaves grow.

- In early spring - onion the size of a walnut - in a pot, or even on a bed. Plants need enough light for growth, we can ensure a frost-free temperature by covering them with a white non-woven fabric. We harvest the onion leaves gradually by cutting them, or at a height of 15 cm or more, we take out the whole onion and use it as a young spring onion. Often two to three plants form from 1 bulb.

- In the spring - at a soil temperature of about 10° Celsius - March, April, we plant a seedling of the size of a hazelnut, diameter 0.5 cm - 1 cm, which we buy in farm supplies. We plant them in rows about 15-20 cm apart and about 7-10 cm from the seedling. From this onion, we will be able to grow onions for consumption and for storage. We will collect it in the summer, when its leaves dry. Then we dry it and can store it. It is not suitable for harvesting



as a green onion because it does not have the potential in the early season to grow faster, but concentrates on the formation of bulbs in the ground. We water it as little as possible during the year so that it ripens well and is durable for storage.

- Onion seed - we can buy it in gardening stores or grow it ourselves. It serves us to grow a seedling or a small onion, which we can preserve in a sweet and sour pickle. Its cultivation is more demanding because it requires very shallow sowing and a plot without weeds. The effect of the harvest is not as interesting as when planting a seedling. Its cultivation could unnecessarily discourage us.

Onion leaves - sometimes called cibiky or "feathers" we will use raw for bread with butter. They serve us very well to season potatoes and pasta when we fry them in butter. Raw and chopped, we can add them to vegetable salads, or we can simply crunch them. They contain many vitamins, aromatic substances and fiber, which our body needs.

Especially in the winter and early spring months, when we can also buy such an onion in a store, but it must have traveled hundreds of kilometers. Therefore, its duration is also very short. When we bring it home from the store, it dries up and withers very quickly. In contrast to ours, when we pick only as much as we need right now and eat it right away when it's fresh. The same applies to a young onion, which we take whole from the ground and can use it cleaned in the same way as onion leaves.



Spring onion



Onion for winter storage

## **Peas**

It is a very suitable plant for growing even with children.

We place the seeds in the soil approx. 3 cm deep. For faster germination, it is advisable to pour more water into the hole where we will sow and cover the seeds with dry soil. Due to the wetness of the water, the seeds will be soaked in water and will germinate faster. We can achieve the same thing by moistening the seeds for a few hours before sowing - for example in a glass of water or on a wet paper towel. It is necessary to ensure that the seeds

do not burst completely and that we do not then damage the radicle during sowing. If we damage it, the plant will no longer grow.

The distance between the plants in the row does not have to be followed exactly, dense sowing is more suitable, because then the plants support each other during growth. We make the dressing in the pot only from the bottom to the saucer. We also try to ensure that we water as little as possible on the plot, so that no waterlogging occurs on the soil. Then the plants do not behave well. Since we sow peas in early spring, there is enough winter moisture in the soil, so we support its movement in the soil to the seeds by pressing the surface with our hands, or with a roller, or a board, so that the water flows well to the seeds.

When the plants grow to a height of approx. 15 cm, we will evaluate whether we will prepare a support for the plants so that they do not lean. Diseases could then appear on the plants and damage the leaf area that the plant needs for growth and photosynthesis.

Peas bloom gradually and will also ripen gradually. So, the first pods will form on the first flowers and they will also be the first suitable for consumption. But we don't have to consume only the seeds from the pods, the young pods are very tasty and we can eat them whole.

In addition, when we consume the seeds from the pods when they are ready for consumption, we can cut the pods into vegetable soup, or at least boil them whole in the soup. They add a very pleasant vegetable sweet taste to the food. Pea pods are also eaten in other cultures.

This information is about green peas, which we consume in the so-called milk maturity. It is sweet, suitable for eating directly or for freezing for later use. To freeze peas for storage, we must blanch the seeds removed from the pod in hot water, let them dry and cool, and only then put them in the freezer in a suitable container or bag.

We only get dry peas from thoroughly ripened pods on the roots of the plants, where the pods have dried out and we peel the peas, dry them in an airy place and store them in a suitable container to prevent pests from getting there. The pea weevil could lay eggs in the pod even before harvesting, so we put well-dried peas in the freezer for a few hours, then dry them again and put them in well-closed glass jars. My type: I sprinkle black ground pepper over the legumes, to make sure the pests don't like it.

And so just a pleasant work in growing it and a good appetite for eating it.





decomposed in the soil and are in a form in which the plant takes in as much as it needs and does not overfertilize.

For young families with children, but also for the rest of us, it is important that we have clean vegetables, without chemicals and industrial additives, so let's always choose an alternative that is suitable for the plants, the soil, the environment and especially for us and our loved ones. The price of this fertilizer is also reasonable, because we need a small amount of it. And in addition, there is an option to create it yourself from kitchen and garden waste.

Beets, carrots and parsley are root vegetables that do not require any additional fertilization. On the contrary, they do very well in the poorest possible soil. As long as the soil is still sandy, it is the best for this vegetable.

If we don't have a plot of land and we prepare the soil for containers and pots, we can prepare the kind of soil that each vegetable needs. In these containers, we do not need to follow the sowing procedure, because we empty the soil and mix a new one, such as our type of vegetable needs.

Carrots and parsley have tiny seeds, so we sow them very shallowly and cover them with a thin layer of soil / 2-4 mm / and press down the surface. Better germination can also be supported by soaking the seed for a few hours in water or on damp paper. Such seeds are then gently placed in rows.

Beetroot has seed in the shape of a ball, so there are more seeds, so we leave the distance between the balls about 3-5 cm. Or then we tear off the sprouted plants so that they can grow large enough. We can use the plants that we pull out in this way in salads or eat them directly from the bed. The same applies to carrot and parsley plants.

Does it seem strange to you that we will eat plants that are not yet big enough, as we buy them in the store?

This is completely normal for your own vegetables. We don't have to wait until it grows, but we also don't have to throw it away / or in the compost / because it is very tasty, contains a large amount of vitamins, beneficial substances and especially fiber, which our body needs very much. It is these plants that are suitable for use in smoothies / healthy drinks of various kinds/, where even children will not notice their appearance and composition, and they are very tasty when added to an apple, banana or orange. Let's also try not to combine too many flavors unnecessarily, so as not to combine it. One fruit is enough to complement the vegetables.

What about the "weeds" in the garden? I've put it in quotes because we're more likely to talk about complementary plants in the garden - it's absolutely amazing in drinks and salads. We will eat it and it will not interfere with our cultivated plants.

Many of the weed species have been bred and their varieties are commonly grown as vegetables for salads / loboda, sedges / or they are flowers / field violet, lovage, purslane, dandelion, daisy/. That is why it is advisable to go through our land thoroughly, see where it grows and whether we can eat it. Especially in spring, plants are the first green source that enriches our diet with important nutrients that we need after winter. And unfortunately, if such vegetables have traveled thousands of kilometers to us and spent a lot of time in warehouses, then the amount of nutrients has been lost. We are also not sure where and how they were grown.

That's why our garden, the meadow behind the house, next to the forest is definitely a more suitable place to collect spring treasures than a shop with products from far away abroad.

## **Spinach**

It is a type of leafy vegetable that is used as a source of iron, but also calcium, chlorophyll and fiber.

It requires planting earlier in the spring, because on warm days it blooms / forms a stem with inflorescences/ and is no longer tasty.

We can cut it several times and the leaves will grow again. We can repeat its cultivation in autumn, when the weather is very similar to spring.

We can sow in rows, but also widely - that is, we throw the seeds on the surface and gently cover them with soil and press them down. Widespread sowing is especially suitable in containers on the balcony. Then we do not place such a container in direct sunlight, because this will create a higher temperature, also due to the influence of the container, and our spinach will begin to flower faster.

Spinach has no special requirements for "neighbors". It thrives near and after all crops. But if we don't have to, we don't sow it next to the parsley, or on the bed where the parsley was last year.

We can use the leaves raw, or gently heat them with hot water or oil. Once it has cooled down, we can put it in the freezer and use it for cooking at any time.

In this way, we can have various tools ready in the freezer that will make cooking easier for us in the period when we no longer have the given crop in the garden. This is how our mothers and grandmothers tried to put off what they had grown for a time when we no longer had it and often saved a lot of money and especially **time**. This is also a great value that we must appreciate and rather devote it to our loved ones and to ourselves in order to make our life more beautiful.

## Potatoes

They are the basis of our diet. Our ancestors already tried to provide the family with enough potatoes, cabbage - mainly fermented, onions and garlic, and then it was possible to cook and have a sufficiently balanced diet throughout the year and in winter.

Once again, we try to return to this idea and ensure our own cultivation of individual types of vegetables.

Potatoes are a crop that tolerates manure fertilization very well. There is a lack of that, but we can replace it with high-quality compost, granulated farmyard manure that we can buy, or vermicompost in the form of Gazdovský substrate. This one is created by Californian earthworms, which process biological material faster into compost, and is produced in Slovakia.

Potatoes are planted in the soil in rows of tubers, which we obtain from the grower, or as seedlings in the farmer's needs. We never use store-bought potatoes. Such tubers are almost always treated with anti-germination preparations, so they will not germinate in our soil. If we have sprouted potatoes at home, we can also use them for planting. It is a sign that they will grow.

With potatoes from supermarkets, there is also the possibility that the tubers are attacked by various diseases and pests that we can transfer to our garden. It is especially dangerous with potatoes from abroad. / the potato is brown when cut/.

Our ancestors, if they had little seed, also used the method of cutting potatoes, and planted only individual parts. It is especially suitable for already sprouted potatoes - that is, the potato has sprouts in the eyes on the tuber. But we must be careful not to break these sprouts when planting, because sometimes the plant will produce other sprouts late or not at all. Sprouted potatoes are suitable with sprouts of about 1 cm and so that the sprout is thick.

Put the potatoes prepared in this way into the ground and mound the soil on top of the potato at a height of 30 cm. Young potatoes are formed on underground stems that will form in this mounded space, not in depth. But the sequence is such that the plant first sends out a stem that grows straight up, there are leaves on it, and other underground parts are created through photosynthesis. So potato plants must have a large enough corm to produce enough potatoes in the ground.

If it happens that frosts come after the emergence of the potatoes and the turnip turns black, we don't have to worry, the potatoes will grow again and send out a new turnip. We don't have to destroy the growth, we just need to wait.

It is advisable to cover the potatoes at least 1 more time during the growing season. We will increase the space where young potatoes can form, fertilize the soil, or destroy the weeds

that are there. But we don't have to do special weed control. In the thicket, the weeds maintain moisture, provide shade for the plants, so the soil does not overheat and the potato plants can develop properly. We can mechanically pull out only perennial plants - thistle, thistle, which either sow seeds or wrap around the plant and prevent its growth. We perform all mechanical operations in the potato plant so as not to damage the potato plants - not to pull them out. So only in the middle rows. The width of the rows from each other is always chosen according to what tools we will use. It is suitable to row about 50 cm apart and potato to potato about 25 cm in the row. If we use a feller, we adapt to its dimensions.

Potatoes respond well to irrigation.

**BUT.** We never water on a leaf. We will use irrigation only in the first part of plant growth - when the tubers are formed. The quality of the tubers decreases with watering - they will be less durable, so we water as little as possible for winter storage. It is suitable to use a watering with a sub-wet - pour water into the rows and let it soak. We prefer to do it 1x and thoroughly, because then it is advisable to loosen the soil so that we don't have any residue left on the soil. We therefore follow the long-term weather forecast and prefer to wait for natural rain. The most suitable water for watering is rainwater, so let's consider if we caught it from the last rain from the roofs and have it in a barrel.

Potatoes can also be grown in hay or in containers. The principle is the same as when growing in soil. We only layer another material in height. Mice can take care of our "early harvest" in hay, but this is not the rule in every environment. In containers, bags, sacks, we must take care to ensure the drainage of excess water at the bottom, a drainage layer, enough nutrients in the substrate and not to overheat the soil and the plants, because the entire space is not protected as in the soil.

Early varieties are harvested in a shorter period after planting, therefore they are more suitable for more northern areas. But in the southern regions we have the first potatoes very early. When planting in March, we can already collect the first young potatoes at the end of June. Again, we don't have to wait until all the potatoes are big, we can fry the small ones as a whole. They are ready quickly in the pan. With a little garlic and parsley, it's almost a complete meal. A light salad is enough and we have a hearty lunch on the table.

Especially the children are also very happy with the harvest, or rather the picking of potatoes from the ground, when we have pulled them out and dug up the mounds. Let's make this activity a moment together and look forward to the miracle on the plate that we have thus created. Colorful, tasty, nutritious.

**And another important addition:** Never peel young, early potatoes from your own harvest or from a grower you know. The skin contains the most vitamins. Just wash the potatoes, cut them, or leave the small ones whole and prepare them for an excellent dish.

For winter storage, we put away well-ripened potatoes in the ground, that means that their core has naturally dried and "laid down" on the ground. At that time, the potatoes are already separated from the underground crawlers, their skin does not peel off with the movement of the hand, and they are suitable for storage. We don't have to peel our potatoes either, just wash them and prepare them.

### **Sowing and planting period in May - after frozen**

This period is the end of May. In more southerly areas and in the current globally warmer times, it can be as early as mid-May - we start sowing and planting heat-loving species:

**- cucumbers, pumpkins, zucchini, beans, tomatoes, peppers**

It is like a vegetable base that is interesting in every household. We have many varieties in each species, so they differ in shape, color, sometimes even in taste, and that is why they are often used in the kitchen. They are also a source of storage in the form of various canned dishes and side dishes that we like to find in the pantry during the winter.

### **What do we need to grow them?**

**Beans** - we will start with the crop that is the most demanding to choose the place where we will sow it. Its demanding nature does not result from the need for fertilization or special preparation of the soil - it does not need fertilization there.

But in the sowing procedure, it requires: not to sow in a place where there was another leguminous plant / peas, beans, beans/. Not after or next to onions, garlic, chives, beets and peppers. So when planning, we have to note this information from last year in the planner so that we don't forget it.

You remember, we said that planning is important in the garden, on the property. And when we draw it, or we have a notebook created for the garden in which we write down our experiences, we definitely have drawings of our beds and what we had on them each year.

In the above-mentioned Seeding procedure, it is suitable when groups of plants do not repeat themselves more often than once every 4 years. /see:

<https://www.zahrada.sk/magazine/striedanie-plodin-efektivny-sposob-ako-predist-unave-pody/>

Its sowing is suitable in rows or in holes. Depending on the choice of variety, whether it is a bush or a peg variety, we also have to consider the possibility of a support. We are also thinking about choosing a variety to harvest pods for green pods or for dry beans. We will take all this into account when sowing. Then we will be able to work better with the plants. We will be able to take better care of them and, above all, collect them appropriately.

Because the bean seed is larger, we sow it deeper. About 5 times the size of the seed. It is convenient to soak the seed for a few hours in advance so that it swells, receives enough

water that it will no longer "search" in the soil, and can germinate more easily. Or pour enough water into the hole. In this way, we also prevent possible damage from pests, for whom the bean seed is very tasty. Cover the sown seeds with dry soil and press down.

You must have noticed that this procedure is the same as it was for the previous types of plants. It's the right way to encourage water retention in the soil. In this way, the water gets closer to the germinating plants and there is no dirt on the soil that we need to disturb. Because an even larger amount of water escapes from the soil through the suction than with normal evaporation. Nowadays, we must try to capture and retain as much water as possible in the soil and to use it as efficiently as possible by plants without additional irrigation.

The plants are prepared for this with their root system. But it is directed downwards, so any water supplied from above confuses it and hinders its growth and the prosperity of the plants. Therefore, drip irrigation is the most suitable, which adds water in small doses, but manages to soak in to a greater depth and the plant gets water again from below.

We can cover the interrows of beans with grass from the mower in a thin layer of no more than 1 cm, or other chopped plants that will protect the surface of the soil from drying out. And also with the growth of weeds. We will not suppress the weeds completely, but we will certainly limit their amount. Alternatively, it is better to cut off only the upper part of those that grow and leave the roots in the ground, because they also contribute to loosening the soil and enriching it with biological matter that can decompose there. It is also an insight that has been verified in recent times, when we try to do as much as possible for the quality of the soil so that it continues to bring us benefits and a quality harvest.

It is not frequent weeding by machines, but the natural work of the plants we have on the property and we know how to work with them, coexist and support each other. They are our helpers and we have to start realizing that and treat them like that.

### **Cucumbers, pumpkins, zucchini**

We put them in one group, because their plant shape is very similar and also the way of cultivation. It is very important when sowing them that we have to realize how big the plants will be. Or how far they will crawl. We can also choose the method of crawling vertically - up high, but with pumpkins we have to be aware of the weight of the fruits so that they don't break off unnecessarily soon. We also have to take into account the possibilities of harvesting - especially with cucumbers, because we need to enter the growth every 3-4 days so that the fruits do not grow unnecessarily. Especially when we want to collect them and can them in a certain size.

So we will sow the seeds according to the procedure we have already described and leave 1-1.5m spacing between the rows. The distance between the seeds in the row is about 20 cm for cucumbers. About 50 cm for courgettes and pumpkins. Again, we will use the method of swelling the seeds in water, or on a damp cloth, or sufficient irrigation in the seeding hole



before sowing. Press down after filling with dry soil. It is very convenient to mark the rows or sown plants with a pin. This will prevent damage to the plants if weeds cover the land in the meantime.

If we have pre-grown cucumber, zucchini or pumpkin transplants, or we have bought them on the market - we will use the same planting distances as sowing, but we will describe the procedure for tomatoes and peppers.

Again, we can line the rows with mulch made of natural material that we have on the property. It can also be shavings, sawdust, but from deciduous trees, or even dirty sheep's wool, which we will not use for processing as yarn.

All these plants respond well to irrigation. But let's keep in mind that the root system is at a depth of about 15-30 cm, so always check the humidity in these places. A few drops on the surface of the soil will only create unwanted dirt that is not beneficial to the plants. So we prefer to use more abundant drip irrigation, or regular irrigation to the roots. But let's do this at a distance of about 15-20 cm from the plant, where the capillary roots are actually located.

We harvest pumpkins and zucchini continuously. Let's not wait for large sizes, because we do not stimulate the plant to produce more fruits, but only to ripen the seeds in these first fruits.

The more we pluck young courgettes and pumpkins and cucumbers as well, the more their fruit production will increase. Young fruits are also much more interesting in taste and we can use them in various recipes.

### **Peppers and tomatoes**

They are crops that we need to plant on our land in the form of transplants. In order to grow pepper transplants, we need to start preparing them already in February, and the plants require special light and temperature conditions, which are very difficult to achieve in block flats. Often not even in family homes. Therefore, it is advisable to leave it to the experts, and we prefer to buy the few transplants that we will need.

#### How many will we need?

We measure the space on which we plan to plant the peppers so that we have rows at a distance of approx. 30-40cm and plant to plant also - 30-40cm. This clip can also be achieved by planting in a triangle, while the rows are fixed and the plants in the row are alternated once in one and then in the other. This 2-row planting system is suitable for the possibility of creating a support for both rows when the plants are tall or have many fruits, so that we have the stakes in the rows and stretch the twine only along the edge of the double row. In this way, the slats lean against each other in a larger size and at the same time do not lean out of the double row. It also allows us to collect very conveniently.

If we plant up to 10 plants, we can use a support for each plant separately.

If it is true here that at the first fruits we also take not very large and mature fruits in order to support their further flowering and fruit formation.

## **Tomatoes**

Transplants need to be sown later than with peppers, but it is advisable that the plants are strong enough, not stretched out to the sun, because that is the only way they can bring us a good harvest. According to these criteria, we will choose the right ones on the market. The best thing is that they have not yet flowered, rather they should be lower when it is a peg variety, and that they have a thoroughly developed root system. This is the most important requirement we should have for transplant sellers. Not crushed roots in the mud, maybe even rotting smelling. Such plants have already been removed from the soil and are suffering, so their growth will be more complicated.

Plants in rooters, in which the roots have grown thoroughly, it is most suitable.

When planting, we need to tear up this root ball a little in order to stimulate the roots to grow further and look for water with nutrients. We do not have to worry about this step, we will not harm the plants, on the contrary, we will help them and their further healthy growth.

And now planting: We will prepare a planting hole - for peppers, courgettes, pumpkins and cucumbers, only as deep as the roter was, or as deep as the plant was in the soil. At the bottom of the pit, we put compost, or chopped nettle, or a farm substrate made of vermicompost - about a handful. Pour approx. 10 liters of water per 1 plant. Since it is a large amount, we wait until the water is absorbed before adding more. We can simultaneously pour into 2-3 holes, but we will use the amount so that it is 10 liters for 1 plant. We will now insert this material into the plant, whose roots we have released from the roter, because they often tear them. We store it vertically. Only with tomatoes, we can place the seedling at an angle, because that way it will take root better.

Cover with dry soil, press down to squeeze out air around the roots. We always leave the surface of the soil dry.

We will postpone the next watering of the plants and will do so in 14-21 days. We will test whether after 14 days the soil is moist at the depth of the roots, if so, we do not water. Only then later. It is most suitable only when this soil is dry at the depth of the roots. The moisture of the soil guarantees us that the plant can easily draw nutrients dissolved in water from the soil, and at the same time the roots grow downwards and look for additional water, which is more in the lower parts of the soil than in the upper ones. That's why we don't pour on the surface.

Even with these crops, foliar dressing is not suitable, as fungal diseases can spread. We will use drip irrigation in larger quantities - burst, or high-quality watering - again approx. 15 cm from the stem of the plant. Mulching of the entire area in between rows and in rows is again very suitable.

Peg varieties need a support, so we place it appropriately, taking into account the root system - preferably immediately when planting, when we can see where the roots are and they will then adapt their growth to the peg.

A flat support at a certain height above the ground is also suitable for cucumbers and creeping pumpkins. This will help the plants so that fungal diseases do not spread on the soil, in case of high humidity. But in times of severe drought, such plants may dry out more and it may be more difficult for water and nutrients to flow to more distant parts of the plants. It's just up to us and it's almost always a hop or a trope. Like many things we deal with living organisms. And that's what our plants are.

#### And how to harvest tomatoes?

We need to check if our variety is with red fruits. If they are supposed to be black, they will never be red. That's why we taste them, smell them and decide on the harvest accordingly. It is also advisable that the fruits do not needlessly ripen to the maturity of the seeds when we want to consume them. The plants get very weak.

We do not eat green tomatoes, unless they are of this variety, they contain solanine.

However, it is partially decomposed by heat treatment, but it is still not suitable to consume such canned snacks in large quantities. Especially not children, pregnant and nursing mothers.

We can use ripe tomatoes to make a large number of dishes that we can store in the form of preserves.

Just as basil goes well with tomatoes in dishes, basil also goes well with tomato plants. Tomatoes have a more pronounced taste, and at the same time, when picking them, we don't forget the basil, which smells good when we touch it while walking.

#### What herbs and complementary plants do we want to grow?

This is probably a frequent question of housewives who are used to using various fresh herbs in their kitchen. We can buy them in the store, but they often don't last very long in pots.

We can also grow them in containers on the balcony, but it is advisable to transplant them into the larger containers in which we bought them. We will use the same procedure as we

described when planting transplants, only we will adapt the amount of water to the container. But we will provide a drainage layer and the possibility of pouring into the saucer.

In the garden, on the plot, we will focus on a smaller number of types of herbs and divide them into perennials and annuals. We will also familiarize ourselves with it so that we know which ones need to be put away for the winter in a non-freezing environment. Also whether in the light, or it can be in the dark.

From annual herbs and aromatic plants, we would like to draw your attention to:

**Dill, basil, fennel, velvet.**

**Velveteen** - we will use it mainly among the plants grown among us as protection against pests. Mainly flying ones, which smell and then will not attack the plants we grow / whiteflies, nematodes, aphids/. Flowers macerated in oil help against joint and muscle pain. Broth from flowers has antibacterial and anti-viral effects. Their smell also repels insects in the apartment and on the terrace.



Velvet plant near the cabbage patch

**Basil and fennel** can be grown in the form of transplants and then planted in the flower bed.

It is enough to sow **dill** in a row or widely. It is advisable to let several dill plants ripen and let the ripened seeds sow naturally. Plants grown in this way will be much more resistant next year and will grow naturally faster. One plant naturally produces many more seeds than we normally buy in a package in the store. Therefore, this method is very suitable for this herb.

Dill is also used among vegetables as an aromatic plant to "fight" pests / whiteflies, potato leafhoppers/, so we can have it in almost all plant stands. In recent years, whiteflies like to "attack" almost all kinds of plants. However, cabbages are the main species.

In addition, it is an addition to many types of food and also to preserves for storage.

**Fennel** is a lesser known vegetable. The leafy part can be used to make tea, in salads and with fruit. The thickened above-ground part can be used raw or steamed. Not every species produces a thickened aerial part. Therefore, we need to choose the right variety. Fennel seeds are known from baby teas and teas for mothers who breastfeed their babies.



Fennel - thickened part and leaves

### **Summer and early autumn**

It might seem that during this period we will only reap what we sowed in the spring. But there are many species that we collect and we are left with an empty space after them. We can use it to sow other types of plants and thus prepare another possible harvest.

It is necessary that we choose the right species that tolerates higher summer temperatures / peas, green beans, iceberg lettuce, beets, onions/.

If it's autumn - it can be the plants we sowed in the spring / radishes, lettuce, spinach, leaf mustard/.

These species have a short growing season – meaning they quickly grow to harvestable stage.

We still have to keep in mind the location where we are, in more northern districts the growing season is shorter, but even there we can collect 2 crops of different plants from plots and beds.

Let's not forget the correct rotation of crops, which will ensure their good health, it will support the quality of the soil. The Wheel of Good Relationships tool can be a guide for us. Also in the selection of other species that we can try to sow. We can find out about their seeds in Semenárske shops, but you can find information on the Internet.

The cooperation of the whole family is a bonding element and will make everyone happy that they participated and contributed their knowledge and work.

The result that we always take only so many vegetables from the garden or pots that we use right away teaches us how not to waste unnecessarily large purchases and at the same time shows us how fresh vegetables taste. Its flavor is almost never found in stores.

We will gradually see it also in the saving of finances. But can money express the good feeling and knowledge that we have acquired together with our family and children? This is another reason and result of our independence.

We can boil all the harvest that we don't eat fresh, create various semi-finished products that we can use for pasta, meat, or just for bread or toast. All vegetables are wonderful with eggs, so even in winter we can remember and enjoy their taste.

### **Where will we grow?**

Yes, we talk all the time about sowing, planting, but we don't talk about where to put those seeds and seedlings. We left this chapter for the end because, while reading the previous lines, you may have already wondered where you could find such a piece of land.

Again, the well-known fact applies - Less is sometimes more. We don't have to immediately think about buying a piece of land, and certainly not a large piece of land. When we are beginners, it will be pleasant for several of us to work together. Currently, community gardens are already being created in many places, we can become part of them.

Look around, ask if there is something like that in your immediate vicinity. Even if not, it can still be called the Gardening District. There, too, people grow their own vegetables, bushes, and trees. When walking in such places, it may seem to us that some parts are not managed, because their owners are not in control, they are older, or they have moved away. So maybe the information from the neighbors will guide you on how things could move forward and you would get your grow space.

It doesn't have to be a purchase right away, a rental is enough to give you the opportunity to try out the activities and find out what you will need. And how will you manage it?

Keep in mind that even a negative result is a result and very important in a new activity, so that we can learn from it. We just have to evaluate it with the experts, whether it was more the effect of the weather, the quality of the soil, or our ignorance. There are many experts with whom we can consult information, consult, or become part of educational workshops. And there is also a lot of advice on the Internet, we just have to sort through them correctly, because not all of them are correct.

## **Raised beds**

In recent years, raised flower beds, or bordered and raised flower beds, have become a frequent element found in the gardens of cities and towns.

Since their height can be different, especially for the higher ones / approx. 60 cm and more/ it is important that we approach them as a space in which the decomposition process will take place, the surface of the soil will decrease, because we put in the lower part a material that decomposes and reduces its volume.

It is actually a slower composting process, because the amount of air that microorganisms have there for the decomposition of plant material is limited. Even so, the soil can subside by 20-30 cm in one year. We will observe this humiliation in the spring.

Then we have two options:

- sprinkle the missing amount with high-quality growing substrate
- move part of the substrate to a thicker layer on one part of the flower bed and again add a thicker layer of branches and coarsely chopped material and sprinkle with high-quality growing substrate. Next year we will do the same with the second part of the flower bed.
- And actually we also have a third option, which is to leave the bed lower like this and do the action from the previous point only after 2 years.

All parts will allow us to grow our plants in a sufficiently high layer of high-quality soil, when we do not have such on the plot. Or for some reason I can't bend down and work on the soil.

The disadvantage of these beds is that they dry out faster than soil, especially on the edges. The watering can also be lost in the lower drainage layer, where many roots will only grow later.

## **Pots and larger containers**

If we use pots and larger containers, it is advisable to change the soil in them after each crop, mix it with a high-quality substrate, or add sand, compost, so that the plants do well.

A very light substrate is not suitable because it does not have the ability to retain water and the root system dries out quickly. A plant can draw nutrients only dissolved in water, in a soil solution, but it also cannot "stand in water" / outside of hydroponics - a special way of growing in an aqueous solution/.

The advantage of these containers is that we can move them. We can place them on the balcony, on the terrace, or on the windowsill in the apartment.

The disadvantage is that they can be heavy, that the soil in them heats up quickly. Plants in the soil on the property always have roots in a cooler environment. This soil also dries out



much faster, so we apply the watering in a saucer / the roots of plants preferentially draw water from below/.

Here are some options for placing raised and raised beds.



Bed made of old bricks and wood



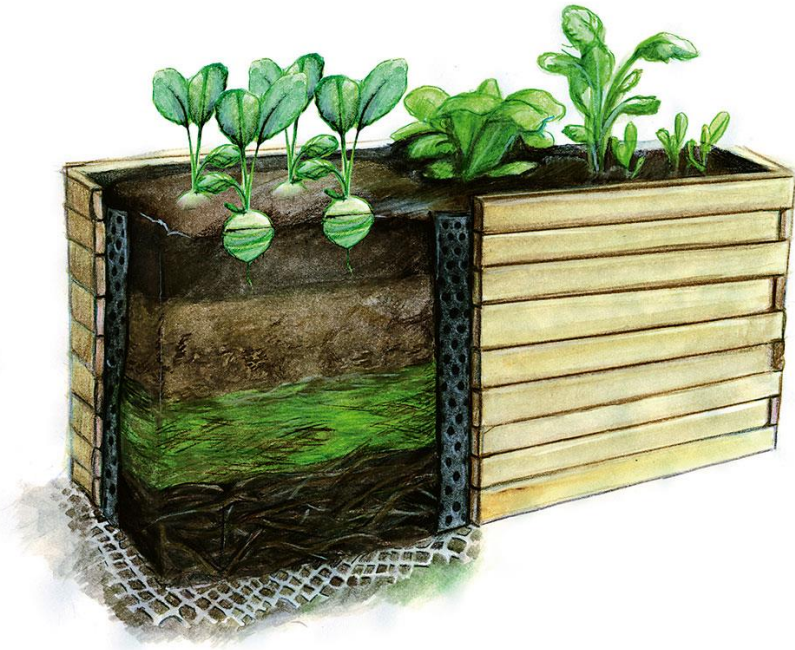
Bed made of used / new / wood



Bed made of agave, alder logs



Raised beds on the property



Layering of materials in the cross-section of the raised bed. The wood is protected by a nop film, against the entry of mice and moles - a dense mesh.

## How to organize your garden, why consider permaculture

The principle of thinking along the lines of permaculture principles is not only about growing plants in the garden. It is a change in our way of life that will be sustainable.

Permaculture is not about disorder, about an overgrown garden, on the contrary, it is a maintained order beneficial to all organisms in our vicinity, and therefore also to us and our loved ones.

I don't have to go into all its corners, but when we get to know the rules gradually and, above all, bring them into our lives, we will suddenly find that we care more about ourselves, our children, our surroundings and the planet.

Meaningful thinking, reusing things and not wasting will also bring us an economic effect. After all, we already pay more for the waste we produce, so it would probably be more appropriate to start creating it as little as possible and gradually even at all.

Our land, garden, place where we can produce any amount of food will teach us this principle more and more. We also return the leftovers that we didn't eat to the plants - in the form of compost. Is it extra work? Maybe so, but let's go back to the old saying: There are no cakes without work.

Our garden can also have the following shape and layout of its individual parts:

so that we can easily get everywhere, walk, even with children and a wheelbarrow.

So that we have places for pleasant sittings and conversations.

So that we feel safe, comfortable and happy to spend time there together.

That you have already read such similar thoughts? Yes, in the beginning when we were talking about our planning and dreaming about how and where we would create our grow space.

Abroad, such spaces were created several decades ago, even almost half a century ago, when abandoned spaces of old buildings, orchards, common areas of parks were used in this way. It doesn't always have to be only a lawn, the soil can help us bring its fruits and food.







### **A few words at the end**

.... our whole life is about learning, acquiring information, trying new things. Young people tend to say that just one more exam in school and I don't even want to see books and textbooks anymore. After all, everything is on the net and I can find it even on my mobile.

The older generation, again, what kind of information is this, when they keep saying that it's a lie, and again, we have to protect ourselves so that no one deceives us. That life was not like this once.

Both sides are actually right, because each generation has its pros and cons. Both in conveniences and in customary procedures.

But all generations needed peace, well-being, a roof over their heads and especially food, water and air for their lives. I arranged them according to the possibility of absence and urgency. And quality water and food are among the most important.

Knowing what we eat is very important for us and our children. When we are still enjoying the preparation, we are also in mental peace and well-being.

In today's difficult and stressful times, it is very important to maintain mental well-being and positive energy, which we will transfer to all the fruits that pass through our hands.

I wish you beautiful days near the fruits of your hands.

**And Bon Appétit!**