

-Chapter 5-

THE PLANTATION



How to plant?

You've found a plot of land, chosen the species you want to plant, and found people willing to do the planting. And then the big day arrives. How best to organize the planting of your urban forest?

The Miyawaki method recommends planting local species, at a rate of 2 to 7 trees per square meter. You need to find the right time for planting, plan for the delivery of the trees and amendments, and be numerous enough to complete the planting in one day, without forgetting the unforeseen events that will arise along the way...

Here are the different elements that will allow you to be as ready as possible to plant your forest.



1- When to plant?

2- Preparation of the plantation

3- The material

4- Logistics

5- Participants

6- Take action

7- Plant a tree

8- The fence

9- Mulching

10- Watering

11- The Giants' Micro-Forest

12- The interview

1- when to plant?

Trees are part of vegetation, which follows the cycles of evolution of life, according to the cycles of the seasons.

the growth cycle

Each season corresponds to a part of the cycle: birth, growth, reproduction (seeds, fruits) and vegetative rest.

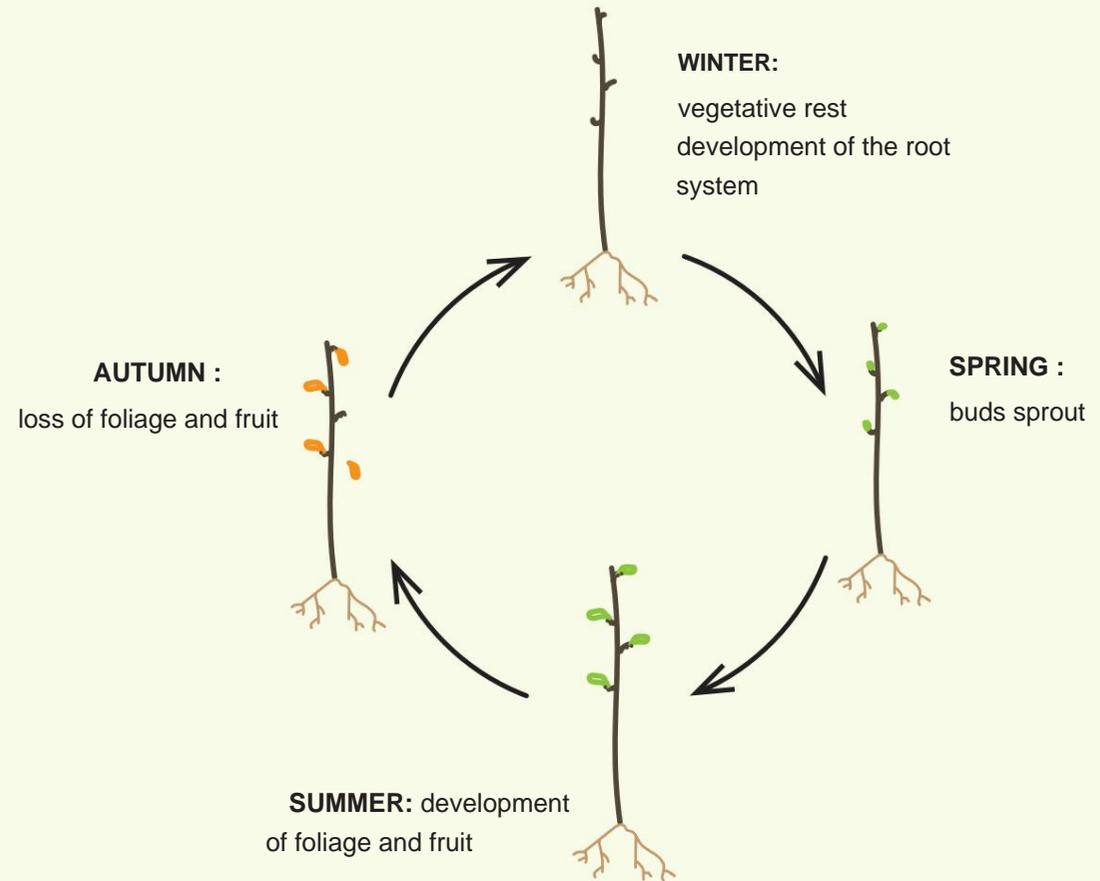
Tree planting is preferably done during the dormant period, which corresponds to autumn/winter.

It is therefore recommended to plant between **the end of October and the beginning of March**, a period which allows the plant time to develop its root system and allows the soil to be worked, whether the trees are delivered to you in pots or with bare roots. For your comfort and that of the tree, it is important not to plant when the ground is frozen or soggy.

“On Saint Catherine’s Day, all wood takes root!”

ADVICE

The planting date will be heavily influenced by the delivery of the seedlings. This is one of the biggest logistical constraints because whether the trees are bare-rooted or in pots, their storage is limited to a few days.



2.1- preparation of the plantation

To avoid last-minute surprises, we recommend making a list of questions to ask yourself regarding the different aspects of planting.

✓ DELIVERY OF AMENDMENTS

- Have I marked out the locations on the land that will accommodate the piles of amendments, before working the soil?
 - Will the amendments be delivered at the same time?
- Soil work can only begin when all the amendments (except straw) are present on site.



✓ SOIL WORK

- Are all the amendments delivered to start working the soil?
- Is there enough fuel for the excavator's work?
Allow two days of preparation for 300 to 400 m² of land.
- Is the soil loose so that trees can be planted easily?
- Have I planned the time and tools (rakes and spades) needed to prepare the soil for planting?



✓ STRAW DELIVERY

Provide space near the field and sufficient quantity to cover the field.



2.2- preparation of the plantation

✓ DELIVERY OF TREES

Provide a space at the edge of the field, the field with a set of species. Provide that there is the desired number of species. species: check that the plants to be planted have been planted 3 days after receipt. Paper notes trees according to your choice correspond to a pre-established design, arrange the plants according to your choice.

✓ FENCE OF THE LAND

The fence must be installed at the end of planting so as not to interfere with the work of the soil or that of the volunteers.

- Have I defined the route of the fence?
- Do I have all the elements and tools to assemble the fence?
- Have I planned the time and human resources needed to set it up?

Allow approximately 1 day for 200 m of fencing

✓ TOOLS

- Will the volunteers bring their own tools?
- Have I planned a stock just in case?
- Have I planned a system to identify tools and their owners?



2.3- preparation of the plantation

✓ WELCOME TO VOLUNTEERS

- Have I communicated the time and location of the planting correctly?
- Are we easily recognizable? (T-shirts, yellow vests)
- Have I planned drinks and food?
- Have I provided a rest area? (chairs, sheets on the floor)

✓ THE WEATHER

An innocent question... which can change everything: bring boots, raincoats and shelter in case of downpours.

✓ WATERING

It is essential to water trees when planting and it is often necessary to do so during the summer following planting. If you do not have access to water on your land you can:

- Call a landscaping company,

- Rent a tank, - Pump
from a nearby stream Watering takes time



3- the material

The equipment needed on planting day will include: planting trees, assembling, watering and mulching if you the fence do it yourself.

1. THE TOOLS NECESSARY FOR PLANTING

- Spades, forks, hoes and shovels...Everyone has their favorite tool for digging holes.
- Buckets and hand shovels for pralining bare-root plants (a muddy mixture made with soil, manure and water applied to the roots to help recovery during planting)
- Wheelbarrow to facilitate the transport of tools/plants in the field.

Tools can be purchased or loaned by volunteers, please make sure that everyone collects their equipment at the end of the day.

2. THE CLOSING

It may be necessary to install a fence around the area to prevent animals or people from visiting during the forest growth period.

There are several options available to you, but the important thing is that the fence lasts for the first three years. After this period, trees are supposed to be strong enough to withstand attacks from both humans and animals.

3. WATERING

Watering should be at least 3L/tree, to be repeated during periods of drought (every 2 or 3 weeks).

If you plan to water the micro-forest yourself, make sure you are properly equipped:

- Pipe of the necessary diameter and length - Water tank
- + car capable of towing it

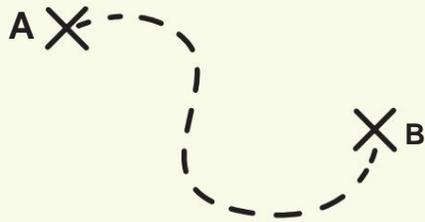
4. MULCHING

Mulching will be done primarily by hand as this allows us to better distribute the straw on the ground and around the trees. To do this, you will need:

- Gloves
- Scissors for cutting the string of the boots

4- logistics

Unless you opt for delivery of all microforest-related purchases, you will have to take care of the logistics yourself - whether it's for amendments or small equipment.



transport

Amendment suppliers may not be able to deliver them to your location. In this case, you'll have to find a solution yourself. There are two options available to you:

- Rent a dump truck

- Call a carrier

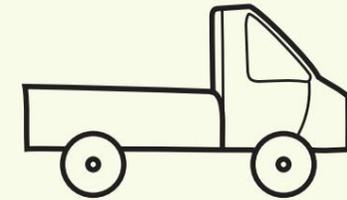
Your choice will be made based on the quantities to be transported, your availability and your budget.



loading

Once you have found a transport solution, you need to make sure that your suppliers have enough to load the rented vehicle or the transporter's vehicle: It is complicated to load 20 m³ of manure by hand...

If your supplier has a loading machine, make sure it is suitable for the transport vehicle. e.g., the loading shovel can load up to 2.50m and the dump truck is 4m high...



the van

Whether it's for trees, tools, fencing or even garden hoses, a means of transport is essential.

It is ideal to have a van or pickup truck available for the days before and after planting.

If no one in your group has this type of vehicle, you can look among your circle of acquaintances or rent a van.

5- the participants

Planting a micro-forest is a truly enriching event. You can target participants as part of your project (local residents, schoolchildren, company members, etc.). You can open up... get hands-on!

participate in the planting

Planting an urban forest is a truly unifying event: it's about **creating something in common together** with the aim of improving the quality of life for everyone.

A large number of people are therefore invited to participate. You will have the opportunity to make a **call for participation** on the media of your choice (e.g., social networks, posters, etc.).

Make sure you **know approximately how many people will be coming** and think about any specific needs they may have (e.g., provide a snack, indicate the nearest restroom).

Some tips:

- **Set the day and time of the meeting**, give the exact address of the site and possibly announce the means of getting there by public transport -

Provide enough tools and drinks for the break

- If photos are taken, ensure that participants agree by signing an image rights authorization form.

the tools?

Buckets , spades , rakes , shovels , pairs **of gloves** and anything else you think might be useful for your planting...

Provide **one tool per person**. If necessary, you can ask participants to bring gloves and provide a few extra pairs.

It may be helpful to **designate people responsible for overseeing the tools**, their use, and the return of borrowed tools. You should plan for transporting the tools on planting day.

ADVICE

Depending on your budget and your partners, you have the choice between borrowing the tools or buying them. Community garden associations or schools, as well as businesses, can be good contacts for lending equipment.

6- take action

You've been preparing for months, and the big day is finally here! It's quite surreal, but you have to stay focused on the day's goals because it's going to be a long day!



on commence !

On D-day, you arrive at the agreed time: a great day has just begun.

For many participants, this will be the first experience of this type: - Gather together and give a short **presentation of your vision and the Miyawaki method.**

- Remind them of the **number of trees and name some species in the future forest** : it's about getting to know them.



who does what?

- Show how to plant a tree
- Show where the tools and different tree species are located
- **Create groups and decide on their activity** (children need to be accompanied) e.g.: planting, fencing, mulching, watering
- **Stay present** to check that there are indeed 3-5 different trees per square meter
- Invite volunteers to take breaks and change tools

7- plant a tree

Your planting method can be random, it's up to you! But remember to go about it SLOWLY! If you rush, you'll plant "wrongly"!



plant a good

You will learn how to handle small trees with care. **Potted plants are advantageous** when planting because they are less fragile and the roots are firmly attached to the root ball. Simply dig a hole and place the root ball at the bottom, making sure that the top of the root ball (which corresponds to the tree's collar) is neither too high nor too low.



bare-root plants

Bare-rooted plants are more fragile, they must be handled with care and **care must be taken to ensure the plant and its roots are positioned correctly.**

Additionally, bare-root plants require a **pralination step**, which involves coating the roots with a mixture of clay, manure, and water. This makes planting a little more complex.

- Make sure **the roots are not damaged**
- Show all the planters **the structure of the tree** and especially the root collar so as not to bury it or leave roots above ground!

8- the fence

The fence can be installed before or after planting, but it's a good idea to have a large group of people involved as it takes time. This fence is designed to protect the young plants from the beginning of their growth until the end of the third year, when the fence will be dismantled.

What type of fence?

The location and size of the land will determine the choice of fence.

You will have the choice between:

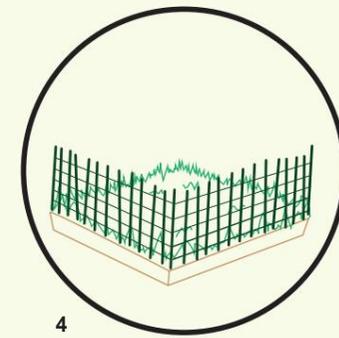
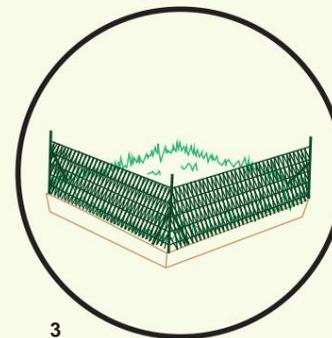
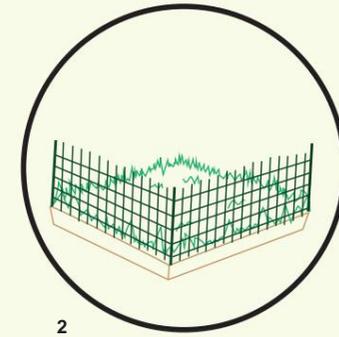
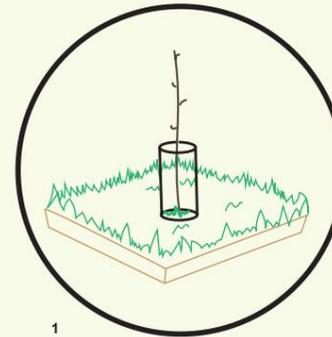
- 1- Sheaths around the plants
- 2- Rigid meshes
- 3- Rolled mesh
- 4- Ganivelle Fence

Don't forget the gate!

For example, a large plot of land far from homes will not need to be surrounded by a wire mesh fence, but rather by suitable protection around the plants (sheath type).

Rabbits, deer, or wild boars can wreak havoc. In our case, we identified the presence of rabbits and so we added chicken wire at the bottom of the fence, about 50 cm high and fixed to the ground horizontally over 20

cm.



9- mulching

Once the trees are planted, it's time to mulch! Mulching should be done once all the young trees are planted. It replaces forest litter until the trees are able to produce their own.

How to mulch?

Mulching fulfills several roles: - It keeps **the soil cool and moist**,
- It prevents the growth of weeds,
- It protects the soil from erosion.
For all these reasons, mulching is essential for young plants.

Once all the trees are planted, the ground must be completely covered with **a dense mulch** (at least 15 cm thick). This step must be done **with caution**, because once the mulch is in place, the plants are almost invisible.

Prefer straw or hay to wood chippings. Straw is quicker and lighter to install than BRF.

If your land is exposed to the wind, you can make a braid using sticks and string stretched between the sticks to prevent the straw from blowing away.



10 - watering

Once the trees are planted and mulched, it's time to water! Due to their young age and adaptation to the climate, they don't require constant irrigation, but watering at planting and during periods of drought is still necessary. This is why watering schedules must be defined in advance.

How to water?

You need to plan for a significant amount of water, and allow **at least 3 liters of water per tree for each watering**. To do this, there are several options available to you:

- **Contact your city's green spaces department** : they may be able to lend you a watering tank.

- Use the **services of a landscaper, expect to pay between €60 and €70/100m²**

- **Water yourself by renting a water tank**, count 30€/day for 1000L. This option implies that you fill the tank yourself.

To do this, you can:

- Ask your town hall **to use outdoor taps or fire hydrants**.

- Apply to **pump from a stream or pond**. This involves equipping yourself with a pump.



11 - the micro-forest of giants

Once the emotion has passed and the strength has been regained, it is important to take stock of the planting experience: what we did well, what we could have done better... We have undertaken this exercise, hoping that it may be useful to you.

PLANTS AND TOOLS

It would have been better **to spread them around the field to avoid trampling**. Having all the plants in the same place made it difficult to distribute them properly, particularly because of the presence of the forty or so middle school students.

DIVIDE PLANTING ZONES

To avoid going back and forth and trampling, it can be useful to **divide the land into different parts, which can help spread out the different activities**. For example: once one part is planted, it can be mulched, while others will plant a still virgin part.

STRAW BALES

Spreading the bales all around the ground makes mulching easier and prevents the young plants from being trampled.



12 - the interview

The Miyawaki method is a planting method that requires minimal maintenance for the first three years. After this period, the trees are considered self-sufficient, and the only thing we are asked to do is watch them grow.

WEEDING

It is necessary to **weed two to three times a year** (depending on the growth of the grass). Wear gloves and a long-sleeved T-shirt when doing this.
Pull up the weeds and leave them on the mulch.

WATERING

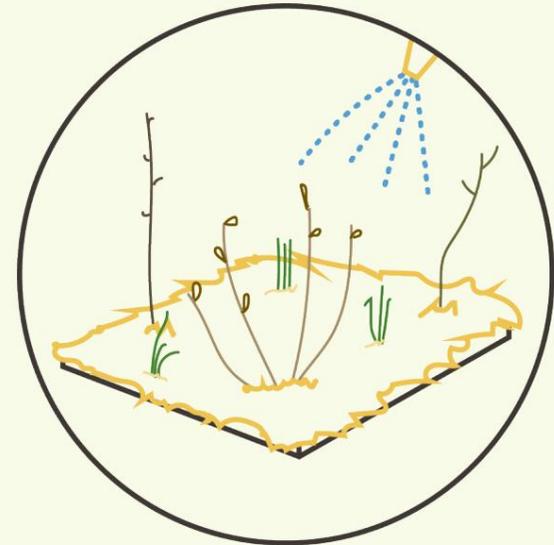
Depending on the weather conditions, watering should be planned **for the first three years** in the summer. **Water every 2 to 3 weeks during dry periods.**

MULCHING

If the soil is bare in some areas, it is necessary to mulch again, with hay or straw. **Keeping a thick mulch will save you from watering during the summer.**

THE GRILLING

Walk around the fence from time to time to check its effectiveness and **carry out any necessary minor maintenance work.**



ADVICE

At the Giants Microforest, we have chosen to have the microforest monitored by an environmental research office. Tree growth, as well as the exotic flora and fauna, will be studied to help us understand the benefits of such a plantation in an urban environment.

and now ?

From the various chapters you have read, you will have an idea of the work involved in a plantation, but what about the price?

It is now time to look at the cost of planting a micro-forest, which we present to you in the chapter **“The cost of a micro-forest”**.

We remain at your disposal to discuss your project.



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