

# How to grow Plumeria from cuttings by Avi Schneor

Copyright © Avi Schneor

## Growing Plumeria from cuttings guide

by Avi Schneor - Mar. 2025 - rev11

[avi\\_diy@schneordesign.com](mailto:avi_diy@schneordesign.com)



Copyright © Avi Schneor

Young Plumeria tree



Copyright © Avi Schneor

Mature Plumeria tree



Copyright © Avi Schneor



Copyright © Avi Schneor



Copyright © Avi Schneor

Plumeria flowers - samples of shape and color variety

**Copyright © Avi Schneor**

This guide is protected by copyright laws. You may freely forward it for reading only!

Do not modify nor publish this guide in whole or in parts in any media without prior written consent of the author.



# How to grow Plumeria from cuttings by Avi Schneor

Copyright © Avi Schneor

## Disclaimer

This guide shows my personal experience with Plumeria growing in Ha-Sharon area, Israel.

Since location and conditions has great impact on plants growing, this guide is NOT to be considered as recommendation or instructions to be followed.

**If you follow any step or any material of this guide, you do it on your own risk and responsibility.**

The author of this guide will not be held responsible for any result due to your actions.

**If it didn't succeed, do not worry, try again using a different way and you'll succeed...**

**Good luck**

**Copyright © Avi Schneor**

This guide is protected by copyright laws. You may freely forward it **for reading only!**  
**Do not modify nor publish this guide in whole or in parts in any media without prior written consent of the author.**

A close-up photograph of several white and yellow plumeria flowers with green leaves in the background. The flowers are in various stages of bloom, with some showing vibrant yellow centers and others being more fully open with white petals.

# How to grow Plumeria from cuttings by Avi Schneor

Copyright © Avi Schneor

## CONTENTS

1. Introduction.....	4
2. How to grow Plumeria? .....	5
3. Pruning cuttings.....	7
4. Leaves and flower spikes removal.....	9
5. Drying and callusing of cutting end .....	10
6. First plant for roots growing .....	13
7. Replant in a pot / soil.....	18
8. Pests and pesticides.....	20
8.1. Spider Mite .....	20
8.2. Rhodometra saccharia .....	22
8.3. Spilostethus Pandurus .....	23
8.4. Aphids.....	24
8.5. Pesticides.....	26
9. Notes and tips.....	27
9.1. Seasons / time of the year in Israel + growing places .....	27
9.2. Tag marking .....	27
9.3. Rooting hormone .....	29
9.4. Fertilizer.....	29
9.5. Perlite .....	30
9.6. Creating a transparent container for roots growing .....	31
9.7. Watering.....	32
9.8. Soil covering .....	34
9.9. sunburn damages .....	35
9.10. Decay diagnostics .....	37
10. Acknowledgment .....	39



# How to grow Plumeria from cuttings by Avi Schneor

Copyright © Avi Schneor

## 1. INTRODUCTION <[BACK TO CONTENTS](#)>

**Plumeria** (common names: *Plumeria*, *Frangipani*, *Pomelia*, *Champa / Chafa*, *Yas / Yasmin*)

More names are associated to Plumeria based on culture and location on the globe.

Plumeria is a tropical plant, a genus of flowering plants in the [Apocynaceae family](#) originating from the Caribbean / Central America. Plumeria genus name is named after the botanist **Charles Plumier** who in the 17th century documented this plant in his travels. The name **Frangipani** is named after Italian Marquis Frangipani from the 16th-century who developed a Plumeria perfume. Plumeria fragrant flowers are used in the manufacture of perfume, for medical and for ritual purposes.

Plumeria flowers are being used for wedding bouquet and flower necklaces that are most famous in the Polynesian Islands / Hawaii.

Plumeria loves heat and humidity and will grow well in hot and even very hot places.

Plumeria (depends on species) is sensitive to cold below 7 degrees Celsius (45 F.), frost and excess of water (roots will rot). Growing Plumeria in a permeable soil will prevent roots rotting.

Plumeria tree survives well without water, it will not develop well and bloom though, but will survive.

It is also resistant to salty air and water near the coast line and will survived strong winds due to its flexible branches.

Plumeria blooms several times a season, there are hundreds of varieties of different colors and scents.

Flower scent is increased at night to attract moths for the purposes of pollination. Plumeria does not have nectar and this is its way to encourage pollination.

The common moth that is responsible for the pollination / fertilization of Plumeria trees is called Sphinx Moth from the Sphingidae species family. This is a special moth with a delicate proboscis that is longer than its body dimensions. You can briefly learn about it on the [Wikipedia page](#). Pollinators are often found in rural environment.

There are hundreds of Plumeria varieties, wild species and hybrids made by growers over the years, resulting a huge variety of colors and scents.

Plumeria flowers grow in clusters, flower usually has five petals but it is not uncommon to find anomalies with more petals, up to ten. A flowers spike may flourish more than once per season and in some cases it may turn into a branch.

The tree branches are split into 2 (dichotomy) or 3 (trichotomy) and this is how the tree grows and gets its volume.

Singular branches are found in the tree edges, before it splits. Mature tree can reach a height 6-8 meters (20-26 Ft.) with circular structure, stem diameter can reach to about 30 cm. (12") or more.

The root system of Plumeria is relatively shallow to its height and it can also be grown in a pot for several years. Over time, the roots will circle around the container and if it is transplanted to the soil in this state, its growth can be stunted. If this is the case, it is recommended to partially trim the roots before transplanting. A tree planted in the ground has a root system that does not spread to a long distance and depth. Recommended distance from tree to tree is 2-5 meters (6-16 feet).

Because of the shallow root system it is recommended to avoid deep pit around the tree and prefer adding a layer of mulch.

Plumeria is fully deciduous tree.

In the winter most of its leaves fall and it enters into dormant phase until early spring.

**During its dormancy there is no need for irrigation.**

Plumeria grows well and loves environment of full direct sunlight or nearly full sunlight.

# How to grow Plumeria from cuttings by Avi Schneor

Copyright © Avi Schneor

## 2. HOW TO GROW PLUMERIA? <[BACK TO CONTENTS](#)>

Plumeria can be grown in several ways:

**A. Purchasing** a young tree in a pot from nurseries where you can find different species, sizes and prices.

**B.** For those seeking a challenging and enjoyable experience from the start, it is recommended to **grow Plumeria from seeds**. Mature Plumeria tree produces seed pods. When the pod matured and opens up, you can collect its seeds and germinate them.

A seedling started from a seed will usually bloom after three years or more. It takes three more blooming cycles to determine the true tree/flower specie.



Image 1: Seed pods on tree



Image 2: Seed pods



Image 3: Open seed pod and seeds



Image 4: Plumeria seed



Image 5: Germination



Image 6: First set of leaves

# How to grow Plumeria from cuttings by Avi Schneor

Copyright © Avi Schneor

## C. Growing from cuttings.

A cutting is a branch taken from a mature tree, rooted and planted in a pot / soil.

Cutting growing is faster than growing from seeds and it is almost the only way to assure the new tree (= second generation) will be with the same flower color to the tree the cutting was taken from (=mother tree, first generation).

With seeds growing this is not guaranteed and in many cases the outcome will be with a different flower colors.

A tree grown from cuttings will usually bloom in the first or second year after planting, depending on the species, time of the year the cutting was taken and rooted and its growth conditions.



Image 7: Different size of Plumeria cuttings

This short guide focuses on **growing Plumeria from cuttings** and it is based on my personal experience and knowledge.

I grow Plumeria in Ha-Sharon area, Israel (coordinates: 32.178195,34.90761).

I grow Plumeria as a hobby. All pictures of this guide were taken by me.

I decided to share my knowledge on the subject, hoping to see more of these beautiful trees in public and private gardens and balconies all around.

Plumeria growing requires almost no financial resources, it requires though a lot of patience and perseverance.

Plant growth is a slow process performed over a long time so I encourage you to enter this adventure only if you have patience and curiosity over time.

The pleasure of success in growing Plumeria is great, its spectacular results speak for themselves.



# How to grow Plumeria from cuttings by Avi Schneor

Copyright © Avi Schneor

## 3. PRUNING CUTTINGS <[BACK TO CONTENTS](#)>

A cutting is a branch pruned from a mother tree which is rooted, grow leaves and flowers and eventually becomes a new tree.

Plumeria cutting branch takes a form of a non-pruned side single straight or a multiple tip branch end (dual, triple, or more) and a pruned side on the other end (where it was attached to the mother tree).

Best time of the year to prune cuttings is in late winter or during spring till mid. summer. [\[9.1\]](#)

Cuttings length should be at least 30 cm. (12") long.

A length of 40-60 cm (16-24") is preferred and will allow later 'repair' if cutting end will rot.

You can grow a shorter length cutting but success rate is lower as the length of the cutting is smaller.

Pruning should be made in a uniform, sharp 90 degrees to allow root growth along its full circumference.

It is better to use a pruning saw than shears as it does not crush / crack the cutting.

Do not harm the donor tree by breaking branches as it will leave an open wound allowing insects and infections to penetrate the tree causing non-recurrent damage. Use only a pruning saw or a very sharp knife like X-Acto knife etc.

It is also advised to seal the cutting area of the donor tree using a special tree sealant paste, DAP, Cinnamon paste made from Cinnamon powder and water or even mud paste made from clean as possible soil.

Best cuttings are taken from a mature tree. Visit the tree you want to take the cuttings from and get to know its flowers before pruning (best time to visit the tree is in late spring / summer).

Pruning should be made close to the base of the branch without causing damage to the main branch the cutting is taken from. Pruning so will prevent the main branch to grow new branch in this area.

If you want new branch to grow from this point, the pruning should be made at least 15cm. (6") away from the main branch.

After pruning, it is recommended to clean and disinfect the cutting area with alcohol, especially clean the cut edge. It is also advised to disinfect the pruning tool prior of using it.

Immediately after pruning, the cut end will drip white latex (toxic), absorb it with a paper towel and apply a rooting hormone [\[9.3\]](#), preferably one with an anti-fungi agent, OR a Cinnamon paste.

It is important to note that although using a rooting hormone has positive impact, many growers do not use it at all and take the natural way, that is, without any additives.

Label the cuttings [\[9.2\]](#) for monitoring / cataloguing. You can do so by using a special tag and/or write directly on the cuttings.

# How to grow Plumeria from cuttings by Avi Schneor

Copyright © Avi Schneor



Copyright © Avi Schneor

Image 8: Cuttings ready for rooting  
(image shows cuttings taken in winter. Right mark is the planting depth)

Cuttings taken in the winter are Gray-Green, fairly uniform and its ends will be without leaves. (deciduous tree). Cuttings taken in the summer will have bright Green edges (this is the part that grew last season) and it will have leaves / flowers.



Image 9: Differences in cuttings taken in Winter vs. Summer

# How to grow Plumeria from cuttings by Avi Schneor

Copyright © Avi Schneor

## 4. LEAVES AND FLOWER SPIKES REMOVAL <[BACK TO CONTENTS](#)>

After pruning the cuttings from the tree remove (with hand shears) all leaves and flower spikes except for the very small leaves at the tip of the cutting. Leaves and flower spikes inhibit root growth.

Cut leaves and flower spikes 1-2 cm (0.5-1") from the cutting, this will reduce latex/sap drip.

Rest of petioles and spikes will dry out in a week or so and will fall without latex secretion.



Copyright © Avi Schneor

Image 10: Cutting leaves and flower spikes, watch the small remains petioles

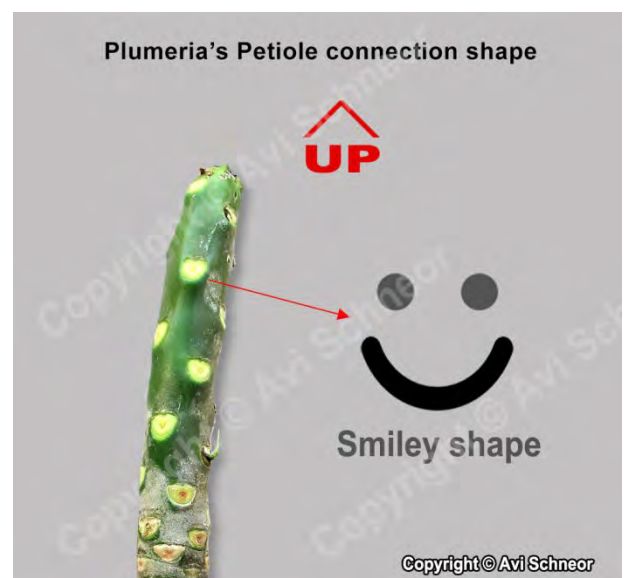
After the Petioles fell, pay attention to the shape where it was connected to the stem, it reminds a kind of a Smiley ☺

### Why do I mention this?

If you try to grow a 'mid-cutting', that is a cutting that was chopped on both its sides and has no tip (and yes, it can be grown as well)

you better remember which side of it should face upwards so you'll not bury the cutting with its head facing the wrong direction.

Image 11: Petiole-branch connecting point shape



Copyright © Avi Schneor

# How to grow Plumeria from cuttings by Avi Schneor

Copyright © Avi Schneor

## 5. DRYING AND CALLUSING OF CUTTING END <[BACK TO CONTENTS](#)>

Let the cutting edge dry and callus in a ventilated, shady and humid place for about a week or two.

The more humid environment, the better callus result we get with less separation of wood rings.

After the edge was callused you can plant the cutting for a root growth, or store it up to 2-3 months.

The cutting area should be fully callused with no signs of decay / fungus.

You can air dry the cutting for this process and you may seal the end immediately with wax.

Melt a bar of wax and dip the end of the cutting to coat it or drip wax from a lit candle to receive full coverage (be careful with fire).

Waxing the end has better results. Watch it while storing so wax coating will not fall out.

For long storage you can wrap the cuttings with newspaper and store it in a shady place.

If cuttings will shrink during long period storage, it will returns to its normal shape after planting.



Copyright © Avi Schneor

Image 12: Callused ends of cuttings after drying period.

# How to grow Plumeria from cuttings by Avi Schneor

Copyright © Avi Schneor

Another proven method to callus Plumeria cuttings is by wrapping the cut end with a wrap / stretch foil / film found in the kitchen or packaging supplies (e.g. Saran wrap and alike) and tighten it with an electric insulation tape or any other tape / rubber band. Wrapping is done immediately after cutting and cleaning of the cut and the foil should be well stretched over the cut to avoid any air pocket.

Some growers dip the cut end in rooting hormone before wrapping it and others do not and let the flowing sap work as a natural sealant.

After 1-2 weeks, the seal can be removed and you'll get a very healthy and ready to root cut end.



Copyright © Avi Schneor

Image 13: Drying and Callusing with wrap foil.



Copyright © Avi Schneor

Image 14: Callused end after drying period with wrap foil.

# How to grow Plumeria from cuttings by Avi Schneor

Copyright © Avi Schneor

## Painting the cuttings:

After the cutting has callused and before going into roots growing phase, I also paint its side facing the ground with designated UV tree paint which is used to prevent/treat sunburns. [\[9.9\]](#)

This kind of pain is also known to act as insects and infections repeller, so it adds another layer of protection to the cutting. Paint the cutting end all around, but **DO NOT paint the callused surface**.

Another advantage of painting the cuttings is that it clearly marks the side that needs to be planted.



Copyright © Avi Schneor

Image 15: painted cuttings prior of roots growing phase

# How to grow Plumeria from cuttings by Avi Schneor

Copyright © Avi Schneor

## 6. FIRST PLANT FOR ROOTS GROWING <[BACK TO CONTENTS](#)>

When cutting end is dry and callused it can be plant for roots growing.

Required temperature is above 15.5 degrees Celsius. (60 F.) Heat is the key to success here.

Cuttings can be planted in a soil pot (without compost), but it is better to plant it in Perlite [\[9.5\]](#) only.

Soil plant has more chances of getting rot. Recommended planting depth is up to 5-7 Cm. (2-3").

You can plant the cutting in a transparent recycled bottle with drainage holes [\[9.6\]](#).

First flood the perlite with water, let the water drain and then plant.

The use of a transparent container allows easy root growth observation and reuse of the container.

If you decide to add rooting hormone/Cinnamon (powder), add it prior of planting, wet the tip cutting in water and then apply the rooting hormone.

Established roots usually develop within 45-90 days, depending on the species, weather condition and other factors.

Cuttings can be grown at this stage in a lit shaded place without direct sunlight.

No watering is needed during root growth, but occasionally water spraying is recommended for creating moist atmosphere.

You can check the rooting progress after about 45 days, and if required, fix rotten cutting by re-cutting the rotten end, dry and re-plant in Perlite.

### Tip:

To stabilize a cutting in the container, support stick can be used or adding 3 Tuff stones to stabilize the cutting.



Image 16: Perlite roots growing in a recycled transparent bottle. Roots can easily be seen

# How to grow Plumeria from cuttings by Avi Schneor

Copyright © Avi Schneor



Copyright © Avi Schneor

Image 17: Cutting roots as pulled out from a Perlite recycled bottle container. Ready for replant.

# How to grow Plumeria from cuttings by Avi Schneor

Copyright © Avi Schneor

Another very easy method for first rooting is called **Bag Rooting**.

As the name implies, it involves using a small ~10x20cm. (~4x8") or alike polybag filled with a mixture of **50% Perlite and 50% Coir** (=fibres extracted from the husk of coconut).

The mixture is soaked with water without excess and tamped lightly before fitting the cuttings into it.

The bag is tighten with an electric insulation tape or any other tape or a rubber band and stored for growing.

If growing roots in cold weather, you can use a heating mat to help the process.

After 45-90 days or more depends on species, roots will fill the bag and this is the time to replant the cutting.

Advantages of the Bag Rooting method:

- Space saving. You can store the cuttings vertically or horizontally.
- Bag is transparent so you can easily watch roots progress.
- Mixture is wet and gives the cutting its necessary water supply. If needed, add water with a large syringe.
- A sealed bag avoids dehydration of the mixture.
- Mixture does not contain soil thus reducing the risk of rot.



Copyright © Avi Schneor

Image 18: Bag Rooting of cuttings

# How to grow Plumeria from cuttings by Avi Schneor

Copyright © Avi Schneor



Copyright © Avi Schneor

Image 19: Bags fill with roots after 45-90 days or more.

# How to grow Plumeria from cuttings by Avi Schneor

Copyright © Avi Schneor

More info on bag rooting for replant process in a pot/soil: ([see also next paragraph](#))

Bag rooting's roots are very gentle, tend to break easily while replanting it and requires some skills to succeed.

After many trials, I came up with the following technique for the replant phase:

- Replant only a dry or almost dry Perlite-Coir mixture of a bag rooting bag. This will keep the mixture and roots bonded and will create a kind of root ball.
- Fill a pot/soil hole with a soil mixture up to three quarters of its height, tamper it and create a cone shape hole. Add additional mixture and build a kind of a wall around the hole and tamp it as well. This mixture serves as a back-fill soil.
- Place the rooted bag at the center of the hole and hold the cutting with one hand or with a help of a 'third hand' that holds the cutting steady. Start to cut open the bag. (see the following image)  
First cut the tape that seals the bag and follow with 4 cuts along the polybag's length. Each cut for every quarter of the bag. Make the cuts from top to bottom, to the lowest place you can reach.
- Use a surgical knife or a very narrow X-Acto knife and make sure you only cut the polybag.
- Gently pull and slide the sliced polybag under the root ball and while doing so, add mixture to hold the root ball steady and also tamper it.
- **Please note** that I do not remove the Perlite-Coir mixture of the bag, I add the additional soil mixture around it. With this procedure the roots are better protected and eventually it will grow and fill the pot/soil hole.
- Water the soil very lightly.

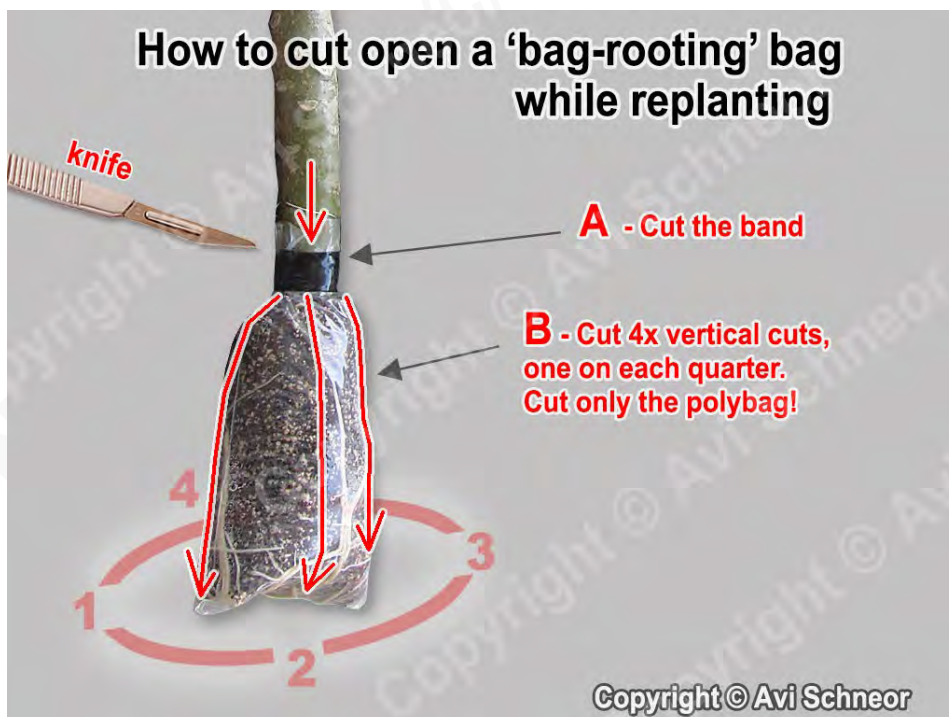


Image 20: How to cut open the 'bag rooting' bag while replanting

# How to grow Plumeria from cuttings by Avi Schneor

Copyright © Avi Schneor

## 7. REPLANT IN A POT / SOIL <[BACK TO CONTENTS](#)>

When established roots have grown and are seen on container shell or filling the bag, you can replant it to pot / soil. Best season to replant / move a Plumeria tree is from the beginning of Spring till mid Summer. In this period Plumeria grows and their root thrives.

If you replant in a pot, prefer a pot of 10 Liters (2.5 Gallon) or bigger.

Composition of soil:

**Garden soil mixture + 1/3 compost + Perlite about 15-25%.** You can add on top a thin layer of tuff/gravel or mulch. [\[9.8\]](#)

If replant in a soil, make sure it is permeable and add compost as necessary.

If planted in soil, plant trees at least 3m (10 Ft.) away from one to another to allow full growth.

Water your Plumeria once a week and fertilize [\[9.4\]](#) In the summer at least once a month.

Note that to transfer the cutting without breaking its delicate roots, a Perlite root planting is easier to handle.



Copyright © Avi Schneor

Image 21: replanted rooted cuttings in pots

# How to grow Plumeria from cuttings by Avi Schneor

Copyright © Avi Schneor



Image 22: cuttings starting to bud in early Spring

# How to grow Plumeria from cuttings by Avi Schneor

Copyright © Avi Schneor

## 8. PESTS AND PESTICIDES <[BACK TO CONTENTS](#)>

Like any other plant, Plumeria has its typical pests, most common in my place and which I encountered during growth are:

### 8.1. SPIDER MITES <[BACK TO CONTENTS](#)>

A miniature spider that can only be seen with a magnifying glass and attacks Plumeria leaves in thousands, sucking chlorophyll, causing the leaves to gradually turn into Silver / Yellow like color.

The attack usually takes place towards the end of the Summer and due to under-watering and dust conditions.

Care: thorough washing of leaves on both sides with water and correct irrigation.

Trim all infected leaves and throw it away from your garden.

Spray with pesticides. [See below](#) for pest control.



Copyright © Avi Schneor

Image 23: Spider Mites on a Plumeria leave back side

# How to grow Plumeria from cuttings by Avi Schneor

Copyright © Avi Schneor



Copyright © Avi Schneor

Image 24: Typical view of Plumeria leaf top side infected by Spider-Mites



Copyright © Avi Schneor

Image 25: Typical view of Plumeria leaves infected by Spider-Mites

# How to grow Plumeria from cuttings by Avi Schneor

Copyright © Avi Schneor

## 8.2. RHODOMETRA SACRARIA <[BACK TO CONTENTS](#)>

Caterpillar of a moth belonging to the family of Geometridae.

It eats Plumeria leaves (especially of seedlings) very rapidly.

Hard to see and camouflages well, but when touching the eaten area, it stands up and look like a miniature stem.

Care: manually collecting the caterpillars, transferring them to a better world or those who are interested, raising them until butterflies will develop out of it.



Copyright © Avi Schneor

Image 26: Rhodometra sacraria caterpillar after a small meal

# How to grow Plumeria from cuttings by Avi Schneor

Copyright © Avi Schneor

## 8.3. *SPILOSTETHUS PANDURUS* <[BACK TO CONTENTS](#)>

Red and black illustrated bug that feeds from the plant sap and insects and also does not hesitate to bite humans. This is one out of many in its family, each specie has its unique graphics on the back. To identify it, it is advised to take a close-up photo of it and search Google by your image to find out if your bug is a friend or a predator.

### Care:

Manually collecting the bugs and transferring them to a better world or to a faraway place, far from your Plumerias.



Copyright © Avi Schneor

Image 27: Spilostethus Pandurus bug

# How to grow Plumeria from cuttings by Avi Schneor

Copyright © Avi Schneor

## 8.4. APHIDS <[BACK TO CONTENTS](#)>

Another pest that also appears mainly towards the end of the summer is Aphids.

Aphids is referred to a very large family of parasite species, usually up to 4mm long that comes in several colors and that some of which are even flying.

Aphids cause plant growth decrease, curly and/or mottled leaves, yellow to brown leaves, wilting and even a tree death. Aphids are very easy to spot because they look like deposits of small white/brown tubers on both sides of the leaves and especially on young and new leaves. With a naked eye and also with a magnifying glass it is possible to see the aphids themselves.

Look for the curly young leaves of your Plumerias and carefully check both sides of the leaves.

Care:

1. Spray the leaves with cold water to remove the aphids.
  2. Wipe the leaves with a cotton swab soaked in a solution of Neem oil with dish soap to remove the aphids.
  3. Prune the infected leaves and remove it from the garden.
  4. Spray the leaves on both sides with a neem oil solution (see pesticides chapter).
- Repeat spraying every day/two days for one to two weeks.
5. In extreme cases of massive aphids attack, spray with a organic pesticide and follow its contraindications.



Copyright © Avi Schneor

Image 28: Curly Plumeria leaves infected by Aphids

# How to grow Plumeria from cuttings by Avi Schneor

Copyright © Avi Schneor



Copyright © Avi Schneor

Image 29: Aphids tubers on a Plumeria leaf



Copyright © Avi Schneor

Image 30: Aphids in action on Plumeria leaf

# How to grow Plumeria from cuttings by Avi Schneor

Copyright © Avi Schneor

## 8.5. PESTICIDES: <[BACK TO CONTENTS](#)>

There are many high cost pesticides in the market.

Instead of using aggressive, poisonous and unfriendly to the environment pesticides, you can use a simple, inexpensive and effective home-made pesticide that proves to perform well on mites and other Plumeria pests.

### Formula to produce 1 liter / 1 Gallon solution of home-made pesticide:

#### Ingredients:

Total volume:	~1 liter	~1 Gallon (3.78 liter)
Water	1 liter	1 Gallon
Baking soda powder	1 teaspoon	4 teaspoons
Hand dishwashing liquid soap	1/2 teaspoon	2 teaspoons
Neem oil (*)	2 teaspoons (10cc)	8 teaspoons (1.3 Ounce)

(\*) Neem oil is extracted from the fruits / seeds of Azadirachta Indica tree and acts as a repellent, among other things.

#### Preparation and Use:

Add the ingredients to 1 Liter / 1 Gallon of water, mix well and spray a fine mist over the leaves on both sides. Preventative spraying can be done once a week or two and you are guaranteed to have pest free Plumeria.

#### Tip:

Because oil floats in water, it is recommended to shake well the solution in sprayer before each use. Prior to performing the pesticide spraying, wash the leaves and irrigate your Plumeria as needed.

# How to grow Plumeria from cuttings by Avi Schneor

Copyright © Avi Schneor

## 9. NOTES AND TIPS: <BACK TO CONTENTS>

### 9.1. SEASONS / TIME OF THE YEAR IN ISRAEL ~29.495-33.080° N, ~34.285-35.125° E AND GROWING PLACES (\*)

(\* may differ in other places around the globe)

- **Autumn:** mid. September till mid. November
- **Winter:** mid. November till mid. March
- **Spring:** mid. March till end of May
- **Summer:** June till mid. September
  - Bud starts: beginning of April
  - Bloom starts: beginning / mid. May
  - Recommended pruning: end of winter while tree is dormant January-February

Best places to grow Plumeria in Israel:

Anywhere where temperatures does not drop below 7°C (45 F.) and with no frost.

You may grow Plumeria in colder areas as long as you transfer it to a greenhouse / warmer place during the Autumn and Winter. Many do so and plant their Plumerias in pots to allow easy seasonal re-location.

### 9.2. TAG MARKING <BACK TO CONTENTS>

**Type:** there are special tags made of plastic or metal for marking plants using a wire or pinning to the ground.

A cheap substitute will be disposable white plastic knives.

**Marking:** using a soft pencil is a better choice since marker pen tends to fade under sunlight.

**Tip:** A pencil needs a rough drawing surface. If your surface is smooth, sand paper it to get a rough surface.



Image 31: marking on a plastic wired tag + on cutting

# How to grow Plumeria from cuttings by Avi Schneor

Copyright © Avi Schneor

## Metal tags

Plastic tags has limited lifetime and it tends to dry and break up mainly because of sun radiation. For this reason many growers use metal tags (Aluminium mainly) which lasts for many years. Metal tags are not cheap to purchase and you can make it by yourself by recycle beverage cans.

Creating recycled metal tags is easy, just follow the steps ahead:

- Remove the can top and bottom covers with a sharp knife to get a cylinder. (Be very careful)
  - Cut the cylinder along its large side with scissors. Cut it in a straight line (use the can's printing as a guide).
  - Straighten the opened cylinder by rolling it in opposite direction.
  - Mark and cut the sheet to tags of your preferred dimensions. Use a knife or scissors.
  - Trim the tag edges with scissors or with a special paper corner punch.
  - Open 2 holes for the wire. Use a special hand punch or use a standard paper holes punch.
  - To write on the tag, use a ballpoint pen or any ball head small metal rod, press hard while writing.
  - Use a metal wire (e.g. plated copper) with 0.5mm-24 gauge or thicker to tie the tag to your Plumeria. Make sure the loop you make will allow future branch growth.
- Close the ends with a crimp wire end ferrule to get a professional loop closure.



Image 32: DIY metal tags made from recycled beverage cans.

# How to grow Plumeria from cuttings by Avi Schneor

Copyright © Avi Schneor

## 9.3. ROOTING HORMONE <[BACK TO CONTENTS](#)>

There are few rooting hormones in the market that comes in a form of gel or powder. Most of them will have **1-Naphthylacetic acid** as their active ingredient.

It is advised to use a compound that has anti-fungus additive. (usually **Thiram** = *tetramethyl thiuram disulphide*)



Image 33: example of a rooting hormone that includes Thiram

## 9.4. FERTILIZER <[BACK TO CONTENTS](#)>

To boost bloom, fertilize with Phosphorus rich fertilizer such as **10-50-10**.

Mid value is important and needs to be high.

Fertilizer formula # represents **N-P-K** (=Nitrogen, Phosphorus, and Potassium)

If you can't get that fertilizer, use the very common 20-20-20 fertilizer.

Growers also add Epsom salt (=Magnesium Sulphate) to their Plumerias fertilizing.

1 tablespoon per gallon (14.8 gr. per 3.78 Lit.) of water is recommended for monthly use.

# How to grow Plumeria from cuttings by Avi Schneor

Copyright © Avi Schneor

## 9.5. PERLITE <[BACK TO CONTENTS](#)>

Perlite for gardening is used as an additive to garden soil mixture or as bedding for growing plants. These white flakes, few millimeters in diameter, lightweight and water absorption capability allow control of water supply to the roots.

Perlite is a natural mineral product. Perlite is an amorphous volcanic glass that after high temperature heating of ~900 degrees Celsius (1652 F.) swells to about 20 times in volume and loses water stored in it.

This process created lightweight Perlite flakes used in agriculture.

Color of Flakes is Gray to White with high capacity of water absorption and slow release.

Perlite has many uses in industry, construction and agriculture.

You can acquire Perlite in nurseries, especially those who specialize in Hydroponic growing.

Perlite is sold per volume unit.

Since Plumeria is sensitive to excess of water, perlite is an important soil additive that allows better storage and release of water per roots requirements.

### Tip:

1. Buy only real Perlite, not Polystyrene flakes that does not absorb water.
2. Buying a large bag of Perlite has better cost per volume ratio comparing to a small volume purchase.



Image 34: Perlite #3 flakes

# How to grow Plumeria from cuttings by Avi Schneor

Copyright © Avi Schneor

## 9.6. CREATING A TRANSPARENT CONTAINER FOR ROOTS GROWING <[BACK TO CONTENTS](#)>

Using a recycled 1.5/2 liter transparent bottle of mineral water for example is handy, easy to prepare and saves space as you can gather many bottles in a relatively small space.

Using transparent bottle will allow root progress observation without removing of the cutting.

How to prepare:

1. Cut a bottle with scissors / sharp knife along its neck where it starts to narrower.
2. Punch 6 or more ~5mm (0.2") diameter holes in the bottom of the bottle for drainage.

Use a driller or a very hot nail/pin to puncture the bottom surface of the bottle.



Image 35: punching drainage holes on bottom.  
red rubber is used to isolate heat from reaching plier

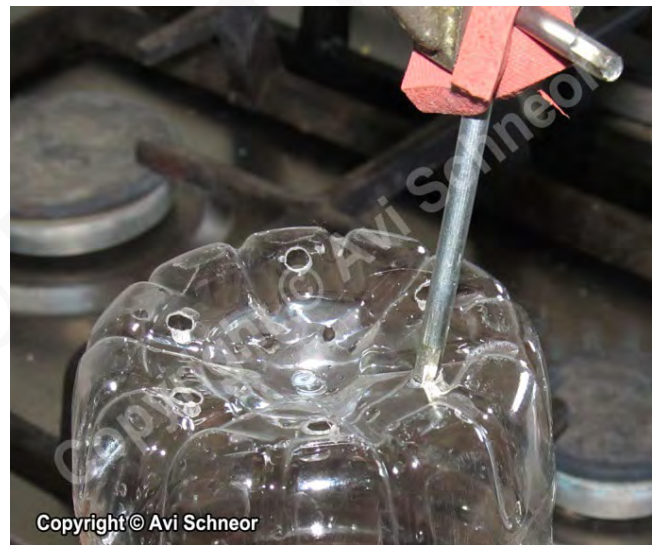


Image 36: closer view of bottom holes

# How to grow Plumeria from cuttings by Avi Schneor

Copyright © Avi Schneor

## 9.7. WATERING <[BACK TO CONTENTS](#)>

Plumeria, like every other plant needs water in order to thrive, grow and flourish.

### How do you know if watering is needed?

Insert your finger into the soil and feel if it is dry or wet, OR use a moisture gauge.

There are few in the market that operates with electric battery or without a battery.

Gauges usually come combined with a PH meter, sun intensity meter, temperature meter and more.



Copyright © Avi Schneor

Image 37: Samples of moisture gauges

### When should we water?

When soil is dry, and only in the growing season, from spring to autumn.

It is recommended to water in early morning to avoid quick evaporation.

Please note, from mid autumn to spring no watering is needed. The plant is in dormant phase.

### What needs to be watered?

The pot surface or around the tree that is planted in the soil.

It is also important to spray water on the top and bottom part of leaves to supply moisture and remove dust and pests.



# How to grow Plumeria from cuttings by Avi Schneor

Copyright © Avi Schneor

## How often to water?

Once a week in average weather.

In very hot weather, above 30 Celsius (86 Fahrenheit) I water twice a week.

## How to water?

**Manually**, with hose or watering can.

Water in a circular motion around the stem until water starts to drain. This should take few seconds if you use a good drainage mixture. Go to the next tree or wait a while and water it a second time until it drains again. This will ensure that the whole pot's volume is watered and that the Perlite absorbed water as well.

**Automatic/Semi-Automatic** with drippers and/or sprinklers that are operated manually or by a controller.

This method is more suitable for large gardens and for trees planted in soil.

Use drippers according to its specified flow rate.

Using a 4 Lit/H dripper twice a week for an hour and a half to two hours is satisfactory based on my experience, of course you should adjust it based on your conditions and location.

Drippers usually (based on manufacturer) comes with color code:

- |         |                  |
|---------|------------------|
| 1 Lit/H | = Brown / Yellow |
| 2 Lit/H | = Red            |
| 4 Lit/H | = Black / Gray   |
| 8 Lit/H | = Green          |

# How to grow Plumeria from cuttings by Avi Schneor

Copyright © Avi Schneor

## 9.8. SOIL COVERING <[BACK TO CONTENTS](#)>

After planting/replanting it is advised to cover the soil for the following reasons:

- Reduce evaporation and thus saving watering.
- Restrain direct sun radiation.
- Prevents soil spilling while watering, especially if done with a hose or sprinklers.
- Prevents seeds from sprouting. Soil contains seeds and if supplied with water and light it will sprout. Since soil covering restrain light, most of the seeds will not sprout.

### What covering should be used?

**Tuff/Gravel stones** (size and color varies) OR **wood chips** can be used.

Wood chips comes in different sizes and colors, disinfected or non-disinfected, all according to your needs and budget.

Those who seek ecologic, sustainable and cheap solution, might use:

**Mulch** - Try to find dry and free of seeds as possible mulch and made from one kind of a tree.

**Bark chips** - Bark shed from various trees can be used. I have tested bark of Pine and Eucalyptus and my Plumerias are happy with both.

Collect bark that naturally fell and crash it by hand to get chips of your desired size.

Do not peel bark from a tree by force as it might damage the tree.

### How much to apply?

Cover the soil around the tree with at least half to one inch (~1-3 cm.) thickness of wood chips.



Image 38: Soil covering with Tuff



Image 39: Soil covering with Eucalyptus chips

# How to grow Plumeria from cuttings by Avi Schneor

Copyright © Avi Schneor

## 9.9. SUNBURN DAMAGES <[BACK TO CONTENTS](#)>

Plumeria and especially young trees are sensitive to direct sun radiation and might develop sunburn in some places. Sunburn damages appear on the tree side facing the sun and look as Brown/Orange, corrosion like color local stain/s. Severe damage might show as missing of bark and even internal destruction that may cause the branch to break.

It is possible to protect and prevent sunburn damages by applying designated paint and paint the stem and branches. The paint, which is White in color, reflects UV radiation and is said to also repel insects, infections and even rodents. Use only designated paint for trees. **DO NOT use wall paint!**

There are few commercial paints in the market, such as for example 'Tree Trunk White' which contains Titanium Dioxide and is said to be "Non-toxic formula". Read its SDS document prior of using it.

Make sure to protect your hands and eyes when you paint. In case of skin or eyes paint contact, was it thoroughly.

Read the paint instructions and dilute it as required. Painting is done with a brush or a roller.

When applying the paint it will look somehow transparent, but after it dries out, it becomes opaque and bright White.



Copyright © Avi Schneor

Image 40: Light sunburn stains

# How to grow Plumeria from cuttings by Avi Schneor

Copyright © Avi Schneor



Copyright © Avi Schneor

Image 41: severe sunburn damage



Copyright © Avi Schneor

Image 42: Plumeria with sunburn painted protection

# How to grow Plumeria from cuttings by Avi Schneor

Copyright © Avi Schneor

## 9.10. DECAY DIAGNOSTICS <[BACK TO CONTENTS](#)>

Plumeria branches decay is inevitable and is found in mature trees as well as in young trees and cuttings.

Diagnosing decay may be done by using 3 main methods:

### A. Visual and squeeze test:

Gently squeeze a branch/cutting on both sides.

**Healthy branch/cutting** will be stiff with very little flexibility. (the younger the flexible it will be). It will appear as Green in Spring/Summer and Gray/Green in winter. Texture will be relatively smooth and tend to look shiny.

**Sick/rotten branch/cutting** will be mushy, it might look green but will be shrunken and wrinkled. This might suggest it is rotten.

On mature/old trees the branch will be very hard, dry, will tend to crumble with colors of dark Brown to Black.

### B. Internal test with a nail:

Prick the branch/cutting with a bright color nail or any other small diameter tool with sharp edge.

Using a bright color allows review of the nail after it is pulled out to see if it has any residue on it.

Disinfect the nail with Alcohol before you start.

If the prick point drips SAP, the branch/cutting is probably healthy. In no SAP is dripping, further investigation is needed.

The level of the nail penetration force can suggest internal dry/rotten layers.

Examine the nail when you pull it out, if it has Brown/Black powder/paste on it, this suggests of a rotten branch.

Protect your hands and eyes when working with sharp objects.

Do not use tooth stick as it tend to break, split and may harm you.

SAP is said to be poisonous, protect your skin and eyes and in case of contact, wash it thoroughly.

This test method should be considered as preliminary test and not a very accurate one.



Image 43: Prick a branch/cutting with a nail



Image 44: Dripping SAP

# How to grow Plumeria from cuttings by Avi Schneor

Copyright © Avi Schneor

## C. Internal test through cutting:

This is the most accurate method for decay detection and will allow quick treat.

A vertical cut is made to the branch/cutting with a very sharp knife or a pruning saw.

It is advised to work against a wood block that acts as a contra to the cutting force.

Protect your hands and eyes when working with sharp objects.

When making a cut, SAP may drip from the cutting area.

SAP is said to be poisonous, protect your skin and eyes and in case of contact, wash it thoroughly.

Clean your cutting tool with Alcohol after each cut to prevent infection transfer to the next cut.

If you find any Brown/Black areas in the cutting surface, these are signs of decay. It should be handled right away as it tends to spread downwards to the stem.

Efficient treatment is done by removing rotten and/or dry branches up to the point where it is healthy.

Continue to cut slice after slice until you reach a Green/White cut with no traces of Brown/Black areas, this is a healthy point and there is no need to further cut the branch.

Seal the cut on the tree with a special tree sealant paste, DAP, Cinnamon paste or a mud paste.

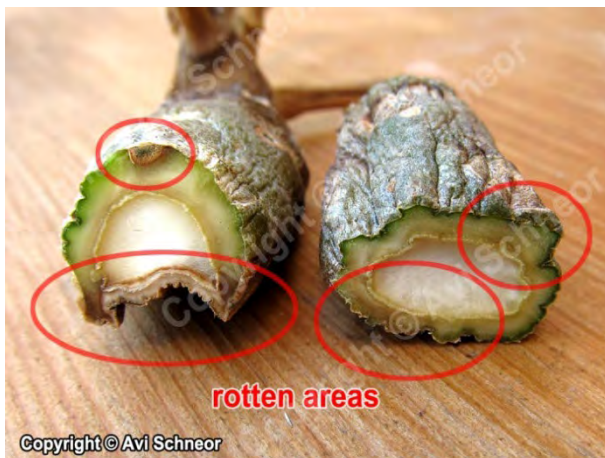


Image 45: A cut with decay signs

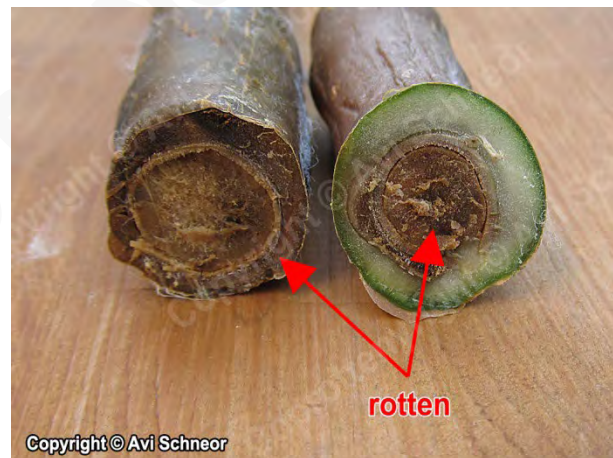


Image 46: A cut with severe decay signs



Image 47: A healthy cut



# How to grow Plumeria from cuttings by Avi Schneor

Copyright © Avi Schneor

## 10. ACKNOWLEDGMENT: <[BACK TO CONTENTS](#)>

Growing Plumeria from cutting is quite a simple task which brings joy, fantastic view and scent and all this in a relative low cost.

Following a Plumeria growth along seasons changing is fascinating and taking care of it is challenging, intriguing and enjoyable process for the whole family.

Plumeria can grow in any pot or garden and almost anywhere with tropical and hot weather.

If you'll stick to this growing process, rest assure you'll enjoy the results in a few months.

In case it did not succeed, it is OK, this is a trail and error process. Start over and perhaps take a different approach.

Don't forget, the most important key phrase in Plumeria growing is **patience**.

I wish you enjoyable growing process, marvellous blooms with great scent and pleasure.

*Avi Schneor*

[avi\\_diy@schneordesign.com](mailto:avi_diy@schneordesign.com)

Copyright © Avi Schneor

This guide is protected by copyright laws. You may freely forward it for reading only!

Do not modify nor publish this guide in whole or in parts in any media without prior written consent of the author.