

GYPSOPHILA MOTHER STOCK PROPAGATION

PLANT PRODUCTION

ROOTING MEDIUM

Gypsophila cuttings can be rooted with much success in a range of rooting products.

Various plug trays can also be used, filled with peat mixture and the addition of medium, which improves aeration.

Should there be a need to root cuttings in medium, which does not contain organic matter, a mixture

of Vermiculite and thin Perlite (no. 2) can be used.

PLUG SIZE AND ROOTING DENSITY

There are various varieties in Gypsophila, differing in their growth habit and leaf size. Some of the varieties are compact and tend to produce a smaller cutting while others are bigger.

The plug size is chosen according to the size of the cutting. We use large plugs (diameter 35 mm) for varieties that tend to have relatively large cuttings, and are rooted at density of 400 cutting per m. While for varieties which tend to produce smaller cuttings, we use plugs with diameter of 25 mm, at density of 480 cuttings per m. For million stars we the density is 650 cutting per m.

ROOTING TEMPERATURE

The prevailing temperature during the rooting process is of great importance in setting the homogeneity and pace of roots' growth. Night temperature especially is of great importance. The recommended temperature in order to attain quick rooting is 18⁰C. The recommended day temperature is 24-26⁰C.

It is possible to produce Gypsophila plants also under a minimum temperature of 13⁰C, but then the rooting will take longer, will be less uniform and will require more work in sorting of the plants.

LIGHT INTENSITIES

During winter, cuttings are to be exposed to maximum light intensities while rooting. During the hot season, the rooting greenhouse is to have higher shading than that of the mother stock.



Extreme light intensities during rooting may cause a decrease in quality of the plants. During summer we shade the rooting cuttings at level of 60-70% shading.

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ROOTING HORMONE

Adding rooting hormone to the base of the cuttings, which have difficulty in rooting, speeds up their rooting and improves the homogeneity of the rooting. We use IBA hormone in the form of powder, at a concentration of 0.3% - 0.8%

The cuttings are to be dipped in the hormone just before rooting. Leaving the hormone applied to the base of the cutting for a length of time (days) causes the base to become softer and damages the cutting and rooting process.

MISTING

In order to succeed in rooting Gypsophila cuttings it is of great importance to prevent the cuttings from becoming "tired" (turgor loss). This can be avoided by regulating a misting system, which will ensure that the amount of moisture in the foliage will be sufficient to prevent the cutting from losing turgor. Misting is applied according to the progress made with rooting process. During the first days it is important to maintain continuously moist foliage avoiding loss of turgor and "tired" cuttings. During the more progressive stages of the rooting, foliage can be maintained with partial short dry periods without having the cuttings become "tired". The more progressed the rooting stage, the longer the periods that the foliage can remain dry.

Despite the importance of maintaining the cuttings' strong turgor during the entire process of rooting, it is very important not to overdo the misting, since an excess of moisture in the foliage can result in damaging the quality of the plant. The plant may become yellowish, elongated and suffer from disease symptoms.

The pulse duration of the misting should only be enough to wet the leaves. During the first days after

planting the cutting, misting should also be carried out a number of times during the night.

PLANT PRODUCTION TIMETABLE

The time necessary for plants to develop a sufficient amount of roots in order to market is between 17 - 25 days from time of planting, at minimum night temperature of 18⁰C. At minimum temperature of 13⁰C its take 5 weeks.

It is recommended not to delay the marketing of the finished plants, since a delay can cause a decrease in the quality of the plant, especially in the summer when the plant tends to become elongated.

HARDENING

When most of the cuttings have developed a sufficient amount of roots, misting can be stopped altogether, and you can begin to water the plants with the addition of fertilizer once a day during noon.

When misting is not applied anymore, it is recommended to gradually decrease the levels of shading in order to let the plant become used to the conditions that it will be exposed to at the grower.

Implants irrigation program -

Autumn/Spring		Summer			Season	
Interval (minute)		Interval (minute)	Pulse (seconds)	Time	Days from implant	
					group 1	group 2
15		12	6	7.00-9.00	1-4	
8		7	6	9.00-17.00		

14		12	6	17.00-19.30		1-3
120*		120	6	20.00-7.00		
18		15	6	7.00-9.00	5-8	4-6
12		10	6	9.00-17.00		
18		15	6	17.00-19.30		
120*		150	6	20.00-7.00		
27		22	6	7.00-9.00	9-12	7-12
18		15	6	9.00-17.00		
24		20	6	17.00-19.30		
240*		240	6	20.00-7.00		
30		25	6	7.00-9.00	13-18	13-20
25		20	6	9.00-17.00		
30		25	6	17.00-19.30		
			6	20.00-7.00		
140		120	60	7.00-9.00	19-end	21-end
140		120	60	9.00-17.00		
140		120	60	17.00-19.30		
0		0	0	20.00-7.00		

*If the rooting table is heated then interval should be 1 hour max

Group 1- XLenece ; White fire; New Love

Group 2- Million Stars; Galaxy

This plan is good for the Israeli conditions. You should adjust the plan to yours. At cold nights avoid misting.

PACKING THE PLANTS

Plants should cease to be watered one to two days before the date of packing, in order to allow the medium to become partially dry.

We pack the plants in a carton box, placing a nylon cover on the bottom of the box (to avoid the box from getting wet) and on top of the nylon we place the plants close to each other.

DISEASES

PYTHIUM

We encounter Pythium only during summer.

Pythium causes moist rot in the cutting, spreading very quickly from one cutting to the other. When discovering an infested point, it must immediately be removed and the area is to be disinfected.

In order to avoid the possibility of this fungus from penetrating the growth, excess watering during the rooting stage is to be avoided. Care should be taken to decrease the misting level in accordance with the developing roots.

In addition, preventive spraying should be carried out against this fungus.

***The recommendations herewith are based on growing conditions in Israel.**

WE HOPE YOU FIND THIS INFORMATION HELPFUL.

THE CULTURAL INSTRUCTIONS PRESENTED HERE, SHOULD BE REGARDED AS GENERAL GUIDELINES.

IT IS ADVISED TO MAKE NECESSARY ADJUSTMENTS WHEN GROWING IN DIFFERENT CLIMATIC CONDITIONS AND AGRICULTURAL PRACTICES.

DANZIGER DAN FLOWER FARM IS NOT RESPONSIBLE FOR ANY DAMAGE CAUSED BY IMPLEMENTATION OF THE RECOMMENDATIONS.