

# Rose cultivation guide

This rose cultivation guide is made by;

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**PREESMAN B.V.** is also a breeder of, Alstroemeria,  
Chrysanthemum, and Gerberas.

**Although we trust that this cultivation guide will be of considerable help to the success of the crop, we cannot accept any liability for the results of your crop. All the information in this guide is without committing ourselves.**

# Rose root problems

As you know it is very important to have white root development.

The following items can cause a bad root system:

- 1. Bad water management (too much and/or too frequent).**
- 2. Bad drain system (wet spots) (water logging).**
- 3. Wrong pH and or EC.**
- 4. Wrong fertilizers, too much or too less of some elements.**
- 5. Diseases (Pythium, Phytophthora, Cylandrocarpon, Cylandrocladium, Fusarium).**
- 6. High root temperature, which causes Phytium and Phytophthora.**
- 7. Unhealthy crop (spider mite infection or other crop diseases).**
- 8. Not enough green leaves !!**

If the roots are not healthy the stem length will decrease, the bud size will be smaller, the leaves will be smaller, the colour of the flower can change, the crop will show deficiencies, leaves will become yellow and will drop and the crop will be more sensitive for pest and diseases.

## **1. Bad water management (too much and/or too frequent).**

**The total drain amount during the day has to be  $\pm 35 / 50$  %.**

**During the first cycle in the morning (1 / 1,5 hour after sunrise) there should be no drain.** If you have drain during the first cycle you stopped too late or you give too much water per cycle.

The total amount of water per m<sup>2</sup> per day will be between 4 and 10 litre (if there are a lot of leaves). If the flush is gone or the crop is not very healthy or the evaporation is low (high humidity), it might be enough to give 3 till 4 litre of water per m<sup>2</sup> per day. The minimum amount per cycle has to be about 100 ml per plant (about 600 ml / m<sup>2</sup>) (about 600 litre per 1000 m<sup>2</sup>.) Between the cycles the coco peat or rock wool can dry up a bit. This is important for the amount of air (oxygen) in the substrate. If you are giving a small amount per cycle, you have to give a lot of cycles to realise 50% drain. After each cycle to substrate is maximum wet so each time the amount of air in the substrate is low.

It is better to give less cycles and more water per cycle.

If the flush is gone or the crop is not healthy (less evaporation), and you keep on giving the same amount of water, you will see that the drain % will increase. If the drain is above 50 %, you have to reduce the amount of cycles (stop earlier) or reduce the amount of water per cycle.

During the night the plant does not assimilate and does not evaporate a lot. For this reason you should not give any water during the night. The roots have to be drier during the night. **Stop giving water about 3 till 4 hours before sunset.**

## **IT IS VERY IMPORTANT TO MEASURE THE AMOUNT OF DRAIN PER CYCLE.**

This is your guide for the water management.

During the data collection you can think about the following items:

Do you see difference between the crops/varieties in drain amount?

Do you give the same amount of water to all the varieties?

Do you give the same amount of water also when the flush is gone?

When do you start giving water? When do you stop?



Aliette                                      root treatment                                      4 kg / ha.

The amount of water per treatment per plants has to be about 100 / 150 ml.

This treatment you have to do 3 times with 5 days in between.

If the weather condition are bad (hot), and the problems are staying, you can repeat the above-mentioned treatment ( 3 times with 5 days in between) with one of the other mentioned chemicals after some weeks.

If the roots become white (healthy) you can give a preventive treatment every 2 or 3 weeks (one treatment)

**If you treat the plants you have to be sure that the plant is thirsty. Before treatment stop giving water. After the treatment you should not give water for half a day. You can give the treatment early morning or instead of the last drip cycle.**

Against Fusarium and or Cylindrocadium it is also good to treat the roots with a benzimidazol fungicide. You can use:

Bavistin	(carbendazim)	200 ml in 100 litre water ( 4 kg / ha.)
Carbendazim	(carbendazim)	200 ml in 100 litre water
Topsin M	(thiophan-methyl)	400 g in 100 litre water ( 4 kg / ha.)
Benlate	(benomyl)	200 g in 100 litre water
Benomyl	(benomyl)	200 g in 100 litre water

You can use these chemicals together with the Aliette or Previcur N.

**The concentration of the chemicals in India can be different. Read the instructions of the chemicals.**

#### **6. High root temperature, which causes Phytophthora and Phytophthora.**

Root temperature should not be above 25 C. For this reason it is very important to cover the stock tank with a roof (it has to be able to ventilate).

#### **7. Unhealthy crop (spider mite infection or other crop diseases).**

#### **8. Not enough green leaves !!**

A bad root development can also be caused by an unhealthy crop. Infection of insects, fungi or other diseases will decrease the amount of green leaves. A low green leaf amount will cause bad growth of leaves and roots. A low leaf amount can also be caused by harvesting too much stems.

It is important, if you have problems, to find the solution. Keep on doing trials/tests on a small scale to find out how to solve the problems.

If you have any questions, please let me know.

Success

With kind regards

Jan Schuttrups

