

Anthurinfo

17E JAARGANG | NR.2 | APRIL 2009

VARIETIES

Soutine®

A newcomer to the selection of medium-flowered Anthurium pot plants. This variety is a real 'work of art'. Soutine® is a strong-growing, exuberantly-flowering pot Anthurium. This expressive variety with lots of pink flowers and beautiful dark pink spadices is particularly suitable for 14 cm pots, although it also grows well in a bigger 17 cm pot size.

The pink colour of Soutine is sophisticated and soft, giving the plant a pretty appearance. The beautiful glossy leaves attract a lot of attention. The older flowers retain their colour and fading is minimal, so you can enjoy this Anthurium pot plant for a long time. Soutine fits perfectly in a soft colour mix with white and mint green.



Soutine®

Kansas City®

Phalaenopsis is popular in Holland and abroad. The exclusive origin and the long shelf life make it a very popular plant. White is favourite, yet the colourful newcomers are a welcome surprise and Kansas City® is a good example of this.



Kansas City®

No sparkling red, but pink for the largest city of the American state of Missouri. Kansas City is known for its numerous fountains. There are more than 200 and it is claimed that only Rome has more fountains. Thanks to its elegant flowers,



An impression of Anthura Flower

Kansas City perfectly embodies the wealth and luxury of this fountain city.

The flowers of Kansas City have a velvety appearance, a strong pink colour and a red lip. The eye-catching flowers are 9.5 cm in diameter. The plant height is around 55 cm and this Phalaenopsis is suitable for 12 cm pots.

If you would like to meet the increasing need of your buyers to sell per variety instead of in a colour mix, then Kansas City is very interesting for you. This large-flowered Phalaenopsis pot plant is extremely suitable for selling per variety.

INTERVIEW

With Arie Vreugdenhil manager of Anthura Flower

Anthura Flower is the demonstration greenhouse with 185 different cut flower varieties of Anthurium, that gives our slogan 'Unlimited in varieties' a face.

Can you introduce yourself?

I have always been interested in horticulture, so I studied at the Higher



Arie Vreugdenhil harvests Maxima Violeta®

Horticultural School in Utrecht. After finishing my studies, I started working in my father's carnation nursery farm. As the possibilities for growing carnations in the Netherlands decreased, I sold the company 10 years later. I was offered the opportunity to start working for Anthura as the manager of the Anthura Flower department. I have been working here for the last seven years.

What is the function of Anthura Flower?

In the breeding department of Anthura, hundreds of cross-fertilizations are made and tested on a small scale. Then, the interesting cross-fertilizations are tested on a larger scale at Anthura Flower. Anthura Flower makes it easier for customers to choose between varieties. Finally, practical tests are carried out at Anthura Flower.

Which aspects of the new varieties are tested?

Of each variety a bed is planted and during a minimum of two years we collect as much information as possible of each variety, such as production, shelf life, cold tolerance, optimal planting density, optimal cutting maturity and suitability for colouring (antique).

What happens with the cut flowers?

The flowers are sold at the auction house. In case of new varieties we probe the opinion of the market by sending trial boxes. We also ask the opinion of traders and florists on a regular basis. Of course, Anthura Flower also supplies the flowers for the trade fairs and demonstrations that Anthura attends. By assessing the reactions of the different links in the chain, it is easier to determine the possibilities of the varieties. It is also a good promotion for the Anthurium product in general.

When is it decided whether a variety is introduced?

Two years after a variety is planted, the collected information is analyzed and then we decide whether a variety is market-worthy. The varieties that score sufficiently on all aspects enter into the so-called green phase. From that moment, customers can order young plants of that variety. Anthura Flower currently has 108 varieties in the green phase of which 31 varieties are not included in the brochure nor have a name yet, they only have a number.

Which practical tests are carried out?

One of the most important developments in the cultivation is young leaf breaking. Together with Bureau IMAC, a large-scale test was set up at Anthura Flower in 2005. For an optimal comparison, both young leaf breaking as the traditional method of cutting leaves are applied to every variety. It brings up striking differences in production. Anthura Flower is also the first greenhouse in which the Diaphragm screen® has been installed on a large scale. We also perform tests with, for instance, different types of substrate and biological control of Anthurium.

Why is it a must for every grower to visit Anthura Flower?

Nowhere else in the world is such an extensive assortment of Anthurium as at Anthura Flower. For growers it is becoming increasingly important to be distinguishing in the market. This is possible by selecting varieties which are interesting for their own specific market. The Polish market, for instance, is quite different from the Dutch market. Further, new varieties can be compared alongside existing varieties. The choice is up to the grower.

Finally, which are your personal favourites?

Each time the breeding department breeds new and unique colours and shapes. I personally like the new varieties of Maxima Violeta® and Bellanca®.

Marco Knijnenburg

NB: Recently growers have been able to plant a small batch of plants of varieties in the green phase to assess the variety under their own conditions. Please visit the website www.anthura.nl and click on Future under the menu Varieties.

TRAVELLING ABROAD

In China

Anyone who remembers the television series 'The Freggles' also knows that they were very diligent and always busy, especially with building: real go-getters.

Wherever you travel in China, from the largest city to the smallest hamlet, there are people busy everywhere, especially in the construction industry.



Anticipating the demolition of a power plant, the construction of a new block of flats has already started...and finished.

China's highest building had hardly been completed (complete with a glass floor at an altitude of 490 metres!) when they had already started building a new and even higher tower just beside it. These construction works also take place at an unbeatable pace: 24/7. We also notice this mentality in our own company and with our suppliers, with the result that the renovation of our demonstration greenhouse or modifications are carried out in the company and executed in no time.

Yet there also lies a danger in the high speed and immediate execution of plans. It is not uncommon, for instance, that they skip stringent checks to judge if it is a good plan. This might end up looking good but can be a waste of energy and money. It appears to be, however, an unavoidable side effect of the rapid development of a country like

China, which has the nearly impossible task of raising the welfare level of 1.3 billion people before they get impatient. In order to achieve this, they have to roll their sleeves up and get down to business. The Chinese are go-getters, and that I like.

**Sander Smeding General Manager
Kunming Anthura Horticulture Co. Ltd.**

CULTIVATION TECHNIQUE

Disinfecting irrigation water for Phalaenopsis

In Phalaenopsis a number of bad bacterial diseases can occur: Acidovorax (Pseudomonas), Erwinia carotavora and Erwinia chrysanthemii. All three bacteria are quite contagious and can cause a lot of losses in a short time.

Bacterial diseases can spread by water and therefore it is of the utmost importance to work with clean water. Currently there are several methods in use which disinfect the irrigation water. In most cases, substances are added to the water which not only have a disinfectant effect, but can also control the existing infection in the plants. The products currently available on the market are chlorine dioxide (ClO₂), copper ions (Aqua hort) and hydrogen peroxide (H₂O₂) (Reciclean).

Chlorine dioxide

Chlorine dioxide is a gas that is produced from the substances sodium chlorite (NaClO₂) or sodium chlorate (NaClO₃) and hydrochloric acid (HCl). This gas is injected into the irrigation water by means of a reactor



Silos, rain pipes and tubes contain organic material on which bacteria and moulds can multiply themselves.



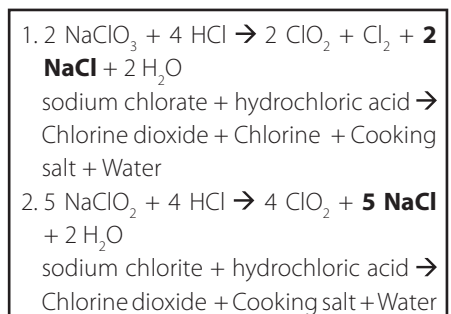
It is of the utmost importance to work with clean water.

vessel. There are a couple of companies that deliver such installations.

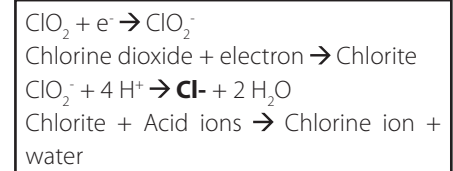
The effectiveness of chlorine dioxide on bacteria such as Acidovorax (Pseudomonas) is immense and has been proven in practice by several companies. The concentrations used fluctuate between 0.5 and 2.0 dpm. The use of chlorine dioxide will also dissolve the bio film in the pipes, taking away the culture medium of Fusarium and thus diminishing the infection pressure.

A disadvantage of chlorine dioxide is the increase of chlorine (chloride) and sodium in the feed water, clearly visible in the reaction equations below. Plants can resist concentrations of ± 0.5 to 1.0 mmol/l of sodium and chloride, but at higher concentrations this will affect their growth. In addition to this, the chlorine dioxide decomposes chelates in the feed water, such as iron and copper chelates. It also seems that the occasional spotted appearance of the leaf is caused by chlorine dioxide. Furthermore, it is not clear what the consequences of dosing are in the long run, so attention is required.

Reaction equations of the production of chlorine dioxide:



Reaction equations of the effect of chlorine dioxide:



Copper ions

In Holland, installations are sold under the name 'Aqua hort' which disinfect the water by injecting copper ions. This is achieved through a process called 'electrolysis'. By passing an electric current onto the copper plates in the water, Cu²⁺ (copper) ions are released and dissolved.

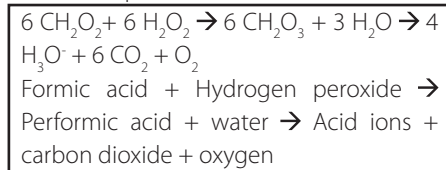
Copper ions have an effect on moulds such as Pythium and Phytophthora and, to a lesser extent, on bacteria such as Xanthomonas and Acidovorax (Pseudomonas). The copper ions damage the cell walls of the moulds, thus killing them. According to the manufacturer a dose of 0.28 dpm of free copper ions is required to achieve an adequate effect (source: KARO - Zwaagdijk). A positive side effect is that copper boosts the absorption of calcium and magnesium.

Hydrogen peroxide

There is a product on the market called Reciclean® that disinfects the water on the basis of hydrogen peroxide (H₂O₂, 35%) and formic acid (CH₂O₂, an organic acid). The active substance is performic acid (CH₂O₃). The residual products of performic acid are water, oxygen (O₂) and carbon dioxide (CO₂). Because oxygen is left in the water, it is assumed that this has a stimulating effect on the root growth.

The advantage of this method of disinfecting is that it does not add any harmful side products to the water, yet the disadvantage is its more limited effect: performic acid and hydrogen peroxide dissolve the bio film in the pipes and have no controlling effect on the plant afterwards, whereas chlorine dioxide does.

Reaction equation:



Conclusion

The three methods discussed are totally different with regard to the effects, each of them having its own advantages and disadvantages. Chlorine dioxide has the best effect on bacteria, yet the consequences in the long term are not clear. Aquahort is a simple system, yet its effectiveness in practice is sometimes disappointing. Reciclean® has the huge advantage that there are no residual products and that it does not show any harmful consequences after long-term use, though it is slightly less effective than chlorine dioxide.

Should you want more information about this subject, please contact Bureau IMAC Bleiswijk B.V.

Menno Gobielle
Bureau IMAC Bleiswijk B.V.

ANTHURVARIA

Anthura attendance at trade fairs from April 2009 to July 2009

Hortiflor Expo,
trade fair in Shanghai, China
01/04/09 – 04/04/09

Flowers & Hortech,
trade fair in Kiev, Ukraine
01/04/09 – 03/04/09

Hortitec, trade fair in Holambra, Brazil
10/06/09 – 12/06/09

News from China

In 2008 the Chinese government added the plant families Anthurium and Bromelia to the list of the UPOV Convention 78 (Protection of New Varieties). UPOV is an

intergovernmental organization for the world-wide protection of new varieties of plants by intellectual property rights. So now it is possible for breeders to use these rights to protect Anthurium and Bromelia varieties in China.

Anthura has taken advantage of this opportunity and has applied for protection of dozens of varieties. Formerly it was impossible to protect them and therefore Anthura was not selling its newest varieties in China. Now this situation has changed, Anthura will be expanding the market with new varieties.

In order to tempt Chinese customers to plant the new varieties, a new 5,000 m² large demonstration greenhouse has been built in Kunming, in which the new Anthura varieties and Bromelia varieties of Corn. Bak are being grown. At this test site, varieties for both pot and cut flower culture are grown in a typical plastic greenhouse under local conditions. This test site is a good example for local growers. The greenhouse consists of a double plastic film and an inner and outer protection screen. It is also equipped with a heating system installed by a local company and a Priva system, purchased at Priva China. The Priva system takes care of the irrigation and the air conditioning (completely in English and Chinese).

At this test site, not only the newest varieties are tested and displayed, but also training is given. Cultivation managers or farm managers can follow a training programme here. These programmes are not only limited to theory lessons, but the trainees also get a practical training. A successful training will be completed with a special diploma. There is a large interest for this training.



Several pot sizes in the demonstration greenhouse



A special Chinese edition of the Anthura brochure is now available.



Exterior of the demonstration greenhouse: double plastic film and an inner and outer protection screen.

COLOFON

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