

Cultivation Guidelines *Syngonanthus chrysanthus* 'Mikado' 



Introduction

This growing manual describes in short the growing of *Syngonanthus chrysanthus* 'Mikado'. Of course this concise handbook is not all-embracing and the cultivation is subject to new insights and techniques. For more detailed information about the possibilities of this cultivation you can contact Anthura B.V. For all your growth related questions the consultants of Bureau IMAC Bleiswijk B.V. are pleased to help you.

In case you are not familiar with the products of Anthura B.V. and the services of Bureau IMAC Bleiswijk B.V., please consult the enclosed introduction of both companies.

Introduction 'Mikado'

Syngonanthus chrysanthus 'Mikado' comes from the family of the Eriocaulaceae. 'Mikado' grows under (sub)-tropical circumstances. The plant consists of a green rosette, where in time an inflorescence is formed, characterised by bold stems with white/yellow pin-head flowers. 'Mikado' is bred by Corn. Bak Bromeliaceae B.V. and Anthura has obtained the world-wide selling rights.

'Mikado' grows best at a temperature of 19-22°C and a relative air humidity of at least 70%. Because of its origin as a swamp plant 'Mikado' grows best under humid circumstances. Keeping the pot moist continuously is essential for a good growth. As soon as the plant gets dryer circumstances, the plant stops growing and dies.



The flower buds have a golden colour



'Mikado' pin-head flowers

Planting material

'Mikado' does not develop into a plant with a big diameter and therefore it is extremely suited for the smaller pot size. The planting material is supplied as plug and can directly be planted in a final pot of 9 to 12 cm. Upon arrival the youngplants must be unpacked and must get acclimatised under growing circumstances. Then they can be potted. When potting it is important that the plants are planted upright, in the middle and at the right height. Planting too deep has as disadvantage that the growing point is more susceptible to fungus. Too high planting gives a bad anchoring and the plant will stand unstable.

Besides, when potting it is important that one does not pinch the growing point too hard. This may lead to deformity of the leaf or definitive damage of the growing point.



Tray with 'Mikado' plugs



Potted plugs

Cultivation plan

'Mikado' can be planted in a square or triangle form, depending on the pot size. By setting the pots in the above-mentioned connection the microclimate around the plants is better. The cultivation of 'Mikado' goes pretty fast; the plant is ready for delivery within 18-26 weeks, dependant on the time of year.

Substrate

'Mikado' grows best on a substrate which is sufficiently airy, but that can retain enough water. A good substrate is for example Pindstrup Type: Lettish soil with a pH-value of 3.9, no calcium, no basic fertilization (PG mix) and a size of 5-20 mm. Since 'Mikado' is very sensitive to salting the adding of fertilisers (with the exception of dolokal) is not necessary.

Irrigation system

Irrigation with fertilised water from beneath is preferred (depending on the time of year once per two weeks) and in addition one or twice a week (depending on the season) from above with clean water. When irrigation from beneath is not possible, irrigation from above only will be enough (then once per two weeks with EC). The water must be free from chemical and visible contamination. Elements as sodium and chloride must stay under 50 mg/lit. and also the bicarbonate may not be too high. For lack of good water osmosis water has to be used. The quantity of water is dependent on the climate, the substrate and the age of the plants. The system must be suited for a release of 5 lt./m².

Fertilisation

In the cultivation of 'Mikado' both mix fertilisers like a system with an A- and B-tank and singular fertilisers can be used. The table below shows which feeding nutrients 'Mikado' needs in the irrigation water. Bureau IMAC Bleiswijk B.V. can help you with a tailor-made fertilisation scheme.

Main element			Micro element		
Feeding element	mmol/lit.	dpm/mg/lit.	feeding element	µmol/lit.	dpm/mg/lit.
NH ₄ ⁺	0.5	9	Fe ⁺⁺	15.0	0.84
K ⁺	5.0	196	Mn ⁺⁺	3.0	0.17
Ca ⁺⁺	2.8	112	B	10.0	0.11
Mg ⁺⁺	0.8	19	Zn ⁺⁺	3.0	0.20
NO ₃ ⁻	8.0	496	Cu ⁺⁺	0.8	0.05
S ⁻	1.6	51	Mo	0.8	0.08
P ⁻	1.5	47			

The EC gift lies around 0.4 and 0.6 mS/cm. The first two water gifts after potting can best be done with an EC of 0. The pH may vary between 4 and 5. In the pot an EC of 0.3-0.4 is a good value, at which a plant with a good leaf colour can be grown.



A good root system



'Mikado' on tables

Climate

'Mikado' is a tropical plant. So temperatures under 14°C and above 30°C must be avoided. For a good growth an average temperature of 19-22°C must be pursued. At a light level of 15,000-30,000 lux 'Mikado' is grown best (for instance in combination with Anthurium). When the relative air humidity is too low, the photosynthesis will be lower. A too high air humidity however gives a chance of problems with fungus. Nevertheless, it is important that at higher light levels also more moisture is present. In countries with higher air humidity, a higher day temperature and a higher light level are acceptable. One should aim for an air humidity between 60 and 80%. When an air moisturising system is used, it is important that the plants do not become too wet.

In tropical countries a shade net of 75% is needed. It is better to use two shade nets, namely a fixed screen of 40% and a second moveable screen of 60%. This moveable screen can be closed in dry periods and on midday to prevent high peaks of light shining.

On locations with much rain, it is advised to use a plastic screen. The plants will be dryer then and so less problems with diseases (fungus) will occur. Another advantage is that the fertilisers can be flushed away less easily, so that the feeding condition in the pot is more stable and the plant grows quicker. For a constant temperature and a good air circulation a greenhouse height of 3-4 mt. is advised.

Diseases and plagues

'Mikado'[®] is, just like other crops, sensitive to pest and diseases. The following diseases and plagues can be found:

- Aphids, to be controlled by Pirimor.
- Florida moth, to be controlled by Conserve, Spod-X and Nomolt.
- Duponchelia moth, to be controlled by Turex.
- Sciara larvae, can be found in the growth point of the plant, to be controlled by Nomolt. Preventively after potting Hypoaspis (100/150 m²) and Steinerrhema nematodes can be set out.
- Also the fungus Myrothecium roridum can attack the plants.

Sales

The plants are ready for sale when the flowers are sufficiently developed and five flowers start to colour white. This way of delivery provides a good growth of the plant at the consumer. It is important for a beautiful growth that the consumer keeps the plant sufficiently wet. When the plant is delivered with closed buds, no further growth of the plant will take place. During transport it is important that the temperature does not fall below 10°C.



'Mikado'[®] ready for sale

Conclusion

We hope that these brief cultivation guidelines will have given you an insight into the cultivation of 'Mikado'[®] pot plants. Although their cultivation is a specialized operation, it is certainly feasible provided that a number of conditions are met. Growers who fulfil these conditions will be rewarded with a beautiful plant that can readily be kept in a good condition, and which deserves an excellent place in the market. You are welcome to contact us should you have any additional questions, or require a further explanation of any issues.

Anthura and Bureau IMAC Bleiswijk BV cannot be held responsible in any form whatsoever for possible damage to the plants because of the given advice. However, on our part we cannot guarantee certain results, because there are many factors, which we cannot influence and control.



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Introduction Anthura B.V.

Anthura B.V. is the world market leader for planting material of Anthurium for pot plant and cut flower culture with greenhouses covering 14 hectares. Besides Anthurium we specialise in the breeding, selection and propagation of Phalaenopsis for pot plant and cut flower culture. Bromeliad completes our current product assortment, and we are happy to offer growers abroad planting material from Corn. Bak B.V. From a growers perspective all of these products are compatible and in many countries are cultivated next to each other. At the establishments in the Netherlands (Bleiswijk) are 180 workers employed and at the establishment in Germany (Borken-Burlo) are 55 workers employed.

It is important that before you begin planting you are thoroughly acquainted with the various husbandry methods we recommend here. This will enable you to make a good start and allow your crop to realise its full potentials. Additional information can be sought through our visiting representatives and agents as well as from the independent consultant agency Bureau IMAC Bleiswijk B.V. Alternatively you can contact the Anthura Sales department.

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Introduction Bureau IMAC Bleiswijk B.V.

IMAC consultants are well educated individuals equipped with a great deal of practical experience gathered at home and abroad and dedicated to your success and ultimately to our own. Consequently there is a great deal of information exchange between our respective organisations upon which growers may call.

Because of our small-scaled mode of operation and a good consultative structure within our walls we keep each other well informed about the developments in the various cultures. Owing to the unique co-operation with Anthura a broad exchange of knowledge takes place between both companies without affecting the independence of IMAC. The activities of IMAC are not limited to the Netherlands only. Many foreign growers make use of the services of our consultation agency. Because of this international character the IMAC consultant is able more than anybody else to get the most out of your cultivation under your specific circumstances.

Activities of IMAC services world-wide include: advice on cultivation and management, support of study groups, fertilisation analysis and advice, studies in the fields of plant disease, business economics, plant evaluation and pot plant planning.

For more information, without obligation, please contact any of the following: Mr Ing. André Lont, Mrs Ir. Josien van Spingelen or Mr Ing. Albert van Os, consultants at Bureau IMAC Bleiswijk B.V.

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