FloraLife®
Research Update

September 2014

Efficacy of Floralife® Orchid Food Clear 300* on Phalaenopsis Stems

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Introduction

Orchid cut flowers are one of the most exclusive and costly flowers available on the market. Breeding new cultivars takes years. The main selection criteria Phalaenopsis breeders use are the numbers of stems produced per plant (the more the better), flower shape and colour, side branches (as few as possible), stem thickness and – firmness (as thick and firm as possible), pose of the leaves, ability to process (aim: to transport and pack them without mechanical damage) and the longevity of the stems (storage through vase life). The longevity of the stems is an important factor to focus on, as it can vary between 5 days and 6 weeks, depending on the cultivar.[1]

Cultivation is another time consuming and relatively expensive process, as one can only grow on average 50 stems per square meter per year. The plants need to be big enough, with good developed rooting systems in order to produce good quality stems (small plants or a poor rooting system results in shorter flower stems, smaller flowers, lack of longevity, and a plant that needs more time to recover). Naturally, plants start to develop flower stems in autumn, so that the first stems can be harvested in February / March. Nowadays, one is able to produce stems year-round by regulating temperatures and the amount of light. Using supplemental lighting improves the induction of new stems and flowers and results in less bud drop.[1]

Stems are harvested when all except one bud is fully developed. The usual way to pack the stems accordingly is by sticking each stem with tape in a carton box (25-30 stems per box) and protecting the vulnerable flowers with paper wool.[1] All of these investments need to be done to produce good quality stems with big flowers that draw in high prices. The average price a grower gets at the Dutch flower auction is about € 0,40 for each single flower, so that a stem with 10 flowers would cost € 4,00 when purchased at the auction.

Due to high costs, one expects a certain quality and longevity as important attributes of their purchase. Apart from the genetic properties, longevity can be influenced by flower food. Floralife developed a special Orchid Food and in order to find out the efficacy of this product on cut Phalaenopsis, a test was set up.

Method

CROP: cut Phalaenopsis

CULTIVARS:

1. Happy Valentina (purple/dark pink)
2. Alpha (light pink)
3. Sensation White (white)

TREATMENTS:

1. water
2. Floralife® Orchid Food Clear 300 liquid

Flowers were purchased at a grower, who freshly harvested the stems that day. After cutting all stems in air, the stems were put in vases with a use solution according to the experiment design. All three cultivars were mixed in each vase, three stems per cultivar.

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Results

Table 1: Vase life (in days) for each treatment.

Treatment	Alpha	Happy Valentina	Sensation White
water	10,9 b	25,4 a	8,0 b
Floralife® Orchid Food	24,4 a	23,9 a	21,7 a

Day 17: Phalaenopsis stems in water (Control)

Day 17: Phalaenopsis with Floralife® Orchid Food

Conclusion

Floralife® Orchid Food Clear 300 is able to prolong longevity of Phalaenopsis significantly and it was observed that it could affect the firmness of the stems as well, which prevents nodding on the rim of the vase.

[1] *Source: Teelthandleiding Phalaenopsis voor de Snijcultuur (2007), a joint publication of IMAC and Anthura*

**Floralife® Orchid Food Clear 300 is available in limited locations. Please check with your Floralife® sales representative for availability in your area.*

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