

**CHRYSALE EXPERIMENTS**

**WITH**

**HELIANTHUS**

**EC05156**

**September 1999**

**EXPERIMENT EC05156**

**Name flower** : EC05156 Helianthus 'Sunbright'  
**Origin** : de Jong, Amstelveen  
**Date** : 13-8-1999  
**Keywords** :

**Test scheme**

Treatm.	Pretreatment	Consumer	Numb.
1	Water	Water	1- 2
2		Chrysal clear	3- 4
3	Chrysal CVB	Water	5- 6
4		Chrysal clear	7- 8
7	Chrysal clear professional 2	Water	13-14
8		Chrysal clear	15-16
	3 days 20°C 12 hours light (1000 lux) 16 stems/bucket 5.0 liters/bucket stems recut	20°C 12 hours light(1000 lux) 4 stems/vase 1.0 liter/vase no recut	

<b>Treatment</b>	<b>Code</b>	<b>Dosage</b>	<b>Date</b>
Chrysal CVB	T713	1 tablet/l	
Chrysal clear professional 2	T427-P1113	10 ml/l	15-07-1999
Chrysal clear	T333-P1155	10 g/l	14-06-1999

**Observations**

Day 0 is the start of the consumer phase  
 Water uptake during pretreatment  
 Vase life flower  
 Day number leaf burning  
 Day number leaf yellowing  
 Stem damage  
 Photographs 1509-1516, 1529-1536

**Remarks**

Chrysal CVB already caused severe leaf burning at day 0 due to misdosage: instead of 1 tablet per 3 liters, 1 tablet per liter was used.

## EXPERIMENT EC05156

### Objective

The objective of this experiment was to compare the effects of different pretreatments with or without Chrysal clear as a consumer treatment on the vase life and leaf quality of Helianthus 'Sunbright'.

### Materials and methods

The flowers originated from the grower mentioned in the test scheme and were set up according to the test scheme.

The experiment was finished at day 15. Flowers that were not written off at this moment were awarded a vase life of 17 days.

### Results

The results of this experiment are summarized in tables 1-3. Water uptake during the pretreatment equalled about 80 ml/stem/day.

From table 1 it can be concluded that all treatments, and especially those with Chrysal clear as a consumer treatment, performed significantly better than the treatment with water only.

Leaf yellowing was also significantly delayed when flowers were treated with Chrysal clear (table 1 and 3). Pretreatment with Chrysal clear professional 2 had a positive effect on stopping leaf yellowing too (table 1 and 2).

Leaf burning was most severe after pretreatment with Chrysal CVB due to misdosage (see remarks).

Table 1: Results in dependence of the treatment.

Treatment	FLV	LFY	LFB
Water • Water	7.4 a*	7.5 a	17.0 b
Water • Chrysal clear	14.5 b	12.9 bc	17.0 b
Chrysal CVB • Water	16.3 b	9.4 a	0.0 a
Chrysal CVB • Chrysal clear	17.0 b	15.3 cd	0.0 a
Chrysal clear professional 2 • Water	13.6 b	9.6 ab	14.5 b
Chrysal clear professional 2 • Chrysal clear	16.5 b	16.5 d	13.0 b
N	2	2	2
P	0.002	0.000	0.001

FLV = Vase life flower [days]

LFY = Day number leaf yellowing [days]

LFB = Day number leaf burning [days]

Table 2: Results in dependence of the pretreatment

Pretreatment	FLV	LFY	LFB
Water	10.9 a*	10.2 a	17.0 c
Chrysal CVB	16.6 a	12.3 a	0.0 a
Chrysal GVB	14.7 a	11.1 a	9.2 b
Chrysal clear professional 2	15.1 a	13.1 a	13.8 bc
N	4	4	4
P	0.099	0.743	0.000

FLV = Vase life flower [days]

LFY = Day number leaf yellowing [days]

LFB = Day number leaf burning [days]

Table 3: Results in dependence of the consumer treatment.

Consumer treatment	FLV	LFY	LFB
Water	12.7 a*	9.5 a	9.2 a
Chrysal clear	16.3 b	15.2 b	10.0 a
N	12	12	12
P	0.002	0.000	0.806

FLV = Vase life flower [days]

LFY = Day number leaf yellowing [days]

LFB = Day number leaf burning [days]

\* Data are analysed by ANOVA (n and P: see tables) followed by Tukey's honestly significant difference multiple comparison test (SPSS software). Different letters in a column indicate significant differences ( $P < 0.05$ ).

## Conclusion

All pretreatments with a Chrysal product had a positive effect on the flower vase life, especially in combination with Chrysal clear as a consumer treatment. Flowers had a vase life of more than 2 weeks.

When leaf quality was also considered Chrysal clear professional 2 in combination with Chrysal clear gave the best results: during 2 weeks at the consumer hardly any leaf burning or leaf yellowing developed in these treatments.

cc. RT/WHM (JJ, 04-10-1999)