Summary

CARNATION TRIAL

climalux

Date:	**January – May 2023**
Cultivation:	**Carnations**
Location:	**Nieuwland Carnation Nursery**
	Hoek van Holland, the Netherlands
Researcher:	**HortiTech**

Made in Holland

In the period from January to May 2023, a study was conducted at Carnation Nursery Nieuwland, Hoek van Holland in the Netherlands, into the effects of the Climalux growing lamp on the development of carnations. As a reference group, carnations that were illuminated under Philips Greenpower LED top lighting Forse 400 (1040W) were used.

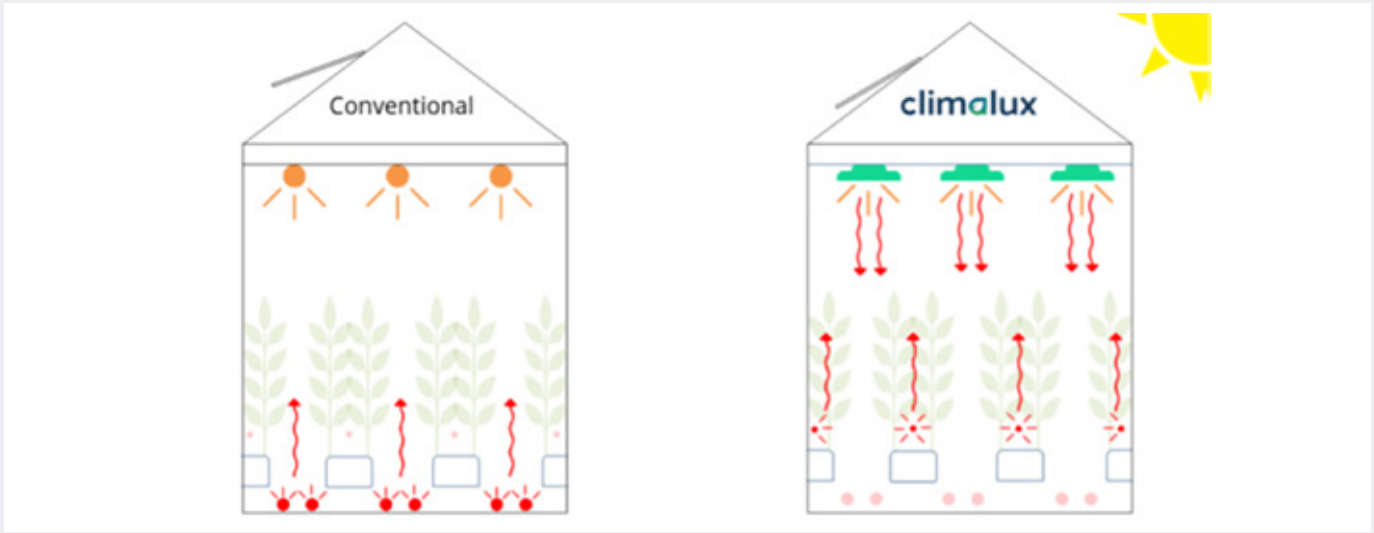
There was less ventilation in the greenhouse during the winter months. The closer the windows, the more important air movement in the greenhouse becomes. This ensures reduced air movement in the greenhouse, making the fans in the greenhouse function more effectively. In addition to investigating the effect of the fans in the Climalux fixtures, the effect of the light source was also compared with the Philips Greenpower LED top lighting Forse 400.

Analyzes were carried out weekly on different types of carnations in different development periods (both young crops and mature crops). Various measurements have been carried out per crop, focusing on the age of the crop.

Energy

In the conventional design with HPS lighting, control was carried out with a relatively high pipe rail temperature under the crop. The warm air rose towards the greenhouse roof. This contrasts with the Climalux CLX V1000, where the heat from the LED lamp was blown down onto the crop by means of an integrated fan.

Air movement could therefore be achieved at much lower energy costs with fans that provided vertical air flow circulation.



Summary

CARNATION TRIAL

climalux

Production

Two types of young carnations (planted in week 47 -2022) were examined: Mendoza and Viper Wine. Several adult carnation varieties from Nieuwland, Kiro and Green Shot, were also part of this research. Measurements were taken every week.

It has been shown several times that mature carnation crops respond positively to the Climalux growth lamp.

In summer the root system under Climalux growing lamp functions better and the stem thickness is better too.

In the newly planted varieties, it is even more evident that the root system is developing better. The stem is regularly thicker under the Climalux lamp.

CONCLUSION

In summary, the following can be concluded from the trial:

- **The Climalux lamp builds a crop with more roots. This is especially noticeable in greater endurance in the summer and autumn.**
- **This advantage means that less high tube temperatures are required. The crop can/must be grown in a more humid climate.**
- **The savings have previously been tested at a 35% energy reduction.**
- **Increased fan activity can reduce the normal temperature. Perhaps in potted plants up to 1C.**

Additional information

Would you like to know more about this carnation trial? Please contact Niels Damen, operational manager.
He can be reached directly via n.damen@climalux.nu or +31 6 18 67 81 29.

Made in Holland

Climalux
Zekkenstraat 31 • 3151 XP Hoek van Holland • The Netherlands • www.climalux.nu
sales@climalux.nu • +31 (0)85 071 1020

CE IP67 RoHS