



The company is also looking at a modular Agro LED lighting system whereby one metre lengths can be simply connected together.

discover the advantages.

The company stresses that all LEDs from Flowmagic are sold under the Agro LED name, and all devices in which lamps are bundled together are registered under the ClusterLED brand.

My visit coincided with the

arrival of the latest ClusterLED prototype, and one which the company has high hopes for – ClusterLED 32. Comprising 32 lamps, Flowmagic general manager Mark van der Ende believes this is a major breakthrough. Even when dimmed to just 10% of its maximum intensity, the device produces an amazing amount of light, and the plan is to intensify this still further by fitting the light unit with a lens. Providing all goes to plan the completed version will be on display for visitors to see at HortiFair in October.

Mark van der Ende said: “It is an incredible prototype and a major breakthrough. It produces an unbelievably high light output for just 40 watts. I have no doubt that it will stun show visitors.”

In addition to a number of different lighting concepts and formats, show visitors will see that the company

offers eight different types of Agro LED including: Farred 740nm, Red 660nm, Red 640nm, Blue 450nm, UV 400nm, Warm White 620nm, Soft White 575nm and Daylight 450nm.

This wide range means that it is possible for growers to select what they need depending on the crop. For instance, work carried out by the Dutch PPO organisation seems to confirm that for optimum growth glasshouse tulips need blue light.

For other crops the possibilities are endless but Flowmagic is thinking about two rows of Daylight LEDs and a single row each of Red and Blue for ClusterLED 32.

“This is one of the options but this may change.”

Mark van der Ende stressed that he does not talk about Lux levels. “This is old fashioned as all it relates to is the light intensity. We talk about PAR light, which is the light that the plant requires. This is something we can control with Agro LEDs.”

Of course, a feature of the technology is that it is possible to give the plants different light levels and intensities where needed. For example, software is currently in development that can adjust the light parameters in the glasshouse automatically. Examples include a sunny day when part of the light in a certain section of the glasshouse is restricted by a cloud. In this case, the technology is there for a computer to automatically adjust the light intensities to the lamps in this area.

However, whilst it is said that LEDs will play a role in the future of glasshouse supplementary lighting, it remains to be seen. Will LEDs eventually replace all current primary lighting systems, or will they be used as a secondary system, bombarding the crop with

extra red and blue light as needed?

Mark van der Ende suggests that it could be possible to use Agro LEDs for both. He feels that ClusterLED 32 and ClusterLED 160 are possibly better suited for use above single layer crops, whilst the modular strip system could be used to get more light to the bottom of a leafy plant.

“There are a lot of smaller single layer vegetable crops, such as radish and lettuce, and pot plants, that are grown as a single layer, with a huge volume of wasted space above them. It is



The company has high hopes for its new prototype ClusterLED 32, which uses just 40 watts.

possible that our systems could allow such crops to be grown in multiple layers. Also, glasshouse vegetable growers working with artificial lights need to invest in expensive screens to prevent light escaping. Most of the light from Agro LEDs is directed straight to the ground. There is very little to the side. This could help to reduce screening costs.”

Also, he suggests that a big problem with sodium lights is heat production, which means that

GLASS
CLEANING
SERVICES

- ◆ MACHINE CLEANING OF VENLO GLASSHOUSE ROOFS
- ◆ OXALIC ACID APPLIED
- ◆ SHADING APPLIED TO ROOFS

FOR MORE INFORMATION PLEASE CONTACT

TEL: 07767 880706 FAX: 01903 726646