Propagating success with LED lighting

A lighting trial carried out on difficult to propagate patio plants with Philips LED GreenPower top lighting at Kernock Park Plants, reports an increase from 30% to 96% in propagation success rates for one crop and up to 75% in energy savings.

Other benefits have included faster rooting and improved crop quality, uniformity and control of botrytis. The energy-efficient LED's also offer less heat and create a more uniform light distribution, making the module ideal for conditioned environments.

Kernock Park Plants, based in Cornwall propagates nearly 1200 varieties of bedding, from annuals to nursery stock, and trials a further 400 varieties on its 4 ha (10 acres) of glass and polythene greenhouses. The challenge is to successfully propagate as many high-quality plants as possible, especially those that are difficult to propagate using conventional HPS lighting methods. Using energy-efficient LEDs offers Kernock Park Plants the potential to increase production, profit margins on certain varieties and crop quality to strengthen its market share.

"LED lights will be used to great effect at Kernock Park on a range of plantings and environments. This lighting set-up offers considerably more for both our motherstock and retailers the opportunity to visit until autumn to make assortment decisions. Selecta Holland’s FlowerTrials® presentation in the Westland takes place in the main building of the FloraHolland in Hoenseldeijk.

In the upper floors a representative selection of the assortment and several marketing presentations will be shown! For the first time Selecta is launching a brand new trend magazine which summarizes marketing theme worlds and other ideas in a retail-optimized way and several novelties will be presented. NightSky is the new Petunia sensation with an extraordinary pattern. The flowers in dark violet with white spots seem like a beautiful starry sky. The variety is very early with a semi-trailing, medium strong vigour and convinces with a very good branching. It is ideally suited for baskets and mixed containers and is approx. 1 m trailing. New types of garden carnations are the compact growing varieties Pillow Red and Pillow Purple with filigree flowers. The two varieties in red with dark stars and pinks with dark stars are very well branching and have a flat, mat-like growth habit. Pillow varieties are suited for pots and baskets as well as a ground cover. The flowers with an interesting star-pattern also convince with an excellent shelf life and continuous flowering.

Calibrachoa cultivars Rave A brand-new Calibrachoa line with five varieties is Rave. Its striking star pattern stands out and makes the big, single flowers a real eye-catcher. Rave Calibrachoa are the novelties that shouldn’t be missing in any assortment. The five varieties are early flowering with a medium-strong, good branching growth habit. The compact Verbena line Pol has been realigned completely with seven new varieties and also, new in the Selecta assortment is the Pelargonium grandiflorum line Novita. The five interspecific Novita varieties are of Selecta's own breeding and selected to provide cultivation and sales security. They convince with medium-sized flowers, small foliage and a very good branching, are early flowering even without a cooling phase and can be cultivated together with bedding.

Other improvements included faster rooting and botrytis control was limited to just one preventative spray. Based on just one season, it is estimated that the return on capital will be less than 2 years – not to mention the 30% reduction in the amount of power required compared to HPS lighting. For the propagated plants, light intensity, optimum blue percentage and length of day will be investigated further to achieve the best results. Kernock Park Plants will extend the trial over a number of areas of the nursery in the 2015/16 season. In addition, Philips GreenPower LED modules are in multi-layer set-ups controlled light, humidity can further production and irrigation utilisation of space will continue into...
Harnett, director of Kernock Park Plants. "Not seeing quality amenable to buying-in of plantings with certainty, knowing supply plugging to persons exactly the requisite plants," he said. The success of the trials with PowerLED modules that recorded new trials and in 2014. New LED top lighting was used to levels typically ~1 400-500 in a highly efficient way. This set-up offers considerable opportunities to increase production and improve crop quality during the year. The results with varieties known to be difficult to propagate were a revelation. Propagation success rates improved vastly – in some cases they rose from 30% to 96%. Other improvements included faster rooting and botrytis control was limited to just one preventative spray. Based on just one season, it is estimated that the return on capital will be less than 2 years – not to mention the 30% reduction in the amount of power required compared to HPS lighting. For the propagated plants, light intensity, optimum blue percentage and length of day will be investigated further to achieve the best results. Kernock Park Plants will extend the trial over a number of areas of the nursery in the 2015/16 season. In addition, Philips GreenPower LED production modules are being trialed in a multi-layer set-up to see if controlled light, heat and humidity can further assist production and improve utilisation of space. This work will continue into 2016.

"Due to soils or growing mediums lacking essential organic matter it is possible many growers are not achieving the full potential of applied fertiliser and therefore wasting money," says Jack Holden (right) of horticultural fertiliser specialists Solufeed. This can easily be rectified by the application of Fulvic acid an essential component of healthy soils that increases the availability and uptake of essential nutrients and minerals. Solufeed have introduced Fulvic 25 a natural and sustainable soil improver to their portfolio of Plant Health Cure products. Fulvic acids are the ultimate compounds formed by the microbial degradation of plant material such as lignin. Described as being like a battery that recharges the soil, increasing the availability and uptake of soil nutrients, resulting in an improved root function and healthier plants. Fulvic 25  is a natural product and not made by an industrial chemical production method, it is extracted from drinking water drawn from a depth of 300 metres below certain peaty soil areas in the Netherlands containing small amounts of natural fulvic acids.