

The certainty of a good start

It has been 25 years since the first batch of Petunia was declared free of virus and shipped to customers with a Naktuinbouw Elite certificate.

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An outbreak of Fusarium in Dianthus in the sixties resulted in the set-up of a full testing programme. Naktuinbouw developed later testing protocols to manage disease outbreaks, for example for Xanthomonas in Pelargonium. At the beginning of the nineties propagation of bedding plants partly transitioned from seed propagation to vegetative propagation. During this transition, growers had problems with several plant diseases, especially Tobamoviruses. The market needed disease-free propagating material, so this is how the development of testing protocols for various other crops began.

QUALITY MANAGEMENT SYSTEM REQUIREMENTS

Due to globalisation of the industry in the early noughties, production of cuttings moved to Southern Europe and later to Africa and South America. Naktuinbouw no longer supervised cutting farms. Participants and other companies requested expansion of Naktuinbouw's services worldwide. In response, they created a quality management system, including the certification regulations of Naktuinbouw Elite Ornamental Crops. This set of requirements forms the basis of the quality management system as it is today.

PREVENT BETTER THAN CURE

Nowadays, the focus of the system lies on preventing plant disease outbreaks. In the past, it was to control outbreaks. Managing outbreaks was something that served the greater good of the industry. In the beginning, sampling activities were only carried out by

and testing by themselves.

Leading companies set-up testing laboratories, which later evaluated in the authorisation system Authorized Service Laboratories Naktuinbouw (ASLN).

PYRAMID SYSTEM

Naktuinbouw Elite certified plant material stands for clean stock material, tested on pathogens according to the latest global phytosanitary requirements. Propagating material originates in a direct line from individually tested candidate plants, which must be verifiably free from relevant diseases.

“NAKTUINBOUWS’ VISION IS TO CONTRIBUTE THAT ALL HORTICULTURAL ENTREPRENEURS AROUND THE GLOBE HAVE ACCESS TO GOOD, HEALTHY AND RELIABLE PROPAGATING MATERIAL’

Naktuinbouw. Once outbreaks were brought under control, disease-free plant material became more of an individual interest. Due to high costs, cutting producers were given more responsibility by allowing them to do the sampling

Candidate plants are preserved under controlled conditions and form the top of the Naktuinbouw Elite system. Sometimes also referred to as a ‘pyramid’ system. Four other multiplication phases follow, resulting in a traceable flow





of clean propagating material. The pyramid image depicts steps 'From a candidate plant to certified mother plants and young plants class E'.

EXPANSION OF CROPS

The Naktuinbouw Elite Ornamental quality management system contains testing protocols for more than 230 different ornamental crops, including annuals and perennials. Many crops certified are Pelargonium, Solanaceae (Petunia, Calibrachoa, Petchoa) and Dianthus. Participating propagators can request a crop to be included in the system. Naktuinbouw will research relevant regulations, common diseases for the crop, possible damage caused by the pathogen, the risk for the industry (ornamental and vegetable) and availability of tests. Decisions are based on these aspects to include a crop to the certification regulations.

NEW THREATS

New harmful pathogens are detected regularly. For example, Tomato brown rugose fruit virus (ToBRFV). This is detrimental to tomato and bell pepper crops whose global production has increased significantly over the last couple of years. Petunia, Calibrachoa and Petchoa belong to the same family as tomato and bell pepper. To date, there are no reports of natural ToBRFV infections in Solanaceae ornamental crops. Detecting the virus means using an indicator plant test, which is a requirement in the certification regulations. As a precaution, the Naktuinbouw R&D team plans to develop a PCR

test for the detection of ToBRFV in Solanaceae ornamentals.

HOLISTIC APPROACH

Plant diseases spread in many ways, with humans being one of the biggest infection risks. According to the certification regulations, observing proper hygiene practice is essential. Irrigation water and growing medium must be demonstrably free of relevant pathogens. After shipping, Elite certified propagation material to growers; it is the growers' responsibility to take care of the crop and keep it healthy.

QUALITY PLUS SYSTEM

The Elite quality management system has participants globally (see FACTS). A rather new development request for participation coming from companies situated on the Asian continent. Our participants choose to have an independent party looking over their shoulder during the yearly audit. Customers of propagating material expect nothing less than disease-free and true to type propagating material. It is standard! The quality management system requirements support companies to keep all processes organised and to apply high hygiene measures. Sampling and testing of the mother plants give the ultimate certainty of a good start. Sampling and testing protocols receive an annual update. New species can be included rapidly. If new pathogens occur, they will be implemented in the protocols with immediate effect or with retrospective effect.

Femke Boon is the coordinator of the Naktuinbouw Elite Ornamental Crops quality management system.

TEAM EFFORT

A downside of the system could be when installing and maintaining a quality management system, and continuous improvement is a burden on the quality manager's shoulders. Quality management should be a team effort by all members of the company to make it a success.

IYPH

The IYPH coincides with the new EU Plant Health Regulations. Besides the newly appointed or regulated quarantine pests and diseases, the Elite quality remains a voluntary system to achieve higher quality standards. A shared goal of IYPH and Elite is protecting plant health. Preventive rather than reactive. Currently, a few plant propagating and breeding companies are expanding their activities by creating varieties of crops resistant to specific pathogens. This advancement is a welcome addition in controlling the spread of pests and diseases. Who knows what the world will bring us tomorrow: mutated viruses, new crop – pathogen combinations? Naktuinbouws' vision is to contribute that all horticultural entrepreneurs around the globe have access to good, healthy and reliable propagating material.

GLOBAL MARKET ACCESS

Naktuinbouw Elite certified plant material could support to fulfil phytosanitary border requirements or to cut down obstacles for practical market access. For specific crops, Norway, and Australia already accept Naktuinbouw Elite certified plant material when shipped with an Elite certificate. It is our goal to continually keep the authorisation scheme of high value to our participants!

'START CLEAN AND STAY CLEAN'

Naktuinbouw Elite Ornamental Crops is a quality standard and authorisation system, especially created over the last 25 years for vegetative propagated ornamental crops. Based on the principle of 'start clean and stay clean' which is secured in several ways throughout the production process.