



New product against citrus mealy bug

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Village Farms takes technology to the next level

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Tuta absoluta clear found more frequentie

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IPM in strawberries

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Village Farms takes to the next level

With a sophisticated combination of modern technology and a self monitoring crop growth system, Village Farms achieves the highest production levels on record today. With three greenhouse facilities in the USA (Texas) as well as three in British Columbia, Canada, Village Farms has a combined total of 140 hectares of hydroponic greenhouse production under glass, and is pushing back frontiers in all respects. Together with Koppert, even for integrated crop protection.

Three years ago, Village Farms launched the Greenhouse Advanced Technology Expert System project (GATES), adjacent to one of its facilities in Marfa, Texas. The goal was to spectacularly improve the efficiency of tomato crops under glass in terms of input (costs) and output (yields, quality, returns and customer satisfaction). This goal appears to have been achieved through the GATES experimental greenhouse. Chief executive officer and cofounder, Mike DeGiglio at Village Farms compares tomato production under glass with open-air production. Worldwide, greenhouse-based production covers a very modest acreage compared with open-air cultivation. "Cultivation under glass is however many times more efficient. Through GATES, we wanted to be able to demonstrate that all our technology enables us to cultivate very high-quality tomatoes most efficiently".

Plant Monitoring System

The interrelated use of technology is one of the secrets behind our success, explains Mike. "Texas has very high temperatures and low humidity; we therefore also have to cool our greenhouses.

We buy in the world's best technology for cultivation in closed or semi-closed cooled greenhouses and add a self-developed ICT program for crop steering. In fact, cameras and sensors are monitoring the plants 24 hours a day. This gives us very precise information on how cultivation variables such as temperature, humidity, CO₂ and solar radiation impact upon the growth of the crop, the productivity, the quality of the fruits and last but not least their flavour. This knowledge makes very accurate proactive steering of the crop possible and allows us to offer our clients a product with the finest quality and best flavour at the moment it is delivered".

High returns on major investments

The production level achieved by Village Farms over the GATES greenhouse is thirty times that of open-air cultivation, amounting to as much as 100 kilograms per square metre. On a global scale, this is equivalent to the company being an Olympic gold medallist. On the other hand, Village Farms manages to be economical in terms of inputs; the water consumption is just 14 per cent of that required by outdoor cultivation. "Water is becoming a scarcity within the world, and therefore also more expensive; we need to reduce our consumption of it", says Mike. The good results are achieved through major investments in technology, research and development. However, the very high production levels mean that the cost price per kilogram can still compete with open-air crops. "The low cost of production is important in various respects. In our approach to the market, we opt for varieties that distinguish themselves and with which we can build up a strong position on



technology

Our Hydroperfect® growing method is a quintessential characteristic of Village Farms' products, says Mike DeGiglio. "Achieving one-hundred percent on our third party food safety audits is the standard – less is simply not an option".

shelves in the retail sectors in North America and Asia. However, even such distinctive varieties ultimately fall back down to the level of a commodity, a bulk product, after which their returns are lower. Thanks to the low cost price, we still earn sufficient returns from older varieties". This is important, explains Mike, as seed is expensive and Village Farms also invests a great deal of time in developing the best cultivation method for every variety.

Gold medal for sustainable cultivation

Investment is a key word for the senior management of Village Farms. Over the course of more than twenty years, the company has invested a great deal of money in the development of cultivation systems that are as natural as possible. As far as the concepts of "green" and "sustainability" are concerned, Village Farms is now an example for others and notable successes are achieved. For example, the tomatoes grown in the GATES greenhouse are 100% free of insecticides; the system resolves all problems with insect infestations. In that respect, Village Farms could be seen as an Olympic gold medallist.

The relationship with Koppert is therefore a very important one, according to Mike DeGiglio. "It is a strategic relationship; after all, Koppert is at the forefront and pushes back frontiers. The company has invested a great deal of time and money in Village Farms; consultant Ron Delissen has provided us with very intensive support and guidance over many years and to that end came to live very close to our farms in Texas. That support and guidance is still very intensive today. Koppert and Village Farms have a relationship in which great mutual trust takes a central role".

One-hundred percent food safety

"Our Hydroperfect® growing method is a quintessential characteristic of Village Farms' products", says Mike DeGiglio. "Our buyers – including those in the institutional market and in the food service channel – count on a product being not only good in terms of flavour and available every day of the year, but also being 100% safe. Neither they nor we would ever be satisfied with even just one percent less. One-hundred percent, every day – less is simply not an option". ■

