

HUMICOOL: Case study Production of high-quality tomatoes



CELdek[®] system helps turn small tomatoes into big profits

A formula for success

A new tomato-grower Hennie Fouche has cleverly managed to make his business venture a great success despite fickle weather conditions. Situated in the South African town of Naboomspruit, his sophisticated greenhouse complex has been equipped with 24 Euroemme[®] EM50 1.5-hp exhaust fans and 115.2 meters of CELdek[®] evaporative cooling pad from Munters.

This technology makes it possible for Mr. Fouche to produce and market high-quality cocktail tomatoes in spite of ambient temperature variations ranging from below freezing in winter to 38 °C (100 degrees F) in summer, not to mention temperature swings of 25 degrees between night and day.

Although he had no previous history of growing tomatoes, Mr. Fouche has succeeded in beating numerous competitors on the South African market at their own game with the help of the advanced CELdek system from Munters. This is a case that clearly proves the well-known phrase: "Where there's a will, there's a way."

Controlled climate and prices

The market price of tomatoes ranges widely from summer to winter. The summer market is saturated with tomatoes from growers, which, of course, includes tomatoes that are naturally ventilated and not grown under a controlled environment.

The average market price in summer for first-grade tomatoes is ZAR 2.50/kg. In winter, however, prices rise to ZAR 4.00/kg owing to a natural shortage, because the ambient climate in South Africa in winter makes it difficult to successfully grow tomatoes using conventional methods.



CELdek[®] evaporative cooling pads and Euroemme[®] fans are the real 'trade secret'."

FACTS

By installing the CELdek[®] system Hennie Fouche has achieved:

- A 50% increase in tomato weight
- With 90% of the harvest being first grade
- Uniform volume both winter or summer
- Stable temperature and humidity

Using CELdek® system, however, Mr. Fouche is able to produce a crop in winter similar to his crop in summer. He thus is able to sell at the highest price without experiencing the seasonal drop in harvest volume caused by cold ambient conditions.

Furthermore, during the high season in summer, even when the market is flooded with tomatoes, and the price per kilogram is low, Mr. Fouche is able to sell all his harvest due to the superior quality of his produce. His tomatoes are sold first before those of his competitors.

There is a difference of ZAR 1.00/kg from first grade to second grade in summer. And, 90% of Mr. Fouche's produce is in the first-grade category.

Sensitive plants

The tomato plants Mr. Fouche uses are called "Josefina," a bright red cherry-shaped cocktail tomato. He averages 12,400 plants in his greenhouse complex, which corresponds to a plant density of 2.8 per square meter. Plants grow to an average height of 3.1 meters. This plant is very sensitive to climate conditions. A strictly controlled climate is necessary to enable the plants to branch into multiple fruit-bearing shoots. A good average for this tomato is four shoots per branch.

Facts are sure proof

Mr. Fouche harvests a total of 620 kilograms of tomatoes a day, 90.4% of which, i.e. 560 kilograms, are sold as first grade. He is aiming to increase the daily production next year. This cultivar is so successful in the controlled environment that it creates up to eight fruit-bearing shoots from a single branch.

The fruit quality is excellent, very dense and up to 50% heavier (not larger) than tomatoes grown in natural ventilated greenhouses. This particular produce is sold by weight in its class.

What does Munters do?

The essence of the CELdek system is to provide comprehensive control – from start to finish – starting with the expertise required to provide the right equipment and finishing with all the technical support necessary for a total turnkey solution. The system itself comprises CELdek evaporative cooling pads, Euroemme® fans, a control system, water distribution equipment, drain gutter, supports and air heaters.

Providing an optimal climate inside when conditions outside are far from ideal is not easy. Whether in tropical or sub-tropical regions or in severe temperate zones, the production rate of, and



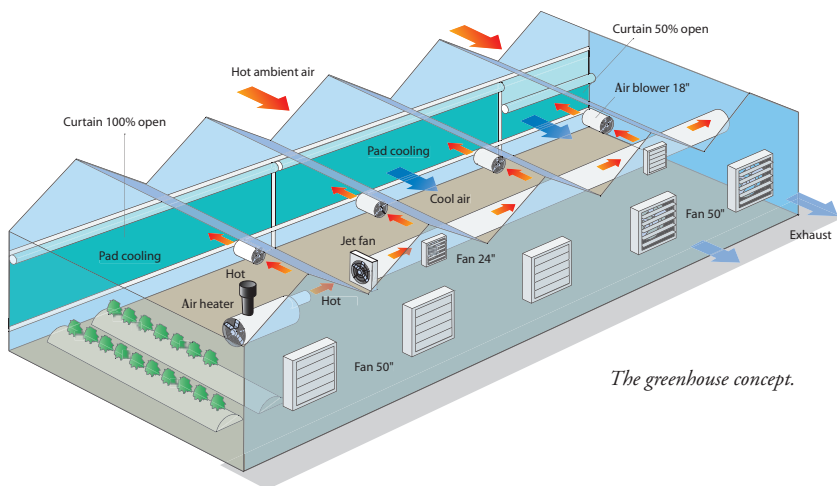
Eight fruit-bearing shoots from a single branch is a result of controlled climate with CELdek® system.

thus the profit from, greenhouse crops hangs in a delicate balance.

Munters has many years of far-ranging, global experience in providing the right climate in the right place – and at the right price.

Your business is our business!

We've been working with horticultural businesses worldwide for many years. That's why we have the right answers to your growing problems. Let Munters work out the proper solutions to ensure an efficient, reliable, and easy-to-operate climate control system for your growing business.



The greenhouse concept.



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