

Ljusgårda

A Mellifiq reference project

Ljusgårda got rid of their mold

**Ozone sanitation is now an
essential part of everyday
sanitation routines**

MELLIFIQ

Ljuskårda, Tibro, Sweden

Ljuskårda is a leading startup within high tech hydroponics. Their vision is to make Sweden self sufficient in vegetable and leafy greens production. Starting with arugula and crisp sallad, the proof of concept has now been established. The investment in an additional 7,000 m³ production facility and many new job opportunities has made a palpable impact in the small community of Tibro. An old wood works facility has been converted to a state of the art grow-opp of fresh produce. The production and idéa for the business was formed by three friends who set up the first hydroponic system in one of their garage. Three years later, they are regularly delivering to 15 different stores and rapidly expanding both production and logistic coverage. The next stage of development is a more automated production. Ljuskårda takes pride in aiming for the most environmentally friendly, nutrient rich and locally produced greens available on the Swedish marked. No pesticides are used in the production, which used a drop system that supplies the vertical growing skids with nutrient rich water. All water is circulated and purified using several filtration and sterilization systems.

Facts

Name:	Ljuskårda AB
Location:	Tibro, Sweden
Industry:	Hydroponic arugula and crisp salad producer
Production space::	7,000 m ³
Purpose:	Mold removal
Performance:	100% mold inactivation

Solution:

RENA Pro B1 with wheels for mobility

Dimensions (HxWxD):	1,800 x 800 x 800 mm
Input power:	1.2 kW
Noise level:	55 dB
Ozone concentration:	up to 240 g/Nm ³

The problem

Mold in any agricultural operation is a serious cause for concern. Producing billions of spores, the mold finds a suitable habitat and takes a hold. These spores end up on all surfaces, crops and in crevices to form the active organism. During his first week on the job, Erik who is one of the cofounders of Ljusgårdar, was introduced in his role as responsible for the hygienic environment. It came to his attention that a mold

infestation had started in a critical part of the production space where the produce was grown. During the warm summer months the humidity and heat made for particularly good growing conditions. Despite several attempts of rinsing and cleaning with various disinfectants, the contamination kept growing. It quickly gained ground and soon the fear was it would completely halt the newly started production.



The solution

Mellifiq was contacted at a point when both equipment and parts of the facility were considered unfit for use. A solution was needed - fast. With short notice Ljusgårdar received a mobile high concentration ozone system, the RENA Pro. It was put to use with immediate effect. The facility's equipment was rinsed clean and placed in the production area. Several rooms were sealed off one at

a time and ventilation was shut off. The idea was to reach a sufficient ozone concentration to reach all surfaces, equipment, nooks and crannies of the room. The rooms were treated for a few hours each and the mold was consistently inactivated. Even the most contaminated spaces were inactivated enough to start production right back up.

Evaluation

As a gas, the ozone is able to reach places and in to spaces where cleaning otherwise is not possible. Both spores and the organism itself are extremely sensitive to the ozones oxidative effect and with concentrations reaching several parts per million in the room. After approximately 4-8 hours of treatment in each room, the mold and its spored were effectively inactivated. The vertical skids were able to be reinstalled and the loading and unloading space was reopened to service the facility. The Rena Pro has since been used during evenings and weekends as a barrier for microbiological growth. It is used to sanitize both the production and packing area with regular intervals. With this regular treatment, no further outbreaks have been experienced.



"We use the RENA Pro for weekly sanitation for both our production, storage and packing areas"

About Mellifiq

Mellifiq is a multi-awarded environmental service company group, that has since the early nineties evolved into a world leading system and solution provider with multiple groundbreaking applications for industrial, municipal, and real estate clients. We supply cutting-edge technologies to manage the most sophisticated air, water, and energy challenges.

Mellifiq offers a complete range of air and water treatment technologies and solutions across multiple industries such as processing industry, energy sector, food and beverage, pharmaceutical, wastewater treatment and commercial real estate.

Mellifiq offers strong and renowned brands, such as Ozonotech, Nodora and Water Maid, and world-class engineering services combined an excellent track record of more than 40 years of innovation. We help our clients achieve the most efficient and sustainable solutions while creating the maximum value for their businesses.

With several business units across Europe, Mellifiq is headquartered in Stockholm where research and development, production, QA and certification all take place. Our unique technology and our extensive expertise have made us the Center of Excellence for the world's most complex projects, and a global player with installations on all six continents.

Everyday millions of people rely on our solutions for ventilation, disinfection, sanitation, and odor control. We are committed to raising the bar for the concept of clean and the industry standard for engineering, technical services and general contracting.

For additional information, visit our website at www.mellifiq.com

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