

**NCERA – 101 Station Report**

**CONVIRON April 2013 – April 2014**

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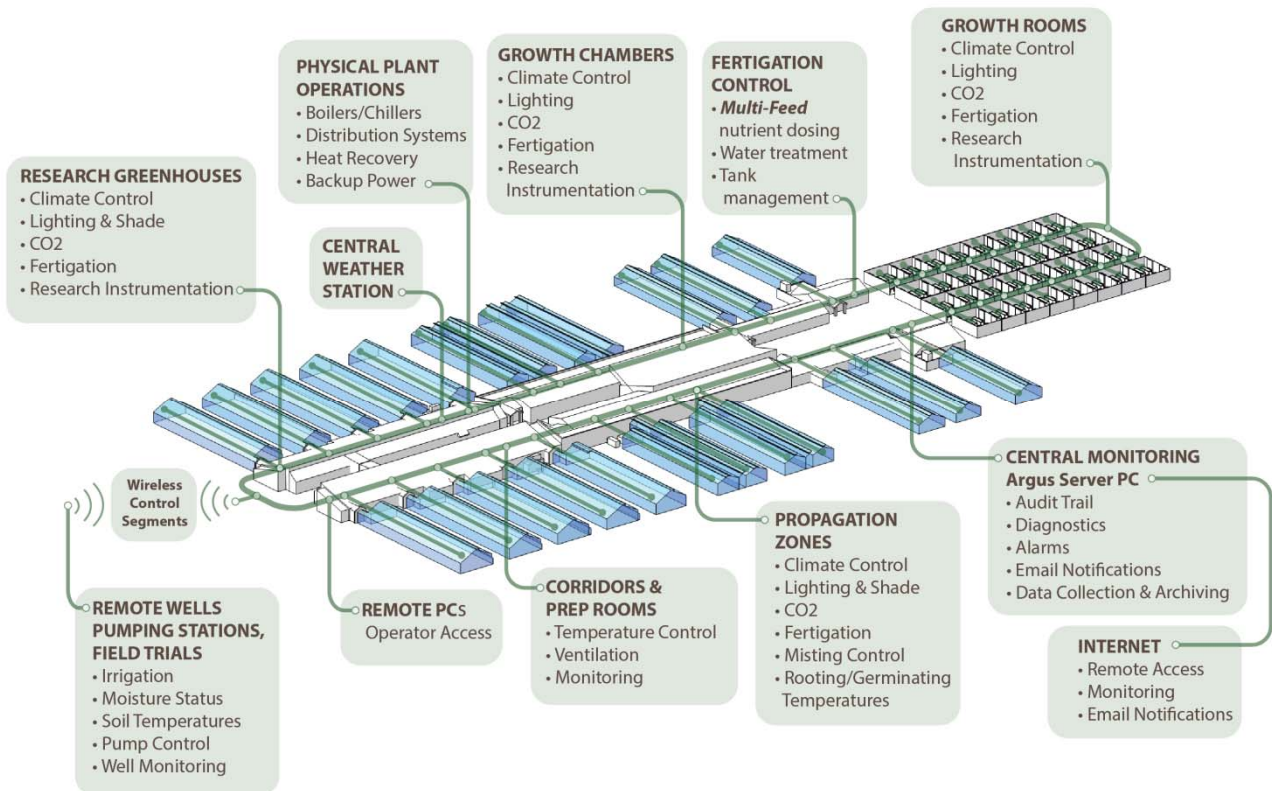
**1. New Facilities & Equipment**

As Conviron celebrates its 50th year in operation, we continue on a path of innovation and the integration of best-of-breed technologies to provide controlled environment solutions for our clients around the world. In the last 12 months, Conviron has:

- Acquired Argus Controls to provide clients facility-wide integration of a wide range of plant growth chambers, rooms and greenhouses under a single control system
- Partnered with Valoya to offer clients unique wide-spectrum LEDs to better equip researchers with lighting solutions and provide facilities with energy-saving opportunities

**Argus Controls**

Argus is a leader in advanced automated control systems for research and commercial greenhouses and other horticultural applications. Argus systems bring together all monitoring and control of research compartments, greenhouses, growth chambers, and related areas under a unified central command complete with intelligent integration of shared resources such as water and energy systems. The Argus technology provides a unique mix of advanced climate control, irrigation, and nutrient management capabilities to support agricultural and horticultural research activities.



*Argus provides a complete control solution that is exceptionally serviceable, scalable, and flexible and can be tailored to any facility.*

## Valoya LEDs

Convicon is now the exclusive distributor of Valoya's products in North America. Working collaboratively, we integrate Valoya's technology into new and existing products to provide clients with high-performing LED lighting solutions. Valoya's products are designed specifically for plant growth applications and feature a proprietary wide-spectrum LED design that results in better yields and measurable energy savings.

In addition to Valoya products, Convicon continues to integrate a range of LED solutions from other suppliers as required by clients to meet specific research objectives.



## 2. Unique Plant Response

In 2013, Convicon performed an extensive research project to identify key users of controlled environments who have published their findings in controlled environment research. With approximately 20,000 units installed in more than 90 countries around the world, we discovered more than 1,800 authors have been cited using Convicon chambers or rooms in publications from 2008 to 2013.

## 3. Key Accomplishments & Projects

The year 2014 marks the 50<sup>th</sup> anniversary of Convicon. Throughout the past year, Convicon executed several significant projects. One highlight includes the integration of a Convicon Growth House™ with a LemnaTec system providing a unique plant research and phenotyping facility at the Donald Danforth Plant Science Center in St Louis, MO.



The Growth House features metal halide and high pressure sodium lighting and downward airflow for uniform conditions throughout the plant growth environment. Plants exit the room for imaging and return on a conveyor through an automated opening in the room wall.

## 4. Impact Statement

Our controlled environment technology uniquely equips researchers and growers with solutions to meet global demands for plant-based food and health products. With Argus Controls, we now provide clients new levels of automation and centralization for controlled environment research facilities. With proven solutions from Valoya and other LED suppliers, we better enable researchers to achieve their research objectives while reducing energy costs.