

# ARVUM PLANT LABS

## RAPID LEAF TISSUE NUTRIENT ANALYSIS

### **CASE STUDY:**

### **Unveiling Hidden Issues - Enhancing Quality Control in a High-Tech Greenhouse**

**TLDR:** A supplemental light greenhouse in Southern California started having trouble consistently generating the results that they were used to. Arvum did a bunch of tests and found that most of the plants had dangerously high calcium levels because of poor water quality. A few days after testing the plants began to show physical signs of distress. The issues were caused by aging infrastructure and sediment buildups. The cultivator addressed the problems and began a weekly plant tissue testing program to make sure that their plants were trending in the right direction and that there were no further issues with their irrigation systems.

In this case study, we shine a spotlight on a cultivator operating a large-scale, high-tech supplemental light greenhouse in Southern California.

#### **The Situation:**

This cultivator had historically been successful at achieving high yields and product quality. Despite visually healthy plants, consistency was a growing concern so they turned to Arvum Plant Labs to help figure out what was going on.

#### **Unveiling the Hidden:**

Arvum suggested a comprehensive battery of agricultural diagnostic tests to gain insight into what was going on with the plants. Through a combination of plant tissue, water, and soil tests Arvum discovered something very interesting. The plant tissue tests revealed alarmingly high calcium levels in most of the plants that were sampled, with one plant exceeding 11%. Ideally Calcium will not exceed 5%. The culprit? Inconsistent water quality stemming from aging infrastructure and sediment buildup. This led to nutrient toxicities, impacting plant development and ultimately affecting yields. This finding was significant because, a few days later, the plants began exhibiting signs of nutrient toxicities. Fortunately the plant tissue tests had provided a glimpse into potential issues before physical symptoms were visible so the cultivator was already in the process of correcting the problem. This early detection potentially saved the harvest.

#### **Developing a Comprehensive Testing Solution:**

Inspired by this newfound knowledge, the cultivator collaborated with Arvum to establish a weekly plant tissue testing program. This program enabled the grower to closely monitor the plants' nutrient levels throughout the life cycle, providing early detection of nutrient imbalances or toxicities. Additionally, the cultivator implemented a regular water testing program to ensure water quality remained optimal. The combination of these two programs allowed the cultivator to stay ahead of any potential problems.

**The Power of Testing:**

The success story of this high-tech greenhouse exemplifies the power of agricultural diagnostics in maintaining quality control. By leveraging tissue, water, and soil testing, the cultivator was able to identify hidden issues and take corrective measures before physical symptoms emerged. This breakthrough discovery potentially saved the harvest. A comprehensive testing program enables cultivators to stay ahead of potential problems and to optimize plant performance.

If you're facing challenges in maintaining consistency or identifying hidden issues in your greenhouse or cultivation facility, consider the transformative impact of regular testing. With the right testing program in place, you can proactively protect your plants, enhance quality control, and secure long-term success.

Arvum Plant Labs is committed to providing innovative testing solutions tailored to your specific needs. Contact us today to embark on a journey of enhanced quality control and unlock the full potential of your cultivation.

**Empowering Growers | Transforming Cultivation**

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