



JR PETERS INC

JR Peters 2021 NCERA-101 Station Report

About

JR Peters Inc. is the formulator and manufacturer of Jack's Fertilizers and Nutrients – high-quality water-soluble fertilizers formulated for the horticulture and controlled environment agriculture markets. In addition to our manufacturing capabilities, the JR Peters Laboratory supports growers and researchers by analyzing plant tissue, solution, and soilless grow media. We continuously strive to provide unmatched plant nutrition solutions and believe that participation in cutting-edge research communities like NCERA-101 is necessary to achieve this.

New Facilities and Equipment

Nothing to report.

Unique Plant Responses

Through conversations and experience working with ornamental and cannabis growers, anecdotal reports indicate that plants grown under LED lights benefit by increasing fertilizer application rates by 25-50% compared to plants grown under HPS and MH (indoor and greenhouse).

Accomplishment Summaries

- Collaborated with The Ohio State University to develop a pre-mix fertilizer formulated for soilless strawberries.
- Actively working on solutions to improve nutrient management in recirculating fertigation systems.
- Actively collaborating with industry partners to determine optimum phosphorus application rates for cannabis grown in controlled environments.

Impact Statements

1. Recirculating fertigation systems offer a sustainable alternative to drain to waste systems and it is possible these systems may be mandated in the future. One of the biggest challenges in recirculating systems is nutrient management. In collaboration with university and industries partners, we are actively working to identify trends in nutrient uptake by plants grown in recirculating systems and how this differs between species and growing environments to offer more sustainable and effective management strategies for recirculating systems.
2. In agricultural and horticultural production, phosphorus is often overapplied which can lead to run-off into the environment causing algae blooms and eutrophication. In recent years, the legalization of commercial medical and recreational cannabis production in many states has led to the development of large-scale commercial production facilities. Most facilities employ intensive forms of production where large amounts of nutrients are applied and excess leachate solution is drained to waste. With little peer-reviewed research on optimum nutrient application rates for cannabis, growers often target P application rates much higher than that of other cultivated flowering crops. We are actively working with an industry partner to determine optimum phosphorus application rates in an attempt to minimize phosphorus run-off into the environment.