# Gregg D. Short P.E.

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## **Greenhouse Engineering Experience:**

#### Professional Greenhouse Engineer & Owner; GShort.com, LLC Burbank, Oh (7/06-Present)

GShort.com is a greenhouse engineering consulting firm focused on providing independent, unbiased, expert technical support and design services to the Greenhouse and Controlled Environment Agricultural industry.

- Licensed Professional Engineer with active registrations (as of 3/17) in Colorado, Ohio, Oklahoma, Michigan, New York, Illinois, Texas, Washington DC and expired registrations in Connecticut, Indiana, Minnesota, Missouri, and Nebraska.
- Current Greenhouse Projects at Cornell University, Oklahoma State University, and California Polytechnic University at San Luis Obispo.
- Engineering design and sealing of commercial greenhouse projects using Finite Element Analysis (FEA) for greenhouse manufactures including CropKing Inc., Paul Boers Inc., Grayhawk Greenhouse Systems, and GGS Structures Inc.
- Greenhouse Structure and Systems expert consultant for Hortica Insurance Company
- Engineer of Record for a greenhouse renovation project at the University of Connecticut.
- Design of a floating bed hydroponic greenhouse system for BrightFarms, Inc. in Washington, DC
- Primary Greenhouse Engineering Consultant for a 3.2-million-dollar renovation of Botany Greenhouses and new construction of an Agriculture Greenhouse project at Southern Illinois University.
- Engineer of Record of a 3.2 Million Dollar Rooftop Greenhouse Project for SUNY-Syracuse (with GreenhouseEngineering, division of Alex Turkewitsch, P.Eng. Ltd)
- Consulted with insurance adjuster to determine repair ability and replacement costs for tornado damaged and destroyed research greenhouses at OARDC campus of The Ohio State University.
- International greenhouse consulting work with USAID/CNFA/DAI in Moldova.
- Engineering Layout and Design of retrofit specialty mushroom systems.
- Greenhouse and Hydroponic Design consulting for CropKing Inc.
- Speaker at the Greenhouse Tomato Short Course by Dr. Rick Snyder

# Lecturer; The Ohio State University -ATI, Wooster, OH (9/15-12/15)

Lecturer at OSU-ATI in the Horticultural Technologies Department teaching the 2500T course "Greenhouse Environmental Control". This course covered the principles and practices of sustainable greenhouse operation and management. Topics include glazings, frames, heating, cooling, energy conservation, nutrition, irrigation, light, plant growth and operations management.

## Volunteer Treasurer & Board Member; Pleasant Hill Outdoor Camp, Perrysville, OH (1/01-present)

Long time Board Member and Treasurer since Jan. 2010 of a 503(c) non-profit Christian Summer Camp and year-round retreat center. PHOC is located on the edge of the Mohican State Park, with waterfront access to Pleasant Hill Lake in Perrysville, OH. The independent board has grown the camp from 50 kids in 2000 to over 550 summer campers in 2015 with fundraising and capital improvements of over 3.5 million in the past 10 years.

#### Design Engineer & Mushroom System Sales; CropKing Inc. Seville, Oh (8/97-8/06)

• Responsible for all engineering activities at CropKing, a controlled environment agricultural systems company. Conducted engineering design, development and plan sealing of structural greenhouse frames using Finite Element Analysis (FEA). Activities also included environmental system design,

computer control and electrical panel design, and hydroponic growing systems including irrigation development and design.

- Worked with outside consultants to create a specialty mushroom growing system including structural frame design, environmental control, and production systems. Designed and supervised manufacturing of a mechanized aerated steam pasteurization unit, for the handling and production of mushroom growing media. Presented ASAE paper on mushroom unit at 2001 annual meeting. Provided all sales and marketing of specialty mushroom production units.
- Was a member of the management team and had direct Supervision of an Engineering Assistant and other employees.
- Revised and maintained construction manuals using AutoCad in 2D and 3D for all systems and buildings manufactured by CropKing. Was responsible for customer technical construction support and problem resolution.
- Managed all computer resources including Accounting, CRM packages, website design, and programming. Designed parametric material lists used for manufacturing and system quoting/costing.

#### **Product Development**; Rough Brothers Inc. (8/94 to 8/97)

Designed and implemented a new extruded aluminum gasketed glass glazing system. Acted as a project manager on six Home Depot projects. Developed new castings, rubber and aluminum extrusions and sheet metal parts. Designed retractable shade systems and rollup curtain systems. Revised over 750 drawing details using AutoCad R12 and R13 for this greenhouse manufacturing company. Designed, wrote and implemented a successful database and AutoLisp program that combined the 750 details into job specific drawings for The Home Depot account.

## Design Engineering Internship; Zelenka Nursery Inc. (Summer 1993)

Worked directly with the senior management of a 5000-acre nursery to fine ways to mechanize the nursery. Used summer experience to design and successfully prototype a system to cover poly-houses as my senior design project.

**Engineering Internship**; Environmental Growth Chambers (Summer 1992)

Assisted in the design of custom growth chambers and in the field installation of the chambers.

#### **Education:**

*The Ohio State University* 1989-June 1994 Conferred Bachelor of Science in Agricultural Engineering Educational emphasis on mechanization and control of agricultural systems. Also took many business courses.

# Organizations, Activities and Awards:

*Active NCEES Record* - Passed Agricultural Engineering Professional Practices test with the highest score in the state.

American Society of Agricultural and Biological Engineers (ASABE) - Member and past Chair of the Controlled Plant Environments Committee involved in ASABE/ISO Standard revisions.

Member of NCERA-101 USDA Committee on Controlled Environment Technology and Use.

*Member of AERGC* Association of Education and Research Greenhouse Curators.

*Member of AmericanHort* The consolidation of ANLA and OFA.

**R.C.** Miller Award - A departmental award given to the senior who best exemplifies the creative spirit of engineering.

*Habitat for Humanity* - Helped initiate a college chapter at Ohio State University and served as first secretary in 1990. Elected as Construction Chair '91 as the Fund-raising Chairperson for the '92-'93 school year.

*Private Pilot/Aircraft Builder* - Received Single Engine Land Aircraft rating in 1990. Have over 175 hours in various light aircraft. Currently building a Sonex light sport aircraft from plans.