

Kenneth J. Roché

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Objective

To obtain a 2015 summer internship whereby I can apply coursework to real-life scenarios and acquire firsthand knowledge and experience.

Education:

- Doctor of Plant Health (DPH) †.

University of Nebraska-Lincoln. Fall 2015 (expected).

- Bachelor of Science in Biology.

Metropolitan State University of Denver. July, 2010.

Minor: Chemistry Focus: Botany

†DPH is a professional doctorate program with a comprehensive approach to plants and agriculture. The program emphasizes a broad interdisciplinary education across all plant-related disciplines, practical learning, experience through internships, and research.

<http://dph.unl.edu/program>

Related Coursework

Relevant Graduate Academic Courses:

Entomology

- Insect Ecology
- Biology of Insects (Taxonomy)
- Pest Management Systems
- Biological Control of Pest
- Insect toxicology

Weed Science

- Technology of Pesticide Applications
- Collegiate Weeds Team Competition
- Interplant Competition

Plant Science

- Agroecology
- Agricultural Biochemistry
- Interplant Health diagnostics
- Plant Water Relations
- Plant Physiology
- Plant Breeding

Plant Pathology

- Biology of Plant Pathogens
- Plant Virology
- Phytopathogenic Nematodes
- Plant Disease Tour
- Plant Associated Microbes

Soil Science

- Soil Chemistry & Mineralogy
- Plant Nutrition and Nutrient Management

Other

- Environmental Leadership
- Introduction to Aquaponics
- Statistical Methods and Research
- Statistical Experimental Design
- Data analysis Using R

Selected Relevant Undergraduate Academic Courses studied:

- General Botany
- Economic Botany
- Entomology
- Vascular Plant Taxonomy
- Plant Anatomy & Morphology
- Paleobotany
- Plant Physiology
- Ecology and Plant Ecology
- Global positioning Systems
- Mycology

Assistantships and Internships**Graduate teaching assistantship, Introductory Plant Pathology 369 Aug.- Dec. 2014.**

- Assist Dr. Gary Yuen with six groups of students, twenty four in total, in preparing their presentations as part of a new hybrid learning initiative.
- Provide guidance as needed to students in gathering reference materials, organizing, formatting and reviewing their presentations.
- Grading and commenting on student's strengths and weaknesses in their presentations.

Internship**United State Department of Agriculture (USDA)- Animal Plant Health Inspection Service (APHIS)- Plant Protection Quarantine (PPQ), May-August 2014.**

- Summer Intern PPQ technician-Federal Service.
- Extensive travel involved to perform the following duties (11,000 + miles traveled).
- Emerald Ash Borer (EAB): Establish, monitor and collect samples from 100+ traps in locations across Nebraska for Emerald Ash Borer (*Agrilus plannipennis* Fairmaire, 1888) as part of a national campaign to track the movement of EAB.
- Grape Commodity Survey. Work with wineries within Nebraska to establish traps to monitor and collect samples of suspect insects as part of a national monitoring program for five lepidopteron species; Silver Y (*Autographa gamma*. L. 1758), African Cotton Leafworm (*Spodoptera littoralis*. Boisduval, 1883), Oriental Leafworm Moth (*Spodoptera litura*. Fabricius, 1775), European Grapevine Moth (*Lobesia botrana*. Denis & Schiffermüller, 1775), and Summer Fruit Tortix (*Adoxophynes orana*. Fischer von Röslerstamm, 1834)
- Assist Nebraska Department of Agriculture in setting up one hundred twenty-six delta traps for gypsy moth (*Lymantria dispar dispar* L. 1758).
- Assist Nebraska Department of Agriculture with commercial nursery inspections.
- Assist the South Dakota Department of Agriculture with nursery and pesticide storage inspections.
- Collect and enter data into USDA systems.

Research Assistant**Ceres Trust Organic Research Initiative, April- December 2013.**

- Managed and implemented the experimental design protocols for the three crop (corn, soy, wheat) and seven cover crop treatment rotation with four replications, to include tillage, planting, cultivating, monitoring and harvesting.

- Collected data over 18 weeks that included soil moisture, soil nutrient samples (N, Bray-P, K, NH₄, SOC), stand counts, weed, crop and cover crop biomass, and harvest totals.
- Analyzed and interpreted data using ANOVA, SAS 9.3 and submit report to primary investigator Dr. John Lindquist (UNL).
- Generated poster and presented it at Midwest Organic & Sustainable Education Services (MOSES) Conference Feb. 2014.

Research Assistant

Spatial and Temporal Distribution of Soybean Cyst Nematode (SCN), *Heterodera glycines*, Nov. 2012- April 2013.

- Assist Dr. Loren Giesler's (UNL) PhD candidate Oscar Perez Hernandez's research in spatial and temporal distribution of soybean cyst nematodes in the Midwest.
- Process soil samples for soybean cyst nematodes to include isolation, counting and record keeping of nematode eggs per sample unit.

Weed Science Technical Assistant May 2012-May 2013.

- Work alongside the Weed Science Assistant Extension Educator Lowell Sandell (UNL).
- Establish and maintain experimental plots and green house studies to assess the status of field resistance to herbicides by weeds common to soybean and corn production.
- Prepare and apply herbicides in greenhouse and field settings.
- Interact with growers, consultants, extension and industry personnel.
- Maintain, monitor and collect data for regulated industry trials for herbicide resistant corn and soybean.
- Train and oversee new incoming graduate students on greenhouse, spray chamber, and soil preparation protocols.
- Grow various vegetable crops year around both indoors and outdoors.

Researcher

Seasonal Pollen Use by the Urban Honeybee *Apis Millifera*. Denver, Colorado. 2009- 2010.

- Capture worker bees through the growing season (1/week) from over 50 hives around the Denver Metropolitan area to determine pollen sources.
- A poster was generated and presented.

Work Experience

Seasonal Growing Assistant for Denver Botanic Gardens at Chatfield Farms. Colorado. Sept.-Nov. 2011.

- Supervise 2-12 volunteers in the weeding, harvesting, and preparation of vegetable crops for distribution to CSA members.

Field Biologist

OtterTail Environmental Inc. Wheatridge, Colorado. May-Sept. 2010.

- Monitored and treated mosquito larval habitats for disease control.
- Utilized handheld GPS devices to collect data on quantity and effects of treatments on mosquito larvae.
- Employed adult mosquito capture and survey methods to monitor disease (West Nile Virus).

Owner/Manager

Hairdresser/Educator. 1985-2005.

- Developed and managed a clientele base of over 300, to include celebrities of music, business, sport and art.
- Worked under pressure and strict timeframes.
- Managed and resolve problems on the fly.
- Fulfilled agreements under high stress and time constraints for fashion contracts with Gucci, Christian Dior, Fendi, Chanel, Louis Vuitton and the Colorado/Aspen Ballet Company.
- Instructed and educated salons and their staff on the latest product and technical releases from the AVEDA Corporation that included extensive travel throughout the US.

Mechanic/Auto. 1980-1985.

- Repaired and serviced automobiles for Chevrolet dealership.
- Worked for independent shop owner on performance vehicles.
- Drove wrecker service (I can drive anything).

Volunteer

Community outreach. Do It Yourself Gourmet Mushroom Cultivation April 15, 2014.

- Presented a two hour course in Do It Yourself (DYI) Gourmet Mushroom Cultivation.
- This class was prepared by invitation for two local food movement groups; Community Crops and Open Harvest (a local food co-op).
- Hands on experience and education for those wanting to learn how to grow their own edible mushrooms from local resources and waste streams.

UNL Student Organic Farm Consultant. 2013 and 2014.

- Provide consultation and guidance to a student run CSA.
- Provide equipment and personal hoophouse space for 5000+ transplant seedlings.
- Determined and advised with plant health issues.
- Volunteered man-hours on the farm.

The Urban Farm at Stapleton. Denver Colorado. June-Oct. 2011. An Educational Farm.

- Supervised and instructed middle school children in vegetable/crop growing principles (planting, cultivating, harvesting etc.).
- Designed, prepared and planted 2500sq.ft. of vegetable crops utilizing on site resources.
- Demonstrated a 'Three Sisters' planting on 1000sq.ft.
- Constructed a 700 gallon aquaponics structure in an under-utilized 20ft. x 100ft. High tunnel/hoophouse with over 200sq.ft. grow bed surface for vegetable crops which were put into production from onsite resources.
- Designed and installed a 12sq. ft. mushroom bed for oyster mushroom production.

CSA Volunteer for Denver Botanical Gardens at Chatfield Farms. Colorado. May-Sept. 2011.

- Planting, weeding, harvesting and preparation of vegetable crops for distribution to CSA members.

Rocky Flats National Wildlife Refuge. Nov. 2010.

- Gathering seeds from native grasses and forbs for reintroduction into the Rocky Flats Arsenal Area.

Additional Experience

Owner/Researcher

Aquaponics Trials March 2011-present.

- Demonstrate the proof of concept utilizing the waste stream of tilapia, catfish and bluegill as fertilizer source to grow crops in a closed system.
- Breed and raise tilapia to market size as well as selling fry and fingerlings to third parties.

Owner/ Manager

Hoophouse/High Tunnel Vegetable Production. Sept. 2010 - present.

- Constructed a 12ft. x 30ft. unheated hoophouse for year around vegetable production.

Owner/Manager

Botany. 2009-2012.

- Collected, preserved and classified plant specimens from the Colorado Rocky Mountains and Eastern Plains.

Owner/Manager

Apiculture. 2005-present.

- Monitor and maintain beehives for pollination and honey production.

Owner/Manager

Animal Husbandry. 2004-present.

- Care and monitor the health and well being of a small flock of chickens for egg production.

Owner/Manager

Mushroom Cultivation. 2004-present.

- Collect and take spore prints.
- Prepare media to culture mushroom spores in order to propagate and produce gourmet mushrooms, *Pluerotus ostreatus*, *P. pulmonarius*, *P. djamor*, and *P. citrinopileatus* as a food source.
- Transfer media cultures to appropriate substrates for mushroom formation.

Owner/Manager

Vermiculture. 2003-present.

- Utilize the red wiggler earthworm (*Eisenia fetida*) to create fertilizer and compost amendments for vegetable production.

Owner/Manager

Urban Farming. 1985-present.

- Grow and produce vegetables year around in an urban setting.
- Donate excess.

Publications

Kenneth Roché, Charles Francis. Book Review. Closing the food gap: resetting the table in the land of plenty. *International Journal of Agricultural Sustainability*, 2013. <http://dx.doi.org/10.1080/14735903.2013.852800>

Competitions

North Central Weed Science Society (NCWSS) Collegiate Weed Science Competition. July 2013, 2012.

- Competed against other Universities in the North Central region in the following categories: Sprayer Field Calibration, Weed I.D., Unknown Herbicide Damage, Written Calibration Problems, and Farmer problem.
- Prepared weeds seeds and seedlings for identification for graduate and undergraduate students.
- Coached up to 16 undergraduates and graduates in sprayer calibration problems sets.
- Work with all teammates in weekly class and field practice sessions.
- University of Nebraska-Lincoln teams placed in both years in graduate, undergraduate, team and individuals categories.

Conferences Attended

- Midwest Organic & Sustainable Education Services (MOSES) Feb. 2014.
- St. Josephs Great Plains Growers Conference Jan. 2013.

Professional Societies

- Worldwide Opportunities on Organic Farms (WWOOF-USA) May 2011-2012.

Certifications

Nebraska Department of Agriculture Commercial Pesticide Applicators License.

April 2012-2015.

- Agricultural Pest Control- Plant.
- Demonstration/Research sub-category.

Awards

Graduate Teaching Assistantship Fall term 2014

Earle Raun Fellowship Award, 2013

Research Assistantship Fall term 2013

William J. Curtis Fellowship Award, 2012

References

Charles Francis, Professor, Department of Agronomy & Horticulture

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