CAS Undergraduate Research Fellowship Proposal for Spring 2020

Interpreting Survey Results for:

The Colorado Native Plant Finishing Protocols for the Horticultural Industry Survey

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Justification: Colorado native plants are underrepresented in the horticultural industry in Colorado. However, due to interest in water conservation of landscapes, biodiversity and declining pollinator populations, the relative value of native plants has reemerged among residents of our state. Gardeners are interested in garnering these benefits in their landscapes but there is a notable lack of attractive native plant material available for purchase in the industry. Designers and landscapers, too, are interested in specifying and installing pleasing native plants for their clients. Even policy in Colorado is encouraging the use of drought tolerant landscaping with bill HB19-1050 Encourage Use of Xeriscape in Common Areas https://leg.colorado.gov/bills/hb19-1050.

Growers often propagate a subset of Colorado native plants, yet those plants are often the ones left at the end of the season because they are not as appealing as the non-native species that adapt well to containers. Therefore, over time growers reduce their stock of native plants due to lack of demand. Propagation is not the primary hurdle in the industry, it is finishing protocols that growers need in order to produce plants that look good enough in containers to sell at garden centers. The bottleneck between the supply from growers and the demand from consumers is the appearance of the plants.

Plant Select® is a nonprofit organization that promotes the use of native and adapted plants that thrive in the high and dry regions of the U.S. Since Plant Select® works with an established network of growers in Colorado and beyond, they can discover via survey and record the best finishing protocols from growers for all the Colorado native Plant Select® plants. Additionally, these finishing protocols can be tested/validated in a greenhouse and shared with the industry to ensure that Colorado native plants are properly finished in containers and appeal to consumers. Experimental trials for this project are funded by the Colorado Department of Agriculture through the Specialty Crop Block Grant Program.

The Fellow would be involved with the first part of this research, which is interpreting the results of the survey from growers. The results of the survey will include qualitative information on the practices that growers use to most effectively grow these plants. The Fellow will review that information and, guided by the Fellowship Mentor and collaborators, will draft the protocols for each of the plants that will be tested over the summer in the greenhouse. There will be up to 20 protocols to draft during the spring 2020 semester from the survey results.

Tasks: The Fellow will take the aggregated qualitative data from the survey and collate by plant species (up to 20 species) into summaries. Then, based on the themes from those summaries, they will then be drafted as plant finishing protocols to be tested over the summer in the greenhouse. The Fellow will be aggregating the qualitative data for approximately the first half of the semester (~75 hours), with guidance from all collaborators. Then the Fellow will be preparing the plant finishing protocols the second half of the semester (~75 hours), also with collaborator guidance.

Major Skills/Competencies: The Fellow will gain experience at being able to summarize major themes from a series of comments. This is similar to the skills needed to write a literature review. The Fellow will gain/hone horticultural knowledge as they will need to distinguish between different terms and tactics used in the horticultural industry. The Fellow will also gain additional skills at writing scientifically.

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Training: The Fellowship Mentor will train the Fellow on how to summarize the qualitative data from the survey. Including a structured plan (i.e. http://learningforaction.com/analyzing-qualitative-data). Additionally, the Fellowship Mentor will train the Fellow on how to take the summaries and turn them into plant finishing protocols.

Working Directly: The Fellow will work primarily with the Fellowship Mentor, Dr. Bousselot. Also, the Fellow will work with industry professionals who are collaborating on the grant, Ross Shrigley, Executive Director of Plant Select® and Emily Goldman, Program Assistant at Plant Select®. There will be opportunity to collaborate with some growers at wholesale nurseries via email or phone as well.

Frequency of Meetings: The Fellow and the Fellowship Mentor will establish weekly meetings in person on campus, via phone or videoconference. Meetings with the other collaborators would be scheduled as needed and will always be on campus. There is also the possibility of collaboration with Dr. Bousselot's graduate student, Michael Guidi, who also works as a Horticulturist at the Denver Botanic Gardens.

Critical Mentoring: A Practical Guide: Yes please!