*Please submit this completed application and any relevant supporting documentation by the deadline listed on the SSC website to* *Sustainability-Committee@Illinois.edu**.The Working Group Chairs will be in contact with you regarding any questions about the application. If you have any questions about the application process, please contact the SSC at* *Sustainability-Committee@Illinois.edu**.*

# General Information

**Project Name:** SIP Garden: Sustainable Ingredient Production for Healthy Beverages

**Total Amount Requested from SSC:** $83,737

**Project Topic Area(s):** [ ] Energy [ ] Education [x] Food & Waste

 [x] Land [ ] Water [ ] Transportation

# Contact Information

Applicant Name: Dr. Sarah Taylor Lovell

Unit/Department: Department of Crop Sciences

Email Address: stlovell@illinois.edu

Phone Number: 217-419-5337

**Project Team**

|  |  |  |
| --- | --- | --- |
| **Name** | **Department** | **Email** |
| Michael Douglass | Department of Crop Sciences | msdougl@illinois.edu |
| Name | Department/Organization | Email Address |
| Name | Department/Organization | Email Address |
| Name | Department/Organization | Email Address |

# Project Information

Please provide a brief background of the project, the goals, and the desired outcomes:

BACKGROUND: In recent years, much emphasis has been placed on sustainable and local production of healthy foods, in an effort to reduce the negative impacts of agriculture on our environment and improve the health of the humans who inhabit it. While the food crop focus is extremely important, much less attention has been placed on the beverages we consume. Even with beverages made entirely from plant-based materials (e.g., tea, coffee, and others), the ingredients are often transported from distant regions and produced under conditions that are harmful to the environment and the communities where they are grown. In the Midwest, the climate is not conducive to growing *Coffea arabica* for coffee or *Camellia sinensis* for tea. Fortunately, many other plants can be grown in the Midwest to provide botanical materials such as berries, leaves, roots, etc. that may be used in beverages. These plants could be selected and managed for sustainability, considering the environmental benefits they might provide, in addition to their harvestable products.

GOALS: The **Sustainable Ingredient Production (SIP) Garden** project would be designed to demonstrate the many herbs, berries and other ingredients that can be grown locally in a sustainable manner for producing healthy beverages to meet a wide range of tastes. The development of this interactive outdoor space would allow students to learn about the production practices related to these crops and to consider how the crops might fit into farming operations of the Midwest.

The SIP Garden would be established directly adjacent to the Sustainable Student Farm at the previous site of the Community Garden project that was funded by SSC in 2014 (PI, Dr. Samuel Wortman). The in-ground and raised-bed gardens from previous research would serve as ideal infrastructure/containment for herb species that can be challenging to grow due to their undesirable spread into surrounding areas. The site even contains a trellis structure that could be used for the production of hops, which can be used as an ingredient in herbal teas, as well as provide a shaded and seating area where classes and students could visits.

DESIRED OUTCOMES: The primary outcome for the SIP Garden project is to change perceptions and behaviors regarding the sustainable production of consumable items, in this case, beverages. This project would demonstrate an opportunity for improving Land Health, particularly for application in small, condensed spaces such as with urban agriculture. The cropping system will include a high level of biodiversity in the planting, with a focus on native and low-maintenance species. Many of the plant species are perennial, which means they will provide a number of ecological benefits such as sequestering carbon, infiltrating stormwater, and recycling nutrients. The low-maintenance species will have fewer external inputs, reducing the ecological footprint. The high biodiversity of plantings will support pollinators and other beneficial insects.

Additionally, this project aims to educate students and the public about connections between agriculture and human health, by considering products for healthy beverages. Students involved with the project and all visitors to the SIP Garden will learn more about the relationships between consumed items and the sustainable agricultural systems that supply them, with a focus on the implications for health of the environment.

Please provide a brief summary of how students will be involved in the project:

**SIP Garden** project will engage students in the design of the planting system through existing courses (HORT 361 – Small Fruit Production and HORT 434 – Designing Urban Agriculture). The project will also support two paid summer internships for students to gain knowledge working on these production systems and exploring opportunities for integrating the new crops into farming systems of the Midwest. The students will track all material and labor inputs for their crops of interest, in order to consider the ecological footprint and economic implications of production. The addition of signage will help educate visitors (students and the public) about the project. The signs will describe the site, plants, and funding provided by SSC. Information will also be added to the existing websites.

Please provide a brief summary of the project timeline:

May 2018 – Applicants receive notice of funding for the proposal

Summer 2018 – Technician will clean and prepare the site for future work

Fall 2018 – Spring 2019 – Garden Designs will be developed, approved, and finalized

Summer 2019 – Interns and Technician will establish phase one of SIP Garden

Fall 2019-Spring 2020 – Technician will perform necessary maintenance and updates

Summer 2020 – Interns and technician will establish phase 2 of SIP Garden

Additional comments

While we recognize that SSC typically prefers to fund physical infrastructure over labor, this particular project relies heavily on personnel to get it designed, established, and maintained. Without partial support for a technician and interns, we would be unable to complete the work.

The project budget will include funding for the following:

* Summer Internships for 4 undergrad students: $4800 x 2 x 2 yrs = $19,200
* Technician to manage the field activities: 30% time x 2.5yrs = $49,537

$34,282 + $15,255 benefits

* Plant materials and other field supplies $7000
* Site improvements (compost bin, picnic tables, etc) $5000
* Land Rent $1000 x 3 yrs = $3000

TOTAL: $83,737