Position Opening

**POSITION:** Student Research Assistant

**STATUS:** Part-time / Non-benefitted / Non-exempt

**COMPENSATION:** $16.00 - $16.10 per hour

**DEPARTMENT:** Center for Regenerative Agriculture & Resilient Systems (CRARS)

**LOCATION:** CSU Chico, Plumas Hall Room 301A

**RECRUITMENT ID:** 045

**RESIDENCY:** Candidate must be a California resident. Chico State Enterprises is not a sponsoring agency for staff and management positions (i.e. H-1B Visas).

**ESSENTIAL JOB FUNCTIONS:**

Title of research project: Characterizing Soil Microbe Composition in Regenerative Agriculture.

Regenerative agriculture offers potential solutions to the carbon-causing climate change issues of conventional agriculture methods. Using cover crops and no-tillage soil treatments, regenerative agriculture methods have shown a net increase in soil carbon accrual and water retention. However, the mechanisms for this process are not well understood. We hypothesize that soil microbes (specifically fungi) are responsible for storing photosynthesized carbon from plants in the soil. This project attempts to identify relevant genetic differences between regenerative and conventional agriculture soil microbes. This project will also correlate soil biotic census information with abiotic soil characteristics such as carbon and water levels.

As proof-of-concept, soil samples have been collected from different farms using both conventional and regenerative soil treatments. Under faculty guidance in a lab at the College of Agriculture, student may:

- Total DNA will be extracted from the soil samples, (using spin column kits)
- DNA concentration assessed
- quantitative PCR will be run for bacterial and fungal primer targets.

Student will subsequently perform data analysis of the qPCR values to identify fungal to bacterial ratios. By comparing the organisms that constitute soil cultivated with regenerative agriculture practices versus conventional, we can assess whether regenerative practices lead to the presence of more bacteria/fungi/archaea in soil that are associated with improved soil characteristics. Students will also be assisting with sample processing, data generation, data organization, statistical analysis, table/figure building, results poster creation, and drafting appropriate publication manuscript(s).

**EMPLOYMENT STANDARDS:**

Familiarity with lab safety, basic PCR techniques, and data spreadsheet management are required. Some familiarity with basic laboratory skills (e.g. using a micropipette) is also required. Faculty will assist with training, guidance, and troubleshooting.
HOW TO APPLY:
To be considered, submit the following documents by **November 23rd**. Documents submitted after this date may not be considered.

- Resume
- Cover Letter
- Chico State Enterprises Application

**BY DROP BOX:** [https://csuchico.app.box.com/f/4af1042b5b194f2a9ee815214f43b9fb](https://csuchico.app.box.com/f/4af1042b5b194f2a9ee815214f43b9fb)
**BY EMAIL:** [csejobs@csuchico.edu](mailto:csejobs@csuchico.edu)

Paper applications will not be accepted; however, Chico State Enterprises is an Equal Opportunity Employer and is happy to provide reasonable accommodations to applicants at any step of the application process. If you need assistance in this regard, or are having technical difficulties, please contact the Human Resources office at 530-898-6811 or [csejobs@csuchico.edu](mailto:csejobs@csuchico.edu) prior to 5:00 pm on the document deadline date. The employer is Chico State Enterprises, a non-profit corporation serving as an auxiliary organization of California State University, Chico. Employment is considered to be at-will.

**AN AFFIRMATIVE ACTION/EQUAL OPPORTUNITY EMPLOYER:**
Chico State Enterprises is an Equal Opportunity Employer and does not discriminate against persons on the basis of race, religion, color ancestry, age, disability, genetic information, gender, gender identity, gender expression, marital status, medical condition, National origin, sex, sexual orientation, covered veteran status, or any other protected status. It is the Enterprises’ policy to hire only United States citizens and aliens lawfully authorized to work in the United States. All new employees must provide proof of identity and authorization to work.