

## **Ergonomic Assessment of Work Tasks in Colorado Vegetable Production Summer Internship**

### **Mentors:**

- John Rosecrance, *Professor, Department of Environmental and Radiological Health Sciences, College of Veterinary Medicine and Biomedical Sciences*
- Adrian Card, *Extension Agent, Boulder County*
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Colorado produce growers are reacting to recent legislation, the [Agricultural Workers' Rights Act \(SB21-087\)](#), which places rules and limitations on the conduct of hand weeding activities in agriculture in Colorado. A new responsibility the law places on growers is to reduce time spent hand weeding to less than 20% of a work week. The internship will involve field research that employs wearable technology to measure time spent in various postures of workers during agricultural tasks. The intern will also learn to conduct ergonomic assessments of working tasks at the farm(s). Interns will receive training on all research tasks that will be conducted.

The goal of the project is to use innovative workplace design to reduce stooped postures of workers during agricultural tasks. This goal will be achieved by 1) quantitative measurements of low back/stooped postures, 2) the ergonomic assessments of farming tasks involving the low back, and 3) the development of improved work design through a participatory process involving CSU researchers, Extension agents/specialists, farm owners, as well as farm workers. Interns may also be involved in meetings with researchers from other academic institutions and agricultural organizations.

The intern will be active in the collection and analysis of field data as part of the ergonomic assessment. This will include visiting farms to outfit workers with wearable accelerometers, observing workers while wearing the device, and conducting a short survey of workers. The intern may also assist in the preparation of educational communications materials for both growers and farmworkers. This internship will require work performed outside at Colorado farms and at the Ergonomics Laboratory at CSU.

The majority of data collection is planned in the northern front range (Boulder, Adams, Weld Counties). The intern will need to provide their own housing in the northern front range. Additional data collection will take place in the Arkansas Valley (Pueblo County) and Western Slope (Montrose County). Travel and hotel arrangements for these trips will be provided.

### Skills gained during this internship:

- Field-based research skills involving human subjects
- Ergonomic assessment
- Research translation, health and science communication

### Ideal applicant skills/experience:

- Background in agriculture, environmental health, engineering, health and exercise science, biomedical sciences, animal sciences, or Spanish languages
- Spanish-language proficiency preferred