

22 – Codling Moth Control - Organic Orchards

Internship Rogers Mesa Research Center, Summer 2019; organic codling moth management project

1. Name of faculty/research scientist mentor and contact information including Department.

Frank Stonaker; mentor

AES WCRC RSII (70/30 AES/CE appointment) and joint appointment with Dept. Horticulture and Landscape Architecture as Assistant Professor.

WCRC Rogers Mesa, 30624 Hwy 92, Hotchkiss, CO 81419

frank.stonaker@colostate.edu

Tel. 970-250-7559

Whitney Cranshaw; co-mentor

Professor and Extension Specialist

Office: C201 Plant Sciences

Lab: E202 Plant Sciences

Whitney.Cranshaw@ColoState.edu

970-491-6781 office

Meredith Shrader: co-mentor Area Extension Agent, Entomology

Office: 2775 Hwy 50, PO Box 20000-5028 Grand Junction, CO 81502-5028

Tel. 970-244-1838

Meredith.Shrader@mesacounty.us

2. In what region will the student be working (county/region/state)?

- a. Delta County, Tri River Area, Western Colorado

3. In less than 150 words, please describe the proposed internship goals, scope, and objectives.

- a. Scope:
 - i. The scope of the project is to identify the reasons why codling moth control is less successful than it has been historically in western Colorado organic orchards and share this information with growers along with suggestions for improving its control.
- b. Goals:
 - i. The intern will become familiar with the value of collaborative research, and the value of stakeholder experience and knowledge in planning an applied research project. The intern will be introduced to opportunities for future livelihood and continued education in the field of applied entomology and tree fruit production.
- c. Objectives:
 - i. The intern will participate in and develop an appreciation for the importance of field research techniques including insect scouting, trap monitoring, sprayer calibration, application accuracy, and the collection and accurate recording of field research data. The intern will understand the importance of clearly

identifying goals, processes, and communicating outcomes to a stakeholder audience.

4. What student learning outcomes do you anticipate and are there opportunities for professional development (eg. attending conferences and stakeholder convenings).

- a. The student will have the unique opportunity of working closely with a stakeholder/research/extension team that has a very specific problem at hand. This exposure to a diverse community of participants will illustrate the challenges and benefits of collaborative applied research in the agricultural field, and will better prepare the student for future employment and/or study. This experience will provide the student with what I believe is the purpose of Extension; serving a community need with applied science based research. During the summer, there will be research station field days that the intern will be encouraged to attend. Additionally, a local growers' association (Valley Organic Growers Association) hosts regular gatherings specifically designed to allow area interns to meet one another while touring host farms.

5. Does this project already include collaboration with a specific Extension agent/office? If yes, please describe the ongoing collaboration.

This is a new project. Frank Stonaker, 30/70 CE/AES position will be the lead on this project and will have daily contact with the intern. Close interaction with Meredith Schrader (area extension entomologist) is anticipated. Whitney Cranshaw (Professor, Extension Specialist) has agreed to participate as the on-campus mentor.

6. How does this internship support identified stakeholder needs?

- a. Fruit production is a unique and significant enterprise on the Western Slope, and organic production of fruit is concentrated in Delta County – where the state's highest concentration of organic growers is found. Codling moth is the primary insect pest of apples and pears, and until recently has been effectively controlled using IPM. In 2017 and 2018 there has been a sharp increase in damage by the pest, and local producers and packers are concerned that without improved control organic apple and pear production in the area may not continue to be economically viable. A telephone survey of most organic apple producers in the area, the largest regional apple packing shed, and the region's primary agricultural chemical supplier have all requested that research on this topic proceed as quickly as possible. A student intern will be a great help in the field research, and will have an excellent opportunity to meet the leaders in fruit industry here.

7. Are travel funds available? Opportunities to provide student assistance with housing?

- a. Travel funds to and from campus will be made available at the beginning and end of the internship. A CSU vehicle will be available for farm visits in the region. Comfortable housing on site will be provided, and may be shared with other students and/or visiting scientists.