

2. Characterizing Melon Quality

Mentors: [Sastry Jayant](#), [Michael Bartolo](#), [Marvin Reynolds](#)

Location(s): San Luis Valley and Rocky Ford Research Centers

1. *Extension mentor and application contact information*

Dr. Sastry S. Jayanty

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

This is a collaborative project between Dr. Jayanty (SLVRC) and Dr. Bartolo (AVRC) to work on postharvest quality melon varieties. The student will be working at both research centers but primarily at SLVRC. SLVRC is in the Rio Grande County whereas AVRC is in Otero County.

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

The Rocky Ford growing region has a long history of producing melons of outstanding quality. Melons have a very short (1-2 days) harvest window that dramatically effects the quality and postharvest shelf life. If a melon is not harvested within the optimum window, it is unmarketable. The recent introduction of long shelf life (LSL) melons represents a significant breakthrough in addressing shelf-life issues; however, even less is known about the physical and chemical characteristics of LSL varieties as compared to popular varieties now grown in Rocky Ford region. Our project is to characterize popular varieties of cantaloupes, honeydew, and watermelons grown in the Rocky Ford area and new LSL varieties. Quality parameters of melons will be measured based on external appearance (rating scale will be used developed by UC Davis), flesh firmness, Brix and ethylene levels, the color of the rind and flavor compounds. The student will be helping in harvesting and measuring quality parameters at AVRC. Collected tissue will be further analyzed at SLVRC for flavor and other compounds.

4. *Which PRU activities are included in the scope of this internship?*

Cropping systems

5. *What student learning outcomes do you anticipate, and are there opportunities for professional development?*

Agricultural farm operation: Learning harvesting conditions of melons, melon quality parameters

Lab experience: Postharvest tests of fruits, texture, soluble solids, measurement of flavor compounds using Gas Chromatography and Mass Spectrometer

Extension experience: Interaction with melon growers and visiting farms, field day presentations

6. *How does this internship support identify stakeholder needs in your county/region?*

This is part of a specialty crop project funded by the Colorado Department of Agriculture and is developed based on the needs of local growers of Rocky Ford.

7. *What is your experience with mentorship? In less than 100 words, please describe your experience with and approach to mentorship*

Dr. Jayanty and Dr. Bartolo supervised and advised several masters and Ph.D. students, visiting scholars, postdoctoral fellows, and high school students for several years. Both faculty members encourage experimental learning and let the students explore and develop in different areas.

8. *Are the on-going connections with CSU faculty associated with this project, or is there identified faculty interest?*

Dr. Bartolo has a long-term interest in melon production, and Dr. Jayanty's research program is focused on postharvest physiology of fruits and vegetables.

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

Travel funds available, and CSU vehicles will be provided to travel between research centers during sample collection. Housing is available at both research centers.