

**Project Introduction:**  
**Table to Farm: A Sustainable, Systems-based Approach for a Safer and Healthier Melon Supply Chain in the U.S.**

**Project Team- Principal Investigators/Team Leads:**

Bhimu S. Patil, Texas A&M University (TAMU)  
Sadhana Ravishankar, University of Arizona  
Tom Turini, University of California  
Fred Nafukho, TAMU  
Kevin Crosby, Texas AgriLife Research  
Marco Palma, Texas A&M AgriLife Extension

**Project Team- Co-Principal Investigators:**

Tim Coolong, Dept. of Horticulture, Univ. of Georgia  
Wenjing Guan, Purdue University  
Jonathan Schultheis, North Carolina State University  
Paul Brierley, University of Arizona  
Mendel Friedman, USDA-ARS-WRRC, Albany, CA 94710  
Monica Ozores-Hampton, University of Florida  
Kerry Cooper, University of Arizona  
Daniel Leskovar, Texas AgriLife Research, Uvalde  
Stanislav Vitha, TAMU  
Hisashi Koiwa, Professor, Dept. Horticultural Sciences, TAMU  
John Jifon, Professor, Texas A&M AgriLife Research, Weslaco  
Luis Ribera, Extension Economist, Dept. of Agri. Economics, TAMU  
Mark Waller, Professor, Department of Ag Economics, Texas AgriLife Extension  
Ronda Miller, Professor, Department of Animal Science, TAMU  
Xiaoning Qian, Assistant Professor, Dept. Electric & Computer Engineering, TAMU  
G.K. Jayaprakasha, Texas AgriLife Research  
Jashbir Singh, Texas AgriLife Research



**Texas A&M AgriLife Research Team**



**University of Arizona Research Team**





**Yuma Center of Excellence for Desert Agriculture (YCEDA) Melon Project Team**

**Project Goal:**

The long-term goal of this multidisciplinary project was to enhance the sustainability and profitability of melon production in the U.S., emphasizing consumer preferences and industry driven needs. This stakeholder-driven goal has been achieved by integrating market surveys, breeding, and improved production practices guided by consumer and industry expectations for retail quality, nutrition, and safety. This systems approach ensured co-optimization of cultivar development and agronomic practices to address multiple stakeholders needs. The project goal accomplished five consumer-driven objectives.

**Objectives:**

Objective 1. To identify and analyze factors influencing consumer behaviors related to melon purchase and consumption.

Objective 2. To develop cultivars/germplasm that address producer and consumer needs identified in Objective 1, using genomics-assisted selection and breeding to harness genetic diversity of melon varieties and improve nutritional quality, flavor, safety, and stress resistance.

Objective 3. To develop region- and cultivar-specific agronomic practices and technologies to improve production efficiency and retail/nutritional quality and safety.

Objective 4. To identify critical control points and develop pre-harvest (breeding and production) and post-harvest strategies to minimize microbial contamination.

Objective 5. To establish a Center of Excellence in Research, Extension, and Outreach for Melons with a focus on integrating all the objectives to improve consumer awareness and meeting the consumer demand for safe, high-quality melons that exceed minimum quality standards and thereby result in increased profits for producers and retailers.

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