

GUATEMALA

Principal Investigator: Mr. Salvador Vega Prado

Internship Title: Post-harvest management: Quality, packing, shelf-life and nutrition composition

Time Period: August-September

Project Background: Through the Small Farm Technologies for Climate Smart Agriculture and Sustainable Market Access Project, Acceso will work with the Rafael Landívar University (URL) and the Ministry of Agriculture and Cattle in Guatemala (MAGA) to lead operations research seeking to catalyze sustainable linkages to established niche markets and increase incomes for farmers. The research study uses a mixed methods approach consisting of experimental design and qualitative inquiry. Through the study Acceso, a locally registered social enterprise in the Northern Triangle (NT), will introduce three different types of protective growing infrastructure for horticulture at farmer households and test the effects of each on production volume and quality in comparison with a control group. At the same time, the study will iteratively improve farmers' use of an essential suite of harvest and post-harvest management practices over time, leading to increased buyer acceptability and sales of horticultural products and therefore solidifying farmer interest and buy-in. The establishment of a local research center will provide important quality benchmarks. Half of participant farmers will be mothers under the age of 35, and the research will include a significant focus on the identification of barriers to their effective participation, devising targeted and iterative strategies to overcome them. Though comparative and cost-effectiveness analysis, the research will identify a series of evidence-based recommendations about the most cost-effective mix of production infrastructure and harvest management practices to maximize horticultural volume and quality, providing a clear avenue to sustained access to markets and increased incomes, especially for mothers under age 35.

Research Question(s) or Specific Issues to be Addressed	Range of Acceptable Disciplines	Deliverables
Postharvest management of horticulture products to ensure quality, shelf life and nutrient conservation.	Food Sciences Agriculture Sciences	A postharvest management manual according with the local conditions detailing the step-by-step procedures to ensure the quality, shelf life and nutrient conservation. Also, identifying the critical points for the postharvest management with key recommendations to follow-up.