AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
<http://ageconsearch.umn.edu>
aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

Challenges for 'going local' by the tourism sector: Lessons from direct food sourcing initiatives in Cusco, Peru

by Trent Blare and Jason Donovan

Copyright 2021 by Trent Blare and Jason Donovan. All rights reserved. Readers may make verbatim copies of this document for non-commercial purposes by any means, provided that this copyright notice appears on all such copies.

Challenges for ‘going local’ by the tourism sector: Lessons from direct food sourcing initiatives in Cusco, Peru

Trent Blare¹, Jason Donovan²

July 6, 2021

Abstract

Restaurants can improve the quality and reliability of their input supplies and gain favor with consumers through direct sourcing while also contributing to development goals around sustainable production and income generation. However, limited evidence exists on the willingness of restaurants to invest in direct sourcing, the implications of these linkages, and the options to achieve scale. We interviewed 46 restaurants to examine their preferences and experiences in sourcing local foods and analyzed three cases that link local production to the tourist sector in Cusco, Peru. Results suggest that the interventions succeeded in providing a few restaurants with high value food. However, the interventions failed to deliver impact at scale. Bottlenecks included low business capacities in farmer organizations, limited support from NGOs and the government, and weak incentives for restaurants. We conclude with a discussion on the changes needed in the business and policy environment for achieving greater impact at scale.

Keywords: rural development, sustainable development, local food systems, food marketing, smallholders

¹ Corresponding author current affiliation: University of Florida Tropical Education and Research Center, Homestead, FL, USA. tblare@ufl.edu

² Current affiliation: International Maize and Wheat Improvement Center, Texcoco, Mexico

Introduction

Restaurants in developed countries have long worked to make direct purchases from local producer organizations because they provide access to high quality, fresh traditional food products that tourists are demanding as part of the authentic experience as well as a signal to socially conscious consumers of their commitment to support rural communities and sustainable production practices. Engagement in short food chains for sustainably produced products offers an important opportunity to engage directly and extensively with processors, consumers, and government agencies. Deeper insights into designing interventions and the bottlenecks faced in implementation are critical for refinement of impact pathways to reflect local realities and needs. This article zooms in on the design of direct sourcing by restaurants in Cusco, Peru—a major tourist destination in Latin America—and their willingness and capacity to engage with local smallholders over time. We provide insights into how these interventions can better meet the needs of the restaurants for the products and services they desire, create deeper, additional, and greater positive impacts to each participating smallholder household and can increase the number of households benefited both directly and indirectly.

Our study of restaurants sourcing locally in Cusco, Peru particularly examines these challenges and analyzes to what extent tourist-oriented restaurants have overcome them and what needs to be done to better address these challenges to bring such efforts to scale. Unlike prior research that focused on the provision of food from the perspective of the farmers, the suppliers, or of the tourism enterprises, we examined these relationships from both ends of the chain, from the businesses seeking out these products and the enterprise that source the restaurants. Additionally, this study provides insights on building these direct buying networks in a middle-income country in Latin America, where little has been published on these relationships.

The remainder of this paper is divided into four sections. The next describes the materials and methods. It includes the conceptual framework, a description of why Cusco provides an ideal study site, and an overview of how we designed the study. It presents in detail the data collection methods for interviewing the restaurants and three cases. The third section presents the results. We first describe the expectations, perceptions, and experiences of the restaurants. We then explain the influence the direct sourcing had rural communities in the three selected efforts. The final section discusses the implications of the findings and summarizes the key lessons for restaurants, farmers and institutions that support these initiatives to bring them to scale.

Materials and methods

Conceptual framework

Recently, interest in the potential for local farmers to supply the restaurant industry with sustainably produced goods have emerged from two very different corners of the rural development literature. With a focus on restaurants in North America and Europe, researchers have highlighted the growing consumer demand for locally produced, organic foods and overall higher quality foods, including attributes such as nutritional value, freshness, safety, and taste. Various researchers have shed light on consumer expectations and demand for locally produced food products, as well as the factors that shape access to and demand for locally produced foods (Arsil et al., 2014; Si et al., 2015; Greenberg, 2017). In addition to taste, factors such as environmentally friendly production and support for local farmers have caught the attention of restaurant patrons, who have indicated a willingness to pay a price premium for these products (Schneider & Francis, 2005; Frash et al., 2015).

Others have found a high interest by restaurants and their chefs in purchasing locally grown foods, but formidable barriers exist that limited the translation of that interest into large

scale purchases from local farmers over time. Overall, restaurants have been primarily concerned with quality, taste, and freshness, with food origin typically being a second-tier issue. While restaurants have generally prioritized food quality and taste above all, those most likely to investment in local engagement for sourcing include smaller, independently owned restaurants. Research in North America has also examined this expanding tourist movement that seeks out look cuisine made from local products in restaurants and resorts. This trend referred to as “culinary tourism” has taken off with restaurants offering traditional dishes made from local products in well-known tourist attractions like Niagara Falls or lesser-known destinations like rural Wisconsin, Colorado, and Ontario (Telfer, 2000; Starr et al., 2003; Smith & Xiao, 2008; Green & Dougherty, 2009).

Looking at the large-scale, often internationally owned, hotel sector in the Global South, researchers have explored the potential opportunity for smallholders to supply directly fresh agricultural products. The interest recognizes that international tourism plays a vital role in domestic economy, and the development of backward linkages with farmers can reduce foreign exchange leakages, while providing a boost to efforts to promote growth of the agricultural economy. For hotels, the incentive was clear: sourcing from smallholders offered a chance to reduce their input costs, reduce their dependent of relatively expensive imported ingredients. Over the last twenty years, donors, UN agencies, NGOs, the private sector, and governmental economic development agencies have supported interventions aimed at building commercial links between hotels and local farmers, with particular interest in small island states (Bennett et al., 1999; Rand et al., 2003; Okumus et al., 2007; UNEP, 2015; ICT, 2010).

Researchers have highlighted various challenges to sustain direct sourcing schemes and achieve impact at scale. Sourcing arrangements with farmers tended to be limited in scope with a

few farmers supplying a few, normally just one, large business, and there was limited capacity for innovation in the commercial relationships when issues began to arise (Telfer & Wall, 2000; Meyer, 2006). They faced challenges to sustain and grow operations over time including logistical difficulties in coordinating deliveries, poor transportation and communication infrastructure, limited social and financial capital, high marketing costs, finicky consumer demand, and weak business leadership and farmer organization (Martinez et al., 2010; Dunne et al., 2011; Freidberg & Goldstein, 2011). Moreover, local sourcing has been seriously impeded by problems with production (i.e., farmers producing in-demand products in sufficient volume), distribution, reliability, and lack of information (Starr et al., 2003; Schneider & Francis, 2005; Inwood et al., 2009; Curtis & Cowee, 2009).

Recently, interest has started to reemerge related to the potential of the tourism sector to engage local farmers, in response to the overall growth of tourism in many parts of the Global South, and the increased interest in food and dining as part of this trend (Sims, 2009; Mak et al., 2012; Deere & Royce, 2019). An important question is whether the fast growth of the tourism sector, combined with an overall increase in consumer interest in more local and fresher foods, has changed the potential for direct scouring schemes between smallholders and restaurants grow over time and deliver positive outcomes for those involved. Overall, scarce evidence exists on the motivations behind engagements in direct sourcing schemes by restaurants in developing countries or on the related outcomes for stakeholders with the exceptions being a study that analyzed the benefits farmers received and their challenges in supplying restaurants in Cambodia (Mao et al., 2014) and another one that examined challenges that a South African resort faced in obtaining a steady local supply from nearby farmers (Rogerson, 2012).

Further understanding of these efforts in developing country are need not only because of the exploding tourism industry in this region but also because of the opportunity that these direct linkages offer to spur rural development (Oppermann, 1997; Akama & Kieti, 2007). Indeed, NGOs, the private sector and governmental economic development agencies have supported these connections to advance rural development goals around poverty reduction and economic growth. These institutions feel an urgency to counter the domination of the externally driven pathways which have characterized food-system evolution in many developing regions as growing evidence suggests that smallholders may not have benefited equally from these strategies, often struggling to connect with export markets (Francis et al., 2003; Fernandez et al., 2012; Holt-Gimez & Altieri, 2012). The evidence from these efforts points out the difficulty in building strategic alliances, overcoming logistical challenges in getting the product from the farms to the business on time, and getting the pricing right to create win-win scenarios for the farmers and the restaurants (Telfer, 2000; Green & Dougherty, 2009).

This prior research has provided insight into several metrics that are important in building direct linkages between smallholders and the hospitality industry: the consistent provision of quality products that meet customer demands, the ability to overcome logistical challenges, the creation of long-lasting business relationships, and the ability of these schemes to spur rural development. We examine the three initiatives to connect smallholders to restaurants in Cusco based on these metrics. We then use the findings from this analysis to provide insights into the potential for similar initiatives to be scaled at different dimensions. These dimensions would be to having a greater positive influence on smallholders' wellbeing, restaurants' access to high quality products, and consumers' diet diversity.

Study site

Its long and eventful history from being the capital of the Incan empire to the Spanish conquest, combined with its strategic proximity to Machu Pichu, has made Cusco one of the most popular tourist destinations in Latin America. Even though mining is the largest economic driver in the region, tourism is the second leading industry making up about 12% of the economy in 2017 (Chique et al., 2018). Tourism has been a booming business in Cusco since the 1990s and has continued to explode with the naming of Machu Pichu as a World Heritage Site and the expansion of budget airlines. Indeed, various Peruvian economic development agencies, as well as NGOs have seen this tourist growth as an economic opportunity that if correctly managed with an eye toward sustainable tourism would provide employment opportunities, lifting households, especially rural households, out of poverty (Rice, 2015; Knight et al., 2017). In fact, this tourism growth had no small part in ensuring that per capita income in the department of Cusco nearly doubled from 2007 to 2017, growing from 2,958 USD to 5,902 USD in 2007 dollars (INEI, 2018a).

This growth in tourism to see Machu Pichu and other culturally important sites cannot be disaggregated from a growing boom for culinary tourism in Peru as tourists seek out Peru's world-renowned local cuisines and restaurants. Peru has been able to create and promote a unique culinary tradition based a rich supply of ingredients from unique Amazonian fruits to a wide diversity of abundant seafood found in the cold waters of the Humboldt current and Andean food products first cultivated by Incan communities and their ancestors. Such products include native potatoes and landrace maize. This variety of widely accessible food products that have been promoted by culinary institutions combined with a diversity of food traditions from pre-colonial times to more recent European and Asian immigrants provide the conditions along with

innovative chefs to create gastronomic delight (Wilson, 2011; Matta, 2014). Even though much of this culinary tourism has been targeted to Lima, which in 2019 had the highest rated restaurant in Latin America and two restaurants among the world's fifty best, these trends have spread to the rest of country. They are especially prominent in Cusco where tourists have very high expectations for dishes that aspire to Peru's fame (Gálvez et al., 2017; Millington, 2019).

This growing demand for Peruvian dishes has also created a boom in the demand for traditional food products as world famous, Peruvian chefs even travel to remote communities including in Cusco in search of the next famous ingredient (Wilson, 2011). Many smallholders in this region grow a range of traditional products, which are suited for the agroclimatic conditions faced altitudes between 2500-3000 meters above sea level. For several of these crops, the market value has increased markedly in recent years (i.e. quinoa and maca). However, overall, poverty in the department of Cusco remains mainly a rural phenomenon. According to the most recent agricultural census in 2013, farms around the city of Cusco tended to be small, averaging 5.5 hectares and 59% were oriented to production for self-consumption with the small surplus sold in local markets. Farmers grew most of their products using traditional, low input methods with 61% of these farmers using only organic fertilizers. The farmers in Cusco are primarily from historically marginalized indigenous communities with 83% of farmers speaking primarily Quechua and 43% were dependent on off-farm income, mainly in the tourism sector, to supplement their farm income (INEI, 2013).

Research design

To understand the options and challenges from direct sourcing by local restaurants in Cusco, this research examined these arrangements from two different perspectives, restaurants seeking out direct purchases and local farming enterprises that source these restaurants. For the evaluation of

the restaurants experience with direct sourcing, we interviewed the person in charge of making the purchasing decision in 46 restaurants to get an understanding of their willingness and experiences to engage in these direct sourcing arrangements. We also selected three of the principal enterprises that supplied these restaurants to conduct a deep dive analysis of these direct purchasing relationships, the experiences that these enterprises had with supplying the restaurants and expectations for the future. We purposefully selected cases that represented the range of enterprises that source restaurants in Cusco. Two were farmer associations and the third was an enterprise managed by a consortium of restaurants.

Restaurant interviews

From a list of 82 restaurants that were members of the Cusco tourism council (DIRECTUR for its acronym in Spanish), we purposefully selected the restaurants to represent the broad diversity of tourist restaurants in Cusco. We selected the restaurant according to the selection criteria of restaurant category (i.e. one, two or three stars), type of menu offered, and year established. A third of the interviewed restaurants were in each of the three categories. Nearly half of the restaurants (22) specialized in dishes traditional to Cusco and the other half's (24) main menu items were of an international flavor. The majority (64 percent) were only restaurants, 17 of them were combined hotel and restaurant. On average, a sampled restaurant had been in business for 11 years, with 6 of them having been in operation for 20 years or more and 12 of them for less than 5 years.

A team of two enumerators interviewed the restaurants. One of the enumerators asked the questions from the interview guide and while the other filled out the guide. Following the interview, enumerators compared notes and completed the interview guide, corrected any discrepancies or misunderstandings, and verified the responses. They interviewed the person or

persons in charge of sourcing inputs for the restaurant. On average, the respondents had held their position for some 5.5 years, as an administrator, owner or head chef, or logistics manager, with 6 of the respondents having greater than 10 years of experience. As the restaurants utilized a range of food products, the enumerators collected data on experiences in sourcing of categories of food: fruits, vegetables, dairy products, meats (including alpaca and guinea pig) and roots and tubers. The respondents also identified challenges they faced in sourcing by each of the food categories and supplier. The final section included questions on the restaurants direct relationships with local farmers.

Case study analysis

To analyze the sourcing of the local products of the restaurants, we selected three such efforts for case studies. This method is well suited to this type of research, as the limited number of direct sourcing relationships limit the ability to undertake large surveys (Selfa & Qazi, 2005; Coley et al., 2009). We carried out a first phase of data collection from February-April 2016. We interviewed stakeholders, including NGO leaders, local governmental officials, and business owners, to identify interventions that had taken place to facilitate the direct sale of agroecological products between smallholders and buyers in Cusco. We gathered information on the products they offered, the intervention period, the people and organizations involved, and possible insights into outcomes and impacts achieved. We identified ten interventions. Local NGOs and government institutions supported seven while international NGOs and bilateral funding agencies helped establish the other three.

We, then, purposely selected three interventions (Native Potato Case, Greenhouse Horticulture Case, Specialty Herb Case) that provided a mix in terms of organizational engagement (NGOs, intermediaries, and restaurants), products offered, and local capacities for

agroecological production and marketing. This diversity allowed us to analyze how different factors influenced the outcomes of the cases and determine if a specific factor benefited or hindered the success of these interventions. Once we selected the cases, we interviewed various actors from May through July of 2016 to obtain multiple perspectives on each case. In the Native Potato Case, we interviewed 26 out of the 35 members of the association. All five female members were included. For the Greenhouse Horticulture Case, we interviewed all the 18 members that participated in the effort. The structured interviews included questions on household demographics, assets, participation in productive activities and in the organization, and overall perceptions of each organization. For the Specialty Herb Case, we visited the enterprise to understand how it operates and interviewed the manager, the manager's assistant, the owner to collect data on the business operation, challenges they faced and plans.

Results

We divide the results into two sections. The first describes the reality restaurants faced while sourcing food products in Cusco, their satisfaction with their current relationships and what challenges they faced in obtaining the desired products. We particularly focused on their direct sourcing relationships and the difficulties they faced in these relationships. The case study analysis is the focus of the second section. Here, we explored the experiences of the enterprises that directly source the restaurants, the challenges they faced in these relationships and their interest in cultivating such arrangements. We provided insights into the ability of these businesses to bring about rural develop and enhance the income earning opportunities for rural households, their success and challenges in producing the products desired by the restaurants and their expectations for continued participation in these relationships.

252 ***Restaurants***

253 Our analysis of restaurants experiences with their sourcing relationships demonstrates that they
254 obtained the food products they needed from their sourcing relationships with intermediaries.
255 However, they faced challenges in these relationships due to the high cost of obtaining the
256 products they wanted and had concerns about the quality and freshness of these products.
257 Because of these challenges and interest in sourcing local products, many restaurants sought
258 direct sourcing relationships with nearby production enterprises. While they often received
259 quality products from these local enterprises, they often faced challenges in coordinating the
260 delivery of the products, ensuring the products meet the proper safety standards and
261 certifications, getting the volume of products that were required, responding to communications
262 quickly, and obtaining proper receipts.

263 ***Relationships for sourcing***

264 The restaurants purchased from a variety of suppliers to secure the agricultural goods needed for
265 their operations. Table 1 presents the different types of suppliers for different types of products.
266 Intermediaries supplied the majority of food products who purchase it from wholesale markets in
267 Lima and in Cusco and then package it for delivery to restaurants. Intermediaries delivered the
268 vast majority of fruits and roots and tubers purchased by the restaurants. The restaurants
269 purchased directly from nearby individual farmers or from farmer organizations when they
270 sourced fish (e.g. trout), meats (e.g. guinea pig), roots and tubers (e.g. native potatoes) and
271 certain types of fruits and vegetables (e.g. herbs, leafy vegetables, edible flowers, strawberries).
272 However, even in these cases, direct purchases usually made up a small percentage of overall
273 volumes purchased. One respondent reported, “We would like to find specialized providers of
274 horticultural products that could supply our restaurants, so as not to have to bring horticultural

products from Lima.” In a few cases, the restaurants had engaged in their own production, for example, in the case of certain types of hard-to-find vegetables and herbs and for Andean grains (e.g. quinoa). The restaurants tended to rely more heavily on specialized suppliers (i.e. formal business that special in the provision of a narrow range of products) for the purchase of dairy and meat products.

[Insert Table 1 Here]

When asked to rate their satisfaction with current food providers on a scale from one to five (with five being the highest degree of satisfaction), respondents on average rated their satisfaction at 3.6. While existing sourcing options are not perfect, they were able to provide them with the products they needed for their current offerings. However, they did not allow for much innovation into offering new dishes. The respondents identified three positive factors and three negative factors about current sourcing relationships (Table 2). The most frequently identified positive element of the existing relationships was the quality of the product delivered. This suggests that, although restaurants are concerned about the overall informality of sourcing relationships (e.g. lack of systems to ensure food safety), roughly 40 percent of those sampled were sufficiently satisfied with the quality of food delivered by existing suppliers. Restaurants also appreciated suppliers that were able to respond to their needs over time, to deliver on site, easy to access (via phone, email, or frequent visits), able to wait for payment, and accept returns of low-quality products. The most frequently identified negative aspect of existing supplier relations related to the transport and handling of fresh foods, poor hygiene, and sudden price hikes without explanation of underlying reasons for the increase.

[Insert Table 2 Here]

We asked the respondents to rate the frequency (1 being very frequent to 5 never occurring) and gravity (1 being very grave to 5 no problem) of some of these problems with intermediaries and direct purchases (Table 3). The respondents rated the lack of sanitary certifications and logistical challenges to be particularly frequent difficulties faced by both sourcing arrangements. Indeed, the respondents rated the challenges to be more frequent for direct purchases than from intermediaries in all the categories except for too high prices. On the other hand, the shortage of product and poor quality of the product were noticeable grave difficulties faced in both sourcing arrangements with high prices being a particular challenge for the relationship with intermediaries and logistical challenges being of concern for direct purchases.

[Insert Table 3 Here]

In some cases, the respondents highlighted the difficult to purchase “organic” products from local suppliers. In Cusco, “organic” generally implied a product that was locally produced by smallholders with limited use of agrichemicals—few restaurants purchased certified organic products, as there were no certified organic products available in Cusco due to the cost of certification. The responses highlighted the high costs to seek out quality inputs and specialty items, such as herbs, trout, and native potatoes. The issues of informality in business relations (and the limited capacity of local sellers of food inputs to provide a purchase invoice—which requires that sellers be formal businesses certified with the tax authorities) was also a frequently mentioned challenge. Where respondents identified bottlenecks not related to sources, these tended to deal with lack of infrastructure (e.g. refrigeration capacity, meat packing). Five restaurants reported no bottlenecks. In some cases, they highlighted how the expansion in the number of local intermediaries allowed them to acquire inputs with less effort than in the past.

Direct sourcing relationships

At the time of the interviews, most of the restaurants, 25 (54%), have had a direct sourcing relationship with 20 distinct local suppliers between 2011 and 2016. There were 34 such relationships as 7 restaurants had two or more such relationships. Of these relationships, 10 (20%) lasted 6 months or less, 19 (56%) lasted from 7 months to 2 years and 5 (15%) lasted over 2 years. Of The respondents classified 2 (6%) of the relationships as being very close, a partnership, 17 (50%) as being somewhat close, a friendship, and 15 (44%) as being distant. The restaurants mentioned that the quality of the products offered, on time delivery, and good communication were the key factors in developing and maintaining the closest relationships. They also stated that the failure to complete orders, delivering the wrong or inadequate amount of a product, and inability to provide legal invoices were the primary factors that limited further strengthening direct purchasing arrangements. Of the restaurants that did not have a direct sourcing relationship, all but one of the restaurants said they were interested in starting one, especially to ensure the sourcing of fresh products. However, their limited of knowledge of who to contact and time to search out these contacts hindered their ability to establish these relationships.

Overall, the respondents demonstrated an interest in sourcing directly from nearby producers, whether that be a single producer, a producer association, or other enterprise. They believe such relationships allow them to source fresh, higher quality goods. However, the challenges faced in maintaining these relationships especially the lack of business skills of the enterprises sourcing the products limited the duration of these relationships. In the next section, we examine the other side of the relationship that of three enterprises that supply these restaurants. Such a perspective allows for more holistic understanding of the challenges that both

sides face in establishing and maintaining these relationships in order to determine what actions can be taken to strengthen and bring to scale these efforts.

Case studies

To demonstrate the other side of the direct sourcing relationship, we examined three different efforts that NGOs, many times in coordination with local governments, made to establish direct buying relationship. The three efforts represent different types of enterprises. The first is an a producers' association that made up of 45 smallholders that markets native potatoes to upscale restaurants in Cusco. The second is a marketing network of 18 smallholders that were trained in growing vegetables in greenhouses that they sell to restaurants and at a farmers' market. The final case is of a business owned by a group of restaurants that sells specialty herbs and vegetables for its own use and sale to other restaurants. These cases demonstrate that although there were challenges especially in coordinating the delivery of the products, the efforts provided new marketing opportunities and employment for a few rural households.

Native potatoes case

In 2001 a local NGO with support from the local government and the national agricultural research implemented a project to conserve the genetic diversity of native potatoes with 140 smallholders located in eight communities. After some success with native potato production, the growing demand by restaurants for native potatoes encouraged these acotrs to facilitate market outlets for surplus production. In 2003, the local NGO received funding to establish a farmers' association to sell the potatoes in local markets and restaurants in Cusco, with 45 farmers making the first sales to a gourmet restaurant in Cusco in 2005. By 2008, all 140 farmers participated in the association and five new restaurants were added to the client list. However, as funding

evaporated in 2010, the NGO withdrew its support, and only 47 farmers from the two communities closest to Cusco maintained their engagement with the association.

Before these direct markets were established, the 35 farmers interviewed for this study did not receive a higher price in the market in Cusco to compensate for lower productivity of native potatoes vis-a-vis hybrid potatoes. A 74-year-old female member pointed out that, “Before [the intervention] we sold native potatoes at a very low price. Very few people bought native potatoes.” At the time of the interviews, these farmers earned three times more for the sales of their native potatoes to the restaurants than they did for selling hybrid potatoes to local intermediaries (1.80 USD/kg for native potatoes compared to 0.60 USD/kg for hybrid potatoes). These market opportunities allowed for the sale of native potatoes to be the most important income source for 50% of the interviewed households and the second most important for an additional 19% of households. A 35-year-old male member of the cooperative mentioned that, “the sale of [Native potatoes] allowed me to pay for my children’s education.”

Even though the members of the association were able to earn higher prices from their sales to restaurants, they continued to depend on the local markets to sell the potatoes. Nonetheless, sales through the farmers’ association was the most important market for these households: 58% of households rated sales to the association as being either important or very important to their marketing native potatoes compared to 54% that gave the same rating for local markets and 38% in regional fairs. Nonetheless, 29% of the farmers indicated that a lack of production knowledge, particularly in controlling diseases, was an important factor that hindered their ability to expand/intensify production, as the NGO that had helped them establish the organization no longer had funds to provide this service. The lack of labor, access to credit, and land were additional factors that inhibited the expansion of the farms (Fig. 1).

[Insert Figure 1 Here]

While participation in these new markets for native potatoes greatly enhanced rural household incomes, the organization failed to expand its clientele beyond six restaurants; each of which only purchase a few kilograms of native potatoes in any one week. There was little willingness on the part of the smallholders to expand the organization, as sharing their limited market access would dilute the market for current association members. The organization would not be able to meet increased demand due to the lack of social cohesion in the organization. The leaders of the association failed to keep the members well informed about meetings, trainings and finances (i.e. details of sales and prices paid by the buyers). In fact, 42% of farmers interviewed said they rarely received information from the association. This lack of communication had motivated some members of the association to be skeptical of the leader. One 40-year-old male, farmer complained, “I am not as dedicated to the production of native potatoes as I used to be because the association is going bankrupt. There have been problems with the directors. They only look out for their own interests.”

The association was also unable to market other products the farmers grew, particularly vegetables, which were sold locally in informal markets. The logistical and infrastructure (i.e. lack of refrigeration) challenges were too difficult to overcome to enter this market. An established intermediary in Cusco attempted to purchase vegetables from the association; however, the association had no way to effectively transport the goods to the intermediary’s warehouse. Moreover, there was little interest from the association’s current clients to purchase additional products. Under the current arrangement, the businesses demonstrated their support for the rural communities, which was important in their marketing

to attract socially conscious clientele, without the complications in developing networks and logistics for the direct purchase of fresh produce.

Greenhouse horticulture case

In 1998, an international NGO began an effort to improve vegetable production through the installation of greenhouses for production of horticultural crops. Given Cusco's high altitude, and the possibility of sudden and severe cold snaps, greenhouses were critical for smallholders to grow horticultural crops throughout the year. The NGO recognized that in addition to producing vegetables, the farmers would need to consider options for marketing these vegetables. In 2011, the international NGO handed the effort over to a local NGO that focused on finding buyers for the greenhouse vegetables. The local NGO engaged with a major multi-national fast food restaurant interested in securing local sources of greenhouse lettuce. The NGO focused on training the 18 participating farmers in best practices, especially in meeting stringent quality standards. When this last phase ended in 2016, the smallholders continued to supply the restaurant and a specialty intermediary, who supplied several restaurants in Cusco with strawberries. The farmers sold their surplus production in a regional farmers' market.

Many of the smallholders claimed that the income from selling to local restaurants allowed them to invest in expanding or building new greenhouses, constructing irrigation systems and the purchase better quality inputs. The greenhouses provide these farmers with a consistent, year-round income and food source. They were motivated to participate because of the price premiums received; 94% of the smallholders admitted that they received higher or much higher prices through these direct sales to the restaurants than they did through local markets. However, they had to wait several days for payments and either had to have a bank account to receive electronic transfers or visit the business several days later for a check. This wait was a challenge

434 for many smallholders who needed immediate payments to pay harvest costs. A majority, 59%,
435 of smallholders found the delay in payments to be intolerable or to be greatly affect their
436 household finances. At the time of the interviews, the farmers were concerned about one client,
437 who had recently had a change in management and had yet to pay them for a delivery made two
438 weeks prior. One 58-year-old male farmer mentioned that, “Getting paid for my vegetables has
439 been very complicated. I have to visit the business to receive my payment and sometimes they do
440 not pay me that day. I waste my time and bus fare [to travel to Cusco].”

441 The households have become very dependent on the sale of products grown in the
442 greenhouses. Vegetables, fruits, and flowers from greenhouse production were either the primary
443 or second most important income source for all the households. Nonetheless, sales from the
444 greenhouses were not as beneficial economically to the few households that participated in the
445 intervention, as they would had hoped. They were not able to sell all their products in these
446 lucrative markets, include additional restaurants or expand membership. Only 39% of
447 households sold the majority of their products through this marketing network. Members rotated
448 filling the orders so that any particular farmer only made a sale once a month. The product that
449 smallholders did not sell to the restaurants was sold in local markets often at a discount of a
450 quarter or third. Several, 22%, of households stated that the limited market access hindered their
451 ability to invest more in their greenhouses. Still, 89% of households planned on investing in their
452 greenhouses, by expansion or improving their irrigation systems. However, without a better
453 understand of the use of the best production practices, they were concerned they would be unable
454 to maximize the potential of these investments. Also, because of the large labor input necessary
455 to produce these goods, the farmers mentioned that they lacked the labor to cultivate additional

land; 56% of the households stated that time constraints were one of the top three factors that limited their ability to expand their greenhouses (Fig. 2).

[Insert Figure 2 Here]

The farmers built themselves a reputation of consistently meeting quality and safety standards for over five years so that the manager of the restaurant that was its primary buyer was helping the organization look for opportunities to supply other restaurants in Cusco. Because of this reputation, they were successful in developing a partnership with a specialized, local intermediary that seeks out high quality products to supply tourist restaurants in Cusco. He was encouraged to buy from the smallholders not only because of the quality of their products and their completion of strict safety standards but also because he could trace the products back to the individual farmer, a characteristic desired by high-end restaurants.

Such a reputation was built through collaboration with the farmers work together to consistently meet their buyers' needs and begin to expand into new markets. Three farmers pointed to the importance of coordinating their sales as a group rather than individually in order to secure higher prices. "We must ... work together to not compete with one another to supply a client," said a 39-year-old female farmer. The price premiums and access to lucrative markets was a very important motivating factor in the farmers' commitment. In fact, 89% of the farmers said they were active or very active in the organization, the same amount that was active when they established the organization. The leadership kept the farmers well informed about sales and activities.

The main challenge the smallholders faced in growing their business was following Peruvian tax laws. The farmers felt that they had not been properly trained in meeting these

479 requirements. They pointed out that they had to pay a large fine when they did not submit tax
480 forms on time and correctly register their sales, yet they were still unsure of what error they
481 had made. The one farmer that left the network decided to do so because he did not want to
482 pay the fine. The farmers also mentioned the need to look into developing relationships with
483 other business (i.e. two new supermarkets in Cusco) in order to sell more of their product at
484 these higher prices and expand their product offering as their customers have been asking for
485 additional crops besides their current offering of lettuce and other leafy vegetables and
486 strawberries. One 59-year-old female pointed out, “We need to access new markets. There
487 are few sales when the harvest is at its peak.”

488 *Specialty herb case*

489 In 2007, a local NGO, in coordination with restaurants, organized twenty farmers to produce
490 fruits and vegetables for restaurants in Cusco. The association supplied ten restaurants with
491 limited products the first year, 2008. For the next two years, it failed to deliver products when
492 promised. In particular, several farmers were unwilling to grow vegetables during the holidays,
493 when demand for the restaurants his highest. Faced with dwindling funding, the NGO also
494 ceased its support for the association and the farmers were unable to assume the intermediary
495 role that the NGO had performed. With an aim to ensure continuity of the supply of these
496 important crops, the owner of a consortium of restaurants in Cusco took over the organization in
497 2010. The consortium bought out the farmers and consolidated the farm to source the products
498 they needed. By 2016, the farm had expanded to supply 29 restaurants in Cusco that are in
499 addition to the 6 restaurants that are part of the consortium.

500 The farm provided an important income source to additional rural households. It
501 employed twelve people from the rural community where it was located and was looking to hire

502 additional workers as the business expanded. What distinguished the farm from other employers
503 was that it provided opportunities for professionals (agronomists, an account, a business manager
504 and a food safety expert) to work in this rural community. Working on the farm provided these
505 professionals with hands on training in business management, marketing, and relatively
506 advanced agronomic practices. The organization also made a particular effort to purchase from
507 nearby smallholders to help fill the demand for particular goods. The manager bought edible
508 flowers from three local farmers on a monthly basis providing them with access to these more
509 lucrative markets. The manager also attempted to purchase fresh vegetables from the farmers in
510 the Native Potato Case. Even the owner of the farm and the director the NGO that established the
511 original farmers' association expected business to provide a steady income source to the
512 community, the farm has only been able to benefit a few households. The farm has only been
513 successful in establishing such sales arrangements with three nearby smallholders.

514 In order for the farm to produce delicate vegetables, flowers, and herbs, the owner
515 invested in specialized infrastructure (i.e. greenhouses, drip irrigation, cold storage, and
516 processing facilities). While the farm had been successful in producing a wide variety of
517 products, throughout any given year it offered 90 products with 42 offered at any one time, it
518 faced many challenges in being able to increase production. Even though the manager hired as
519 many students as possible from the technical training program supported by the local NGO that
520 founded the enterprise, he was still unable to find enough qualified workers, especially during
521 harvest. To increase production, the farm needed a computerized irrigation system and improved
522 composting facilities. However, banks were hesitant to issue the business credit because of the
523 uncertainty of the risk in such an innovative business. In order to raise the needed capital, the
524 owner was considering seeking outside investors including other restaurants in Cusco.

525 Although the business sees a demand for organic produce, the legal and policy
526 environment hindered the ability of the farm to exploit these opportunities and expand its
527 production. In particular, the farm faced difficulties in sourcing organic seeds for specialty crops.
528 The manager had to import many of these seeds from the United States, which can cost up to 4
529 USD per seed because of the additional transactional costs of shipping and paying the Peruvian
530 custom fees. The manager also indicated that there was little support from the agricultural
531 ministry to support organic production. The extension system focused on conventional
532 production methods that rely on agrochemicals and was geared to the production of export crops,
533 such as quinoa and avocados, and not for products for the local market. The agronomists that
534 worked for the business felt that they had no one to turn to for advice for organic solutions to
535 disease or pest infestations or in helping develop better techniques to produce organic fertilizer.

536 An indication of the enterprise's success was its inability to keep up with the demand. One
537 of the principal clients of the farm pointed out that he would like to source all his products from
538 it due to the freshness of the locally produced vegetables and herbs and lower transportation cost.
539 However, the restaurant was only able to source 70% of its needed vegetables and herbs from the
540 business; the rest came from Lima. Either it does not produce enough at the time that the product
541 is required by the restaurant, or it does not produce the desired vegetable or herb. In order to spur
542 this demand, the manager made efforts at maintaining open communication with the business'
543 clients about when products were available and delivering the products directly to the
544 establishments on set days during the week. The management also developed an online catalog
545 to display the vegetables and herbs that it offers; sent out monthly emails with a list of products,
546 prices, quality available, and any special offers; and accepted electronic orders. The business
547 constantly updated its product offer in order to keep up with food trends by taking product

recommendations from its clients. Of particular importance were connections to a restaurant in Lima, where food trends often emerge before spreading across the rest of the country.

The manager pointed out that five chefs from the most elite restaurants in the city were especially stringent in their requests. They demanded high quality products, based on taste, color, smell and texture, which were hard to meet due to increasing climatic variability. These chefs also desired organically certified products. However, organic certification, at a cost of 1000 USD, was too costly for the farm. As there were no organically certified products in the markets in Cusco, the chefs had nowhere else to turn. Rather than having certification, the owner allowed the chefs to visit the farm anytime to verify the production systems utilized, which all the chefs commented that these visits provided them with confidence in the product. The owner of the farm mentioned that, “If they [the restaurants] want to purchase from us they will. If they require organic certification, let them go find someone who will provide it, which I know they will not be able to find.”

Discussion

These cases demonstrated that establishing direct sales between local farmers and tourist restaurants in middle income countries like Peru could foster rural development by providing new jobs and enhanced income for smallholders through access to lucrative local markets. At the same time, such relationships have the potential to provide restaurants with access to quality food products that is highly sought after by its patrons. However, those promoting such direct sourcing relationships should proceed with caution as what may seem as an easy and obvious win-win solution has proven difficult to achieve at scale. Achievements were restrained, even in a tourism-dependent city like Cusco with a burgeoning culinary scene. The production enterprises struggled to move beyond a few restaurants to source a larger population. Only a

handful of farmers and workers benefited in any one case. Many restaurants faced difficulties in maintaining these relationships often with the sourcing arrangement lasting only a few months. The interventions were small in scope with a few farmers supplying a few, normally just one, large business. There has been little innovation in these relationships. The restaurants waiting for the farmer to deliver the products, no new forms of intermediation.

The NGOs and governmental agencies involved in creating these relationships focused their activities on improving smallholders' production capacity. They tended to pay less attention to improving smallholder organizations' business capacity (i.e. management, marketing, group coordination, issues receipts and fulfilling tax laws, obtaining food safety certifications). They did not collaborate with the restaurants to determine these needs and address them. The production enterprises' weakness in these skills was the principal factor listed by the restaurant managers as limiting their ability to engage further with these local suppliers. The implications are clear: limited ability for the suppliers to engage and expand their operations, both in terms of buyers and products sold. Research has discussed the long and unpredictable pathway for smallholder business organizations in Latin America and beyond to volume into viable business operations (Donovan et al., 2008; Poole & Donovan, 2013; Donovan et a 2017). In this light, direct sourcing that hinge on the capacity of remote, newly organized smallholder businesses are at relatively high levels of risk to stagnation, or in the worst case, failure over the midterm.

In addition to the challenge in obtaining the financing to support these efforts over the long term (more than three years), they were unable to gain greater buy in and coordination from local governments (i.e. tax and regulatory policies, institutional purchasing, technical assistance, infrastructure) and the restaurants and processors (i.e. co investing in transportation and cold storage infrastructure). The ability for restaurants to purchase the vast majority of fresh food

needs from a single intermediary is simply too attractive for them to consider deep engagement with nearly-by smallholders who would only be able to supply a small number of the various foods needed for their operations. Collaboration between public sector agencies, researchers, NGOs, and the private sector is needed to identify and test alternative forms to aggregate and market smallholder production, as well as to incentivize more local restaurants (and other types of buyers) to actively engage in the construction of local food chains.

The two cases with active smallholder business organizations faced challenges to market all their products, while the Specialty Herb case was unable to keep with its demand. This difference in marketing success between smallholder organizations and a private business provide several important lessons. First, rather than developing entirely new marketing mechanisms opportunities may lie with existing markets and actors (i.e. intermediaries, restaurants, processors), such as the restaurant consortium in Cusco that was able to take over the farm. Marketing, logistical, and legal requirements can only be met through the support or leadership of the restaurants and the rest of the private sector, as farmers may not be interested or have the capabilities to meet these expectations. For instance, because of the interest of an intermediary, the farmers in the greenhouse case are likely to become suppliers of this intermediary.

The Specialty Herb Case also demonstrated that this alternative arrangement of a private enterprise managing these direct sales provided significant benefits to the smallholders that sold to it and its employees while providing restaurants with the variety of products, desired by their clients, from a single source, with the proper receipts, which would lower coordination costs. Such an effort would also require a structure communication framework to ensure that the production systems are nimble enough to change production to developing food trends. Through

a coordinated marketing and logistics, a single entity or intermediary could offer all the products from each of the enterprises while provide the restaurants with a high-quality product that satisfies its customer's needs.

References

- Akama, J. S., & Kieti, D. (2007). Tourism and socio-economic development in developing countries: A case study of Mombasa Resort in Kenya. *Journal of Sustainable Tourism*, 15(6), 735-748.
- Arsil, P., Li, E., Bruwer, J. & Lyons, G. (2014). Exploring consumer motivations towards buying local fresh food products: A means-end chain approach. *British Food Journal*, 116 (10), 1533-1549.
- Bamber, P. & Staritz, C. (2016). The gender dimensions of global value chains. Issue Paper. International Center for Trade and Sustainable Development, Geneva, Switzerland. https://www.ictsd.org/sites/default/files/research/the_gender_dimensions_of_global_value_chains_0.pdf
- Barrett, C. B. (2008). Poverty traps and resource dynamics in smallholder agrarian systems: In R. B. Dellink & A. Ruijs (Eds.) *Economics of poverty, environment and natural-resource use*. (pp. Springer. Dordrecht, Netherlands. (pp. 17-40).
- Barrett, C. B., Bachke, M. E., Bellemare, M. F., Michelson, H. C., Narayanan, S. & Walker, T. F. (2012). Smallholder participation in contract farming: comparative evidence from five countries. *World Development*, 40(4), 715-730.
- Blare, T., Donovan, J. & del Pozo, C. (2017). Estimates of the willingness to pay for locally grown tree fruits in Cusco, Peru. *Journal of Renewable Agriculture and Food Systems* 34 (1): 50-61.
- Chique, V., Apaza, J., & Sánchez, J. (2018). Caracterización Del Departamento De Cusco. Banco Central de Reserva Perú (BCRP) Sucursal Cusco. <https://www.bcrp.gob.pe/docs/Sucursales/Cusco/cusco-caracterizacion.pdf>
- Coley, D., Howard, M. & Winter, M. (2009). Local food, food miles and carbon emissions: A comparison of farm shop and mass distribution approaches. *Food Policy*, 34(2), 150-155.
- Connelly, S., Markey, S., & Roseland, M. (2011). Bridging sustainability and the social economy: Achieving community transformation through local food interventions. *Critical Social Policy*, 31(2), 308-324.
- Curtis, K & Cowee, M. (2009). Direct marketing local food to chefs: Chef preferences and perceived obstacles. *Journal of Food Distribution Research*, 40 (2): 26-36.

- Deere, C. D., & Royce, F. S. (2019). Provisioning Cuba's Private Restaurants: Linking Tourism and Agriculture. *Tourism Planning and Development*, 16(6), 675-695.
- Donovan, J., Stoian, D. & Poole, N. (2008). Global Review of Rural Community Enterprises: The Long and Winding Road to Creating Viable Businesses, and Potential Shortcuts. Technical Series 29/Rural Enterprise Development Collection 2, CATIE, Turrialba, Costa Rica.
- Donovan, J., Blare, T., & Poole, N. (2017). Stuck in a rut: emerging cocoa cooperatives in Peru and the factors that influence their performance. *International Journal of Agricultural Sustainability*, 15(2), 169-184.
- Donovan, J. & Poole, N. (2014). Changing asset endowments and smallholder participation in higher value markets: evidence from certified coffee farmers in Nicaragua. *Food Policy*, 44, 1-13.
- Donovan, J., Poole, N., Poe, K., & Herrera-Arauz, I. (2018). Ambition meets reality: lessons from the taro boom in Nicaragua. *Journal of Agribusiness in Developing and Emerging Economies*, 8(1), 77-98.
- Dunne, J. B., Chambers, K. J., Giombolini, K. J., & Schlegel, S. A. (2011). What does 'local' mean in the grocery store? Multiplicity in food retailers' perspectives on sourcing and marketing local foods. *Renewable Agriculture and Food Systems*, 26(1), 46-59.
- Fernandez, M., Goodall, K., Olson, M. & Méndez, V. E. (2013). Agroecology and alternative agri-food movements in the United States: Toward a sustainable agri-food system. *Agroecology and Sustainable Food Systems*, 37(1), 115-126.
- Francis, C., Lieblein, G., Gliessman, S., Breland, T.A., Creamer, N., Harwood, R., Salomonsson, L., Helenius, J., Rickerl, D., Salvador, R. & Wiedenhoeft, M. (2003). Agroecology: The ecology of food systems. *Journal of Sustainable Agriculture*, 22(3), 99-118.
- Frash, R., DiPietro, R. & Smith, W. (2015). Pay more for local? Examining motivations for willingness to pay for local food in a chain restaurant setting. *Journal of Hospitality Marketing and Management*, 24 (4), 411-434.
- Freidberg, S., & Goldstein, L. (2011). Alternative food in the global south: Reflections on a direct marketing intervention in Kenya. *Journal of Rural Studies*, 27(1), 24-34.
- Gálvez, J. C. P., López-Guzmán, T., Buiza, F. C., & Medina-Viruel, M. J. (2017). Gastronomy as an element of attraction in a tourist destination: the case of Lima, Peru. *Journal of Ethnic Foods*, 4(4), 254-261.
- Garnett, T. (2014). Three perspectives on sustainable food security: efficiency, demand restraint, food system transformation. What role for life cycle assessment?. *Journal of Cleaner Production*, 73, 10-18.

- Gibbon, P. & Ponte, S. (2005). *Trading down: Africa, value chains, and the global economy*. Temple University Press, Philadelphia, Pennsylvania, United States of America.
- Green, G. P., & Dougherty, M. L. (2008). Localizing linkages for food and tourism: Culinary tourism as a community development strategy. *Community Development*, 39(3), 148-158.
- Greenberg, S. (2017). Corporate power in the agro-food system and the consumer food environment in South Africa. *Journal of Peasant Studies*, 44 (2): 467-496.
- Holt-Giménez, E. & Altieri, M. A. (2013). Agroecology, food sovereignty, and the new green revolution. *Agroecology and Sustainable Food Systems*, 37(1), 90-102.
- Instituto Nacional de Estadística e Informática (INEI). 2013. Resultados Definitivos IV Censo nacional Agropecuario 2012. Lima, Peru.
- Instituto Nacional de Estadística e Informática (INEI). 2018a. Economía. <http://www.inei.gob.pe/estadisticas/indice-tematico/economia/>
- Instituto Nacional de Estadística e Informática (INEI). 2015b. Ecuencia de hogares 2015
- Instituto Nacional de Estadística e Informática (INEI). 2018b. Perú Enfermedades no transmisibles y transmisibles, 2017. Lima, Peru. https://www.inei.gob.pe/media/MenuRecursivo/publicaciones_digitales/Est/Lib1526/libro.pdf
- Inwood, S., Sharp, J., Moore, R., & Stinner, D. (2008). Restaurants, chefs and local foods: insights drawn from application of a diffusion of innovation framework. *Agriculture and Human Values*, 26 (2009), 177-191.
- Knight, D. W., Cottrell, S. P., Pickering, K., Bohren, L., & Bright, A. (2017). Tourism-based development in Cusco, Peru: comparing national discourses with local realities. *Journal of Sustainable Tourism*, 25(3), 344-361.
- Lee, J., Gereffi, G. & Beauvais, J. (2012). Global value chains and agrifood standards: Challenges and possibilities for smallholders in developing countries. *Proceedings of the National Academy of Sciences*, 109(31), 12326-12331.
- Mao, N., Grunfeld, H., DeLacy, T., & Chandler, D. (2014). Agriculture and tourism linkage constraints in the Siem Reap-Angkor region of Cambodia. *Tourism Geographies*, 16(4), 669-686.
- Markelova, H., Meinzen-Dick, R., Hellin, J. & Dohrn, S. (2009). Collective action for smallholder market access. *Food Policy*, 34(1), 1-7.

- Martinez, S., Hand, M., Da Para, M., Pollack, S., Ralston, K., Smith, T., Vogel, S., Clark, S., Lohr, L., Low, S. & Newman, C. (2010). Local food systems; concepts, impacts, and issues. United States Department of Agriculture. Economic Research Service. Economic Research Report 97.
- Matta, R. (2014). Dismantling the boom of Peruvian cuisine. *ReVista* (Cambridge), 14(1), 64.
- Mithöfer, D., Nang'ole, E. & Asfaw, S. (2008). Smallholder access to the export market: the case of vegetables in Kenya. *Outlook on Agriculture*, 37(3), 203-211.
- Meyer, D. (2006). Caribbean tourism, local sourcing and enterprise development: Review of the literature. Pro-poor Tourism Partnership.
<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.467.7822&rep=rep1&type=pdf>
- Montgomery, M. R. (2008). The urban transformation of the developing world. *Science*, 319 (5864): 761-764.
- Mundler, P. & Rumpus, L. (2012). The energy efficiency of local food systems: A comparison between different modes of distribution. *Food Policy*, 37(6), 609-615.
- Oppermann, M., & Kye-Sung, C. (1997). *Tourism in developing countries*. International Thomson Business Press.
- Poole, N. & Donovan, J. (2014). Building Cooperative Capacity: The Specialty Coffee Sector in Nicaragua. *Journal of Agribusiness in Developing and Emerging Economies*, 4(2), 133-156.
- Reardon, T., Timmer, C. P. & Berdegue, J. A. (2008). The rapid rise of supermarkets in developing countries: induced organizational, institutional, and technological change in agrifood systems: In E. B. McCullough, P.L. Pingali, & K. G. Stamoulis, K. G. (Eds.). *The transformation of agri-food systems: Globalization, supply chains and smallholder farmers*. Food & Agriculture Organization (FAO). Rome.
- Rice, M. (2015). Selling Sacred Cities: Tourism, Region, and Nation in Cusco, Peru (Doctoral dissertation, The Graduate School, Stony Brook University: Stony Brook, NY.).
- Rogerson, C. M. (2012). Tourism–agriculture linkages in rural South Africa: Evidence from the accommodation sector. *Journal of Sustainable Tourism*, 20(3), 477-495.
- Schneider, M. & Francis, C. (2005). Marketing locally produced foods: Consumer and farmer opinions in Wasington County, Nebraska. *Renewable Agriculture and Food Systems*, 20 (4): 252-260.
- Selfa, T. & Qazi, J. (2005). Place, taste, or face-to-face? Understanding farmer–consumer networks in “local” food systems in Washington State. *Agriculture and Human Values*, 22(4), 451-464.

- Seyfang, G. (2006). Ecological citizenship and sustainable consumption: Examining local organic food networks. *Journal of Rural Studies*, 22(4), 383-395.
- Si, Z., Schumilas, T. & Scott, S. (2015). Characterizing alternative food networks in China. *Agriculture and Human Values*, 32(2), 299-313.
- Smith, S. L., & Xiao, H. (2008). Culinary tourism supply chains: A preliminary examination. *Journal of Travel Research*, 46(3), 289-299.
- Soussana, J. F. (2014). Research priorities for sustainable agri-food systems and life cycle assessment. *Journal of Cleaner Production*, 73, 19-23.
- Starr, A., Card, A., Benepe, C., Auld, G., Lamm, D., Smith, K., & Wilken, K. (2003). Sustaining local agriculture barriers and opportunities to direct marketing between farms and restaurants in Colorado. *Agriculture and Human Values*, 20(3), 301-321.
- Swinnen, J. & Vandeplas, A. (2011). Rich consumers and poor producers: quality and rent distribution in global value chains. *Journal of Globalization and Development*, 2(2).
- Telfer, D. J. (2000). Tastes of Niagara: Building strategic alliances between tourism and agriculture. *International Journal of Hospitality and Tourism Administration*, 1(1), 71-88.
- Telfer, D. J., & Wall, G. (1996). Linkages between tourism and food production. *Annals of tourism Research*, 23(3), 635-653.
- Tucker, C. (2013). Honduras's Smallholder Coffee Farmers, the Coffee Crisis, and Neoliberal Policy. In: Burrell, J. L. & Moddie, E. (Eds.). *Central America in the new millennium: Living transition and reimagining democracy*. Berghahn Books. New York.
- Wilkinson, J. (2008). The food processing industry, globalization and developing countries: In E. B. McCullough, P. L. Pingali, & K. G. Stamoulis (Eds.). *The transformation of agri-food systems: globalization, supply chains and smallholder farmers*. Food & Agriculture Organization (FAO). Rome.
- Wilson, R. (2011). Cocina peruana para el Mundo: Gastrodiplomacy, the culinary nation brand, and the context of national cuisine in Peru. *Exchange: The Journal of Public Diplomacy*, 2(1), 2.

835 **Table 1.** Percentage of food purchased from different types of suppliers

	Intermediaries	Direct purchase	Own production	Specialized distributor
Tubers	76.4	18.9	0.8	3.9
Vegetables	64.4	19.2	2.2	14.2
Fruits	81.7	9.3	0.0	8.9
Fish	60.6	18.6	0.7	20.1
Meat	69.1	8.9	0.0	22.0
Grains	58.6	7.0	1.8	32.5
Dairy	37.5	7.2	0.0	55.2

836

837

Table 2. Percentage of respondents that reported the following positive and negative aspects of the relationship with their buyers

Positive aspects	Percentage	Negative aspects	Percentage
Quality of product meets needs	43	Improper processing practices	53
Trust relationship	36	Poor hygiene	8
Delivery on time/ on site	36	Price volatility	9
Variety of products offered	23	Inability to present purchase invoices	6
Effective communication	19	Inconsistency in product quality	5
Allow for delayed payments	17	Poor communication	4
Supplier accepts returns	12	Lack of variety in supply	4
Low prices	10		

Table 3. Average rating of the frequency (1=very frequent, 2=frequent, 3=sometimes, 4=rarely, 5=never) and gravity (1=very grave, 2=grave, 3= somewhat grave, 4=minor problem, 5 no problem) of difficulties with the current sourcing from intermediaries (n=46) and direct purchases from farmers (n=25)

Difficulty	Intermediaries		Direct purchases	
	Frequency of problem	Gravity of the problem	Frequency of problem	Gravity of the problem
Shortage of product	3.43	2.79	2.57	2.57
Difficulty in coordinating delivery	3.66	3.09	3.29	3.71
Lacking sanitary certifications	3.29	2.95	2.43	3.14
Logistical challenges	3.19	3.11	3.00	2.86
Poor quality	3.41	2.82	3.00	3.00
High prices	2.86	2.71	3.86	3.43
Failure to deliver product	4.02	3.21	4.00	3.71

848

849

850

851

852 **Figure 1.** Percentage of households that identified the following factors as limiting their ability
 853 to expand native potato production

854

855

856 **Figure 2.** Percentage of interviewed households that identified the following factors as limiting
 857 their ability to expand native potato production